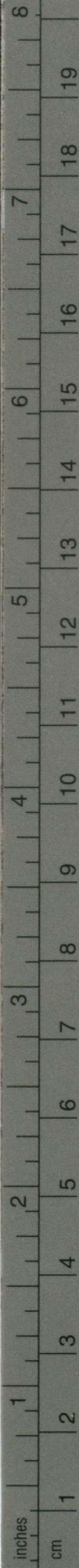


# Kodak Gray Scale



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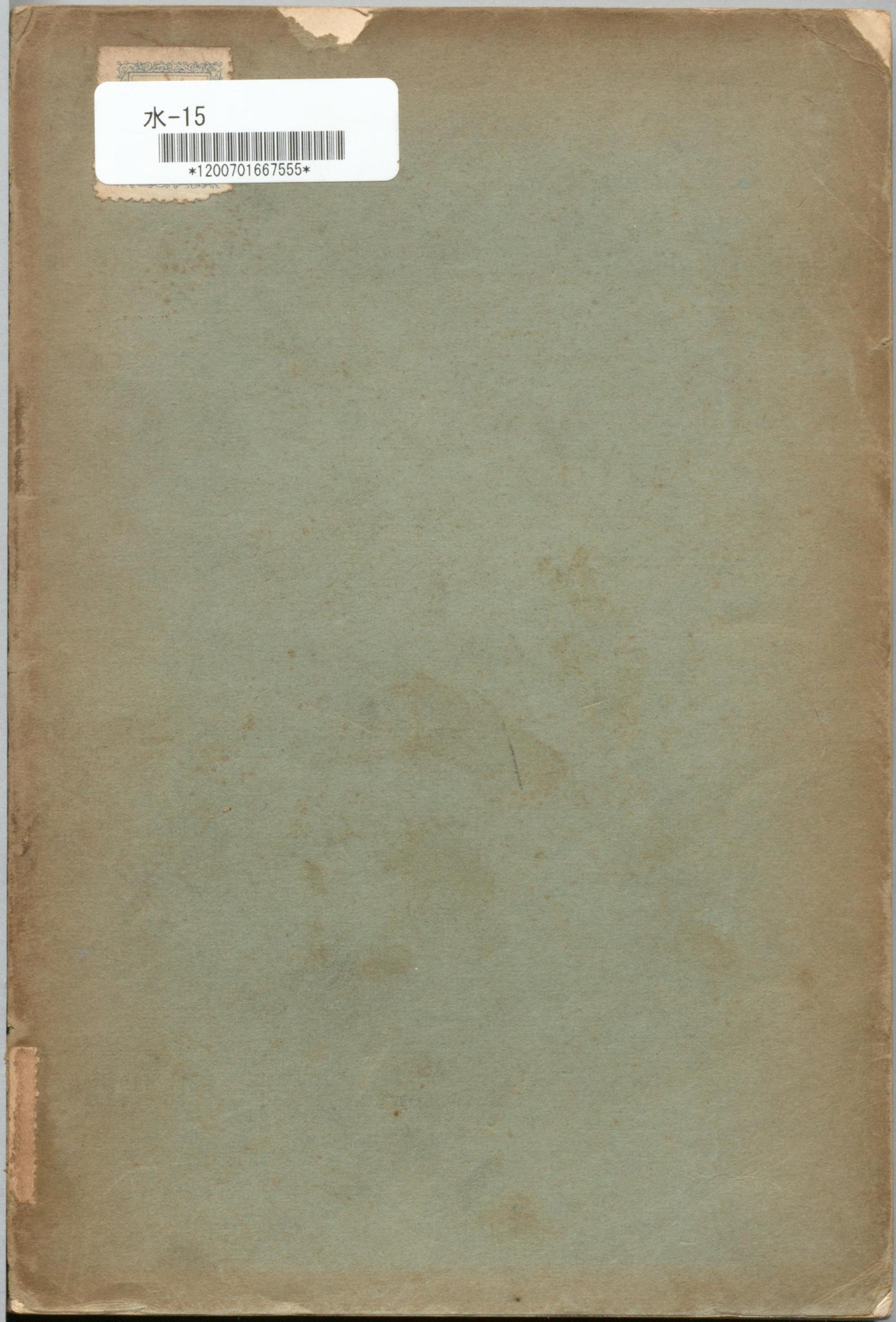
A 1 2 3 4 5 6 M 8 9 10 11 12 13 14 15 B 17 18 19



# Kodak Color Control Patches

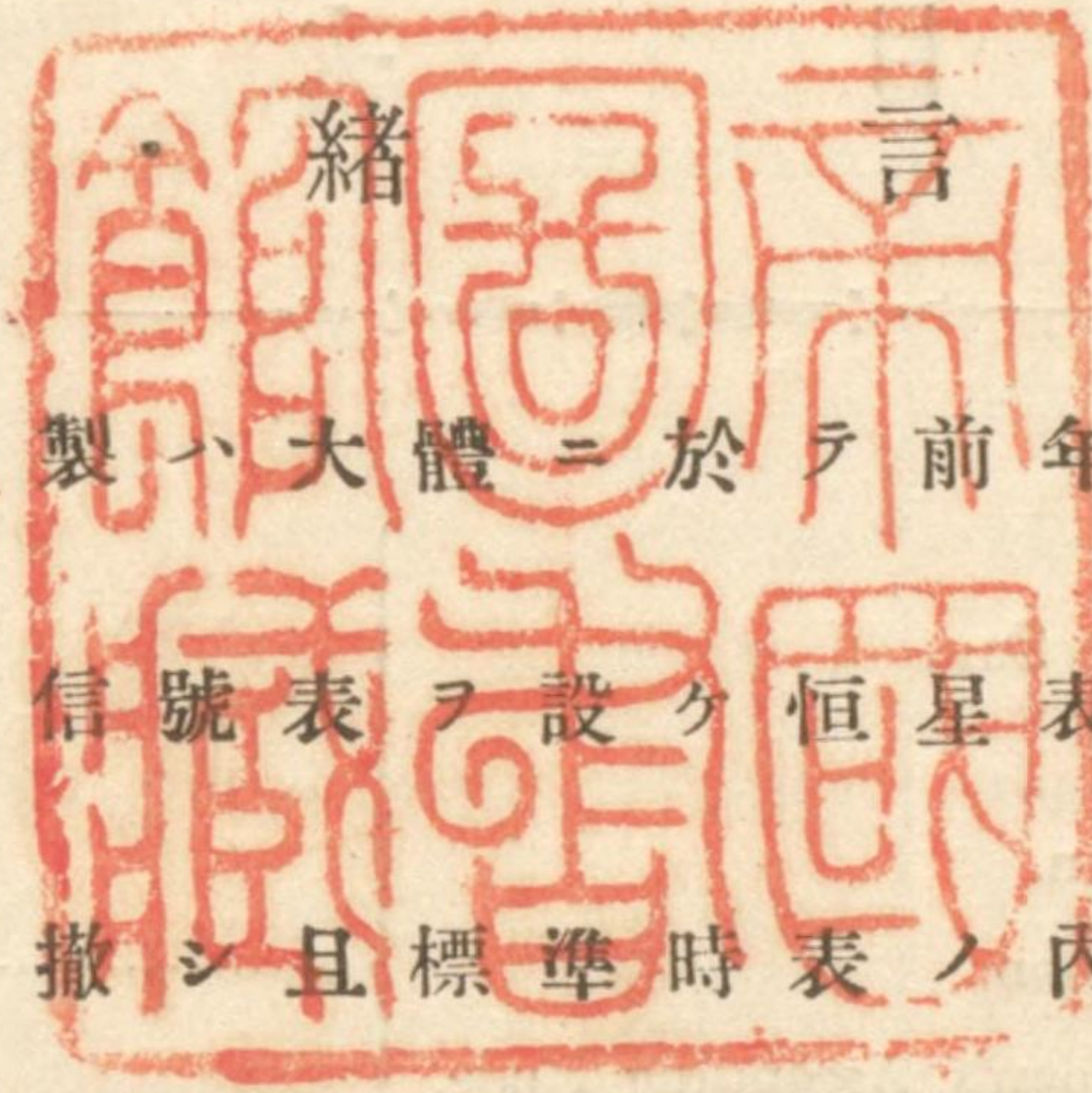
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Blue	Cyan	Green	Yellow	Red	Magenta	White	3/Color	Black
Light Blue	Light Cyan	Light Green	Light Yellow	Light Red	Light Magenta	White	Light Gray	Light Black
Dark Blue	Dark Cyan	Dark Green	Dark Yellow	Dark Red	Dark Magenta	White	Dark Gray	Dark Black



水-15  
\*1200701667555\*





本年表ノ編製ハ大體ニ於テ前年分ト異ラサル  
 モ新ニ報時信號表ヲ設ケ恒星表中南赤緯六〇  
 度ノ制限ヲ撤シ且標準時表ノ内容ヲ増加シ其  
 他零碎ノ點ニ於テ多少改良セル所アリ  
 然レトモ前版明治四十年海軍航海年表ハ當部  
 ニ於ケル創製ニシテ本表ハ僅ニ第二次ノ編纂  
 ニ過キサルヲ以テ改補ノ餘地甚タ多カルヘシ  
 使用者ハ之ニ留意シ實驗上改補ヲ要スト認ム  
 ル點アルヲ發見シタルトキハ速ニ當部ニ報告  
 アランコトヲ望ム

明治四十年十一月

水路部





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1908.

Mean Noon.	Nutation in R.A. (in time.)	The Sun's			The Moon's		
		Horizontal Parallax.	Aberration.	Mean Longitude.	Mean Longitude.	Mean Longitude Ascending Node.	Mean Longitude Perigee.
Jan. 1	— 1'00	8'95	20'82	279'75250	251'8770	104'4490	299'8497
11	— 0'98	8'95	20'81	280'60897	23'6410	103'9195	300'9637
21	— 0'96	8'94	20'79	299'46545	155'4049	103'3899	302'0778
31	— 0'95	8'93	20'77	309'32192	287'1689	102'8604	303'1918
Feb. 10	— 0'95	8'92	20'74	319'17839	58'9329	102'3308	304'3059
20	— 0'96	8'90	20'70	329'03487	190'6968	101'8013	305'4199
31	— 0'98	8'88	20'65	338'89134	322'4608	101'2717	306'5339
11	— 1'01	8'85	20'60	348'74781	94'2248	100'7422	307'6480
21	— 1'03	8'83	20'54	358'60429	225'9888	100'2127	308'7620
31	— 1'06	8'80	20'48	8'46076	357'7527	99'6831	309'8761
Apr. 10	— 1'08	8'78	20'42	18'31723	129'5167	99'1535	310'9901
20	— 1'10	8'75	20'36	28'17371	261'2807	98'6240	312'1041
30	— 1'11	8'73	20'31	38'03018	33'0446	98'0945	313'2182
May 10	— 1'12	8'71	20'26	47'88665	164'8086	97'5649	314'3322
20	— 1'11	8'69	20'22	57'74313	296'5726	97'0354	315'4463
30	— 1'10	8'68	20'19	67'59960	68'3366	96'5059	316'5603
June 9	— 1'08	8'67	20'16	77'45607	200'1005	95'9763	317'6743
19	— 1'05	8'66	20'14	87'31255	331'8645	95'4468	318'7884
29	— 1'03	8'66	20'13	97'16902	103'6285	94'9173	319'9024
July 9	— 1'01	8'66	20'13	107'02549	235'3924	94'3877	321'0165
19	— 0'99	8'66	20'14	116'88197	7'1564	93'8582	322'1305
29	— 0'98	8'67	20'16	126'73844	138'9204	93'3287	323'2445
Aug. 8	— 0'98	8'68	20'19	136'59491	270'6843	92'7991	324'3586
18	— 0'99	8'70	20'23	146'45139	42'4483	92'2696	325'4726
28	— 1'00	8'72	20'27	156'30786	174'2123	91'7400	326'5867
Sept. 7	— 1'02	8'74	20'32	166'16434	305'9763	91'2105	327'7007
17	— 1'05	8'76	20'38	176'02081	77'7402	90'6809	328'8147
27	— 1'07	8'78	20'43	185'87728	209'5042	90'1514	329'9288
Oct. 7	— 1'10	8'81	20'49	195'73376	341'2682	89'6218	331'0428
17	— 1'12	8'83	20'55	205'59023	113'0321	89'0923	332'1569
27	— 1'13	8'86	20'61	215'44670	244'7961	88'5627	333'2709
Nov. 6	— 1'14	8'88	20'66	225'30318	16'5601	88'0332	334'3849
16	— 1'13	8'90	20'71	235'15965	148'3240	87'5037	335'4990
26	— 1'12	8'92	20'75	245'01612	280'0880	86'9741	336'6130
Dec. 6	— 1'10	8'93	20'78	254'87260	51'8520	86'4446	337'7271
16	— 1'07	8'94	20'80	264'72907	183'6160	85'9150	338'8411
26	— 1'04	8'95	20'82	274'58554	315'3799	85'3855	339'9551
36	— 1'01	8'95	20'82	284'44202	87'1439	84'8560	341'0692

		Daily Motion.			
Mean Obliquity, 1908'0.....	23 27 4'51	+	+	-	+
Precession for the Year 1908.....	50'2582	0'9856473	13'176397	0'052954	0'111404
Precession for 1 Day.....	0'1376				



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be added to Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi-diameter.*		
Wed. 1	h m s 18 42 10.46	s 11.060	° ' " S. 23 5 46.7	" 11.14	' " 16 17.53	m s 3 10.33	s 1.200
Thur. 2	18 46 35.75	11.048	23 1 5.6	12.29	16 17.53	3 39.00	1.188
Frid. 3	18 51 0.74	11.034	22 55 56.8	13.44	16 17.53	4 7.35	1.174
Sat. 4	18 55 25.38	11.019	22 50 20.6	14.58	16 17.53	4 35.35	1.159
Sun. 5	18 59 49.63	11.002	22 44 17.2	15.71	16 17.52	5 2.97	1.142
Mon. 6	19 4 13.46	10.983	22 37 46.6	16.83	16 17.51	5 30.17	1.124
Tues. 7	19 8 36.83	10.964	22 30 49.2	17.95	16 17.49	5 56.91	1.104
Wed. 8	19 12 59.72	10.943	22 23 25.1	19.06	16 17.47	6 23.17	1.083
Thur. 9	19 17 22.09	10.921	22 15 34.5	20.15	16 17.44	6 48.91	1.061
Frid. 10	19 21 43.91	10.898	22 7 17.7	21.24	16 17.42	7 14.11	1.038
Sat. 11	19 26 5.17	10.874	21 58 34.8	22.32	16 17.39	7 38.75	1.014
Sun. 12	19 30 25.84	10.849	21 49 26.3	23.39	16 17.35	8 2.79	0.989
Mon. 13	19 34 45.90	10.823	21 39 52.3	24.44	16 17.31	8 26.22	0.963
Tues. 14	19 39 5.32	10.796	21 29 53.2	25.48	16 17.26	8 49.02	0.936
Wed. 15	19 43 24.09	10.768	21 19 29.2	26.51	16 17.20	9 11.17	0.909
Thur. 16	19 47 42.19	10.740	21 8 40.6	27.53	16 17.14	9 32.66	0.881
Frid. 17	19 51 59.61	10.711	20 57 27.7	28.54	16 17.07	9 53.46	0.852
Sat. 18	19 56 16.33	10.682	20 45 50.8	29.53	16 17.00	10 13.57	0.823
Sun. 19	20 0 32.34	10.652	20 33 50.4	30.50	16 16.92	10 32.97	0.793
Mon. 20	20 4 47.63	10.622	20 21 26.6	31.47	16 16.83	10 51.65	0.763
Tues. 21	20 9 2.18	10.591	20 8 39.8	32.42	16 16.74	11 9.60	0.733
Wed. 22	20 13 15.99	10.560	19 55 30.4	33.36	16 16.64	11 26.81	0.701
Thur. 23	20 17 29.05	10.528	19 41 58.7	34.28	16 16.54	11 43.26	0.670
Frid. 24	20 21 41.35	10.496	19 28 5.0	35.19	16 16.43	11 58.96	0.638
Sat. 25	20 25 52.88	10.464	19 13 49.8	35.08	16 16.32	12 13.89	0.606
Sun. 26	20 30 3.63	10.432	18 59 13.3	36.95	16 16.20	12 28.05	0.574
Mon. 27	20 34 13.61	10.399	18 44 16.0	37.82	16 16.07	12 41.44	0.541
Tues. 28	20 38 22.80	10.366	18 28 58.1	38.66	16 15.95	12 54.03	0.508
Wed. 29	20 42 31.19	10.333	18 13 20.2	39.49	16 15.82	13 5.84	0.475
Thur. 30	20 46 38.78	10.299	17 57 22.5	40.31	16 15.68	13 16.85	0.442
Frid. 31	20 50 45.57	10.266	17 41 5.5	41.10	16 15.54	13 27.05	0.408
Sat. 32	20 54 51.54	10.232	S. 17 24 29.6	41.88	16 15.40	13 36.44	0.374

\* The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be subtracted from Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
1	h m s 18 42 9.87	° ' " S. 23 5 47.3	° ' " 279 41 15.7	" N. 0.24	m s 3 10.27	h m s 18 38 59.60
2	18 46 35.08	23 1 6.3	280 42 26.9	N. 0.13	3 38.93	18 42 56.16
3	18 50 59.98	22 55 57.7	281 43 38.1	0.00	4 7.27	18 46 52.72
4	18 55 24.54	22 50 21.7	282 44 49.4	S. 0.14	4 35.26	18 50 49.27
5	18 59 48.71	22 44 18.5	283 46 0.6	0.27	5 2.87	18 54 45.83
6	19 4 12.45	22 37 48.2	284 47 11.6	0.40	5 30.06	18 58 42.39
7	19 8 35.75	22 30 51.0	285 48 22.3	0.51	5 56.80	19 2 38.95
8	19 12 58.56	22 23 27.1	286 49 32.6	0.58	6 23.05	19 6 35.50
9	19 17 20.85	22 15 36.8	287 50 42.3	0.63	6 48.79	19 10 32.06
10	19 21 42.60	22 7 20.2	288 51 51.5	0.64	7 13.98	19 14 28.62
11	19 26 3.79	21 58 37.7	289 53 0.2	0.63	7 38.62	19 18 25.18
12	19 30 24.39	21 49 29.4	290 54 8.2	0.58	8 2.66	19 22 21.73
13	19 34 44.38	21 39 55.7	291 55 15.6	0.51	8 26.09	19 26 18.29
14	19 39 3.73	21 29 56.9	292 56 22.4	0.40	8 48.89	19 30 14.85
15	19 43 22.44	21 19 33.2	293 57 28.6	0.28	9 11.04	19 34 11.41
16	19 47 40.48	21 8 44.9	294 58 34.2	0.15	9 32.52	19 38 7.96
17	19 51 57.84	20 57 32.4	295 59 39.1	S. 0.02	9 53.32	19 42 4.52
18	19 56 14.51	20 45 55.9	297 0 43.5	N. 0.11	10 13.43	19 46 1.08
19	20 0 30.47	20 33 55.8	298 1 47.3	0.23	10 32.83	19 49 57.63
20	20 4 45.70	20 21 32.3	299 2 50.5	0.34	10 51.51	19 53 54.19
21	20 9 0.21	20 8 45.9	300 3 53.2	0.44	11 9.46	19 57 50.75
22	20 13 13.98	19 55 36.8	301 4 55.3	0.52	11 26.67	20 1 47.30
23	20 17 26.99	19 42 5.4	302 5 56.9	0.58	11 43.13	20 5 43.86
24	20 21 39.25	19 28 12.1	303 6 57.9	0.61	11 58.83	20 9 40.42
25	20 25 50.74	19 13 57.1	304 7 58.4	0.60	12 13.77	20 13 36.97
26	20 30 1.47	18 59 21.0	305 8 58.4	0.56	12 27.94	20 17 33.53
27	20 34 11.41	18 44 24.0	306 9 57.8	0.50	12 41.32	20 21 30.09
28	20 38 20.57	18 29 6.4	307 10 56.6	0.40	12 53.92	20 25 26.64
29	20 42 28.93	18 13 28.8	308 11 54.8	0.29	13 5.73	20 29 23.20
30	20 46 36.50	17 57 31.4	309 12 52.2	0.16	13 16.75	20 33 19.75
31	20 50 43.27	17 41 14.7	310 13 48.8	N. 0.02	13 26.96	20 37 16.31
32	20 54 49.22	S. 17 24 39.1	311 14 44.6	S. 0.11	13 36.35	20 41 12.87



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be added to Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi-diameter.*		
	h m s	s	° / ' "	"	' "	m s	s
Sat. 1	20 54 51.54	10.232	S. 17 24 29.6	41.88	16 15.40	13 36.44	0.374
Sun. 2	20 58 56.69	10.197	17 7 35.2	42.64	16 15.25	13 45.01	0.340
Mon. 3	21 3 1.01	10.163	16 50 22.7	43.39	16 15.11	13 52.76	0.306
Tues. 4	21 7 4.51	10.129	16 32 52.6	44.11	16 14.96	13 59.68	0.271
Wed. 5	21 11 7.18	10.094	16 15 5.2	44.83	16 14.80	14 5.77	0.237
Thur. 6	21 15 9.01	10.059	15 57 1.0	45.52	16 14.65	14 11.03	0.202
Frid. 7	21 19 10.01	10.024	15 38 40.4	46.19	16 14.49	14 15.46	0.168
Sat. 8	21 23 10.18	9.990	15 20 3.9	46.84	16 14.33	14 19.07	0.133
Sun. 9	21 27 9.53	9.956	15 1 11.9	47.48	16 14.16	14 21.86	0.099
Mon. 10	21 31 8.06	9.922	14 42 4.8	48.10	16 13.99	14 23.83	0.065
Tues. 11	21 35 5.78	9.889	14 22 43.1	48.70	16 13.81	14 24.99	0.032
Wed. 12	21 39 2.71	9.856	14 3 7.0	49.29	16 13.63	14 25.36	0.001
Thur. 13	21 42 58.85	9.823	13 43 17.0	49.86	16 13.45	14 24.95	0.033
Frid. 14	21 46 54.21	9.791	13 23 13.7	50.41	16 13.26	14 23.77	0.065
Sat. 15	21 50 48.82	9.760	13 2 57.3	50.95	16 13.07	14 21.83	0.096
Sun. 16	21 54 42.68	9.729	12 42 28.3	51.46	16 12.87	14 19.14	0.127
Mon. 17	21 58 35.81	9.699	12 21 47.1	51.96	16 12.67	14 15.72	0.157
Tues. 18	22 2 28.22	9.669	12 0 54.1	52.45	16 12.46	14 11.59	0.187
Wed. 19	22 6 19.93	9.640	11 39 49.6	52.91	16 12.25	14 6.76	0.215
Thur. 20	22 10 10.96	9.613	11 18 34.2	53.36	16 12.03	14 1.26	0.243
Frid. 21	22 14 1.33	9.585	10 57 8.1	53.80	16 11.81	13 55.09	0.271
Sat. 22	22 17 51.04	9.558	10 35 31.8	54.22	16 11.59	13 48.27	0.297
Sun. 23	22 21 40.13	9.533	10 13 45.7	54.62	16 11.36	13 40.82	0.323
Mon. 24	22 25 28.60	9.508	9 51 50.2	55.00	16 11.13	13 32.75	0.348
Tues. 25	22 29 16.47	9.483	9 29 45.6	55.37	16 10.90	13 24.10	0.373
Wed. 26	22 33 3.77	9.459	9 7 32.3	55.72	16 10.66	13 14.87	0.396
Thur. 27	22 36 50.50	9.436	8 45 10.8	56.06	16 10.42	13 5.07	0.420
Frid. 28	22 40 36.68	9.413	8 22 41.4	56.38	16 10.18	12 54.73	0.442
Sat. 29	22 44 22.33	9.391	8 0 4.6	56.68	16 9.94	12 43.85	0.464
Sun. 30	22 48 7.46	9.370	S. 7 37 20.7	56.97	16 9.69	12 32.46	0.485

\* The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be subtracted from Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
	h m s	° / ' "	° / ' "	"	m s	h m s
1	20 54 49.22	S. 17 24 39.1	311 14 44.6	S. 0.11	13 36.35	20 41 12.87
2	20 58 54.35	17 7 45.0	312 15 39.4	0.23	13 44.93	20 45 9.42
3	21 2 58.66	16 50 32.8	313 16 33.0	0.34	13 52.69	20 49 5.98
4	21 7 2.15	16 33 2.9	314 17 25.5	0.43	13 59.62	20 53 2.53
5	21 11 4.81	16 15 15.8	315 18 16.6	0.49	14 5.72	20 56 59.09
6	21 15 6.63	15 57 11.8	316 19 6.3	0.51	14 10.99	21 0 55.64
7	21 19 7.62	15 38 51.4	317 19 54.5	0.50	14 15.43	21 4 52.20
8	21 23 7.79	15 20 15.1	318 20 41.2	0.45	14 19.04	21 8 48.75
9	21 27 7.14	15 1 23.3	319 21 26.3	0.39	14 21.84	21 12 45.31
10	21 31 5.67	14 42 16.4	320 22 9.8	0.30	14 23.81	21 16 41.86
11	21 35 3.40	14 22 54.8	321 22 51.7	0.20	14 24.99	21 20 38.42
12	21 39 0.34	14 3 18.8	322 23 32.0	S. 0.07	14 25.37	21 24 34.97
13	21 42 56.49	13 43 29.0	323 24 10.6	N. 0.07	14 24.96	21 28 31.53
14	21 46 51.86	13 23 25.8	324 24 47.7	0.20	14 23.78	21 32 28.08
15	21 50 46.49	13 3 9.5	325 25 23.2	0.33	14 21.85	21 36 24.64
16	21 54 40.36	12 42 40.6	326 25 57.1	0.45	14 19.17	21 40 21.19
17	21 58 33.50	12 21 59.4	327 26 29.5	0.55	14 15.76	21 44 17.74
18	22 2 25.93	12 1 6.5	328 27 0.4	0.63	14 11.64	21 48 14.30
19	22 6 17.67	11 40 2.1	329 27 29.7	0.68	14 6.82	21 52 10.85
20	22 10 8.72	11 18 46.6	330 27 57.6	0.72	14 1.32	21 56 7.41
21	22 13 59.11	10 57 20.6	331 28 24.1	0.72	13 55.15	22 0 3.96
22	22 17 48.85	10 35 44.3	332 28 49.1	0.69	13 48.33	22 4 0.51
23	22 21 37.96	10 13 58.2	333 29 12.7	0.63	13 40.89	22 7 57.07
24	22 25 26.45	9 52 2.6	334 29 34.9	0.55	13 32.83	22 11 53.62
25	22 29 14.35	9 29 57.9	335 29 55.8	0.45	13 24.18	22 15 50.17
26	22 33 1.68	9 7 44.6	336 30 15.2	0.33	13 14.95	22 19 46.73
27	22 36 48.45	8 45 23.0	337 30 33.2	0.19	13 5.16	22 23 43.28
28	22 40 34.66	8 22 53.5	338 30 49.8	N. 0.06	12 54.83	22 27 39.83
29	22 44 20.34	8 0 16.6	339 31 4.8	S. 0.06	12 43.95	22 31 36.39
30	22 48 5.50	S. 7 37 32.6	340 31 18.2	S. 0.16	12 32.56	22 35 32.94



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be added to Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi-diameter.*		
<i>Sun.</i> 1	h m s 22 48 7.46	s 9.370	S. ° ' " 7 37 20.7	" 56.97	' " 16 9.69	m s 12 32.46	s 0.485
<i>Mon.</i> 2	22 51 52.08	9.349	7 14 30.2	57.23	16 9.45	12 20.56	0.506
<i>Tues.</i> 3	22 55 36.21	9.329	6 51 33.5	57.48	16 9.20	12 8.17	0.526
<i>Wed.</i> 4	22 59 19.86	9.309	6 28 31.0	57.71	16 8.96	11 55.30	0.546
<i>Thur.</i> 5	23 3 3.04	9.290	6 5 23.2	57.93	16 8.71	11 41.97	0.565
<i>Frid.</i> 6	23 6 45.77	9.271	5 42 10.4	58.13	16 8.46	11 28.18	0.583
<i>Sat.</i> 7	23 10 28.07	9.254	5 18 53.1	58.31	16 8.21	11 13.97	0.601
<i>Sun.</i> 8	23 14 9.96	9.237	4 55 31.6	58.47	16 7.96	10 59.34	0.618
<i>Mon.</i> 9	23 17 51.44	9.221	4 32 6.4	58.62	16 7.71	10 44.31	0.634
<i>Tues.</i> 10	23 21 32.55	9.206	4 8 37.9	58.75	16 7.45	10 28.91	0.649
<i>Wed.</i> 11	23 25 13.31	9.191	3 45 6.3	58.87	16 7.20	10 13.16	0.663
<i>Thur.</i> 12	23 28 53.72	9.178	3 21 32.2	58.96	16 6.94	9 57.07	0.677
<i>Frid.</i> 13	23 32 33.83	9.165	2 57 55.9	59.05	16 6.68	9 40.67	0.689
<i>Sat.</i> 14	23 36 13.66	9.154	2 34 17.7	59.13	16 6.42	9 23.99	0.701
<i>Sun.</i> 15	23 39 53.21	9.143	2 10 37.9	59.18	16 6.16	9 7.03	0.712
<i>Mon.</i> 16	23 43 32.52	9.133	1 46 57.1	59.22	16 5.89	8 49.83	0.721
<i>Tues.</i> 17	23 47 11.60	9.124	1 23 15.5	59.24	16 5.62	8 32.41	0.730
<i>Wed.</i> 18	23 50 50.49	9.117	0 59 33.5	59.25	16 5.35	8 14.79	0.738
<i>Thur.</i> 19	23 54 29.20	9.110	0 35 51.3	59.25	16 5.08	7 57.00	0.744
<i>Frid.</i> 20	23 58 7.76	9.104	S. 0 12 9.5	59.23	16 4.80	7 39.06	0.750
<i>Sat.</i> 21	0 1 46.20	9.099	N. 0 11 31.8	59.20	16 4.52	7 20.99	0.755
<i>Sun.</i> 22	0 5 24.53	9.096	0 35 12.2	59.15	16 4.24	7 2.83	0.759
<i>Mon.</i> 23	0 9 2.79	9.093	0 58 51.2	59.09	16 3.96	6 44.58	0.762
<i>Tues.</i> 24	0 12 40.99	9.091	1 22 28.7	59.02	16 3.68	6 26.27	0.763
<i>Wed.</i> 25	0 16 19.15	9.090	1 46 4.2	58.93	16 3.40	6 7.94	0.764
<i>Thur.</i> 26	0 19 57.30	9.090	2 9 37.4	58.83	16 3.11	5 49.59	0.765
<i>Frid.</i> 27	0 23 35.46	9.090	2 33 8.0	58.71	16 2.83	5 31.24	0.764
<i>Sat.</i> 28	0 27 13.64	9.092	2 56 35.6	58.58	16 2.55	5 12.92	0.763
<i>Sun.</i> 29	0 30 51.86	9.094	3 19 59.8	58.43	16 2.27	4 54.64	0.760
<i>Mon.</i> 30	0 34 30.14	9.097	3 43 20.3	58.27	16 1.99	4 36.42	0.758
<i>Tues.</i> 31	0 38 8.50	9.100	4 6 36.8	58.09	16 1.71	4 18.27	0.754
<i>Wed.</i> 32	0 41 46.94	9.104	N. 4 29 48.7	57.90	16 1.43	4 0.21	0.750

\* The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be subtracted from Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
1	h m s 22 48 5.50	S. ° ' " 7 37 32.6	° ' " 340 31 18.2	S. " 0.16	m s 12 32.56	h m s 22 35 32.94
2	22 51 50.16	7 14 41.9	341 31 29.9	0.26	12 20.67	22 39 29.49
3	22 55 34.33	6 51 45.1	342 31 39.7	0.33	12 8.28	22 43 26.05
4	22 59 18.01	6 28 42.5	343 31 47.7	0.36	11 55.41	22 47 22.60
5	23 3 1.23	6 5 34.5	344 31 53.8	0.35	11 42.08	22 51 19.15
6	23 6 44.00	5 42 21.5	345 31 57.7	0.31	11 28.29	22 55 15.71
7	23 10 26.34	5 19 4.0	346 31 59.5	0.26	11 14.08	22 59 12.26
8	23 14 8.27	4 55 42.3	347 31 59.2	0.18	10 59.45	23 3 8.81
9	23 17 49.79	4 32 16.9	348 31 56.7	S. 0.07	10 44.43	23 7 5.36
10	23 21 30.94	4 8 48.1	349 31 51.9	N. 0.05	10 29.03	23 11 1.92
11	23 25 11.74	3 45 16.4	350 31 45.0	0.18	10 13.27	23 14 58.47
12	23 28 52.20	3 21 42.0	351 31 35.9	0.30	9 57.18	23 18 55.02
13	23 32 32.36	2 58 5.4	352 31 24.6	0.42	9 40.79	23 22 51.58
14	23 36 12.23	2 34 26.9	353 31 11.1	0.54	9 24.10	23 26 48.13
15	23 39 51.82	2 10 46.9	354 30 55.4	0.65	9 7.14	23 30 44.68
16	23 43 31.17	1 47 5.8	355 30 37.7	0.73	8 49.94	23 34 41.23
17	23 47 10.30	1 23 23.9	356 30 17.8	0.78	8 32.52	23 38 37.79
18	23 50 49.23	0 59 41.6	357 29 55.9	0.81	8 14.90	23 42 34.34
19	23 54 27.99	0 35 59.2	358 29 32.0	0.81	7 57.10	23 46 30.89
20	23 58 6.60	S. 0 12 17.0	359 29 6.2	0.80	7 39.16	23 50 27.44
21	0 1 45.08	N. 0 11 24.6	0 28 38.5	0.75	7 21.09	23 54 24.00
22	0 5 23.46	0 35 5.2	1 28 8.9	0.67	7 2.92	23 58 20.55
23	0 9 1.77	0 58 44.6	2 27 37.5	0.58	6 44.67	0 2 17.10
24	0 12 40.01	1 22 22.4	3 27 4.4	0.46	6 26.36	0 6 13.65
25	0 16 18.22	1 45 58.2	4 26 29.5	0.33	6 8.02	0 10 10.21
26	0 19 56.42	2 9 31.7	5 25 52.9	0.20	5 49.66	0 14 6.76
27	0 23 34.62	2 33 2.6	6 25 14.6	N. 0.08	5 31.31	0 18 3.31
28	0 27 12.85	2 56 30.5	7 24 34.4	S. 0.03	5 12.99	0 21 59.86
29	0 30 51.12	3 19 55.1	8 23 52.5	0.13	4 54.71	0 25 56.42
30	0 34 29.45	3 43 15.9	9 23 8.7	0.20	4 36.48	0 29 52.97
31	0 38 7.85	4 6 32.6	10 22 23.0	0.23	4 18.32	0 33 49.52
32	0 41 46.34	N. 4 29 44.9	11 21 35.3	S. 0.23	4 0.26	0 37 46.07



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be subtracted from Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi-diameter.*		
Wed. 1	h m s	s	° ' "	"	' "	m s	s
Thur. 2	0 41 46.94	9.104	N. 4 29 48.7	57.90	16 1.43	4 0.21	0.750
Frid. 3	0 45 25.40	9.109	4 52 55.8	57.69	16 1.15	3 42.25	0.746
Sat. 4	0 49 4.16	9.114	5 15 57.6	57.46	16 0.88	3 24.42	0.740
Sun. 5	0 52 42.96	9.120	5 38 53.9	57.21	16 0.60	3 6.71	0.735
Mon. 6	0 56 21.91	9.126	6 1 44.2	56.96	16 0.33	2 49.16	0.728
Tues. 7	1 0 1.02	9.134	6 24 28.2	56.69	16 0.06	2 31.77	0.721
Wed. 8	1 3 40.32	9.142	6 47 5.5	56.40	15 59.79	2 14.56	0.713
Thur. 9	1 7 19.82	9.150	7 9 35.7	56.10	15 59.52	1 57.55	0.704
Frid. 10	1 10 59.54	9.160	7 31 58.6	55.79	15 59.25	1 40.77	0.694
Sat. 11	1 14 39.50	9.170	7 54 13.8	55.46	15 58.98	1 24.22	0.684
Sun. 12	1 18 19.71	9.181	8 16 20.9	55.12	15 58.72	1 7.92	0.674
Mon. 13	1 22 0.19	9.193	8 38 19.6	54.76	15 58.45	0 51.89	0.662
Tues. 14	1 25 40.97	9.205	9 0 9.6	54.40	15 58.19	0 36.16	0.649
Wed. 15	1 29 22.05	9.219	9 21 50.6	54.01	15 57.92	0 20.73	0.636
Thur. 16	1 33 3.47	9.233	9 43 22.2	53.61	15 57.66	0 5.63	0.622
Frid. 17	1 36 45.23	9.248	10 4 44.1	53.20	15 57.39	0 9.12	0.607
Sat. 18	1 40 27.36	9.263	10 25 56.0	52.78	15 57.12	0 23.50	0.591
Sun. 19	1 44 9.87	9.280	10 46 57.6	52.34	15 56.85	0 37.51	0.575
Mon. 20	1 47 52.78	9.297	11 7 48.6	51.90	15 56.59	0 51.11	0.558
Tues. 21	1 51 36.12	9.315	11 28 28.7	51.44	15 56.33	1 4.29	0.540
Wed. 22	1 55 19.89	9.333	11 48 57.6	50.96	15 56.06	1 17.04	0.522
Thur. 23	1 59 4.12	9.352	12 9 15.0	50.48	15 55.80	1 29.34	0.503
Frid. 24	2 2 48.81	9.372	12 29 20.5	49.98	15 55.53	1 41.16	0.483
Sat. 25	2 6 33.99	9.393	12 49 13.8	49.46	15 55.27	1 52.51	0.463
Sun. 26	2 10 19.65	9.413	13 8 54.6	48.93	15 55.01	2 3.37	0.442
Mon. 27	2 14 5.81	9.434	13 28 22.6	48.39	15 54.76	2 13.73	0.421
Tues. 28	2 17 52.49	9.456	13 47 37.4	47.84	15 54.51	2 23.59	0.400
Wed. 29	2 21 39.68	9.477	14 6 38.7	47.27	15 54.26	2 32.92	0.378
Thur. 30	2 25 27.40	9.499	14 25 26.3	46.68	15 54.01	2 41.73	0.356
Frid. 31	2 29 15.64	9.521	14 43 59.6	46.09	15 53.77	2 50.02	0.334
	2 33 4.41	9.543	N. 15 2 18.4	45.47	15 53.53	2 57.78	0.312

\* The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be subtracted from added to Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
1	h m s	° ' "	° ' "	"	m s	h m s
1	0 41 46.34	N. 4 29 44.9	11 21 35.3	S. 0.23	4 0.26	0 37 46.07
2	0 45 24.93	4 52 52.2	12 20 45.5	0.21	3 42.30	0 41 42.63
3	0 49 3.64	5 15 54.4	13 19 53.6	0.15	3 24.46	0 45 39.18
4	0 52 42.48	5 38 51.0	14 18 59.5	S. 0.07	3 6.75	0 49 35.73
5	0 56 21.48	6 1 41.5	15 18 3.2	N. 0.02	2 49.19	0 53 32.29
6	1 0 0.64	6 24 25.8	16 17 4.6	0.14	2 31.80	0 57 28.84
7	1 3 39.98	6 47 3.4	17 16 3.6	0.27	2 14.59	1 1 25.39
8	1 7 19.52	7 9 33.9	18 15 0.4	0.40	1 57.58	1 5 21.95
9	1 10 59.28	7 31 57.0	19 13 54.9	0.52	1.40.79	1 9 18.50
10	1 14 39.28	7 54 12.4	20 12 47.2	0.62	1 24.23	1 13 15.05
11	1 18 19.53	8 16 19.8	21 11 37.2	0.72	1 7.93	1 17 11.61
12	1 22 0.06	8 38 18.8	22 10 24.9	0.81	0 51.90	1 21 8.16
13	1 25 40.88	9 0 9.1	23 9 10.5	0.86	0 36.16	1 25 4.71
14	1 29 22.00	9 21 50.3	24 7 54.0	0.90	0 20.73	1 29 1.27
15	1 33 3.45	9 43 22.1	25 6 35.3	0.90	0 5.63	1 32 57.82
16	1 36 45.25	10 4 44.2	26 5 14.6	0.89	0 9.12	1 36 54.37
17	1 40 27.42	10 25 56.4	27 3 51.9	0.84	0 23.51	1 40 50.93
18	1 44 9.96	10 46 58.2	28 2 27.3	0.75	0 37.52	1 44 47.48
19	1 47 52.91	11 7 49.4	29 1 0.9	0.65	0 51.12	1 48 44.03
20	1 51 36.28	11 28 29.7	29 59 32.8	0.53	1 4.30	1 52 40.59
21	1 55 20.09	11 48 58.7	30 58 3.0	0.41	1 17.05	1 56 37.14
22	1 59 4.35	12 9 16.2	31 56 31.5	0.28	1 29.35	2 0 33.70
23	2 2 49.07	12 29 21.8	32 54 58.5	0.15	1 41.18	2 4 30.25
24	2 6 34.28	12.49 15.3	33 53 23.9	N. 0.03	1 52.53	2 8 26.80
25	2 10 19.97	13 8 56.2	34 51 47.7	S. 0.07	2 3.39	2 12 23.36
26	2 14 6.16	13 28 24.4	35 50 10.0	0.13	2 13.75	2 16 19.91
27	2 17 52.86	13 47 39.3	36 48 30.7	0.17	2 23.60	2 20 16.47
28	2 21 40.08	14 6 40.8	37 46 49.8	0.18	2 32.94	2 24 13.02
29	2 25 27.83	14 25 28.4	38 45 7.3	0.15	2 41.75	2 28 9.58
30	2 29 16.09	14 44 1.8	39 43 23.1	0.10	2 50.04	2 32 6.13
31	2 33 4.89	N. 15 2 20.6	40 41 37.1	S. 0.03	2 57.80	2 36 2.68



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be subtracted from Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi-diameter.*		
	h m s	s	° / '	'	' / ''	m s	s
Frid. 1	2 33 4'41	9'543	N.15 2 18'4	45'47	15 53'53	2 57'78	0'312
Sat. 2	2 36 53'72	9'565	15 20 22'3	44'85	15 53'29	3 5'01	0'290
Sun. 3	2 40 43'57	9'588	15 38 11'0	44'21	15 53'06	3 11'70	0'268
Mon. 4	2 44 33'96	9'611	15 55 44'2	43'55	15 52'83	3 17'85	0'245
Tues. 5	2 48 24'88	9'633	16 13 1'5	42'88	15 52'61	3 23'46	0'223
Wed. 6	2 52 16'36	9'656	16 30 2'6	42'20	15 52'39	3 28'53	0'200
Thur. 7	2 56 8'39	9'679	16 46 47'1	41'50	15 52'17	3 33'04	0'177
Frid. 8	3 0 0'97	9'702	17 3 14'8	40'80	15 51'95	3 37'01	0'154
Sat. 9	3 3 54'10	9'726	17 19 25'5	40'08	15 51'74	3 40'42	0'130
Sun. 10	3 7 47'80	9'749	17 35 18'8	39'35	15 51'53	3 43'27	0'107
Mon. 11	3 11 42'05	9'772	17 50 54'4	38'61	15 51'32	3 45'57	0'084
Tues. 12	3 15 36'86	9'796	18 6 11'9	37'85	15 51'12	3 47'31	0'061
Wed. 13	3 19 32'24	9'819	18 21 11'1	37'08	15 50'92	3 48'49	0'037
Thur. 14	3 23 28'18	9'842	18 35 51'8	36'30	15 50'72	3 49'10	0'014
Frid. 15	3 27 24'68	9'866	18 50 13'7	35'51	15 50'52	3 49'15	0'010
Sat. 16	3 31 21'76	9'890	19 4 16'5	34'71	15 50'32	3 48'63	0'033
Sun. 17	3 35 19'40	9'914	19 18 0'0	33'90	15 50'12	3 47'55	0'057
Mon. 18	3 39 17'61	9'937	19 31 23'9	33'08	15 49'93	3 45'90	0'081
Tues. 19	3 43 16'39	9'961	19 44 28'0	32'25	15 49'74	3 43'68	0'104
Wed. 20	3 47 15'74	9'985	19 57 12'0	31'41	15 49'55	3 40'90	0'128
Thur. 21	3 51 15'65	10'008	20 9 35'7	30'56	15 49'36	3 37'55	0'151
Frid. 22	3 55 16'12	10'031	20 21 38'8	29'70	15 49'18	3 33'65	0'174
Sat. 23	3 59 17'14	10'054	20 33 21'2	28'83	15 49'00	3 29'20	0'197
Sun. 24	4 3 18'70	10'076	20 44 42'5	27'95	15 48'82	3 24'21	0'219
Mon. 25	4 7 20'80	10'098	20 55 42'6	27'05	15 48'65	3 18'68	0'241
Tues. 26	4 11 23'41	10'119	21 6 21'1	26'15	15 48'48	3 12'64	0'262
Wed. 27	4 15 26'53	10'140	21 16 37'9	25'24	15 48'32	3 6'10	0'283
Thur. 28	4 19 30'13	10'160	21 26 32'7	24'32	15 48'17	2 59'07	0'303
Frid. 29	4 23 34'21	10'179	21 36 5'3	23'39	15 48'01	2 51'57	0'322
Sat. 30	4 27 38'74	10'198	21 45 15'4	22'45	15 47'86	2 43'62	0'340
Sun. 31	4 31 43'70	10'215	21 54 2'9	21'50	15 47'72	2 35'24	0'358
Mon. 32	4 35 49'08	10'233	N.22 2 27'6	20'55	15 47'58	2 26'44	0'375

\* The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be added to Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
	h m s	° / '	' / ''	'	m s	h m s
1	2 33 4'89	N. 15 2 20'6	40 41 37'1	S. 0'03	2 57'80	2 36 2'68
2	2 36 54'21	15 20 24'6	41 39 49'4	N. 0'08	3 5'03	2 39 59'24
3	2 40 44'08	15 38 13'3	42 37 59'8	0'19	3 11'72	2 43 55'79
4	2 44 34'49	15 55 46'5	43 36 8'3	0'31	3 17'86	2 47 52'35
5	2 48 25'43	16 13 3'9	44 34 14'9	0'44	3 23'47	2 51 48'90
6	2 52 16'92	16 30 5'0	45 32 19'7	0'56	3 28'54	2 55 45'46
7	2 56 8'96	16 46 49'6	46 30 22'5	0'67	3 33'05	2 59 42'01
8	3 0 1'55	17 3 17'3	47 28 23'5	0'78	3 37'02	3 3 38'57
9	3 3 54'70	17 19 28'0	48 26 22'6	0'87	3 40'43	3 7 35'13
10	3 7 48'40	17 35 21'2	49 24 19'9	0'93	3 43'28	3 11 31'68
11	3 11 42'66	17 50 56'8	50 22 15'4	0'97	3 45'57	3 15 28'24
12	3 15 37'48	18 6 14'2	51 20 9'1	0'97	3 47'31	3 19 24'79
13	3 19 32'86	18 21 13'4	52 18 1'0	0'95	3 48'49	3 23 21'35
14	3 23 28'80	18 35 54'1	53 15 51'3	0'90	3 49'10	3 27 17'91
15	3 27 25'31	18 50 15'9	54 13 40'1	0'82	3 49'15	3 31 14'46
16	3 31 22'39	19 4 18'7	55 11 27'3	0'73	3 48'63	3 35 11'02
17	3 35 20'03	19 18 2'1	56 9 13'2	0'61	3 47'55	3 39 7'57
18	3 39 18'24	19 31 26'0	57 6 57'7	0'48	3 45'89	3 43 4'13
19	3 43 17'01	19 44 30'0	58 4 41'0	0'34	3 43'67	3 47 0'69
20	3 47 16'35	19 57 13'9	59 2 23'2	0'20	3 40'89	3 50 57'24
21	3 51 16'26	20 9 37'5	60 0 4'3	N. 0'07	3 37'54	3 54 53'80
22	3 55 16'72	20 21 40'6	60 57 44'4	S. 0'04	3 33'64	3 58 50'35
23	3 59 17'73	20 33 22'9	61 55 23'6	0'11	3 29'19	4 2 46'91
24	4 3 19'27	20 44 44'1	62 53 1'8	0'16	3 24'20	4 6 43'47
25	4 7 21'35	20 55 44'0	63 50 39'0	0'19	3 18'67	4 10 40'02
26	4 11 23'95	21 6 22'5	64 48 15'3	0'17	3 12'63	4 14 36'58
27	4 15 27'05	21 16 39'2	65 45 50'7	0'13	3 6'09	4 18 33'14
28	4 19 30'63	21 26 33'9	66 43 25'1	S. 0'06	2 59'06	4 22 29'69
29	4 23 34'69	21 36 6'4	67 40 58'5	N. 0'05	2 51'56	4 26 26'25
30	4 27 39'20	21 45 16'5	68 38 30'8	0'17	2 43'61	4 30 22'81
31	4 31 44'14	21 54 3'9	69 36 2'0	0'30	2 35'22	4 34 19'37
32	4 35 49'50	N. 22 2 28'4	70 33 32'2	N. 0'42	2 26'42	4 38 15'92



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be subtracted from added to Apparent Time.	Var. in 1 hour.	
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi-diameter.*			
	h m s	s	° / ' "	"	' "	m s	s	
Mon.	1	4 35 49.08	10.233	N. 22 2 27.6	20.55	15 47.58	2 26.44	0.375
Tues.	2	4 39 54.86	10.249	22 10 29.2	19.58	15 47.45	2 17.25	0.391
Wed.	3	4 44 1.01	10.264	22 18 7.6	18.61	15 47.32	2 7.68	0.406
Thur.	4	4 48 7.52	10.278	22 25 22.6	17.63	15 47.20	1 57.75	0.421
Frid.	5	4 52 14.36	10.292	22 32 13.9	16.65	15 47.08	1 47.49	0.434
Sat.	6	4 56 21.53	10.305	22 38 41.6	15.66	15 46.97	1 36.91	0.447
Sun.	7	5 0 28.99	10.317	22 44 45.5	14.66	15 46.86	1 26.04	0.459
Mon.	8	5 4 36.73	10.328	22 50 25.4	13.66	15 46.75	1 14.89	0.470
Tues.	9	5 8 44.72	10.338	22 55 41.1	12.65	15 46.65	1 3.49	0.480
Wed.	10	5 12 52.95	10.348	23 0 32.7	11.64	15 46.55	0 51.85	0.490
Thur.	11	5 17 1.40	10.356	23 5 0.0	10.63	15 46.45	0 39.99	0.498
Frid.	12	5 21 10.04	10.364	23 9 2.8	9.61	15 46.36	0 27.93	0.506
Sat.	13	5 25 18.87	10.371	23 12 41.3	8.59	15 46.27	0 15.70	0.513
Sun.	14	5 29 27.85	10.377	23 15 55.1	7.56	15 46.19	0 3.31	0.519
Mon.	15	5 33 36.98	10.383	23 18 44.3	6.54	15 46.10	0 9.23	0.525
Tues.	16	5 37 46.23	10.388	23 21 9.0	5.51	15 46.02	0 21.89	0.530
Wed.	17	5 41 55.60	10.392	23 23 8.9	4.48	15 45.95	0 34.66	0.534
Thur.	18	5 46 5.05	10.395	23 24 44.1	3.45	15 45.87	0 47.52	0.537
Frid.	19	5 50 14.58	10.398	23 25 54.6	2.42	15 45.80	1 0.45	0.540
Sat.	20	5 54 24.15	10.399	23 26 40.3	1.39	15 45.73	1 13.43	0.541
Sun.	21	5 58 33.75	10.400	23 27 1.3	0.36	15 45.67	1 26.44	0.542
Mon.	22	6 2 43.35	10.400	23 26 57.5	0.68	15 45.61	1 39.45	0.541
Tues.	23	6 6 52.93	10.398	23 26 28.8	1.71	15 45.56	1 52.43	0.540
Wed.	24	6 11 2.46	10.396	23 25 35.5	2.74	15 45.51	2 5.37	0.538
Thur.	25	6 15 11.92	10.392	23 24 17.3	3.77	15 45.46	2 18.24	0.534
Frid.	26	6 19 21.27	10.387	23 22 34.5	4.79	15 45.43	2 31.00	0.529
Sat.	27	6 23 30.49	10.381	23 20 27.0	5.82	15 45.40	2 43.63	0.523
Sun.	28	6 27 39.56	10.374	23 17 54.9	6.85	15 45.37	2 56.10	0.516
Mon.	29	6 31 48.45	10.366	23 14 58.3	7.87	15 45.35	3 8.40	0.508
Tues.	30	6 35 57.13	10.356	23 11 37.1	8.89	15 45.33	3 20.49	0.499
Wed.	31	6 40 5.57	10.346	N. 23 7 51.6	9.90	15 45.32	3 32.34	0.488

\* The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be added to subtracted from Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
	h m s	° / ' "	° / ' "	"	m s	h m s
1	4 35 49.50	N. 22 2 28.4	70 33 32.2	N. 0.42	2 26.42	4 38 15.92
2	4 39 55.25	22 10 29.9	71 31 1.2	0.54	2 17.23	4 42 12.48
3	4 44 1.37	22 18 8.2	72 28 29.0	0.66	2 7.67	4 46 9.04
4	4 48 7.85	22 25 23.1	73 25 55.7	0.76	1 57.74	4 50 5.59
5	4 52 14.67	22 32 14.4	74 23 21.3	0.85	1 47.48	4 54 2.15
6	4 56 21.81	22 38 42.1	75 20 45.7	0.91	1 36.90	4 57 58.71
7	5 0 29.24	22 44 45.8	76 18 9.0	0.95	1 26.03	5 1 55.27
8	5 4 36.94	22 50 25.6	77 15 31.3	0.96	1 14.88	5 5 51.82
9	5 8 44.90	22 55 41.4	78 12 52.5	0.95	1 3.48	5 9 48.38
10	5 12 53.10	23 0 32.9	79 10 12.6	0.90	0 51.84	5 13 44.94
11	5 17 1.51	23 5 0.1	80 7 31.8	0.82	0 39.98	5 17 41.50
12	5 21 10.12	23 9 2.9	81 4 50.1	0.73	0 27.93	5 21 38.05
13	5 25 18.91	23 12 41.3	82 2 7.6	0.61	0 15.70	5 25 34.61
14	5 29 27.86	23 15 55.1	82 59 24.3	0.47	0 3.31	5 29 31.17
15	5 33 36.95	23 18 44.3	83 56 40.4	0.33	0 9.23	5 33 27.73
16	5 37 46.17	23 21 8.9	84 53 56.0	0.20	0 21.89	5 37 24.28
17	5 41 55.50	23 23 8.8	85 51 11.2	N. 0.06	0 34.66	5 41 20.84
18	5 46 4.91	23 24 44.0	86 48 26.1	S. 0.07	0 47.52	5 45 17.40
19	5 50 14.40	23 25 54.5	87 45 40.8	0.17	1 0.44	5 49 13.96
20	5 54 23.94	23 26 40.2	88 42 55.3	0.23	1 13.42	5 53 10.51
21	5 58 33.50	23 27 1.3	89 40 9.7	0.25	1 26.43	5 57 7.07
22	6 2 43.06	23 26 57.5	90 37 23.9	0.25	1 39.44	6 1 3.63
23	6 6 52.60	23 26 28.9	91 34 38.1	0.23	1 52.42	6 5 0.19
24	6 11 2.10	23 25 35.6	92 31 52.2	0.17	2 5.35	6 8 56.75
25	6 15 11.52	23 24 17.5	93 29 6.3	S. 0.09	2 18.21	6 12 53.30
26	6 19 20.84	23 22 34.7	94 26 20.3	N. 0.02	2 30.97	6 16 49.86
27	6 23 30.02	23 20 27.3	95 23 34.1	0.15	2 43.61	6 20 46.42
28	6 27 39.06	23 17 55.3	96 20 47.8	0.28	2 56.08	6 24 42.98
29	6 31 47.91	23 14 58.7	97 18 1.4	0.40	3 8.37	6 28 39.53
30	6 35 56.55	23 11 37.6	98 15 14.7	0.52	3 20.46	6 32 36.09
31	6 40 4.96	N. 23 7 52.2	99 12 27.9	N. 0.63	3 32.31	6 36 32.65



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be added to Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi-diameter.*		
Wed. 1	6 40 5'57	10'346	N.23 7 51'6	9'90	15 45'32	3 32'34	0'488
Thur. 2	6 44 13'75	10'335	23 3 41'7	10'91	15 45'32	3 43'93	0'477
Frid. 3	6 48 21'64	10'323	22 59 7'7	11'92	15 45'32	3 55'24	0'465
Sat. 4	6 52 29'23	10'309	22 54 9'6	12'92	15 45'33	4 6'24	0'451
Sun. 5	6 56 36'49	10'295	22 48 47'6	13'91	15 45'34	4 16'91	0'437
Mon. 6	7 0 43'40	10'280	22 43 1'7	14'90	15 45'36	4 27'23	0'422
Tues. 7	7 4 49'93	10'264	22 36 52'2	15'88	15 45'38	4 37'18	0'406
Wed. 8	7 8 56'08	10'248	22 30 19'2	16'86	15 45'40	4 46'74	0'390
Thur. 9	7 13 1'81	10'230	22 23 22'8	17'83	15 45'43	4 55'89	0'373
Frid. 10	7 17 7'12	10'212	22 16 3'3	18'79	15 45'46	5 4'62	0'355
Sat. 11	7 21 11'99	10'193	22 8 20'8	19'75	15 45'50	5 12'91	0'336
Sun. 12	7 25 16'40	10'174	22 0 15'4	20'69	15 45'54	5 20'74	0'317
Mon. 13	7 29 20'35	10'155	21 51 47'5	21'63	15 45'58	5 28'11	0'298
Tues. 14	7 33 23'83	10'135	21 42 57'1	22'56	15 45'62	5 35'02	0'278
Wed. 15	7 37 26'82	10'115	21 33 44'5	23'48	15 45'67	5 41'44	0'258
Thur. 16	7 41 29'33	10'094	21 24 9'8	24'40	15 45'73	5 47'38	0'237
Frid. 17	7 45 31'34	10'073	21 14 13'4	25'30	15 45'78	5 52'81	0'216
Sat. 18	7 49 32'84	10'052	21 3 55'3	26'20	15 45'84	5 57'73	0'195
Sun. 19	7 53 33'83	10'030	20 53 15'8	27'09	15 45'90	6 2'15	0'173
Mon. 20	7 57 34'29	10'008	20 42 15'2	27'96	15 45'97	6 6'05	0'151
Tues. 21	8 1 34'22	9'986	20 30 53'6	28'83	15 46'04	6 9'42	0'129
Wed. 22	8 5 33'61	9'963	20 19 11'3	29'69	15 46'11	6 12'24	0'106
Thur. 23	8 9 32'45	9'940	20 7 8'6	30'54	15 46'19	6 14'51	0'083
Frid. 24	8 13 30'72	9'916	19 54 45'6	31'38	15 46'27	6 16'23	0'059
Sat. 25	8 17 28'42	9'892	19 42 2'6	32'20	15 46'36	6 17'37	0'035
Sun. 26	8 21 25'54	9'868	19 29 0'0	33'01	15 46'46	6 17'93	0'011
Mon. 27	8 25 22'07	9'843	19 15 38'0	33'81	15 46'56	6 17'90	0'014
Tues. 28	8 29 18'00	9'818	19° 1 56'8	34'61	15 46'66	6 17'28	0'039
Wed. 29	8 33 13'33	9'792	18 47 56'8	35'39	15 46'77	6 16'06	0'064
Thur. 30	8 37 8'04	9'767	18 33 38'1	36'16	15 46'89	6 14'23	0'089
Frid. 31	8 41 2'15	9'741	18 19 1'2	36'91	15 47'01	6 11'80	0'115
Sat. 32	8 44 55'64	9'716	N.18 4 6'3	37'66	15 47'14	6 8'74	0'141

\* The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be subtracted from Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
1	6 40 4'96	N. 23 7 52'2	99 12 27'9	N. 0'63	3 32'31	6 36 32'65
2	6 44 13'11	23 3 42'4	100 9 40'9	0'72	3 43'90	6 40 29'21
3	6 48 20'97	22 59 8'5	101 6 53'6	0'80	3 55'21	6 44 25'76
4	6 52 28'53	22 54 10'5	102 4 6'2	0'84	4 6'21	6 48 22'32
5	6 56 35'76	22 48 48'6	103 1 18'5	0'85	4 16'88	6 52 18'88
6	7 0 42'64	22 43 2'8	103 58 30'6	0'85	4 27'20	6 56 15'44
7	7 4 49'14	22 36 53'4	104 55 42'6	0'82	4 37'15	7 0 11'99
8	7 8 55'26	22 30 20'5	105 52 54'4	0'76	4 46'71	7 4 8'55
9	7 13 0'97	22 23 24'3	106 50 6'1	0'67	4 55'86	7 8 5'11
10	7 17 6'26	22 16 4'9	107 47 17'7	0'56	5 4'59	7 12 1'66
11	7 21 11'10	22 8 22'5	108 44 29'3	0'43	5 12'88	7 15 58'22
12	7 25 15'49	22 0 17'3	109 41 41'0	0'29	5 20'71	7 19 54'78
13	7 29 19'42	21 51 49'5	110 38 52'9	N. 0'14	5 28'09	7 23 51'34
14	7 33 22'88	21 42 59'2	111 36 5'1	0'00	5 34'99	7 27 47'89
15	7 37 25'86	21 33 46'7	112 33 17'6	S. 0'13	5 41'42	7 31 44'45
16	7 41 28'35	21 24 12'2	113 30 30'7	0'24	5 47'35	7 35 41'01
17	7 45 30'35	21 14 15'9	114 27 44'4	0'31	5 52'78	7 39 37'56
18	7 49 31'84	21 3 57'9	115 24 58'7	0'36	5 57'72	7 43 34'12
19	7 53 32'82	20 53 18'5	116 22 13'9	0'38	6 2'14	7 47 30'68
20	7 57 33'28	20 42 18'0	117 19 29'8	0'35	6 6'04	7 51 27'24
21	8 1 33'20	20 30 56'5	118 16 46'6	0'30	6 9'41	7 55 23'79
22	8 5 32'58	20 19 14'4	119 14 4'2	0'22	6 12'23	7 59 20'35
23	8 9 31'41	20 7 11'7	120 11 22'6	S. 0'12	6 14'50	8 3 16'90
24	8 13 29'68	19 54 48'8	121 8 41'9	0'00	6 16'22	8 7 13'46
25	8 17 27'38	19 42 6'0	122 6 2'1	N. 0'13	6 17'36	8 11 10'02
26	8 21 24'50	19 29 3'5	123 3 23'1	0'25	6 17'93	8 15 6'57
27	8 25 21'03	19 15 41'5	124 0 44'9	0'37	6 17'90	8 19 3'13
28	8 29 16'96	19 2 0'4	124 58 7'5	0'48	6 17'28	8 22 59'69
29	8 33 12'30	18 48 0'4	125 55 30'9	0'58	6 16'06	8 26 56'24
30	8 37 7'03	18 33 41'9	126 52 55'1	0'66	6 14'23	8 30 52'80
31	8 41 1'15	18 19 5'0	127 50 20'0	0'72	6 11'80	8 34 49'35
32	8 44 54'65	N. 18 4 10'1	128 47 45'6	N. 0'75	6 8'74	8 38 45'91



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be added to subtracted from Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi- diameter.*		
	h m s	s	° / '	"	' "	m s	s
Sat. 1	8 44 55.64	9.716	N. 18 4 6.3	37.66	15 47.14	6 8.74	0.141
Sun. 2	8 48 48.51	9.690	17 48 53.7	38.39	15 47.27	6 5.05	0.167
Mon. 3	8 52 40.76	9.664	17 33 23.7	39.11	15 47.40	6 0.75	0.192
Tues. 4	8 56 32.38	9.638	17 17 36.6	39.81	15 47.54	5 55.83	0.218
Wed. 5	9 0 23.38	9.612	17 1 32.7	40.51	15 47.69	5 50.29	0.243
Thur. 6	9 4 13.76	9.587	16 45 12.3	41.19	15 47.84	5 44.14	0.269
Frid. 7	9 8 3.53	9.561	16 28 35.8	41.85	15 47.99	5 37.37	0.295
Sat. 8	9 11 52.69	9.536	16 11 43.4	42.51	15 48.14	5 29.99	0.320
Sun. 9	9 15 41.25	9.511	15 54 35.5	43.15	15 48.30	5 22.01	0.345
Mon. 10	9 19 29.21	9.487	15 37 12.3	43.78	15 48.46	5 13.45	0.369
Tues. 11	9 23 16.59	9.463	15 19 34.1	44.40	15 48.62	5 4.30	0.393
Wed. 12	9 27 3.40	9.439	15 1 41.3	45.00	15 48.79	4 54.59	0.416
Thur. 13	9 30 49.66	9.416	14 43 34.2	45.59	15 48.95	4 44.32	0.439
Frid. 14	9 34 35.37	9.394	14 25 12.9	46.18	15 49.12	4 33.50	0.462
Sat. 15	9 38 20.55	9.372	14 6 37.8	46.74	15 49.30	4 22.15	0.483
Sun. 16	9 42 5.22	9.351	13 47 49.2	47.30	15 49.47	4 10.30	0.504
Mon. 17	9 45 49.38	9.330	13 28 47.4	47.84	15 49.65	3 57.94	0.525
Tues. 18	9 49 33.05	9.309	13 9 32.8	48.37	15 49.83	3 45.09	0.546
Wed. 19	9 53 16.23	9.289	12 50 5.5	48.89	15 50.01	3 31.76	0.565
Thur. 20	9 56 58.94	9.270	12 30 25.9	49.40	15 50.20	3 17.95	0.585
Frid. 21	10 0 41.20	9.251	12 10 34.4	49.89	15 50.39	3 3.69	0.604
Sat. 22	10 4 23.01	9.233	11 50 31.2	50.37	15 50.58	2 48.99	0.622
Sun. 23	10 8 4.37	9.214	11 30 16.6	50.84	15 50.78	2 33.84	0.640
Mon. 24	10 11 45.31	9.197	11 9 51.1	51.29	15 50.98	2 18.26	0.658
Tues. 25	10 15 25.82	9.180	10 49 14.9	51.73	15 51.19	2 2.26	0.675
Wed. 26	10 19 5.93	9.163	10 28 28.3	52.15	15 51.40	1 45.86	0.692
Thur. 27	10 22 45.65	9.147	10 7 31.7	52.56	15 51.61	1 29.07	0.708
Frid. 28	10 26 24.98	9.131	9 46 25.5	52.95	15 51.83	1 11.89	0.724
Sat. 29	10 30 3.94	9.116	9 25 9.9	53.34	15 52.05	0 54.34	0.739
Sun. 30	10 33 42.54	9.101	9 3 45.3	53.70	15 52.28	0 36.44	0.753
Mon. 31	10 37 20.79	9.087	8 42 12.1	54.06	15 52.51	0 18.20	0.767
Tues. 32	10 40 58.72	9.074	N. 8 20 30.5	54.40	15 52.74	0 0.38	0.780

\* The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be subtracted from added to Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
	h m s	° / '	' "	"	m s	h m s
1	8 44 54.65	N. 18 4 10.1	128 47 45.6	N. 0.75	6 8.74	8 38 45.91
2	8 48 47.53	17 48 57.5	129 45 11.9	0.75	6 5.06	8 42 42.46
3	8 52 39.79	17 33 27.6	130 42 38.9	0.72	6 0.77	8 46 39.02
4	8 56 31.43	17 17 40.5	131 40 6.7	0.67	5 55.85	8 50 35.58
5	9 0 22.45	17 1 36.6	132 37 35.1	0.58	5 50.31	8 54 32.13
6	9 4 12.85	16 45 16.2	133 35 4.3	0.48	5 44.16	8 58 28.69
7	9 8 2.64	16 28 39.7	134 32 34.3	0.36	5 37.40	9 2 25.24
8	9 11 51.82	16 11 47.3	135 30 5.1	0.22	5 30.03	9 6 21.80
9	9 15 40.40	15 54 39.3	136 27 36.7	N. 0.08	5 22.05	9 10 18.35
10	9 19 28.38	15 37 16.1	137 25 9.2	S. 0.06	5 13.48	9 14 14.91
11	9 23 15.79	15 19 37.9	138 22 42.8	0.19	5 4.33	9 18 11.46
12	9 27 2.64	15 1 45.0	139 20 17.5	0.30	4 54.62	9 22 8.02
13	9 30 48.93	14 43 37.7	140 17 53.4	0.37	4 44.35	9 26 4.57
14	9 34 34.66	14 25 16.4	141 15 30.7	0.42	4 33.53	9 30 1.13
15	9 38 19.87	14 6 41.2	142 13 9.4	0.44	4 22.19	9 33 57.68
16	9 42 4.56	13 47 52.5	143 10 49.6	0.42	4 10.33	9 37 54.24
17	9 45 48.76	13 28 50.6	144 8 31.4	0.38	3 57.97	9 41 50.79
18	9 49 32.47	13 9 35.8	145 6 14.9	0.31	3 45.12	9 45 47.34
19	9 53 15.69	12 50 8.4	146 4 0.0	0.21	3 31.79	9 49 43.90
20	9 56 58.43	12 30 28.6	147 1 46.8	S. 0.10	3 17.98	9 53 40.45
21	10 0 40.73	12 10 36.9	147 59 35.3	N. 0.03	3 3.72	9 57 37.01
22	10 4 22.58	11 50 33.5	148 57 25.4	0.16	2 49.02	10 1 33.56
23	10 8 3.98	11 30 18.8	149 55 17.2	0.28	2 33.87	10 5 30.12
24	10 11 44.96	11 9 53.1	150 53 10.6	0.39	2 18.29	10 9 26.67
25	10 15 25.51	10 49 16.6	151 51 5.7	0.49	2 2.29	10 13 23.22
26	10 19 5.66	10 28 29.8	152 49 2.4	0.57	1 45.89	10 17 19.78
27	10 22 45.42	10 7 33.0	153 47 0.6	0.64	1 29.09	10 21 16.33
28	10 26 24.79	9 46 26.5	154 45 0.4	0.67	1 11.91	10 25 12.89
29	10 30 3.80	9 25 10.7	155 43 1.7	0.67	0 54.36	10 29 9.44
30	10 33 42.45	9 3 45.8	156 41 4.5	0.65	0 36.45	10 33 5.99
31	10 37 20.75	8 42 12.3	157 39 8.8	0.61	0 18.20	10 37 2.55
32	10 40 58.73	N. 8 20 30.5	158 37 14.5	N. 0.54	0 0.38	10 40 59.10



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be subtracted from Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi-diameter.*		
	h m s	s	° / ' "	"	' "	m s	s
Tues. 1	10 40 58.72	9.074	N. 8 20 30.5	54.40	15 52.74	0 0.38	0.780
Wed. 2	10 44 36.33	9.061	7 58 40.9	54.72	15 52.97	0 19.27	0.793
Thur. 3	10 48 13.63	9.049	7 36 43.8	55.03	15 53.21	0 38.46	0.805
Frid. 4	10 51 50.66	9.038	7 14 39.3	55.33	15 53.45	0 57.94	0.817
Sat. 5	10 55 27.42	9.027	6 52 27.8	55.62	15 53.70	1 17.68	0.827
Sun. 6	10 59 3.93	9.017	6 30 9.7	55.89	15 53.94	1 37.66	0.837
Mon. 7	11 2 40.21	9.008	6 7 45.3	56.14	15 54.19	1 57.88	0.846
Tues. 8	11 6 16.28	9.000	5 45 14.9	56.39	15 54.44	2 18.31	0.855
Wed. 9	11 9 52.18	8.992	5 22 38.8	56.62	15 54.69	2 38.91	0.862
Thur. 10	11 13 27.91	8.986	4 59 57.3	56.83	15 54.94	2 59.68	0.868
Frid. 11	11 17 3.50	8.981	4 37 10.8	57.04	15 55.19	3 20.58	0.873
Sat. 12	11 20 38.98	8.976	4 14 19.5	57.23	15 55.44	3 41.59	0.877
Sun. 13	11 24 14.37	8.973	3 51 23.6	57.41	15 55.69	4 2.70	0.881
Mon. 14	11 27 49.70	8.971	3 28 23.6	57.58	15 55.94	4 23.87	0.883
Tues. 15	11 31 24.98	8.969	3 5 19.7	57.74	15 56.19	4 45.08	0.885
Wed. 16	11 35 0.24	8.969	2 42 12.2	57.88	15 56.45	5 6.32	0.885
Thur. 17	11 38 35.50	8.969	2 19 1.5	58.01	15 56.70	5 27.56	0.885
Frid. 18	11 42 10.78	8.970	1 55 47.9	58.12	15 56.96	5 48.78	0.883
Sat. 19	11 45 46.09	8.972	1 32 31.7	58.22	15 57.22	6 9.95	0.881
Sun. 20	11 49 21.46	8.975	1 9 13.3	58.31	15 57.48	6 31.07	0.879
Mon. 21	11 52 56.90	8.979	0 45 53.0	58.38	15 57.74	6 52.13	0.875
Tues. 22	11 56 32.44	8.983	N. 0 22 31.1	58.44	15 58.00	7 13.09	0.871
Wed. 23	12 0 8.09	8.988	S. 0 0 52.0	58.48	15 58.27	7 33.94	0.866
Thur. 24	12 3 43.86	8.994	0 24 15.9	58.51	15 58.54	7 54.66	0.860
Frid. 25	12 7 19.78	9.000	0 47 40.4	58.52	15 58.81	8 15.23	0.854
Sat. 26	12 10 55.86	9.007	1 11 4.9	58.52	15 59.09	8 35.65	0.847
Sun. 27	12 14 32.13	9.015	1 34 29.2	58.50	15 59.36	8 55.89	0.839
Mon. 28	12 18 8.59	9.024	1 57 52.9	58.47	15 59.64	9 15.92	0.830
Tues. 29	12 21 45.27	9.034	2 21 15.5	58.42	15 59.92	9 35.73	0.821
Wed. 30	12 25 22.18	9.044	2 44 36.9	58.35	16 0.20	9 55.32	0.811
Thur. 31	12 28 59.35	9.054	S. 3 7 56.5	58.27	16 0.48	10 14.66	0.800

\* The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be added to Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
	h m s	° / ' "	° / ' "	"	m s	h m s
1	10 40 58.73	N. 8 20 30.5	158 37 14.5	N. 0.54	0 0.38	10 40 59.10
2	10 44 36.38	7 58 40.6	159 35 21.6	0.44	0 19.28	10 44 55.65
3	10 48 13.74	7 36 43.2	160 33 30.2	0.32	0 38.47	10 48 52.21
4	10 51 50.81	7 14 38.4	161 31 40.2	0.19	0 57.95	10 52 48.76
5	10 55 27.61	6 52 26.6	162 29 51.6	N. 0.06	1 17.70	10 56 45.31
6	10 59 4.18	6 30 8.2	163 28 4.5	S. 0.08	1 37.69	11 0 41.87
7	11 2 40.51	6 7 43.5	164 26 18.9	0.21	1 57.91	11 4 38.42
8	11 6 16.03	5 45 12.7	165 24 34.8	0.32	2 18.34	11 8 34.97
9	11 9 52.57	5 22 36.3	166 22 52.4	0.40	2 38.95	11 12 31.52
10	11 13 28.36	4 59 54.5	167 21 11.7	0.45	2 59.72	11 16 28.08
11	11 17 4.00	4 37 7.6	168 19 32.8	0.47	3 20.63	11 20 24.63
12	11 20 39.54	4 14 15.9	169 17 55.9	0.46	3 41.65	11 24 21.18
13	11 24 14.98	3 51 19.8	170 16 20.9	0.43	4 2.76	11 28 17.74
14	11 27 50.35	3 28 19.4	171 14 48.1	0.37	4 23.94	11 32 14.29
15	11 31 25.69	3 5 15.1	172 13 17.4	0.28	4 45.15	11 36 10.84
16	11 35 1.00	2 42 7.3	173 11 48.8	0.17	5 6.39	11 40 7.40
17	11 38 36.31	2 18 56.3	174 10 22.4	S. 0.04	5 27.64	11 44 3.95
18	11 42 11.64	1 55 42.3	175 8 58.4	N. 0.08	5 48.86	11 48 0.50
19	11 45 47.01	1 32 25.7	176 7 36.5	0.19	6 10.04	11 51 57.05
20	11 49 22.44	1 9 6.9	177 6 16.8	0.30	6 31.17	11 55 53.61
21	11 52 57.93	0 45 46.3	178 4 59.2	0.39	6 52.23	11 59 50.16
22	11 56 33.52	N. 0 22 24.0	179 3 43.8	0.47	7 13.19	12 3 46.71
23	12 0 9.22	S. 0 0 59.4	180 2 30.5	0.53	7 34.04	12 7 43.26
24	12 3 45.05	0 24 23.7	181 1 19.3	0.57	7 54.77	12 11 39.82
25	12 7 21.02	0 47 48.4	182 0 10.2	0.57	8 15.35	12 15 36.37
26	12 10 57.16	1 11 13.3	182 59 3.1	0.55	8 35.77	12 19 32.92
27	12 14 33.47	1 34 37.9	183 57 57.9	0.51	8 56.01	12 23 29.48
28	12 18 9.98	1 58 1.9	184 56 54.7	0.44	9 16.05	12 27 26.03
29	12 21 46.72	2 21 24.9	185 55 53.3	0.35	9 35.87	12 31 22.58
30	12 25 23.68	2 44 46.5	186 54 53.8	0.23	9 55.46	12 35 19.13
31	12 29 0.89	S. 3 8 6.4	187 53 56.1	N. 0.10	10 14.80	12 39 15.69



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be subtracted from Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi-diameter.*		
Thur. 1	12 28 59.35	9.054	S. 3 7 56.5	58.27	16 0.48	10 14.66	0.800
Frid. 2	12 32 36.78	9.066	3 31 14.0	58.18	16 0.76	10 33.73	0.788
Sat. 3	12 36 14.50	9.079	3 54 29.0	58.07	16 1.04	10 52.51	0.776
Sun. 4	12 39 52.53	9.092	4 17 41.2	57.94	16 1.33	11 10.98	0.763
Mon. 5	12 43 30.89	9.106	4 40 50.1	57.80	16 1.61	11 29.12	0.749
Tues. 6	12 47 9.60	9.121	5 3 55.5	57.64	16 1.89	11 46.92	0.734
Wed. 7	12 50 48.68	9.137	5 26 57.0	57.47	16 2.17	12 4.34	0.717
Thur. 8	12 54 28.17	9.154	5 49 54.2	57.29	16 2.45	12 21.36	0.701
Frid. 9	12 58 8.07	9.172	6 12 46.9	57.09	16 2.73	12 37.97	0.683
Sat. 10	13 1 48.41	9.191	6 35 34.7	56.88	16 3.01	12 54.12	0.664
Sun. 11	13 5 29.23	9.211	6 58 17.1	56.65	16 3.28	13 9.82	0.644
Mon. 12	13 9 10.54	9.232	7 20 53.9	56.41	16 3.56	13 25.03	0.623
Tues. 13	13 12 52.36	9.253	7 43 24.8	56.15	16 3.83	13 39.73	0.601
Wed. 14	13 16 34.72	9.276	8 5 49.3	55.88	16 4.10	13 53.88	0.578
Thur. 15	13 20 17.63	9.300	8 28 7.2	55.60	16 4.37	14 7.47	0.555
Frid. 16	13 24 1.12	9.324	8 50 18.0	55.30	16 4.64	14 20.50	0.531
Sat. 17	13 27 45.20	9.349	9 12 21.4	54.98	16 4.90	14 32.94	0.506
Sun. 18	13 31 29.90	9.375	9 34 17.0	54.65	16 5.17	14 44.76	0.480
Mon. 19	13 35 15.22	9.402	9 56 4.4	54.30	16 5.43	14 55.97	0.454
Tues. 20	13 39 1.18	9.429	10 17 43.3	53.93	16 5.70	15 6.54	0.427
Wed. 21	13 42 47.80	9.456	10 39 13.1	53.55	16 5.96	15 16.45	0.399
Thur. 22	13 46 35.08	9.484	11 0 33.5	53.15	16 6.23	15 25.69	0.371
Frid. 23	13 50 23.05	9.513	11 21 44.1	52.73	16 6.49	15 34.25	0.342
Sat. 24	13 54 11.72	9.543	11 42 44.5	52.30	16 6.75	15 42.11	0.313
Sun. 25	13 58 1.10	9.573	12 3 34.3	51.84	16 7.02	15 49.27	0.283
Mon. 26	14 1 51.19	9.603	12 24 13.0	51.37	16 7.28	15 55.72	0.253
Tues. 27	14 5 42.01	9.633	12 44 40.2	50.89	16 7.55	16 1.43	0.223
Wed. 28	14 9 33.57	9.664	13 4 55.5	50.38	16 7.81	16 6.42	0.192
Thur. 29	14 13 25.87	9.695	13 24 58.5	49.86	16 8.07	16 10.66	0.161
Frid. 30	14 17 18.93	9.727	13 44 48.7	49.32	16 8.33	16 14.15	0.129
Sat. 31	14 21 12.75	9.759	14 4 25.8	48.76	16 8.59	16 16.88	0.098
Sun. 32	14 25 7.34	9.791	S. 14 23 49.2	48.18	16 8.85	16 18.83	0.065

\*The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be added to Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
1	12 29 0.89	S. 3 8 6.4	187 53 56.1	N. 0.10	10 14.80	12 39 15.67
2	12 32 38.37	3 31 24.2	188 53 0.1	S. 0.04	10 33.86	12 43 12.24
3	12 36 16.14	3 54 39.5	189 52 5.8	0.17	10 52.65	12 47 8.79
4	12 39 54.22	4 17 51.9	190 51 13.3	0.30	11 11.13	12 51 5.35
5	12 43 32.63	4 41 1.2	191 50 22.6	0.41	11 29.27	12 55 1.90
6	12 47 11.39	5 4 6.9	192 49 33.6	0.50	11 47.06	12 58 58.45
7	12 50 50.52	5 27 8.6	193 48 46.4	0.56	12 4.48	13 2 55.00
8	12 54 30.05	5 50 6.1	194 48 1.1	0.59	12 21.51	13 6 51.56
9	12 58 10.00	6 12 59.0	195 47 17.7	0.59	12 38.11	13 10 48.11
10	13 1 50.39	6 35 46.9	196 46 36.4	0.55	12 54.27	13 14 44.66
11	13 5 31.25	6 58 20.5	197 45 57.1	0.48	13 9.96	13 18 41.22
12	13 9 12.60	7 21 6.5	198 45 20.0	0.40	13 25.17	13 22 37.77
13	13 12 54.46	7 43 37.6	199 44 45.1	0.29	13 39.86	13 26 34.32
14	13 16 36.86	8 6 2.3	200 44 12.5	0.16	13 54.01	13 30 30.88
15	13 20 19.82	8 28 20.3	201 43 42.1	S. 0.04	14 7.61	13 34 27.43
16	13 24 3.35	8 50 31.3	202 43 14.1	N. 0.08	14 20.64	13 38 23.98
17	13 27 47.47	9 12 34.8	203 42 48.4	0.19	14 33.07	13 42 20.54
18	13 31 32.20	9 34 30.5	204 42 24.9	0.30	14 44.89	13 46 17.09
19	13 35 17.56	9 56 18.0	205 42 3.7	0.38	14 56.09	13 50 13.64
20	13 39 3.55	10 17 56.8	206 41 44.8	0.43	15 6.65	13 54 10.20
21	13 42 50.20	10 39 26.7	207 41 28.1	0.46	15 16.55	13 58 6.75
22	13 46 37.52	11 0 47.2	208 41 13.5	0.47	15 25.79	14 2 3.31
23	13 50 25.52	11 21 57.8	209 41 1.1	0.46	15 34.34	14 5 59.86
24	13 54 14.22	11 42 58.2	210 40 50.7	0.42	15 42.20	14 9 56.41
25	13 58 3.63	12 3 48.0	211 40 42.3	0.34	15 49.35	14 13 52.97
26	14 1 53.74	12 24 26.6	212 40 35.9	0.25	15 55.79	14 17 49.52
27	14 5 44.58	12 44 53.8	213 40 31.4	0.14	16 1.49	14 21 46.08
28	14 9 36.16	13 5 9.0	214 40 28.6	N. 0.01	16 6.47	14 25 42.63
29	14 13 28.48	13 25 11.9	215 40 27.6	S. 0.13	16 10.71	14 29 39.19
30	14 17 21.56	13 45 2.1	216 40 28.2	0.27	16 14.18	14 33 35.74
31	14 21 15.39	14 4 39.0	217 40 30.5	0.40	16 16.90	14 37 32.30
32	14 25 10.00	S. 14 24 2.3	218 40 34.4	S. 0.51	16 18.85	14 41 28.85



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be subtracted from Apparent Time.	Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi-diameter.*		
<i>Sun.</i> 1	h m s 14 25 7 <sup>34</sup>	s 9 <sup>791</sup>	° / ' / '' S. 14 23 49 <sup>2</sup>	'' 48 <sup>18</sup>	' / '' 16 8 <sup>85</sup>	m s 16 18 <sup>83</sup>	s 0 <sup>065</sup>
Mon. 2	14 29 2 <sup>70</sup>	9 <sup>824</sup>	14 42 58 <sup>6</sup>	47 <sup>59</sup>	16 9 <sup>10</sup>	16 20 <sup>02</sup>	0 <sup>033</sup>
Tues. 3	14 32 58 <sup>86</sup>	9 <sup>857</sup>	15 1 53 <sup>6</sup>	46 <sup>98</sup>	16 9 <sup>35</sup>	16 20 <sup>41</sup>	0 <sup>000</sup>
Wed. 4	14 36 55 <sup>82</sup>	9 <sup>890</sup>	15 20 33 <sup>7</sup>	46 <sup>36</sup>	16 9 <sup>60</sup>	16 20 <sup>01</sup>	0 <sup>034</sup>
Thur. 5	14 40 53 <sup>59</sup>	9 <sup>924</sup>	15 38 58 <sup>7</sup>	45 <sup>71</sup>	16 9 <sup>85</sup>	16 18 <sup>80</sup>	0 <sup>067</sup>
Frid. 6	14 44 52 <sup>17</sup>	9 <sup>958</sup>	15 57 8 <sup>0</sup>	45 <sup>05</sup>	16 10 <sup>09</sup>	16 16 <sup>78</sup>	0 <sup>101</sup>
<i>Sat.</i> 7	14 48 51 <sup>58</sup>	9 <sup>993</sup>	16 15 1 <sup>3</sup>	44 <sup>38</sup>	16 10 <sup>33</sup>	16 13 <sup>93</sup>	0 <sup>136</sup>
<i>Sun.</i> 8	14 52 51 <sup>83</sup>	10 <sup>028</sup>	16 32 38 <sup>2</sup>	43 <sup>69</sup>	16 10 <sup>57</sup>	16 10 <sup>25</sup>	0 <sup>171</sup>
Mon. 9	14 56 52 <sup>92</sup>	10 <sup>063</sup>	16 49 58 <sup>5</sup>	42 <sup>98</sup>	16 10 <sup>80</sup>	16 5 <sup>73</sup>	0 <sup>206</sup>
Tues. 10	15 0 54 <sup>87</sup>	10 <sup>099</sup>	17 7 1 <sup>5</sup>	42 <sup>26</sup>	16 11 <sup>03</sup>	16 0 <sup>35</sup>	0 <sup>242</sup>
Wed. 11	15 4 57 <sup>67</sup>	10 <sup>135</sup>	17 23 47 <sup>1</sup>	41 <sup>53</sup>	16 11 <sup>25</sup>	15 54 <sup>12</sup>	0 <sup>278</sup>
Thur. 12	15 9 1 <sup>35</sup>	10 <sup>171</sup>	17 40 14 <sup>8</sup>	40 <sup>77</sup>	16 11 <sup>47</sup>	15 47 <sup>02</sup>	0 <sup>314</sup>
Frid. 13	15 13 5 <sup>88</sup>	10 <sup>207</sup>	17 56 24 <sup>2</sup>	40 <sup>00</sup>	16 11 <sup>68</sup>	15 39 <sup>06</sup>	0 <sup>350</sup>
<i>Sat.</i> 14	15 17 11 <sup>20</sup>	10 <sup>243</sup>	18 12 14 <sup>9</sup>	39 <sup>22</sup>	16 11 <sup>89</sup>	15 30 <sup>23</sup>	0 <sup>385</sup>
<i>Sun.</i> 15	15 21 17 <sup>56</sup>	10 <sup>279</sup>	18 27 46 <sup>6</sup>	38 <sup>42</sup>	16 12 <sup>10</sup>	15 20 <sup>55</sup>	0 <sup>421</sup>
Mon. 16	15 25 24 <sup>60</sup>	10 <sup>315</sup>	18 42 58 <sup>9</sup>	37 <sup>60</sup>	16 12 <sup>31</sup>	15 10 <sup>00</sup>	0 <sup>457</sup>
Tues. 17	15 29 32 <sup>68</sup>	10 <sup>351</sup>	18 57 51 <sup>3</sup>	36 <sup>76</sup>	16 12 <sup>51</sup>	14 58 <sup>60</sup>	0 <sup>493</sup>
Wed. 18	15 33 41 <sup>53</sup>	10 <sup>386</sup>	19 12 23 <sup>5</sup>	35 <sup>91</sup>	16 12 <sup>71</sup>	14 46 <sup>34</sup>	0 <sup>529</sup>
Thur. 19	15 37 51 <sup>23</sup>	10 <sup>421</sup>	19 26 35 <sup>1</sup>	35 <sup>05</sup>	16 12 <sup>90</sup>	14 33 <sup>23</sup>	0 <sup>564</sup>
Frid. 20	15 42 1 <sup>77</sup>	10 <sup>456</sup>	19 40 25 <sup>7</sup>	34 <sup>16</sup>	16 13 <sup>10</sup>	14 19 <sup>29</sup>	0 <sup>598</sup>
<i>Sat.</i> 21	15 46 13 <sup>14</sup>	10 <sup>491</sup>	19 53 54 <sup>9</sup>	33 <sup>26</sup>	16 13 <sup>29</sup>	14 4 <sup>52</sup>	0 <sup>632</sup>
<i>Sun.</i> 22	15 50 25 <sup>32</sup>	10 <sup>524</sup>	20 7 2 <sup>4</sup>	32 <sup>35</sup>	16 13 <sup>47</sup>	13 48 <sup>94</sup>	0 <sup>666</sup>
Mon. 23	15 54 38 <sup>30</sup>	10 <sup>557</sup>	20 19 47 <sup>7</sup>	31 <sup>42</sup>	16 13 <sup>66</sup>	13 32 <sup>56</sup>	0 <sup>699</sup>
Tues. 24	15 58 52 <sup>07</sup>	10 <sup>590</sup>	20 32 10 <sup>5</sup>	30 <sup>48</sup>	16 13 <sup>84</sup>	13 15 <sup>39</sup>	0 <sup>732</sup>
Wed. 25	16 3 6 <sup>61</sup>	10 <sup>622</sup>	20 44 10 <sup>5</sup>	29 <sup>52</sup>	16 14 <sup>02</sup>	12 57 <sup>45</sup>	0 <sup>763</sup>
Thur. 26	16 7 21 <sup>91</sup>	10 <sup>653</sup>	20 55 47 <sup>3</sup>	28 <sup>54</sup>	16 14 <sup>20</sup>	12 38 <sup>77</sup>	0 <sup>794</sup>
Frid. 27	16 11 37 <sup>93</sup>	10 <sup>682</sup>	21 7 0 <sup>5</sup>	27 <sup>55</sup>	16 14 <sup>37</sup>	12 19 <sup>35</sup>	0 <sup>824</sup>
<i>Sat.</i> 28	16 15 54 <sup>66</sup>	10 <sup>711</sup>	21 17 49 <sup>8</sup>	26 <sup>55</sup>	16 14 <sup>55</sup>	11 59 <sup>23</sup>	0 <sup>853</sup>
<i>Sun.</i> 29	16 20 12 <sup>08</sup>	10 <sup>740</sup>	21 28 14 <sup>8</sup>	25 <sup>53</sup>	16 14 <sup>72</sup>	11 38 <sup>43</sup>	0 <sup>881</sup>
Mon. 30	16 24 30 <sup>17</sup>	10 <sup>767</sup>	21 38 15 <sup>3</sup>	24 <sup>50</sup>	16 14 <sup>88</sup>	11 16 <sup>96</sup>	0 <sup>908</sup>
Tues. 31	16 28 48 <sup>91</sup>	10 <sup>794</sup>	S. 21 47 50 <sup>9</sup>	23 <sup>46</sup>	16 15 <sup>04</sup>	10 54 <sup>84</sup>	0 <sup>935</sup>

\*The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be added to Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
1	h m s 14 25 10 <sup>00</sup>	° / ' / '' S. 14 24 2 <sup>3</sup>	° / ' / '' 218 40 34 <sup>4</sup>	'' S. 0 <sup>51</sup>	m s 16 18 <sup>85</sup>	h m s 14 41 28 <sup>85</sup>
2	14 29 5 <sup>38</sup>	14 43 11 <sup>6</sup>	219 40 39 <sup>8</sup>	0 <sup>61</sup>	16 20 <sup>03</sup>	14 45 25 <sup>40</sup>
3	14 33 1 <sup>55</sup>	15 2 6 <sup>4</sup>	220 40 46 <sup>7</sup>	0 <sup>68</sup>	16 20 <sup>41</sup>	14 49 21 <sup>96</sup>
4	14 36 58 <sup>51</sup>	15 20 46 <sup>3</sup>	221 40 55 <sup>2</sup>	0 <sup>71</sup>	16 20 <sup>00</sup>	14 53 18 <sup>52</sup>
5	14 40 56 <sup>28</sup>	15 39 11 <sup>1</sup>	222 41 5 <sup>2</sup>	0 <sup>71</sup>	16 18 <sup>79</sup>	14 57 15 <sup>07</sup>
6	14 44 54 <sup>87</sup>	15 57 20 <sup>2</sup>	223 41 16 <sup>8</sup>	0 <sup>68</sup>	16 16 <sup>76</sup>	15 1 11 <sup>63</sup>
7	14 48 54 <sup>28</sup>	16 15 13 <sup>3</sup>	224 41 30 <sup>1</sup>	0 <sup>62</sup>	16 13 <sup>90</sup>	15 5 8 <sup>18</sup>
8	14 52 54 <sup>53</sup>	16 32 50 <sup>0</sup>	225 41 45 <sup>1</sup>	0 <sup>54</sup>	16 10 <sup>21</sup>	15 9 4 <sup>74</sup>
9	14 56 55 <sup>62</sup>	16 50 10 <sup>0</sup>	226 42 1 <sup>8</sup>	0 <sup>43</sup>	16 5 <sup>68</sup>	15 13 1 <sup>29</sup>
10	15 0 57 <sup>56</sup>	17 7 12 <sup>8</sup>	227 42 20 <sup>3</sup>	0 <sup>31</sup>	16 0 <sup>29</sup>	15 16 57 <sup>85</sup>
11	15 5 0 <sup>36</sup>	17 23 58 <sup>1</sup>	228 42 40 <sup>7</sup>	0 <sup>18</sup>	15 54 <sup>05</sup>	15 20 54 <sup>40</sup>
12	15 9 4 <sup>02</sup>	17 40 25 <sup>5</sup>	229 43 2 <sup>9</sup>	S. 0 <sup>06</sup>	15 46 <sup>94</sup>	15 24 50 <sup>96</sup>
13	15 13 8 <sup>54</sup>	17 56 34 <sup>6</sup>	230 43 26 <sup>9</sup>	N. 0 <sup>06</sup>	15 38 <sup>97</sup>	15 28 47 <sup>52</sup>
14	15 17 13 <sup>93</sup>	18 12 25 <sup>1</sup>	231 43 52 <sup>9</sup>	0 <sup>17</sup>	15 30 <sup>14</sup>	15 32 44 <sup>07</sup>
15	15 21 20 <sup>18</sup>	18 27 56 <sup>5</sup>	232 44 20 <sup>7</sup>	0 <sup>26</sup>	15 20 <sup>45</sup>	15 36 40 <sup>63</sup>
16	15 25 27 <sup>30</sup>	18 43 8 <sup>4</sup>	233 44 50 <sup>4</sup>	0 <sup>33</sup>	15 9 <sup>89</sup>	15 40 37 <sup>18</sup>
17	15 29 35 <sup>27</sup>	18 58 0 <sup>4</sup>	234 45 21 <sup>9</sup>	0 <sup>37</sup>	14 58 <sup>48</sup>	15 44 33 <sup>74</sup>
18	15 33 44 <sup>09</sup>	19 12 32 <sup>3</sup>	235 45 55 <sup>2</sup>	0 <sup>38</sup>	14 46 <sup>21</sup>	15 48 30 <sup>30</sup>
19	15 37 53 <sup>76</sup>	19 26 43 <sup>6</sup>	236 46 30 <sup>3</sup>	0 <sup>38</sup>	14 33 <sup>10</sup>	15 52 26 <sup>85</sup>
20	15 42 4 <sup>26</sup>	19 40 33 <sup>8</sup>	237 47 7 <sup>0</sup>	0 <sup>34</sup>	14 19 <sup>15</sup>	15 56 23 <sup>41</sup>
21	15 46 15 <sup>60</sup>	19 54 2 <sup>7</sup>	238 47 45 <sup>4</sup>	0 <sup>27</sup>	14 4 <sup>37</sup>	16 0 19 <sup>97</sup>
22	15 50 27 <sup>75</sup>	20 7 9 <sup>8</sup>	239 48 25 <sup>3</sup>	0 <sup>17</sup>	13 48 <sup>78</sup>	16 4 16 <sup>53</sup>
23	15 54 40 <sup>69</sup>	20 19 54 <sup>8</sup>	240 49 6 <sup>8</sup>	N. 0 <sup>06</sup>	13 32 <sup>40</sup>	16 8 13 <sup>08</sup>
24	15 58 54 <sup>42</sup>	20 32 17 <sup>3</sup>	241 49 49 <sup>7</sup>	S. 0 <sup>06</sup>	13 15 <sup>22</sup>	16 12 9 <sup>64</sup>
25	16 3 8 <sup>91</sup>	20 44 16 <sup>9</sup>	242 50 33 <sup>9</sup>	0 <sup>20</sup>	12 57 <sup>28</sup>	16 16 6 <sup>20</sup>
26	16 7 24 <sup>15</sup>	20 55 53 <sup>3</sup>	243 51 19 <sup>3</sup>	0 <sup>35</sup>	12 38 <sup>60</sup>	16 20 2 <sup>75</sup>
27	16 11 40 <sup>13</sup>	21 7 6 <sup>1</sup>	244 52 5 <sup>8</sup>	0 <sup>49</sup>	12 19 <sup>19</sup>	16 23 59 <sup>31</sup>
28	16 15 56 <sup>80</sup>	21 17 55 <sup>1</sup>	245 52 53 <sup>4</sup>	0 <sup>61</sup>	11 59 <sup>07</sup>	16 27 55 <sup>87</sup>
29	16 20 14 <sup>16</sup>	21 28 19 <sup>7</sup>	246 53 42 <sup>0</sup>	0 <sup>71</sup>	11 38 <sup>26</sup>	16 31 52 <sup>43</sup>
30	16 24 32 <sup>19</sup>	21 38 19 <sup>8</sup>	247 54 31 <sup>4</sup>	0 <sup>78</sup>	11 16 <sup>79</sup>	16 35 48 <sup>98</sup>
31	16 28 50 <sup>87</sup>	S. 21 47 55 <sup>1</sup>	248 55 21 <sup>7</sup>	S. 0 <sup>82</sup>	10 54 <sup>67</sup>	16 39 45 <sup>54</sup>



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be subtracted from added to Apparent Time.	Var. in 1 hour.	
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Semi-diameter.*			
	h m s	s	° / '	"	' / "	m s	s	
Tues.	1	16 28 48.91	10.794	S. 21 47 50.9	23.46	16 15.04	10 54.84	0.935
Wed.	2	16 33 8.28	10.820	21 57 1.3	22.41	16 15.20	10 32.09	0.960
Thur.	3	16 37 28.25	10.844	22 5 46.4	21.34	16 15.35	10 8.74	0.985
Frid.	4	16 41 48.81	10.868	22 14 5.8	20.27	16 15.50	9 44.80	1.009
Sat.	5	16 46 9.93	10.891	22 21 59.3	19.18	16 15.64	9 20.31	1.032
Sun.	6	16 50 31.59	10.914	22 29 26.6	18.09	16 15.78	8 55.27	1.054
Mon.	7	16 54 53.78	10.935	22 36 27.6	16.99	16 15.91	8 29.71	1.075
Tues.	8	16 59 16.47	10.955	22 43 2.0	15.88	16 16.04	8 3.66	1.095
Wed.	9	17 3 39.63	10.975	22 49 9.7	14.76	16 16.15	7 37.12	1.115
Thur.	10	17 8 3.25	10.993	22 54 50.4	13.63	16 16.26	7 10.14	1.133
Frid.	11	17 12 27.29	11.010	23 0 4.0	12.50	16 16.37	6 42.73	1.150
Sat.	12	17 16 51.73	11.026	23 4 50.3	11.36	16 16.48	6 14.92	1.166
Sun.	13	17 21 16.54	11.041	23 9 9.2	10.21	16 16.57	5 46.75	1.181
Mon.	14	17 25 41.70	11.055	23 13 0.4	9.06	16 16.66	5 18.23	1.195
Tues.	15	17 30 7.16	11.067	23 16 23.9	7.90	16 16.75	4 49.40	1.207
Wed.	16	17 34 32.90	11.078	23 19 19.6	6.74	16 16.83	4 20.30	1.218
Thur.	17	17 38 58.89	11.087	23 21 47.3	5.57	16 16.91	3 50.95	1.227
Frid.	18	17 43 25.09	11.095	23 23 46.9	4.40	16 16.98	3 21.39	1.235
Sat.	19	17 47 51.47	11.102	23 25 18.4	3.22	16 17.04	2 51.65	1.242
Sun.	20	17 52 17.99	11.107	23 26 21.7	2.05	16 17.11	2 21.77	1.247
Mon.	21	17 56 44.61	11.111	23 26 56.7	0.87	16 17.17	1 51.79	1.251
Tues.	22	18 1 11.30	11.112	23 27 3.4	0.31	16 17.22	1 21.74	1.253
Wed.	23	18 5 38.01	11.113	23 26 41.9	1.49	16 17.27	0 51.67	1.253
Thur.	24	18 10 4.71	11.111	23 25 52.0	2.67	16 17.32	0 21.61	1.251
Frid.	25	18 14 31.36	11.108	23 24 33.7	3.85	16 17.37	0 8.40	1.249
Sat.	26	18 18 57.92	11.104	23 22 47.2	5.03	16 17.41	0 38.32	1.244
Sun.	27	18 23 24.34	11.098	23 20 32.4	6.20	16 17.45	1 8.11	1.238
Mon.	28	18 27 50.60	11.090	23 17 49.4	7.37	16 17.48	1 37.72	1.230
Tues.	29	18 32 16.64	11.080	23 14 38.4	8.54	16 17.51	2 7.13	1.221
Wed.	30	18 36 42.45	11.070	23 10 59.4	9.71	16 17.53	2 36.30	1.210
Thur.	31	18 41 7.99	11.058	23 6 52.5	10.87	16 17.55	3 5.20	1.198
Frid.	32	18 45 33.23	11.044	S. 23 2 17.8	12.02	16 17.57	3 33.80	1.185

\* The Semidiameter for Mean Noon may be assumed the same as that for Apparent Noon.

AT GREENWICH MEAN NOON.

Date.	THE SUN'S Apparent				Equation of Time, to be added to subtracted from Mean Time.	Sidereal Time.
	Right Ascension.	Declination.	Longitude.	Latitude.		
	h m s	° / '	° / '	"	m s	h m s
1	16 28 50.87	S. 21 47 55.1	248 55 21.7	S. 0.82	10 54.67	16 39 45.54
2	16 33 10.18	21 57 5.2	249 56 12.9	0.83	10 31.92	16 43 42.10
3	16 37 30.09	22 5 50.0	250 57 4.9	0.81	10 8.57	16 47 38.66
4	16 41 50.58	22 14 9.1	251 57 57.6	0.75	9 44.64	16 51 35.21
5	16 46 11.63	22 22 2.3	252 58 51.3	0.67	9 20.15	16 55 31.77
6	16 50 33.22	22 29 29.3	253 59 45.8	0.55	8 55.11	16 59 28.33
7	16 54 55.33	22 36 30.0	255 0 41.1	0.43	8 29.56	17 3 24.89
8	16 59 17.94	22 43 4.2	256 1 37.4	0.30	8 3.51	17 7 21.45
9	17 3 41.03	22 49 11.6	257 2 34.7	0.17	7 36.98	17 11 18.00
10	17 8 4.56	22 54 52.0	258 3 32.9	S. 0.03	7 10.00	17 15 14.56
11	17 12 28.52	23 0 5.4	259 4 32.1	N. 0.09	6 42.60	17 19 11.12
12	17 16 52.88	23 4 51.5	260 5 32.3	0.18	6 14.80	17 23 7.68
13	17 21 17.60	23 9 10.1	261 6 33.5	0.25	5 46.63	17 27 4.24
14	17 25 42.67	23 13 1.2	262 7 35.7	0.30	5 18.12	17 31 0.79
15	17 30 8.05	23 16 24.6	263 8 38.9	0.33	4 49.31	17 34 57.35
16	17 34 33.70	23 19 20.1	264 9 43.0	0.33	4 20.21	17 38 53.91
17	17 38 59.60	23 21 47.7	265 10 48.0	0.30	3 50.87	17 42 50.47
18	17 43 25.71	23 23 47.2	266 11 53.8	0.24	3 21.32	17 46 47.03
19	17 47 52.00	23 25 18.6	267 13 0.5	0.15	2 51.59	17 50 43.58
20	17 52 18.42	23 26 21.8	268 14 7.9	N. 0.05	2 21.72	17 54 40.14
21	17 56 44.95	23 26 56.8	269 15 15.9	S. 0.07	1 51.75	17 58 36.70
22	18 1 11.55	23 27 3.5	270 16 24.6	0.21	1 21.71	18 2 33.26
23	18 5 38.17	23 26 41.9	271 17 33.7	0.35	0 51.65	18 6 29.82
24	18 10 4.78	23 25 51.9	272 18 43.2	0.48	0 21.60	18 10 26.38
25	18 14 31.34	23 24 33.7	273 19 53.0	0.61	0 8.40	18 14 22.94
26	18 18 57.80	23 22 47.2	274 21 2.9	0.71	0 38.31	18 18 19.49
27	18 23 24.14	23 20 32.5	275 22 12.9	0.78	1 8.08	18 22 16.05
28	18 27 50.30	23 17 49.6	276 23 22.8	0.83	1 37.69	18 26 12.61
29	18 32 16.26	23 14 38.7	277 24 32.6	0.85	2 7.09	18 30 9.17
30	18 36 41.98	23 10 59.8	278 25 42.3	0.84	2 36.26	18 34 5.73
31	18 41 7.43	23 6 53.0	279 26 51.8	0.79	3 5.15	18 38 2.29
32	18 45 32.58	S. 23 2 18.5	280 28 1.1	S. 0.71	3 33.74	18 41 58.84



GREENWICH MEAN TIME.

THE MOON'S

Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m.	h m
1	246 20 0.6	253 38 10.3	N. 3 15 50.0	N. 2 42 22.4	27.07	22 35.1	10 4.8
2	261 1 40.8	268 29 42.3	2 5 47.5	1 26 41.0	28.07	23 38.2	11 6.3
3	276 1 16.3	283 35 17.1	N. 0 45 45.2	N. 0 3 47.5	29.07	* *	12 10.6
4	291 10 34.2	298 45 54.9	S. 0 38 21.5	S. 1 19 49.9	0.59	0 43.0	13 15.1
5	306 20 7.7	313 52 3.9	1 59 47.4	2 37 26.9	1.59	1 46.6	14 17.3
6	321 20 40.9	328 45 4.1	3 12 6.8	3 43 12.4	2.59	2 47.0	15 15.6
7	336 4 28.0	343 18 17.2	4 10 16.2	4 32 58.2	3.59	3 43.2	16 9.7
8	350 26 6.7	357 27 41.4	4 51 6.2	5 4 34.6	4.59	4 35.3	17 0.1
9	4 22 55.2	11 11 50.4	5 13 23.6	5 17 38.0	5.59	5 24.3	17 47.9
10	17 54 36.1	24 31 26.9	5 17 26.7	5 13 1.6	6.59	6 11.2	18 34.2
11	31 2 41.9	37 28 43.4	5 4 36.8	4 52 27.9	7.59	6 57.2	19 20.1
12	43 49 55.8	50 6 44.7	4 36 51.7	4 18 6.0	8.59	7 43.1	20 6.2
13	56 10 36.4	62 28 56.6	3 56 28.9	3 32 19.3	9.59	8 29.6	20 53.2
14	68 35 10.9	74 38 43.6	3 5 56.2	2 37 38.8	10.59	9 17.1	21 41.3
15	80 39 57.8	86 39 15.2	2 7 46.8	1 36 40.1	11.59	10 5.6	22 30.2
16	92 36 56.1	98 33 19.5	S. 1 4 38.7	S. 0 32 2.4	12.59	10 54.8	23 19.4
17	104 28 43.3	110 23 24.4	N. 0 0 48.5	N. 0 33 34.0	13.59	11 44.0	* *
18	116 17 39.0	122 11 42.5	1 5 54.3	1 37 30.1	14.59	12 32.4	0 8.3
19	128 5 50.2	134 0 17.3	2 8 2.3	2 37 12.6	15.59	13 19.6	0 56.2
20	139 55 19.7	145 51 13.4	3 4 43.0	3 30 16.7	16.59	14 5.3	1 42.6
21	151 48 15.4	157 46 43.9	3 53 37.5	4 14 30.3	17.59	14 49.4	2 27.5
22	163 46 58.4	169 49 19.6	4 32 40.8	4 47 55.6	18.59	15 32.6	3 11.1
23	175 54 9.8	182 1 52.4	5 0 2.3	5 8 49.8	19.59	16 15.3	3 53.9
24	188 12 52.5	194 27 35.8	5 14 7.5	5 15 46.3	20.59	16 58.5	4 36.8
25	200 46 28.8	207 9 57.9	5 13 38.3	5 7 37.0	21.59	17 43.1	5 20.6
26	213 38 29.2	220 12 27.1	4 57 38.0	4 43 38.6	22.59	18 30.3	6 6.3
27	226 52 13.6	233 38 7.7	4 25 39.1	4 3 43.0	23.59	19 21.1	6 55.2
28	240 30 23.4	247 29 8.7	3 37 57.7	3 8 35.3	24.59	20 16.2	7 48.1
29	254 34 23.9	261 46 0.6	2 35 53.5	2 0 15.8	25.59	21 15.8	8 45.5
30	269 3 40.3	276 26 54.0	1 22 11.9	N. 0 42 18.1	26.59	22 18.8	9 47.0
31	283 55 1.3	291 27 10.8	N. 0 1 15.9	S. 0 40 7.9	27.59	23 23.1	10 51.0
32	299 2 21.1	306 39 23.0	S. 1 21 3.5	S. 2 0 40.1	28.59	* *	11 54.9

GREENWICH MEAN TIME.

THE MOON'S

Day.	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	' / "	' / "	' / "	' / "		h m s	s	° / ' / "	"
1	16 21'21	16 27'73	59 54'95	60 18'84					
2	16 33'39	16 38'01	60 39'57	60 56'49					
3	16 41'44	16 43'55	61 9'03	61 16'78					
4	16 44'30	16 43'68	61 19'53	61 17'25					
5	16 41'72	16 38'52	61 10'08	60 58'34					
6	16 34'20	16 28'92	60 42'52	60 23'20					
7	16 22'87	16 16'26	60 1'05	59 36'77					
8	16 9'24	16 2'00	59 11'06	58 44'55					
9	15 54'70	15 47'49	58 17'81	57 51'36					
10	15 40'47	15 33'73	57 25'63	57 0'96					
11	15 27'35	15 21'40	56 37'61	56 15'77					
12	15 15'88	15 10'84	55 55'56	55 37'06					
13	15 6'26	15 2'15	55 20'30	55 5'25					
14	14 58'51	14 55'30	54 51'88	54 40'14					
15	14 52'52	14 50'15	54 29'97	54 21'29					
16	14 48'17	14 46'56	54 14'03	54 8'13					
17	14 45'30	14 44'39	54 3'53	54 0'18					
18	14 43'82	14 43'59	53 58'09	53 57'25					
19	14 43'71	14 44'17	53 57'67	53 59'38					
20	14 45'00	14 46'22	54 2'43	54 6'89					
21	14 47'85	14 49'91	54 12'85	54 20'40					
22	14 52'43	14 55'42	54 29'62	54 40'61					
23	14 58'93	15 2'94	54 53'43	55 8'14					
24	15 7'49	15 12'57	55 24'80	55 43'42					
25	15 18'17	15 24'28	56 3'96	56 26'33					
26	15 30'85	15 37'84	56 50'41	57 16'00					
27	15 45'16	15 52'70	57 42'80	58 10'45					
28	16 0'36	16 7'99	58 38'52	59 6'47					
29	16 15'41	16 22'44	59 33'66	59 59'43					
30	16 28'89	16 34'55	60 23'06	60 43'82					
31	16 39'24	16 42'80	61 1'01	61 14'02					
32	16 45'07	16 45'97	61 22'34	61 25'63					
<b>WEDNESDAY 1.</b>									
0	16 20 10.54	24.732	S. 18 9 26.0	86.96					
4	16 30 7.54	25.017	18 43 20.3	82.51					
8	16 40 11.32	25.297	19 15 24.5	77.79					
12	16 50 21.72	25.568	19 45 32.2	72.79					
16	17 0 38.53	25.831	20 13 36.9	67.54					
20	17 11 1.50	26.081	S. 20 39 32.2	62.03					
<b>THURSDAY 2.</b>									
0	17 21 30.32	26.317	S. 21 3 12.4	56.28					
4	17 32 4.63	26.538	21 24 31.7	50.29					
8	17 42 44.01	26.741	21 43 24.8	44.09					
12	17 53 28.02	26.923	21 59 46.7	37.70					
16	18 4 16.14	27.082	22 13 33.1	31.13					
20	18 15 7.83	27.220	S. 22 24 40.1	24.42					
<b>FRIDAY 3.</b>									
0	18 26 2.50	27.331	S. 22 33 4.4	17.59					
4	18 36 59.54	27.417	22 38 43.4	10.64					
8	18 47 58.30	27.476	22 41 35.0	3.64					
12	18 58 58.14	27.506	22 41 38.0	3.40					
16	19 9 58.38	27.509	22 38 51.7	10.46					
20	19 20 58.36	27.484	S. 22 33 16.4	17.48					
<b>SATURDAY 4.</b>									
0	19 31 57.42	27.432	S. 22 24 53.0	24.46					
4	19 42 54.90	27.353	22 13 43.0	31.36					
8	19 53 50.18	27.248	21 59 48.7	38.14					
12	20 4 42.66	27.121	21 43 13.1	44.79					
16	20 15 31.78	26.969	21 23 59.7	51.28					
20	20 26 17.02	26.797	S. 21 2 12.8	57.59					
<b>SUNDAY 5.</b>									
0	20 36 57.89	26.606	S. 20 37 57.0	63.68					
4	20 47 33.96	26.397	20 11 17.5	69.56					
8	20 58 4.85	26.174	19 42 20.1	75.19					
12	21 8 30.23	25.938	19 11 10.5	80.56					
16	21 18 49.81	25.692	18 37 55.1	85.67					
20	21 29 3.38	25.437	S. 18 2 40.5	90.50					
<b>MONDAY 6.</b>									
0	21 39 10.75	25.176	S. 17 25 33.3	95.05					
4	21 49 11.81	24.912	16 46 40.4	99.32					
8	21 59 6.47	24.643	16 6 8.7	103.28					
12	22 8 54.69	24.375	15 24 4.9	106.97					
16	22 18 36.48	24.107	14 40 36.3	110.36					
20	22 28 11.88	23.842	S. 13 55 49.6	113.47					



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: TUESDAY 7, 14, WEDNESDAY 8, 15, THURSDAY 9, 16, FRIDAY 10, 17, SATURDAY 11, 18, SUNDAY 12, 19, MONDAY 13, 20.

GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: TUESDAY 21, 28, WEDNESDAY 22, 29, THURSDAY 23, 30, FRIDAY 24, 31, SATURDAY 25, 26, 27, 31, MONDAY 27. Includes PHASES OF THE MOON section at the bottom.



GREENWICH MEAN TIME.							
Day.	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	299 2 21.1	306 39 23.0	S. 1 21 3.5	S. 2 0 40.1	28.59	* *	11 54.9
2	314 17 1.2	321 53 57.4	2 38 8.3	3 12 41.7	0.14	0 26.1	12 56.5
3	329 28 53.7	337 0 35.9	3 43 39.7	4 10 29.1	1.14	1 26.0	13 54.5
4	344 27 56.4	351 49 56.8	4 32 45.1	4 50 11.7	2.14	2 22.0	14 48.6
5	359 5 49.8	6 15 0.2	5 2 41.3	5 10 14.0	3.14	3 14.4	15 39.5
6	13 17 4.8	20 11 52.8	5 12 56.7	5 11 1.5	4.14	4 4.0	16 28.1
7	26 59 24.1	33 39 48.4	5 4 44.3	4 54 24.0	5.14	4 51.9	17 15.6
8	40 13 23.4	46 40 33.1	4 40 21.2	4 22 56.9	6.14	5 39.1	18 2.6
9	53 1 46.8	59 17 37.3	4 2 33.0	3 39 30.9	7.14	6 26.2	18 50.0
10	65 28 39.5	71 35 29.8	3 14 11.7	2 46 56.0	8.14	7 13.9	19 38.0
11	77 38 44.5	83 38 59.7	2 18 3.7	1 47 54.4	9.14	8 2.3	20 26.7
12	89 36 50.3	95 32 49.7	1 16 47.3	S. 0 45 1.2	10.14	8 51.2	21 15.8
13	101 27 29.1	107 21 17.7	S. 0 12 54.8	N. 0 19 13.3	11.14	9 40.3	22 4.7
14	113 14 42.4	119 8 7.2	N. 0 51 4.7	1 22 20.8	12.14	10 28.9	22 52.9
15	125 1 54.1	130 56 22.3	1 52 43.2	2 21 53.8	13.14	11 16.5	23 39.9
16	136 51 48.9	142 48 29.0	2 49 34.4	3 15 27.7	14.14	12 2.8	* *
17	148 46 35.7	154 46 20.6	3 39 16.3	4 0 44.2	15.14	12 47.6	0 25.4
18	160 47 54.3	166 51 26.3	4 19 36.0	4 35 37.4	16.14	13 31.3	1 9.6
19	172 57 5.8	179 5 2.1	4 48 35.1	4 58 17.9	17.14	14 14.3	1 52.8
20	185 15 24.7	191 28 24.2	5 4 36.0	5 7 20.9	18.14	14 57.2	2 35.7
21	197 44 12.1	204 3 1.0	5 6 26.4	5 1 48.4	19.14	15 41.0	3 19.0
22	210 25 5.1	216 50 39.7	4 53 24.5	4 41 14.8	20.14	16 26.6	4 3.5
23	223 20 1.5	229 53 27.9	4 25 21.7	4 5 50.3	21.14	17 14.8	4 50.3
24	236 31 16.4	243 13 44.1	3 42 48.5	3 16 27.2	22.14	18 6.6	5 40.2
25	250 1 6.6	256 53 37.1	2 47 1.2	2 14 48.7	23.14	19 2.2	6 33.9
26	263 51 25.4	270 54 35.7	1 40 12.1	N. 1 3 38.3	24.14	20 1.5	7 31.5
27	278 3 5.6	285 16 45.1	N. 0 25 38.7	S. 0 13 11.1	25.14	21 3.2	8 32.1
28	292 35 15.0	299 58 5.8	S. 0 52 11.7	1 30 40.5	26.14	22 5.2	9 34.3
29	307 24 37.7	314 54 0.4	2 7 53.3	2 43 5.2	27.14	23 5.8	10 35.8
30	322 25 14.7	329 57 13.7	S. 3 15 32.9	S. 3 44 36.7	28.14	* *	11 35.1

GREENWICH MEAN TIME.									
Day.	THE MOON'S								
	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	' "	' "	' "	' "		° / ' / "	° / ' / "		
1	16 45.07	16 45.97	61 22.34	61 25.63		<b>SATURDAY 1.</b>			
2	16 45.45	16 43.54	61 23.75	61 16.73		h m s s ° / ' / "			
3	16 40.28	16 35.80	61 4.80	60 48.39	0	20 5 52.96	27.179	S. 21 41 1.6	46.06
4	16 30.25	16 23.82	60 28.08	60 4.51	4	20 16 44.17	27.083	21 21 16.3	52.69
5	16 16.71	16 9.11	59 38.43	59 10.58	8	20 27 32.82	26.967	20 58 53.4	59.18
6	16 1.22	15 53.23	58 41.69	58 12.42	12	20 38 18.39	26.827	20 33 56.8	65.49
7	15 45.32	15 37.61	57 43.40	57 15.15	16	20 49 0.39	26.669	20 6 31.1	71.61
8	15 30.22	15 23.27	56 48.12	56 22.64	20	20 59 38.38	26.493	S. 19 36 41.2	77.51
9	15 16.82	15 10.93	55 59.00	55 37.39		<b>SUNDAY 2.</b>			
10	15 5.61	15 0.90	55 17.93	55 0.68	0	21 10 11.97	26.303	S. 19 4 32.6	83.16
11	14 56.81	14 53.33	54 45.68	54 32.91	4	21 20 40.81	26.097	18 30 11.2	88.57
12	14 50.43	14 48.10	54 22.30	54 13.78	8	21 31 4.60	25.882	17 53 43.3	93.70
13	14 46.32	14 45.06	54 7.26	54 2.64	12	21 41 23.09	25.657	17 15 15.5	98.56
14	14 44.28	14 43.95	53 59.78	53 58.57	16	21 51 36.07	25.423	16 34 54.7	103.12
15	14 44.04	14 44.52	53 58.90	54 0.68	20	22 1 43.37	25.184	S. 15 52 47.8	107.39
16	14 45.37	14 46.56	54 3.79	54 8.15		<b>MONDAY 3.</b>			
17	14 48.08	14 49.91	54 13.70	54 20.40	0	22 11 44.90	24.942	S. 15 9 2.1	111.36
18	14 52.04	14 54.48	54 28.22	54 37.14	4	22 21 40.58	24.697	14 23 45.0	115.01
19	14 57.21	15 0.26	54 47.16	54 58.31	8	22 31 30.39	24.452	13 37 3.7	118.37
20	15 3.62	15 7.30	55 10.62	55 24.11	12	22 41 14.33	24.209	12 49 5.7	121.41
21	15 11.32	15 15.67	55 38.81	55 54.76	16	22 50 52.44	23.967	11 59 58.4	124.14
22	15 20.36	15 25.39	56 11.97	56 30.42	20	23 0 24.81	23.730	S. 11 9 48.9	126.59
23	15 30.75	15 36.42	56 50.05	57 10.80		<b>TUESDAY 4.</b>			
24	15 42.35	15 48.50	57 32.53	57 55.05	0	23 9 51.53	23.497	S. 10 18 44.3	128.73
25	15 54.78	16 1.13	58 18.11	58 41.37	4	23 19 12.74	23.271	9 26 51.8	130.58
26	16 7.42	16 13.53	59 4.40	59 26.76	8	23 28 28.60	23.052	8 34 18.2	132.16
27	16 19.30	16 24.61	59 47.95	60 7.40	12	23 37 39.27	22.839	7 41 10.2	133.46
28	16 29.28	16 33.14	60 24.49	60 38.63	16	23 46 44.95	22.636	6 47 34.3	134.49
29	16 36.05	16 37.89	60 49.29	60 56.03	20	23 55 45.85	22.441	S. 5 53 36.8	135.27
30	16 38.56	16 38.02	60 58.51	60 56.50		<b>WEDNESDAY 5.</b>			
					0	0 4 42.18	22.256	S. 4 59 23.7	135.78
					4	0 13 34.18	22.080	4 5 0.9	136.07
					8	0 22 22.07	21.913	3 10 34.0	136.12
					12	0 31 6.10	21.758	2 16 8.4	135.96
					16	0 39 46.52	21.612	1 21 49.4	135.58
					20	0 48 23.57	21.477	S. 0 27 41.9	135.00
						<b>THURSDAY 6.</b>			
					0	0 56 57.51	21.353	N. 0 26 9.4	134.22
					4	1 5 28.60	21.239	1 19 39.9	133.27
					8	1 13 57.06	21.135	2 12 45.3	132.14
					12	1 22 23.16	21.042	3 5 21.4	130.84
					16	1 30 47.14	20.958	3 57 24.4	129.38
					20	1 39 9.24	20.884	N. 4 48 50.4	127.77



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: FRIDAY 7, 14, SATURDAY 8, 15, SUNDAY 9, 16, MONDAY 10, 17, TUESDAY 11, 18, WEDNESDAY 12, 19, THURSDAY 13, 20.

GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: FRIDAY 21, 28, SATURDAY 22, 29, SUNDAY 23, MAR. 1, MONDAY 24, TUESDAY 25, WEDNESDAY 26, THURSDAY 27.

PHASES OF THE MOON.

Table with columns: Date, Phase, Time (h m). Rows: Feb. 1 New Moon, 8 First Quarter, 16 Full Moon, 24 Last Quarter.

Table with columns: Date, Event, Time (h). Rows: Feb. 1 Perigee, 14 Apogee.



GREENWICH MEAN TIME.

THE MOON'S

Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	322 25 14.7	329 57 13.7	S. 3 15 32.9	S. 3 44 36.7	28.14	* *	11 35.1
2	337 28 45.7	344 58 37.0	4 9 42.2	4 30 21.5	29.14	0 3.6	12 31.4
3	352 25 35.3	359 48 32.7	4 46 14.7	4 57 10.6	0.71	0 58.4	13 24.7
4	7 6 29.1	14 18 33.6	5 3 6.3	5 4 6.5	1.71	1 50.5	14 15.7
5	21 24 7.2	28 22 43.2	5 0 22.8	4 52 12.0	2.71	2 40.6	15 5.2
6	35 14 6.6	41 58 14.3	4 39 54.9	4 23 54.9	3.71	3 29.7	15 54.0
7	48 35 13.8	55 5 21.8	4 4 36.9	3 42 26.2	4.71	4 18.3	16 42.7
8	61 29 2.5	67 46 46.2	3 17 47.8	2 51 5.9	5.71	5 7.2	17 31.7
9	73 59 8.0	80 6 45.9	2 22 43.9	1 53 3.5	6.71	5 56.4	18 21.1
10	86 10 20.2	92 10 32.0	1 22 25.6	S. 0 51 9.7	7.71	6 45.9	19 10.7
11	98 8 2.6	104 3 32.7	S. 0 19 34.9	N. 0 12 0.9	8.71	7 35.4	20 0.0
12	109 57 41.6	115 51 7.1	N. 0 43 20.2	1 14 6.0	9.71	8 24.4	20 48.6
13	121 44 24.3	127 38 6.0	1 44 1.3	2 12 49.3	10.71	9 12.4	21 35.9
14	133 32 41.8	139 28 38.2	2 40 13.4	3 5 57.0	11.71	9 59.1	22 22.0
15	145 26 18.4	151 26 2.0	3 29 43.5	3 51 16.7	12.71	10 44.5	23 6.7
16	157 28 5.4	163 32 41.2	4 10 20.9	4 26 40.9	13.71	11 28.7	23 50.5
17	169 39 58.8	175 50 4.6	4 40 2.7	4 50 13.3	14.71	12 12.2	* *
18	182 3 2.6	188 18 54.5	4 57 1.4	5 0 17.8	15.71	12 55.5	0 33.8
19	194 37 40.0	200 59 18.2	4 59 55.2	4 55 49.1	16.71	13 39.4	1 17.3
20	207 23 47.6	213 51 6.7	4 47 57.5	4 36 21.3	17.71	14 24.8	2 1.9
21	220 21 15.0	226 54 12.8	4 21 4.7	4 2 14.7	18.71	15 12.3	2 48.2
22	233 30 2.3	240 8 47.1	3 40 1.5	3 14 38.4	19.71	16 2.8	3 37.2
23	246 50 32.7	253 35 25.5	2 46 22.0	2 15 31.7	20.71	16 56.6	4 29.3
24	260 23 33.0	267 15 2.9	1 42 30.0	N. 1 7 42.1	21.71	17 53.6	5 24.7
25	274 10 2.2	281 8 36.0	N. 0 31 36.5	S. 0 5 16.0	22.71	18 52.8	6 23.0
26	288 10 46.5	295 16 31.5	S. 0 42 22.2	1 19 7.1	23.71	19 52.7	7 22.8
27	302 25 43.4	309 38 7.9	1 54 53.7	2 29 4.6	24.71	20 51.9	8 22.5
28	316 53 23.3	324 10 59.8	3 1 2.6	3 30 11.8	25.71	21 49.0	9 20.8
29	331 30 19.3	338 50 36.8	3 55 58.4	4 17 53.0	26.71	22 43.7	10 16.7
30	346 11 1.0	353 30 36.0	4 35 30.8	4 48 33.3	27.71	23 36.2	11 10.2
31	0 48 23.8	8 3 26.9	4 56 48.9	5 0 13.0	28.71	* *	12 1.7
32	15 14 50.8	22 21 45.9	S. 4 58 48.5	S. 4 52 44.6	0.29	0 27.0	12 52.0

GREENWICH MEAN TIME.

THE MOON'S

Day.	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	° / ' / "	° / ' / "	° / ' / "	° / ' / "		h m s	s	° / ' / "	"
1	16 38.56	16 38.02	60 58.51	60 56.50	<b>SUNDAY 1.</b>				
2	16 36.23	16 33.24	60 49.95	60 38.98					
3	16 29.12	16 23.99	60 23.89	60 5.10					
4	16 18.00	16 11.32	59 43.15	59 18.67					
5	16 4.12	15 56.59	58 52.30	58 24.71					
6	15 48.91	15 41.25	57 56.57	57 28.51					
7	15 33.75	15 26.56	57 1.05	56 34.68					
8	15 19.77	15 13.49	56 9.81	55 46.77					
9	15 7.77	15 2.66	55 25.82	55 7.14					
10	14 58.22	14 54.45	54 50.86	54 37.04					
11	14 51.37	14 48.96	54 25.73	54 16.92					
12	14 47.22	14 46.12	54 10.54	54 6.51					
13	14 45.64	14 45.73	54 4.74	54 5.08					
14	14 46.36	14 47.49	54 7.39	54 11.52					
15	14 49.06	14 51.06	54 17.31	54 24.59					
16	14 53.40	14 56.07	54 33.19	54 42.95					
17	14 59.00	15 2.17	54 53.71	55 5.33					
18	15 5.55	15 9.09	55 17.69	55 30.68					
19	15 12.78	15 16.59	55 44.19	55 58.16					
20	15 20.51	15 24.53	56 12.53	56 27.26					
21	15 28.65	15 32.83	56 42.32	56 57.66					
22	15 37.10	15 41.43	57 13.28	57 29.15					
23	15 45.82	15 50.23	57 45.22	58 1.40					
24	15 54.64	15 59.03	58 17.59	58 33.65					
25	16 3.33	16 7.48	58 49.40	59 4.60					
26	16 11.41	16 15.03	59 19.00	59 32.26					
27	16 18.24	16 20.94	59 44.03	59 53.96					
28	16 23.05	16 24.46	60 1.68	60 6.85					
29	16 25.09	16 24.86	60 9.14	60 8.32					
30	16 23.74	16 21.71	60 4.21	59 56.77					
31	16 18.78	16 15.01	59 46.04	59 32.19					
32	16 10.45	16 5.20	59 15.48	58 56.26					
0	21 43 30.57	25.346	S. 17 7 41.1	99.75					
4	21 53 36.73	25.167	16 26 50.8	104.39					
8	22 3 38.50	24.981	15 44 12.4	108.77					
12	22 13 35.77	24.791	14 59 52.2	112.86					
16	22 23 28.45	24.598	14 13 57.0	116.69					
20	22 33 16.48	24.404	S. 13 26 33.6	120.22					
0	22 42 59.85	24.209	S. 12 37 48.8	123.46					
4	22 52 38.55	24.016	11 47 49.7	126.41					
8	23 2 12.63	23.825	10 56 43.4	129.07					
12	23 11 42.17	23.637	10 4 36.8	131.43					
16	23 21 7.24	23.453	9 11 37.1	133.50					
20	23 30 27.94	23.273	S. 8 17 51.2	135.27					
0	23 39 44.41	23.100	S. 7 23 25.9	136.77					
4	23 48 56.78	22.933	6 28 28.1	138.00					
8	23 58 5.23	22.772	5 33 4.3	138.93					
12	0 7 9.91	22.620	4 37 21.2	139.60					
16	0 16 11.02	22.474	3 41 25.2	140.01					
20	0 25 8.74	22.337	S. 2 45 22.5	140.17					
0	0 34 3.27	22.208	S. 1 49 10.0	140.07					
4	0 42 54.80	22.087	S. 0 53 20.6	139.74					
8	0 51 43.54	21.976	N. 0 2 26.9	139.18					
12	1 0 29.70	21.872	0 57 58.2	138.39					
16	1 9 13.49	21.778	1 53 7.9	137.38					
20	1 17 55.10	21.692	N. 2 47 51.1	136.17					
0	1 26 34.76	21.614	N. 3 42 2.9	134.77					
4	1 35 12.65	21.545	4 35 38.6	133.17					
8	1 43 48.98	21.484	5 28 33.8	131.39					
12	1 52 23.93	21.431	6 20 44.1	129.43					
16	2 0 57.71	21.386	7 12 5.5	127.32					
20	2 9 30.48	21.347	N. 8 2 34.2	125.04					
0	2 18 2.43	21.317	N. 8 52 6.3	122.61					
4	2 26 33.72	21.292	9 40 38.4	120.03					
8	2 35 4.52	21.275	10 28 7.0	117.32					
12	2 43 34.97	21.264	11 14 28.9	114.47					
16	2 52 5.22	21.257	11 59 41.2	111.52					
20	3 0 35.39	21.257	N. 12 43 40.9	108.43					



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: SATURDAY 7, SUNDAY 8, MONDAY 9, TUESDAY 10, WEDNESDAY 11, THURSDAY 12, FRIDAY 13, SATURDAY 14, SUNDAY 15, MONDAY 16, TUESDAY 17, WEDNESDAY 18, THURSDAY 19, FRIDAY 20.

GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: SATURDAY 21, SUNDAY 22, MONDAY 23, TUESDAY 24, WEDNESDAY 25, THURSDAY 26, FRIDAY 27, SATURDAY 28, SUNDAY 29, MONDAY 30, TUESDAY 31, WEDNESDAY, APRIL 1. Includes PHASES OF THE MOON section at the bottom.



GREENWICH MEAN TIME.							
THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Noon.	Upper.
	° / ' "	° / ' "	° / ' "	° / ' "	d	h m	h m
1	15 14 50.8	22 21 45.9	S. 4 58 48.5	S. 4 52 44.6	0.29	0 27.0	12 52.0
2	29 23 30.2	36 19 30.4	4 42 16.6	4 27 44.6	1.29	1 16.8	13 41.6
3	43 9 23.2	49 52 55.0	4 9 32.2	3 48 5.3	2.29	2 6.5	14 31.4
4	56 30 1.9	63 0 49.9	3 23 50.9	2 57 16.5	3.29	2 56.4	15 21.5
5	69 25 33.1	75 44 32.4	2 28 49.1	1 58 54.2	4.29	3 46.7	16 12.0
6	81 58 15.3	88 7 14.1	1 27 56.3	S. 0 56 18.5	5.29	4 37.3	17 2.7
7	94 12 4.8	100 13 26.2	S. 0 24 21.8	N. 0 7 34.1	6.29	5 27.9	17 53.0
8	106 11 58.7	112 8 23.8	N. 0 39 10.6	1 10 10.4	7.29	6 17.8	18 42.3
9	118 3 23.0	123 57 37.6	1 40 16.8	2 9 14.2	8.29	7 6.6	19 30.4
10	129 51 47.5	135 46 31.1	2 36 47.1	3 2 40.2	9.29	7 53.8	20 16.9
11	141 42 24.5	147 40 1.3	3 26 38.5	3 48 27.3	10.29	8 39.6	21 2.0
12	153 39 51.9	159 42 23.1	4 7 51.8	4 24 37.5	11.29	9 24.1	21 46.0
13	165 47 57.7	171 56 54.1	4 38 30.3	4 49 16.6	12.29	10 7.7	22 29.4
14	178 9 26.7	184 25 44.9	4 56 43.9	5 0 41.2	13.29	10 51.2	23 13.1
15	190 45 53.7	197 9 53.6	5 0 59.2	4 57 30.9	14.29	11 35.2	23 57.6
16	203 37 41.2	210 9 9.3	4 50 12.1	4 39 1.7	15.29	12 20.5	* *
17	216 44 7.8	223 22 24.5	4 24 2.3	4 5 20.3	16.29	13 8.1	0 44.0
18	230 3 45.5	236 47 56.7	3 43 6.0	3 17 34.0	17.29	13 58.5	1 32.9
19	243 34 44.1	250 23 54.6	2 49 2.6	2 17 53.7	18.29	14 52.2	2 24.9
20	257 15 16.4	264 8 39.7	1 44 32.7	N. 1 9 27.8	19.29	15 48.8	3 20.2
21	271 3 56.4	278 1 0.2	N. 0 33 9.6	S. 0 3 49.3	20.29	16 47.7	4 18.1
22	284 59 45.8	292 0 9.1	S. 0 40 55.2	1 17 33.7	21.29	17 47.1	5 17.4
23	299 2 5.7	306 5 30.5	1 53 10.0	2 27 10.0	22.29	18 45.6	6 16.6
24	313 10 16.0	320 16 12.5	2 59 0.4	3 28 9.8	23.29	19 42.0	7 14.1
25	327 23 6.9	334 30 42.0	3 54 8.9	4 16 31.6	24.29	20 35.8	8 9.2
26	341 38 36.3	348 46 23.9	4 34 55.3	4 49 1.8	25.29	21 27.4	9 1.9
27	355 53 34.8	2 59 35.9	4 58 38.0	5 3 36.2	26.29	22 17.3	9 52.5
28	10 3 51.9	17 5 46.7	5 3 54.0	4 59 35.1	27.29	23 6.4	10 41.9
29	24 4 44.4	31 0 11.4	4 50 48.6	4 37 48.5	28.29	23 55.4	11 30.9
30	37 51 37.6	44 38 37.3	4 20 53.3	4 0 25.4	29.29	* *	12 20.1
31	51 20 50.3	57 58 2.9	S. 3 36 49.7	S. 3 10 32.7	0.85	0 45.0	13 10.1

GREENWICH MEAN TIME.									
THE MOON'S									
Day.	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	' "	' "	' "	' "		° / ' "	° / ' "		
1	16 10.45	16 5.20	59 15.48	58 56.26					
2	15 59.39	15 53.16	58 34.98	58 12.13					
3	15 46.63	15 39.96	57 48.23	57 23.79					
4	15 33.29	15 26.74	56 59.32	56 35.32					
5	15 20.44	15 14.49	56 12.25	55 50.45					
6	15 8.98	15 4.01	55 30.26	55 12.04					
7	14 59.64	14 55.91	54 56.03	54 42.38					
8	14 52.85	14 50.49	54 31.17	54 22.51					
9	14 48.83	14 47.88	54 16.45	54 12.98					
10	14 47.63	14 48.05	54 12.05	54 13.60					
11	14 49.12	14 50.80	54 17.51	54 23.66					
12	14 53.05	14 55.81	54 31.89	54 42.00					
13	14 59.02	15 2.62	54 53.77	55 6.98					
14	15 6.56	15 10.75	55 21.39	55 36.74					
15	15 15.12	15 19.60	55 52.76	56 9.20					
16	15 24.14	15 28.66	56 25.81	56 42.36					
17	15 33.10	15 37.42	56 58.64	57 14.45					
18	15 41.56	15 45.50	57 29.63	57 44.06					
19	15 49.20	15 52.65	57 57.64	58 10.30					
20	15 55.86	15 58.79	58 22.02	58 32.78					
21	16 1.46	16 3.86	58 42.56	58 51.34					
22	16 5.99	16 7.84	58 59.13	59 5.92					
23	16 9.40	16 10.67	59 11.66	59 16.30					
24	16 11.62	16 12.21	59 19.76	59 21.94					
25	16 12.42	16 12.21	59 22.71	59 21.96					
26	16 11.56	16 10.42	59 19.55	59 15.36					
27	16 8.76	16 6.57	59 9.29	59 1.29					
28	16 3.86	16 0.61	58 51.34	58 39.45					
29	15 56.86	15 52.65	58 25.72	58 10.31					
30	15 48.05	15 43.12	57 53.42	57 35.32					
31	15 37.92	15 32.56	57 16.29	56 56.66					
<b>WEDNESDAY 1.</b>									
	h m s	s	° / ' "	° / ' "					
0	1 3 48.59	21.863	N. 1 24 26.4	139.78					
4	1 12 32.64	21.809	2 20 11.0	138.90					
8	1 21 15.49	21.763	3 15 31.9	137.80					
12	1 29 57.31	21.723	4 10 23.9	136.49					
16	1 38 38.26	21.691	5 4 41.9	134.97					
20	1 47 18.54	21.667	N. 5 58 21.0	133.25					
<b>THURSDAY 2.</b>									
0	1 55 58.29	21.647	N. 6 51 16.4	131.33					
4	2 4 37.66	21.634	7 43 23.5	129.22					
8	2 13 16.81	21.627	8 34 37.9	126.94					
12	2 21 55.86	21.627	9 24 55.4	124.48					
16	2 30 34.96	21.632	10 14 11.7	121.85					
20	2 39 14.23	21.641	N. 11 2 23.0	119.06					
<b>FRIDAY 3.</b>									
0	2 47 53.76	21.654	N. 11 49 25.5	116.11					
4	2 56 33.66	21.672	12 35 15.5	113.02					
8	3 5 14.00	21.692	13 19 49.6	109.79					
12	3 13 54.87	21.715	14 3 4.5	106.42					
16	3 22 36.33	21.741	14 44 57.1	102.93					
20	3 31 18.43	21.767	N. 15 25 24.4	99.32					
<b>SATURDAY 4.</b>									
0	3 40 1.21	21.797	N. 16 4 23.6	95.59					
4	3 48 44.69	21.827	16 41 52.2	91.76					
8	3 57 28.88	21.855	17 17 47.5	87.83					
12	4 6 13.76	21.884	17 52 7.4	83.81					
16	4 14 59.34	21.914	18 24 49.8	79.70					
20	4 23 45.59	21.940	N. 18 55 52.6	75.52					
<b>SUNDAY 5.</b>									
0	4 32 32.46	21.965	N. 19 25 14.0	71.27					
4	4 41 19.90	21.987	19 52 52.6	66.94					
8	4 50 7.83	22.007	20 18 46.8	62.57					
12	4 58 56.19	22.022	20 42 55.3	58.14					
16	5 7 44.89	22.034	21 5 17.0	53.66					
20	5 16 33.82	22.042	N. 21 25 50.9	49.15					
<b>MONDAY 6.</b>									
0	5 25 22.89	22.047	N. 21 44 36.1	44.62					
4	5 34 11.98	22.044	22 1 32.0	40.05					
8	5 43 0.97	22.037	22 16 38.1	35.47					
12	5 51 49.73	22.025	22 29 54.2	30.87					
16	6 0 38.12	22.007	22 41 19.9	26.27					
20	6 9 26.02	21.983	N. 22 50 55.3	21.67					



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
<b>TUESDAY 7.</b>					<b>TUESDAY 14.</b>				
0	6 18 13 <sup>s</sup> 28	21 <sup>m</sup> 954	N. 22 58 40 <sup>s</sup> 4	17 <sup>m</sup> 09	0	12 1 6 <sup>s</sup> 11	19 <sup>m</sup> 207	N. 5 16 20 <sup>s</sup> 7	119 <sup>m</sup> 77
4	6 26 59 <sup>s</sup> 76	21 <sup>m</sup> 918	23 4 35 <sup>s</sup> 5	12 <sup>m</sup> 51	4	12 8 47 <sup>s</sup> 24	19 <sup>m</sup> 222	4 28 11 <sup>s</sup> 0	121 <sup>m</sup> 01
8	6 35 45 <sup>s</sup> 32	21 <sup>m</sup> 877	23 8 40 <sup>s</sup> 9	7 <sup>m</sup> 95	8	12 16 28 <sup>s</sup> 87	19 <sup>m</sup> 247	3 39 33 <sup>s</sup> 4	122 <sup>m</sup> 11
12	6 44 29 <sup>s</sup> 83	21 <sup>m</sup> 831	23 10 57 <sup>s</sup> 2	3 <sup>m</sup> 42	12	12 24 11 <sup>s</sup> 18	19 <sup>m</sup> 280	2 50 30 <sup>s</sup> 9	123 <sup>m</sup> 08
16	6 53 13 <sup>s</sup> 14	21 <sup>m</sup> 778	23 11 25 <sup>s</sup> 0	1 <sup>m</sup> 09	16	12 31 54 <sup>s</sup> 38	19 <sup>m</sup> 321	2 1 6 <sup>s</sup> 5	123 <sup>m</sup> 92
20	7 1 55 <sup>s</sup> 12	21 <sup>m</sup> 719	N. 23 10 5 <sup>s</sup> 1	5 <sup>m</sup> 56	20	12 39 38 <sup>s</sup> 66	19 <sup>m</sup> 370	N. 1 11 23 <sup>s</sup> 5	124 <sup>m</sup> 64
<b>WEDNESDAY 8.</b>					<b>WEDNESDAY 15.</b>				
0	7 10 35 <sup>s</sup> 64	21 <sup>m</sup> 656	N. 23 6 58 <sup>s</sup> 3	10 <sup>m</sup> 00	0	12 47 24 <sup>s</sup> 22	19 <sup>m</sup> 428	N. 0 21 25 <sup>s</sup> 1	125 <sup>m</sup> 21
4	7 19 14 <sup>s</sup> 58	21 <sup>m</sup> 588	23 2 5 <sup>s</sup> 6	14 <sup>m</sup> 39	4	12 55 11 <sup>s</sup> 27	19 <sup>m</sup> 494	S. 0 28 45 <sup>s</sup> 4	125 <sup>m</sup> 63
8	7 27 51 <sup>s</sup> 83	21 <sup>m</sup> 515	22 55 28 <sup>s</sup> 2	18 <sup>m</sup> 72	8	13 3 0 <sup>s</sup> 02	19 <sup>m</sup> 569	1 19 4 <sup>s</sup> 5	125 <sup>m</sup> 93
12	7 36 27 <sup>s</sup> 26	21 <sup>m</sup> 437	22 47 7 <sup>s</sup> 1	23 <sup>m</sup> 02	12	13 10 50 <sup>s</sup> 66	19 <sup>m</sup> 652	2 9 28 <sup>s</sup> 6	126 <sup>m</sup> 06
16	7 45 0 <sup>s</sup> 79	21 <sup>m</sup> 356	22 37 3 <sup>s</sup> 6	27 <sup>m</sup> 26	16	13 18 43 <sup>s</sup> 40	19 <sup>m</sup> 744	2 59 54 <sup>s</sup> 2	126 <sup>m</sup> 05
20	7 53 32 <sup>s</sup> 30	21 <sup>m</sup> 270	N. 22 25 19 <sup>s</sup> 3	31 <sup>m</sup> 42	20	13 26 38 <sup>s</sup> 45	19 <sup>m</sup> 845	S. 3 50 17 <sup>s</sup> 4	125 <sup>m</sup> 87
<b>THURSDAY 9.</b>					<b>THURSDAY 16.</b>				
0	8 2 1 <sup>s</sup> 74	21 <sup>m</sup> 182	N. 22 11 55 <sup>s</sup> 4	35 <sup>m</sup> 54	0	13 34 36 <sup>s</sup> 01	19 <sup>m</sup> 954	S. 4 40 34 <sup>s</sup> 6	125 <sup>m</sup> 53
4	8 10 29 <sup>s</sup> 02	21 <sup>m</sup> 091	21 56 53 <sup>s</sup> 6	39 <sup>m</sup> 59	4	13 42 36 <sup>s</sup> 29	20 <sup>m</sup> 071	5 30 41 <sup>s</sup> 7	125 <sup>m</sup> 03
8	8 18 54 <sup>s</sup> 08	20 <sup>m</sup> 997	21 40 15 <sup>s</sup> 6	43 <sup>m</sup> 57	8	13 50 39 <sup>s</sup> 47	20 <sup>m</sup> 197	6 20 34 <sup>s</sup> 9	124 <sup>m</sup> 37
12	8 27 16 <sup>s</sup> 87	20 <sup>m</sup> 902	21 22 2 <sup>s</sup> 9	47 <sup>m</sup> 48	12	13 58 45 <sup>s</sup> 77	20 <sup>m</sup> 330	7 10 10 <sup>s</sup> 0	123 <sup>m</sup> 52
16	8 35 37 <sup>s</sup> 35	20 <sup>m</sup> 805	21 2 17 <sup>s</sup> 3	51 <sup>m</sup> 31	16	14 6 55 <sup>s</sup> 38	20 <sup>m</sup> 472	7 59 22 <sup>s</sup> 7	122 <sup>m</sup> 50
20	8 43 55 <sup>s</sup> 50	20 <sup>m</sup> 707	N. 20 41 0 <sup>s</sup> 6	55 <sup>m</sup> 07	20	14 15 8 <sup>s</sup> 49	20 <sup>m</sup> 622	S. 8 48 8 <sup>s</sup> 8	121 <sup>m</sup> 30
<b>FRIDAY 10.</b>					<b>FRIDAY 17.</b>				
0	8 52 11 <sup>s</sup> 30	20 <sup>m</sup> 609	N. 20 18 14 <sup>s</sup> 5	58 <sup>m</sup> 76	0	14 23 25 <sup>s</sup> 27	20 <sup>m</sup> 778	S. 9 36 23 <sup>s</sup> 8	119 <sup>m</sup> 92
4	9 0 24 <sup>s</sup> 74	20 <sup>m</sup> 511	19 54 1 <sup>s</sup> 0	62 <sup>m</sup> 35	4	14 31 45 <sup>s</sup> 91	20 <sup>m</sup> 943	10 24 3 <sup>s</sup> 3	118 <sup>m</sup> 33
8	9 8 35 <sup>s</sup> 82	20 <sup>m</sup> 413	19 28 22 <sup>s</sup> 0	65 <sup>m</sup> 87	8	14 40 10 <sup>s</sup> 57	21 <sup>m</sup> 113	11 11 2 <sup>s</sup> 6	116 <sup>m</sup> 57
12	9 16 44 <sup>s</sup> 57	20 <sup>m</sup> 317	19 1 19 <sup>s</sup> 5	69 <sup>m</sup> 31	12	14 48 39 <sup>s</sup> 42	21 <sup>m</sup> 291	11 57 17 <sup>s</sup> 1	114 <sup>m</sup> 61
16	9 24 51 <sup>s</sup> 01	20 <sup>m</sup> 221	18 32 55 <sup>s</sup> 6	72 <sup>m</sup> 67	16	14 57 12 <sup>s</sup> 60	21 <sup>m</sup> 474	12 42 42 <sup>s</sup> 1	112 <sup>m</sup> 44
20	9 32 55 <sup>s</sup> 18	20 <sup>m</sup> 127	N. 18 3 12 <sup>s</sup> 2	75 <sup>m</sup> 93	20	15 5 50 <sup>s</sup> 24	21 <sup>m</sup> 664	S. 13 27 12 <sup>s</sup> 8	110 <sup>m</sup> 07
<b>SATURDAY 11.</b>					<b>SATURDAY 18.</b>				
0	9 40 57 <sup>s</sup> 13	20 <sup>m</sup> 036	N. 17 32 11 <sup>s</sup> 5	79 <sup>m</sup> 11	0	15 14 32 <sup>s</sup> 48	21 <sup>m</sup> 857	S. 14 10 44 <sup>s</sup> 4	107 <sup>m</sup> 52
4	9 48 56 <sup>s</sup> 93	19 <sup>m</sup> 947	16 59 55 <sup>s</sup> 6	82 <sup>m</sup> 20	4	15 23 19 <sup>s</sup> 41	22 <sup>m</sup> 055	14 53 11 <sup>s</sup> 9	104 <sup>m</sup> 73
8	9 56 54 <sup>s</sup> 65	19 <sup>m</sup> 863	16 26 26 <sup>s</sup> 5	85 <sup>m</sup> 21	8	15 32 11 <sup>s</sup> 13	22 <sup>m</sup> 256	15 34 30 <sup>s</sup> 3	101 <sup>m</sup> 76
12	10 4 50 <sup>s</sup> 38	19 <sup>m</sup> 782	15 51 46 <sup>s</sup> 5	88 <sup>m</sup> 11	12	15 41 7 <sup>s</sup> 71	22 <sup>m</sup> 459	16 14 34 <sup>s</sup> 7	98 <sup>m</sup> 57
16	10 12 44 <sup>s</sup> 19	19 <sup>m</sup> 703	15 15 57 <sup>s</sup> 8	90 <sup>m</sup> 92	16	15 50 9 <sup>s</sup> 19	22 <sup>m</sup> 665	16 53 20 <sup>s</sup> 1	95 <sup>m</sup> 17
20	10 20 36 <sup>s</sup> 18	19 <sup>m</sup> 630	N. 14 39 2 <sup>s</sup> 7	93 <sup>m</sup> 65	20	15 59 15 <sup>s</sup> 62	22 <sup>m</sup> 871	S. 17 30 41 <sup>s</sup> 5	91 <sup>m</sup> 57
<b>SUNDAY 12.</b>					<b>SUNDAY 19.</b>				
0	10 28 26 <sup>s</sup> 47	19 <sup>m</sup> 562	N. 14 1 3 <sup>s</sup> 4	96 <sup>m</sup> 27	0	16 8 27 <sup>s</sup> 00	23 <sup>m</sup> 077	S. 18 6 34 <sup>s</sup> 1	87 <sup>m</sup> 77
4	10 36 15 <sup>s</sup> 16	19 <sup>m</sup> 497	13 22 2 <sup>s</sup> 2	98 <sup>m</sup> 81	4	16 17 43 <sup>s</sup> 31	23 <sup>m</sup> 282	18 40 52 <sup>s</sup> 9	83 <sup>m</sup> 76
8	10 44 2 <sup>s</sup> 39	19 <sup>m</sup> 440	12 42 1 <sup>s</sup> 4	101 <sup>m</sup> 24	8	16 27 4 <sup>s</sup> 50	23 <sup>m</sup> 484	19 13 32 <sup>s</sup> 9	79 <sup>m</sup> 55
12	10 51 48 <sup>s</sup> 29	19 <sup>m</sup> 387	12 1 3 <sup>s</sup> 5	103 <sup>m</sup> 57	12	16 36 30 <sup>s</sup> 50	23 <sup>m</sup> 682	19 44 29 <sup>s</sup> 6	75 <sup>m</sup> 14
16	10 59 32 <sup>s</sup> 99	19 <sup>m</sup> 340	11 19 10 <sup>s</sup> 7	105 <sup>m</sup> 80	16	16 46 1 <sup>s</sup> 23	23 <sup>m</sup> 877	20 13 38 <sup>s</sup> 2	70 <sup>m</sup> 54
20	11 7 16 <sup>s</sup> 64	19 <sup>m</sup> 299	N. 10 36 25 <sup>s</sup> 7	107 <sup>m</sup> 93	20	16 55 36 <sup>s</sup> 53	24 <sup>m</sup> 064	S. 20 40 54 <sup>s</sup> 2	65 <sup>m</sup> 76
<b>MONDAY 13.</b>					<b>MONDAY 20.</b>				
0	11 14 59 <sup>s</sup> 39	19 <sup>m</sup> 264	N. 9 52 50 <sup>s</sup> 8	109 <sup>m</sup> 96	0	17 5 16 <sup>s</sup> 26	24 <sup>m</sup> 245	S. 21 6 13 <sup>s</sup> 4	60 <sup>m</sup> 80
4	11 22 41 <sup>s</sup> 39	19 <sup>m</sup> 237	9 8 28 <sup>s</sup> 6	111 <sup>m</sup> 87	4	17 15 0 <sup>s</sup> 24	24 <sup>m</sup> 417	21 29 31 <sup>s</sup> 5	55 <sup>m</sup> 67
8	11 30 22 <sup>s</sup> 80	19 <sup>m</sup> 217	8 23 21 <sup>s</sup> 8	113 <sup>m</sup> 67	8	17 24 48 <sup>s</sup> 24	24 <sup>m</sup> 581	21 50 44 <sup>s</sup> 4	50 <sup>m</sup> 38
12	11 38 3 <sup>s</sup> 81	19 <sup>m</sup> 202	7 37 32 <sup>s</sup> 8	115 <sup>m</sup> 37	12	17 34 40 <sup>s</sup> 02	24 <sup>m</sup> 733	22 9 48 <sup>s</sup> 7	44 <sup>m</sup> 94
16	11 45 44 <sup>s</sup> 58	19 <sup>m</sup> 196	6 51 4 <sup>s</sup> 5	116 <sup>m</sup> 97	16	17 44 35 <sup>s</sup> 31	24 <sup>m</sup> 873	22 26 40 <sup>s</sup> 7	39 <sup>m</sup> 37
20	11 53 25 <sup>s</sup> 28	19 <sup>m</sup> 197	N. 6 3 59 <sup>s</sup> 5	118 <sup>m</sup> 43	20	17 54 33 <sup>s</sup> 82	25 <sup>m</sup> 001	S. 22 41 17 <sup>s</sup> 4	33 <sup>m</sup> 66

GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
<b>TUESDAY 21.</b>					<b>TUESDAY 28.</b>				
0	18 4 35 <sup>s</sup> 23	25 <sup>m</sup> 113	S. 22 53 35 <sup>s</sup> 7	27 <sup>m</sup> 85	0	0 44 54 <sup>s</sup> 47	21 <sup>m</sup> 503	S. 0 40 30 <sup>s</sup> 6	139 <sup>m</sup> 21
4	18 14 39 <sup>s</sup> 18	25 <sup>m</sup> 213	23 3 33 <sup>s</sup> 2	21 <sup>m</sup> 92	4	0 53 30 <sup>s</sup> 02	21 <sup>m</sup> 460	N. 0 15 8 <sup>s</sup> 4	139 <sup>m</sup> 00
8	18 24 45 <sup>s</sup> 33	25 <sup>m</sup> 296	23 11 7 <sup>s</sup> 8	15 <sup>m</sup> 93	8	1 2 4 <sup>s</sup> 62	21 <sup>m</sup> 425	1 10 39 <sup>s</sup> 8	138 <sup>m</sup> 58
12	18 34 53 <sup>s</sup> 28	25 <sup>m</sup> 363	23 16 17 <sup>s</sup> 7	9 <sup>m</sup> 87	12	1 10 38 <sup>s</sup> 47	21 <sup>m</sup> 397	2 5 58 <sup>s</sup> 8	137 <sup>m</sup> 96
16	18 45 2 <sup>s</sup> 65	25 <sup>m</sup> 414	23 19 1 <sup>s</sup> 3	3 <sup>m</sup> 76	16	1 19 11 <sup>s</sup> 77	21 <sup>m</sup> 378	3 1 0 <sup>s</sup> 1	137 <sup>m</sup> 12
20	18 55 13 <sup>s</sup> 04	25 <sup>m</sup> 448	S. 23 19 17 <sup>s</sup> 7	2 <sup>m</sup> 39	20	1 27 44 <sup>s</sup> 72	21 <sup>m</sup> 368	N. 3 55 38 <sup>s</sup> 9	136 <sup>m</sup> 07
<b>WEDNESDAY 22.</b>					<b>WEDNESDAY 29.</b>				
0	19 5 24 <sup>s</sup> 05	25 <sup>m</sup> 466	S. 23 17 6 <sup>s</sup> 3	8 <sup>m</sup> 56	0	1 36 17 <sup>s</sup> 49	21 <sup>m</sup> 364	N. 4 49 50 <sup>s</sup> 3	134 <sup>m</sup> 83
4	19 15 35 <sup>s</sup> 28	25 <sup>m</sup> 467	23 12 26 <sup>s</sup> 8	14 <sup>m</sup> 72	4	1 44 50 <sup>s</sup> 26	21 <sup>m</sup> 368	5 43 29 <sup>s</sup> 4	133 <sup>m</sup> 39
8	19 25 46 <sup>s</sup> 32	25 <sup>m</sup> 451	23 5 19 <sup>s</sup> 6	20 <sup>m</sup> 87	8	1 53 23 <sup>s</sup> 20	21 <sup>m</sup> 378	6 36 31 <sup>s</sup> 6	131 <sup>m</sup> 76
12	19 35 56 <sup>s</sup> 78	25 <sup>m</sup> 418	22 55 45 <sup>s</sup> 1	26 <sup>m</sup> 99	12	2 1 56 <sup>s</sup> 48	21 <sup>m</sup> 396	7 28 52 <sup>s</sup> 3	129 <sup>m</sup> 92
16	19 46 6 <sup>s</sup> 28	25 <sup>m</sup> 371	22 43 44 <sup>s</sup> 2	33 <sup>m</sup> 07	16	2 10 30 <sup>s</sup> 25	21 <sup>m</sup> 419	8 20 26 <sup>s</sup> 8	127 <sup>m</sup> 92
20	19 56 14 <sup>s</sup> 44	25 <sup>m</sup> 307	S. 22 29 18 <sup>s</sup> 6	39 <sup>m</sup> 07	20	2 19 4 <sup>s</sup> 64	21 <sup>m</sup> 448	N. 9 11 10 <sup>s</sup> 6	125 <sup>m</sup> 71
<b>THURSDAY 23.</b>					<b>THURSDAY 30.</b>				
0	20 6 20 <sup>s</sup> 92	25 <sup>m</sup> 230	S. 22 12 29 <sup>s</sup> 8	44 <sup>m</sup> 98	0	2 27 39 <sup>s</sup> 80	21 <sup>m</sup> 482	N. 10 0 59 <sup>s</sup> 5	123 <sup>m</sup> 32
4	20 16 25 <sup>s</sup> 38	25 <sup>m</sup> 139	21 53 20 <sup>s</sup> 1	50 <sup>m</sup> 80	4	2 36 15 <sup>s</sup> 84	21 <sup>m</sup> 522	10 49 49 <sup>s</sup> 1	120 <sup>m</sup> 77
8	20 26 27 <sup>s</sup> 51	25 <sup>m</sup> 036	21 31 52 <sup>s</sup> 0	56 <sup>m</sup> 52	8	2 44 52 <sup>s</sup> 86	21 <sup>m</sup> 564	11 37 35 <sup>s</sup> 4	118 <sup>m</sup> 05
12	20 36 27 <sup>s</sup> 03	24 <sup>m</sup> 922	21 8 8 <sup>s</sup> 4	62 <sup>m</sup> 10	12	2 53 30 <sup>s</sup> 96	21 <sup>m</sup> 611	12 24 14 <sup>s</sup> 4	115 <sup>m</sup> 16
16	20 46 23 <sup>s</sup> 68	24 <sup>m</sup> 797	20 42 12 <sup>s</sup> 3	67 <sup>m</sup> 55	16	3 2 10 <sup>s</sup> 22	21 <sup>m</sup> 662	13 9 42 <sup>s</sup> 1	112 <sup>m</sup> 11
20	20 56 17 <sup>s</sup> 24	24 <sup>m</sup> 664	S. 20 14 7 <sup>s</sup> 3	72 <sup>m</sup> 84	20	3 10 50 <sup>s</sup> 71	21 <sup>m</sup> 713	N. 13 53 54 <sup>s</sup> 7	108 <sup>m</sup> 91
<b>FRIDAY 24.</b>					<b>FRIDAY, MAY 1.</b>				
0	21 6 7 <sup>s</sup> 50	24 <sup>m</sup> 523	S. 19 43 57 <sup>s</sup> 0	77 <sup>m</sup> 98	0	3 19 32 <sup>s</sup> 47	21 <sup>m</sup> 767	N. 14 36 48 <sup>s</sup> 7	105 <sup>m</sup> 56
4	21 15 54 <sup>s</sup> 30	24 <sup>m</sup> 376	19 11 45 <sup>s</sup> 5	82 <sup>m</sup> 95					
8	21 25 37 <sup>s</sup> 49	24 <sup>m</sup> 223	18 37 36 <sup>s</sup> 9	87 <sup>m</sup> 74					
12	21 35 16 <sup>s</sup> 98	24 <sup>m</sup> 067	18 1 35 <sup>s</sup> 4	92 <sup>m</sup> 34					
16	21 44 52 <sup>s</sup> 68	23 <sup>m</sup> 908	17 23 45 <sup>s</sup> 9	96 <sup>m</sup> 75					
20	21 54 24 <sup>s</sup> 54	23 <sup>m</sup> 747	S. 16 44 13 <sup>s</sup> 1	100 <sup>m</sup> 96					
<b>SATURDAY 25.</b>					<b>SUNDAY 26.</b>				
0	22 3 52 <sup>s&lt;/</sup>								



GREENWICH MEAN TIME.

THE MOON'S

Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	51 20 50.3	57 58 2.9	S. 3 36 49.7	S. 3 10 32.7	0.85	0 45.0	13 10.1
2	64 30 8.3	70 57 6.2	2 42 2.2	2 11 45.9	1.85	1 35.5	14 1.0
3	77 19 2.6	83 36 10.0	1 40 11.1	1 7 43.8	2.85	2 26.6	14 52.4
4	89 48 46.6	95 57 15.5	S. 0 34 48.5	S. 0 1 48.3	3.85	3 18.1	15 43.7
5	102 2 3.8	108 3 42.6	N. 0 30 55.4	N. 1 3 2.8	4.85	4 9.1	16 34.3
6	114 2 45.7	119 59 49.5	1 34 15.8	2 4 17.6	5.85	4 59.0	17 23.4
7	125 55 31.6	131 50 30.8	2 32 52.6	2 59 45.8	6.85	5 47.3	18 10.7
8	137 45 26.4	143 40 57.5	3 24 43.0	3 47 30.7	7.85	6 33.7	18 56.2
9	149 37 42.3	155 36 18.0	4 7 55.6	4 25 44.5	8.85	7 18.4	19 40.3
10	161 37 20.0	167 41 21.1	4 40 44.7	4 52 43.5	9.85	8 2.0	20 23.5
11	173 48 51.1	180 0 16.1	5 1 28.8	5 6 49.2	10.85	8 45.0	21 6.6
12	186 15 58.0	192 36 14.2	5 8 34.3	5 6 34.9	11.85	9 28.4	21 50.5
13	199 1 16.7	205 31 11.7	5 0 43.9	4 50 56.7	12.85	10 13.0	22 36.1
14	212 5 59.8	218 45 35.9	4 37 11.9	4 19 31.8	13.85	10 59.9	23 24.4
15	225 29 49.3	232 18 24.0	3 58 2.9	3 32 56.4	14.85	11 49.7	* *
16	239 10 59.4	246 7 11.3	3 4 28.6	2 33 0.7	15.85	12 43.2	0 16.0
17	253 6 32.7	260 8 34.7	1 58 58.5	1 22 52.5	16.85	13 40.3	1 11.4
18	267 12 47.7	274 18 42.6	N. 0 45 16.5	N. 0 6 47.0	17.85	14 40.2	2 10.0
19	281 25 51.1	288 33 46.7	S. 0 31 57.3	S. 1 10 17.5	18.85	15 41.0	3 10.6
20	295 42 4.9	302 50 23.7	1 47 35.1	2 23 12.5	19.85	16 41.0	4 11.2
21	309 58 23.4	317 5 46.6	2 56 34.7	3 27 9.9	20.85	17 38.4	5 10.1
22	324 12 17.5	331 17 41.7	3 54 29.3	4 18 8.4	21.85	18 32.8	6 6.0
23	338 21 45.8	345 24 16.9	4 37 47.0	4 53 9.5	22.85	19 24.2	6 58.8
24	352 25 2.0	359 23 48.3	5 4 4.6	5 10 26.1	23.85	20 13.4	7 49.0
25	6 20 22.2	13 14 30.2	5 12 12.2	5 9 25.8	24.85	21 1.5	8 37.6
26	20 5 58.4	26 54 33.0	5 2 14.1	4 50 48.2	25.85	21 49.2	9 25.3
27	33 40 0.5	40 22 8.1	4 35 23.2	4 16 17.5	26.85	22 37.5	10 13.2
28	47 0 44.6	53 35 40.5	3 53 52.4	3 28 31.1	27.85	23 26.8	11 2.0
29	60 6 48.7	66 34 4.5	3 0 38.9	2 30 42.0	28.85	* *	11 51.9
30	72 57 26.4	79 16 56.4	1 59 7.2	1 26 20.9	0.36	0 17.3	12 43.0
31	85 32 40.0	91 44 46.1	S. 0 52 49.4	S. 0 18 57.6	1.36	1 8.7	13 34.5
32	97 53 27.1	103 58 59.0	N. 0 14 50.6	N. 0 48 12.6	2.36	2 0.3	14 25.8

GREENWICH MEAN TIME.

THE MOON'S

Day.	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	' / "	' / "	' / "	' / "		h m s	s	° / ' / "	' / "
1	15 37.92	15 32.56	57 16.29	56 56.66					
2	15 27.13	15 21.75	56 36.79	56 17.06					
3	15 16.50	15 11.49	55 57.83	55 39.44					
4	15 6.78	15 2.46	55 22.20	55 6.41					
5	14 58.64	14 55.34	54 52.37	54 40.31					
6	14 52.64	14 50.58	54 30.41	54 22.85					
7	14 49.18	14 48.49	54 17.74	54 15.18					
8	14 48.50	14 49.21	54 15.22	54 17.85					
9	14 50.64	14 52.74	54 23.06	54 30.79					
10	14 55.51	14 58.90	54 40.93	54 53.32					
11	15 2.84	15 7.30	55 7.79	55 24.12					
12	15 12.20	15 17.43	55 42.04	56 1.24					
13	15 22.93	15 28.60	56 21.40	56 42.14					
14	15 34.31	15 39.98	57 3.09	57 23.85					
15	15 45.49	15 50.73	57 44.03	58 3.24					
16	15 55.61	16 0.05	58 21.13	58 37.39					
17	16 3.97	16 7.32	58 51.76	59 4.04					
18	16 10.07	16 12.21	59 14.11	59 21.92					
19	16 13.71	16 14.63	59 27.46	59 30.80					
20	16 14.97	16 14.78	59 32.05	59 31.35					
21	16 14.11	16 13.02	59 28.90	59 24.88					
22	16 11.53	16 9.70	59 19.44	59 12.74					
23	16 7.58	16 5.18	59 4.95	58 56.18					
24	16 2.54	15 59.68	58 46.52	58 36.04					
25	15 56.61	15 53.34	58 24.79	58 12.80					
26	15 49.88	15 46.24	58 0.12	57 46.79					
27	15 42.43	15 38.46	57 32.82	57 18.28					
28	15 34.35	15 30.13	57 3.24	56 47.79					
29	15 25.85	15 21.52	56 32.06	56 16.21					
30	15 17.20	15 12.97	56 0.42	55 44.87					
31	15 8.85	15 4.91	55 29.76	55 15.34					
32	15 1.21	14 57.84	55 1.82	54 49.44					

FRIDAY 1.					
h	m	s	° / ' / "	' / "	
0	3 19	32.47	21.767	N. 14 36 48.7	105.56
4	3 28	15.54	21.822	15 18 20.5	102.07
8	3 36	59.95	21.878	15 58 26.9	98.43
12	3 45	45.70	21.934	16 37 4.6	94.67
16	3 54	32.78	21.989	17 14 10.7	90.81
20	4 3	21.17	22.042	N. 17 49 42.3	86.81

SATURDAY 2.					
h	m	s	° / ' / "	' / "	
0	4 12	10.81	22.093	N. 18 23 36.7	82.70
4	4 21	1.65	22.142	18 55 51.4	78.51
8	4 29	53.62	22.187	19 26 24.1	74.21
12	4 38	46.63	22.228	19 55 12.7	69.82
16	4 47	40.57	22.266	20 22 15.2	65.37
20	4 56	35.33	22.297	N. 20 47 29.9	60.84

SUNDAY 3.					
h	m	s	° / ' / "	' / "	
0	5 5	30.77	22.322	N. 21 10 55.3	56.26
4	5 14	26.75	22.342	21 32 30.0	51.62
8	5 23	23.12	22.354	21 52 13.0	46.95
12	5 32	19.72	22.360	22 10 3.3	42.24
16	5 41	16.38	22.359	22 26 0.2	37.50
20	5 50	12.91	22.350	N. 22 40 3.0	32.74

MONDAY 4.					
h	m	s	° / ' / "	' / "	
0	5 59	9.14	22.334	N. 22 52 11.6	27.97
4	6 8	4.89	22.310	23 2 25.8	23.21
8	6 16	59.96	22.277	23 10 45.6	18.44
12	6 25	54.17	22.238	23 17 11.3	13.69
16	6 34	47.33	22.190	23 21 43.2	8.97
20	6 43	39.24	22.135	N. 23 24 22.1	4.27

TUESDAY 5.					
h	m	s	° / ' / "	' / "	
0	6 52	29.74	22.072	N. 23 25 8.6	0.39
4	7 1	18.65	22.002	23 24 3.7	5.01
8	7 10	5.82	21.927	23 21 8.5	9.58
12	7 18	51.07	21.844	23 16 24.1	14.10
16	7 27	34.26	21.755	23 9 51.9	18.57
20	7 36	15.26	21.662	N. 23 1 33.4	22.97

WEDNESDAY 6.					
h	m	s	° / ' / "	' / "	
0	7 44	53.95	21.562	N. 22 51 30.1	27.29
4	7 53	30.21	21.458	22 39 43.7	31.56
8	8 2	3.94	21.352	22 26 16.0	35.74
12	8 10	35.07	21.242	22 11 8.7	39.85
16	8 19	3.51	21.128	21 54 23.8	43.87
20	8 27	29.22	21.013	N. 21 36 3.3	47.82



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: THURSDAY 7, THURSDAY 14, FRIDAY 8, FRIDAY 15, SATURDAY 9, SATURDAY 16, SUNDAY 10, SUNDAY 17, MONDAY 11, MONDAY 18, TUESDAY 12, TUESDAY 19, WEDNESDAY 13, WEDNESDAY 20.

GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: THURSDAY 21, THURSDAY 28, FRIDAY 22, FRIDAY 29, SATURDAY 23, SATURDAY 30, SUNDAY 24, SUNDAY 31, MONDAY 25, MONDAY, JUNE 1, PHASES OF THE MOON, TUESDAY 26, WEDNESDAY 27.



GREENWICH MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Upper.	Lower.
	° / ' "	° / ' "	° / ' "	° / ' "	d	h m	h m
1	97 53 27.1	103 58 59.0	N. 0 14 50.6	N. 0 48 12.6	2.36	2 0.3	14 25.8
2	110 1 41.1	116 1 55.7	1 20 47.7	1 52 16.7	3.36	2 51.1	15 15.9
3	122 0 8.3	127 56 46.5	2 22 21.9	2 50 47.1	4.36	3 40.3	16 4.2
4	133 52 20.4	139 47 22.2	3 17 17.1	3 41 38.2	5.36	4 27.6	16 50.5
5	145 42 25.5	151 38 4.9	4 3 37.5	4 23 2.7	6.36	5 12.9	17 34.9
6	157 34 55.9	163 33 34.7	4 39 42.4	4 53 25.4	7.36	5 56.6	18 18.0
7	169 34 37.0	175 38 37.6	5 4 0.9	5 11 19.0	8.36	6 39.2	19 0.4
8	181 46 10.3	187 57 46.8	5 15 9.7	5 15 24.2	9.36	7 21.7	19 43.1
9	194 13 56.0	200 35 4.0	5 11 54.7	5 4 34.9	10.36	8 4.9	20 27.1
10	207 1 32.0	213 33 36.2	4 53 20.2	4 38 8.6	11.36	8 50.0	21 13.5
11	220 11 27.2	226 55 9.2	4 19 1.3	3 56 3.5	12.36	9 37.9	22 3.3
12	233 44 39.2	240 39 47.2	3 29 25.0	2 59 20.8	13.36	10 29.7	22 57.2
13	247 40 15.2	254 45 38.3	2 26 11.3	1 50 22.8	14.36	11 25.8	23 55.4
14	261 55 24.7	269 8 56.7	N. 1 12 27.2	N. 0 33 1.0	15.36	12 25.8	* *
15	276 25 31.8	283 44 23.8	S. 0 7 14.9	S. 0 47 37.0	16.36	13 28.3	0 56.9
16	291 4 44.4	298 25 45.0	1 27 20.3	2 5 40.5	17.36	14 30.8	1 59.7
17	305 46 37.9	313 6 37.9	2 41 55.2	3 15 25.2	18.36	15 31.2	3 1.4
18	320 25 3.0	327 41 16.2	3 45 36.1	4 11 58.8	19.36	16 28.2	4 0.2
19	334 54 45.5	342 5 4.0	4 34 10.6	4 51 54.6	20.36	17 21.4	4 55.2
20	349 11 50.7	356 14 49.8	5 4 59.8	5 13 21.4	21.36	18 11.7	5 46.9
21	3 13 50.2	10 8 45.4	5 16 59.4	5 15 58.7	22.36	18 59.9	6 36.0
22	16 59 32.0	23 46 10.4	5 10 28.5	5 0 41.0	23.36	19 47.2	7 23.6
23	30 28 43.4	37 7 15.4	4 46 51.8	4 29 18.8	24.36	20 34.5	8 10.8
24	43 41 52.5	50 12 41.7	4 8 22.1	3 44 23.5	25.36	21 22.5	8 58.4
25	56 39 50.8	63 3 28.0	3 17 45.8	2 48 53.1	26.36	22 11.8	9 47.0
26	69 23 42.2	75 40 42.1	2 18 9.9	1 46 0.9	27.36	23 2.3	10 37.0
27	81 54 37.4	88 5 37.8	1 12 51.0	S. 0 39 4.8	28.36	23 53.5	11 27.8
28	94 13 54.0	100 19 37.2	S. 0 5 6.1	N. 0 28 42.1	29.36	* *	12 19.0
29	106 23 0.0	112 24 15.8	N. 1 1 57.6	1 34 19.4	0.81	0 44.4	13 9.6
30	118 23 39.7	124 21 27.9	2 5 28.2	2 35 5.9	1.81	1 34.3	13 58.7
31	130 17 58.7	136 13 31.9	N. 3 2 55.5	N. 3 28 42.0	2.81	2 22.5	14 45.7

GREENWICH MEAN TIME.

THE MOON'S									
Day.	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	' "	' "	' "	' "		h m s	s	° / ' "	"
<b>MONDAY 1.</b>									
1	15 1.21	14 57.84	55 1.82	54 49.44					
2	14 54.83	14 52.26	54 38.43	54 29.00					
3	14 50.17	14 48.62	54 21.35	54 15.67					
4	14 47.66	14 47.31	54 12.14	54 10.88					
5	14 47.62	14 48.61	54 12.01	54 15.63					
6	14 50.29	14 52.67	54 21.80	54 30.53					
7	14 55.75	14 59.51	54 41.80	54 55.54					
8	15 3.90	15 8.90	55 11.64	55 29.96					
9	15 14.45	15 20.47	55 50.29	56 12.36					
10	15 26.88	15 33.56	56 35.84	57 0.34					
11	15 40.42	15 47.30	57 25.44	57 50.65					
12	15 54.06	16 0.58	58 15.46	58 39.32					
13	16 6.68	16 12.23	59 1.67	59 21.99					
14	16 17.09	16 21.15	59 39.82	59 54.73					
15	16 24.33	16 26.57	60 6.38	60 14.58					
16	16 27.84	16 28.14	60 19.22	60 20.34					
17	16 27.51	16 26.03	60 18.05	60 12.59					
18	16 23.76	16 20.82	60 4.30	59 53.53					
19	16 17.32	16 13.35	59 40.66	59 26.10					
20	16 9.02	16 4.44	59 10.25	58 53.47					
21	15 59.69	15 54.86	58 36.09	58 18.39					
22	15 50.01	15 45.19	58 0.60	57 42.92					
23	15 40.43	15 35.75	57 25.48	57 8.37					
24	15 31.20	15 26.78	56 51.68	56 35.47					
25	15 22.49	15 18.35	56 19.77	56 4.60					
26	15 14.37	15 10.54	55 49.99	55 35.97					
27	15 6.89	15 3.41	55 22.58	55 9.87					
28	15 0.15	14 57.13	54 57.93	54 46.84					
29	14 54.36	14 51.87	54 36.69	54 27.61					
30	14 49.73	14 47.95	54 19.74	54 13.21					
31	14 46.56	14 45.63	54 8.15	54 4.72					
<b>TUESDAY 2.</b>									
0	7 27 30.45	21.900	N. 23 17 18.1	18.22					
4	7 36 14.89	21.803	23 9 7.0	22.69					
8	7 44 56.94	21.700	22 59 9.4	27.09					
12	7 53 36.45	21.592	22 47 27.0	31.42					
16	8 2 13.29	21.477	22 34 1.7	35.67					
20	8 10 47.35	21.360	N. 22 18 55.4	39.82					
<b>WEDNESDAY 3.</b>									
0	8 19 18.52	21.237	N. 22 2 10.4	43.90					
4	8 27 46.72	21.112	21 43 48.7	47.88					
8	8 36 11.87	20.984	21 23 52.7	51.77					
12	8 44 33.93	20.854	21 2 24.5	55.57					
16	8 52 52.86	20.724	20 39 26.5	59.25					
20	9 1 8.66	20.593	N. 20 15 1.1	62.84					
<b>THURSDAY 4.</b>									
0	9 9 21.33	20.463	N. 19 49 10.7	66.33					
4	9 17 30.88	20.334	19 21 57.8	69.72					
8	9 25 37.35	20.206	18 53 24.7	73.01					
12	9 33 40.78	20.081	18 23 33.8	76.21					
16	9 41 41.25	19.958	17 52 27.6	79.29					
20	9 49 38.83	19.840	N. 17 20 8.6	82.27					
<b>FRIDAY 5.</b>									
0	9 57 33.60	19.726	N. 16 46 39.0	85.17					
4	10 5 25.68	19.616	16 12 1.4	87.96					
8	10 13 15.17	19.511	15 36 18.0	90.64					
12	10 21 2.23	19.411	14 59 31.4	93.23					
16	10 28 46.97	19.318	14 21 43.7	95.72					
20	10 36 29.55	19.231	N. 13 42 57.3	98.12					
<b>SATURDAY 6.</b>									
0	10 44 10.12	19.152	N. 13 3 14.5	100.43					
4	10 51 48.87	19.079	12 22 37.5	102.63					
8	10 59 25.96	19.014	11 41 8.7	104.75					
12	11 7 1.59	18.957	10 58 50.2	106.77					
16	11 14 35.94	18.907	10 15 44.3	108.70					
20	11 22 9.22	18.867	N. 9 31 53.4	110.53					



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days Sunday 7 through Saturday 13, and Sunday 14 through Saturday 20.

GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days Sunday 21 through Sunday 28, Monday 22 through Monday 29, Tuesday 23 through Tuesday 30, Wednesday 24 through Wednesday, July 1, and Phases of the Moon.



GREENWICH MEAN TIME.

THE MOON'S

Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	130 17 58.7	136 13 31.9	N. 3 2 55.5	N. 3 28 42.0	2.81	2 22.5	14 45.7
2	142 8 29.4	148 3 14.6	3 52 11.0	4 13 9.9	3.81	3 8.5	15 30.8
3	153 58 12.8	159 53 51.3	4 31 27.1	4 46 52.1	4.81	3 52.6	16 14.0
4	165 50 38.9	171 49 5.9	4 59 15.2	5 8 27.6	5.81	4 35.2	16 56.1
5	177 49 43.6	183 53 4.3	5 14 21.2	5 16 48.6	6.81	5 17.0	17 37.9
6	189 59 40.8	196 10 6.0	5 15 43.4	5 11 0.1	7.81	5 58.9	18 20.3
7	202 24 51.8	208 44 28.9	5 2 34.3	4 50 23.1	8.81	6 42.1	19 4.4
8	215 9 25.8	221 40 8.0	4 34 25.4	4 14 42.9	9.81	7 27.5	19 51.4
9	228 16 56.8	235 0 8.4	3 51 20.1	3 24 25.1	10.81	8 16.2	20 42.2
10	241 49 52.2	248 46 10.9	2 54 10.6	2 20 54.4	11.81	9 9.3	21 37.7
11	255 48 58.1	262 57 58.4	1 44 59.6	N. 1 6 55.5	12.81	10 7.1	22 37.6
12	270 12 46.2	277 32 46.4	N. 0 27 16.8	S. 0 13 16.3	13.81	11 8.8	23 40.6
13	284 57 14.5	292 25 17.2	S. 0 53 59.5	1 34 5.5	14.81	12 12.6	* *
14	299 55 53.9	307 27 59.2	2 12 46.3	2 49 14.4	15.81	13 15.9	0 44.5
15	315 0 25.1	322 32 3.2	3 22 45.6	3 52 40.9	16.81	14 16.5	1 46.6
16	330 1 47.8	337 28 38.2	4 18 27.5	4 39 40.2	17.81	15 13.2	2 45.3
17	344 51 40.6	352 10 10.0	4 56 2.0	5 7 23.7	18.81	16 6.3	3 40.2
18	359 23 30.7	6 31 17.1	5 13 43.6	5 15 6.7	19.81	16 56.5	4 31.7
19	13 33 12.7	20 29 10.3	5 11 43.4	5 3 48.6	20.81	17 44.9	5 20.9
20	27 19 10.7	34 3 21.1	4 51 40.5	4 35 39.9	21.81	18 32.6	6 8.8
21	40 41 54.6	47 15 8.1	4 16 9.3	3 53 32.0	22.81	19 20.5	6 56.5
22	53 43 22.0	60 6 58.4	3 28 11.8	3 0 32.9	23.81	20 9.2	7 44.7
23	66 26 20.6	72 41 52.3	2 30 59.4	1 59 55.0	24.81	20 58.9	8 33.9
24	78 53 56.8	85 2 56.8	1 27 43.0	S. 0 54 46.6	25.81	21 49.4	9 24.1
25	91 9 13.8	97 13 8.1	S. 0 21 28.2	N. 0 11 50.5	26.81	22 40.0	10 14.7
26	103 14 58.8	109 15 3.5	N. 0 44 48.3	1 17 4.6	27.81	23 30.1	11 5.2
27	115 13 38.8	121 11 0.4	1 48 19.9	2 18 15.6	28.81	* *	11 54.6
28	127 7 23.2	133 3 1.4	2 46 34.2	3 12 59.1	0.20	0 18.7	12 42.3
29	138 58 9.6	144 53 2.4	3 37 15.3	3 59 8.8	1.20	1 5.4	13 28.0
30	150 47 55.0	156 43 3.2	4 18 26.9	4 34 58.5	2.20	1 50.1	14 11.7
31	162 38 44.3	168 35 16.6	4 48 33.5	4 59 3.3	3.20	2 33.0	14 54.0
32	174 33 0.4	180 32 17.3	N. 5 6 20.3	N. 5 10 18.4	4.20	3 14.8	15 35.5

GREENWICH MEAN TIME.

THE MOON'S

Day.	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	' / "	' / "	' / "	' / "		° / ' / "	"	"	"
1	14 46.56	14 45.63	54 8.15	54 4.72					
2	14 45.18	14 45.25	54 3.07	54 3.32					
3	14 45.88	14 47.11	54 5.63	54 10.13					
4	14 48.96	14 51.46	54 16.91	54 26.06					
5	14 54.60	14 58.42	54 37.61	54 51.58					
6	15 2.89	15 8.01	55 7.97	55 26.71					
7	15 13.74	15 20.02	55 47.69	56 10.73					
8	15 26.80	15 33.99	56 35.56	57 1.88					
9	15 41.48	15 49.14	57 29.32	57 57.41					
10	15 56.84	16 4.41	58 25.62	58 53.37					
11	16 11.68	16 18.45	59 19.99	59 44.81					
12	16 24.55	16 29.81	60 7.17	60 26.45					
13	16 34.09	16 37.24	60 42.10	60 53.66					
14	16 39.19	16 39.90	61 0.81	61 3.40					
15	16 39.36	16 37.63	61 1.43	60 55.08					
16	16 34.78	16 30.95	60 44.66	60 30.63					
17	16 26.28	16 20.91	60 13.51	59 53.86					
18	16 15.03	16 8.77	59 32.27	59 9.34					
19	16 2.29	15 55.73	58 45.61	58 21.57					
20	15 49.21	15 42.81	57 57.65	57 34.21					
21	15 36.62	15 30.70	57 11.53	56 49.84					
22	15 25.09	15 19.82	56 29.29	56 9.99					
23	15 14.91	15 10.38	55 52.01	55 35.38					
24	15 6.21	15 2.40	55 20.11	55 6.18					
25	14 58.96	14 55.86	54 53.55	54 42.20					
26	14 53.11	14 50.70	54 32.12	54 23.28					
27	14 48.62	14 46.87	54 15.65	54 9.26					
28	14 45.47	14 44.42	54 4.13	54 0.28					
29	14 43.74	14 43.43	53 57.77	53 56.66					
30	14 43.53	14 44.06	53 57.03	53 58.98					
31	14 45.05	14 46.52	54 2.61	54 8.00					
32	14 48.51	14 51.03	54 15.26	54 24.49					

WEDNESDAY 1.					
	h	m	s	"	
0	8 54	29.20	20.723	N. 20 36 13.8	59.94
4	9 2	44.95	20.589	20 11 32.1	63.52
8	9 10	57.49	20.454	19 45 25.8	67.00
12	9 19	6.79	20.321	19 17 57.3	70.36
16	9 27	12.89	20.187	18 49 9.3	73.62
20	9 35	15.81	20.056	N. 18 19 4.4	76.77

THURSDAY 2.					
	h	m	s	"	
0	9 43	15.58	19.926	N. 17 47 45.2	79.81
4	9 51	12.27	19.798	17 15 14.3	82.75
8	9 59	5.94	19.675	16 41 34.2	85.57
12	10 6	56.70	19.555	16 6 47.7	88.28
16	10 14	44.63	19.440	15 30 57.3	90.89
20	10 22	29.86	19.330	N. 14 54 5.5	93.40

FRIDAY 3.					
	h	m	s	"	
0	10 30	12.50	19.225	N. 14 16 14.8	95.80
4	10 37	52.69	19.126	13 37 27.8	98.09
8	10 45	30.58	19.033	12 57 46.9	100.29
12	10 53	6.33	18.947	12 17 14.6	102.38
16	11 0	40.10	18.869	11 35 53.2	104.37
20	11 8	12.09	18.797	N. 10 53 45.2	106.27

SATURDAY 4.					
	h	m	s	"	
0	11 15	42.46	18.734	N. 10 10 53.0	108.07
4	11 23	11.41	18.680	9 27 18.8	109.77
8	11 30	39.15	18.632	8 43 5.0	111.36
12	11 38	5.87	18.596	7 58 14.0	112.87
16	11 45	31.79	18.567	7 12 48.1	114.28
20	11 52	57.13	18.547	N. 6 26 49.5	115.59

SUNDAY 5.					
	h	m	s	"	
0	12 0	22.11	18.537	N. 5 40 20.6	116.81
4	12 7	46.98	18.537	4 53 23.6	117.93
8	12 15	11.96	18.547	4 6 0.8	118.96
12	12 22	37.29	18.567	3 18 14.6	119.88
16	12 30	3.23	18.597	2 30 7.4	120.71
20	12 37	30.02	18.638	N. 1 41 41.6	121.43

MONDAY 6.					
	h	m	s	"	
0	12 44	57.93	18.690	N. 0 52 59.6	122.04
4	12 52	27.21	18.752	N. 0 4 4.0	122.57
8	12 59	58.14	18.827	S. 0 45 2.6	122.97
12	13 7	30.97	18.912	1 34 17.6	123.26
16	13 15	5.98	19.007	2 23 38.3	123.44
20	13 22	43.43	19.115	S. 3 13 1.8	123.50



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: TUESDAY 7, 14, WEDNESDAY 8, 15, THURSDAY 9, 16, FRIDAY 10, 17, SATURDAY 11, 18, SUNDAY 12, 19, MONDAY 13, 20.

GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: TUESDAY 21, 28, WEDNESDAY 22, 29, THURSDAY 23, 30, FRIDAY 24, 31, SATURDAY 25, AUG. 1, PHASES OF THE MOON.



GREENWICH MEAN TIME.							
Day.	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	174 33 0.4	180 32 17.3	N. 5 6 20.3	N. 5 10 18.4	4.20	3 14.8	15 35.5
2	186 33 31.2	192 37 7.3	5 10 52.7	5 7 59.3	5.20	3 56.1	16 16.9
3	198 43 32.7	204 53 15.8	5 1 35.5	4 51 40.1	6.20	4 38.0	16 59.4
4	211 6 46.1	217 24 33.9	4 38 13.3	4 21 16.7	7.20	5 21.3	17 43.9
5	223 47 9.0	230 15 0.9	4 0 54.1	3 37 11.6	8.20	6 7.3	18 31.6
6	236 48 37.0	243 28 22.0	3 10 18.2	2 40 26.0	9.20	6 56.9	19 23.3
7	250 14 36.2	257 7 34.8	2 7 51.1	1 32 53.9	10.20	7 50.8	20 19.5
8	264 7 25.2	271 14 6.5	N. 0 55 59.9	N. 0 17 39.5	11.20	8 49.3	21 19.9
9	278 27 27.4	285 47 5.3	S. 0 21 31.7	S. 1 0 53.4	12.20	9 51.3	22 23.0
10	293 12 25.5	300 42 41.0	1 39 41.6	2 17 9.6	13.20	10 54.8	23 26.4
11	308 16 53.2	315 53 53.5	2 52 30.0	3 24 56.9	14.20	11 57.4	* *
12	323 32 25.2	331 11 7.4	3 53 48.2	4 18 27.1	15.20	12 57.3	0 27.8
13	338 48 37.6	346 23 35.5	4 38 24.5	4 53 20.2	16.20	13 53.7	1 25.9
14	353 54 47.2	1 21 7.4	5 3 3.0	5 7 30.8	17.20	14 46.9	2 20.7
15	8 41 42.8	15 55 52.3	5 6 50.0	5 1 14.0	18.20	15 37.8	3 12.6
16	23 3 7.5	30 3 13.2	4 51 1.8	4 36 36.4	19.20	16 27.3	4 2.6
17	36 56 5.7	43 41 51.6	4 18 23.6	3 56 50.8	20.20	17 16.4	4 51.8
18	50 20 46.3	56 53 12.0	3 32 26.0	3 5 36.3	21.20	18 5.7	5 41.0
19	63 19 36.1	69 40 29.5	2 36 48.4	2 6 27.0	22.20	18 55.7	6 30.6
20	75 56 25.3	82 7 57.9	1 34 59.5	S. 1 2 46.1	23.20	19 46.2	7 20.9
21	88 15 41.5	94 20 9.7	S. 0 30 10.0	N. 0 2 28.0	24.20	20 36.8	8 11.5
22	100 21 54.8	106 21 27.2	N. 0 34 47.8	1 6 30.5	25.20	21 27.0	9 2.0
23	112 19 15.1	118 15 44.4	1 37 17.6	2 6 51.7	26.20	22 15.9	9 51.6
24	124 11 18.4	130 6 18.0	2 34 55.9	3 1 14.4	27.20	23 3.1	10 39.7
25	136 1 2.0	141 55 46.0	3 25 31.9	3 47 34.3	28.20	23 48.3	11 25.9
26	147 50 47.1	153 46 15.7	4 7 8.2	4 24 1.8	29.20	* *	12 10.3
27	159 42 24.9	165 39 25.8	4 38 4.0	4 49 5.7	0.54	0 31.8	12 53.0
28	171 37 29.3	177 36 46.5	4 56 58.9	5 1 37.0	1.54	1 13.9	13 34.7
29	183 37 29.0	189 39 49.6	5 2 55.4	5 0 50.7	2.54	1 55.4	14 16.0
30	195 44 2.6	201 50 23.8	4 55 21.5	4 46 27.9	3.54	2 36.8	14 57.9
31	207 59 11.0	214 10 44.1	4 34 11.9	4 18 37.0	4.54	3 19.2	15 41.1
32	220 25 25.0	226 43 37.2	N. 3 59 49.0	N. 3 37 55.0	5.54	4 3.5	16 26.7

GREENWICH MEAN TIME.									
Day.	THE MOON'S								
	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	' / "	' / "	' / "	' / "		h m s	s	° / ' / "	"
1	14 48.51	14 51.03	54 15.26	54 24.49					
2	14 54.11	14 57.76	54 35.76	54 49.14					
3	15 2.00	15 6.84	55 4.68	55 22.39					
4	15 12.25	15 18.20	55 42.21	56 4.07					
5	15 24.69	15 31.66	56 27.86	56 53.37					
6	15 39.02	15 46.67	57 20.33	57 48.37					
7	15 54.50	16 2.38	58 17.06	58 45.91					
8	16 10.13	16 17.58	59 14.31	59 41.60					
9	16 24.51	16 30.77	60 7.05	60 29.95					
10	16 36.13	16 40.45	60 49.61	61 5.40					
11	16 43.55	16 45.34	61 16.78	61 23.33					
12	16 45.76	16 44.78	61 24.84	61 21.28					
13	16 42.46	16 38.88	61 12.78	60 59.67					
14	16 34.18	16 28.53	60 42.46	60 21.74					
15	16 22.10	16 15.10	59 58.19	59 32.51					
16	16 7.70	16 0.09	59 5.41	58 37.54					
17	15 52.43	15 44.88	58 9.49	57 41.80					
18	15 37.55	15 30.54	57 14.94	56 49.26					
19	15 23.93	15 17.78	56 25.04	56 2.50					
20	15 12.13	15 7.00	55 41.79	55 22.99					
21	15 2.39	14 58.32	55 6.13	54 51.22					
22	14 54.78	14 51.75	54 38.24	54 27.15					
23	14 49.21	14 47.15	54 17.86	54 10.30					
24	14 45.54	14 44.35	54 4.39	54 0.05					
25	14 43.57	14 43.18	53 57.18	53 55.75					
26	14 43.17	14 43.53	53 55.72	53 57.02					
27	14 44.24	14 45.33	53 59.64	54 3.62					
28	14 46.78	14 48.60	54 8.03	54 15.59					
29	14 50.80	14 53.41	54 23.67	54 33.21					
30	14 56.43	14 59.87	54 44.27	54 56.90					
31	15 3.76	15 8.09	55 11.13	55 27.01					
32	15 12.89	15 18.13	55 44.58	56 3.82					
<b>SATURDAY 1.</b>									
0	11 48 6.46	18.444	N. 6 51 14.6	114.40					
4	11 55 28.74	18.414	6 5 14.9	115.56					
8	12 2 50.40	18.392	5 18 48.4	116.62					
12	12 10 11.66	18.381	4 31 57.7	117.58					
16	12 17 32.73	18.377	3 44 45.2	118.44					
20	12 24 53.85	18.384	N. 2 57 13.3	119.19					
<b>SUNDAY 2.</b>									
0	12 32 15.23	18.399	N. 2 9 24.4	119.86					
4	12 39 37.11	18.426	1 21 21.1	120.40					
8	12 46 59.74	18.462	N. 0 33 5.8	120.85					
12	12 54 23.35	18.508	S. 0 15 18.9	121.18					
16	13 1 48.19	18.565	1 3 50.5	121.42					
20	13 9 14.52	18.631	S. 1 52 26.3	121.54					
<b>MONDAY 3.</b>									
0	13 16 42.59	18.710	S. 2 41 3.7	121.55					
4	13 24 12.65	18.797	3 29 40.1	121.47					
8	13 31 44.97	18.897	4 18 12.7	121.23					
12	13 39 19.81	19.007	5 6 38.5	120.90					
16	13 46 57.43	19.129	5 54 54.6	120.42					
20	13 54 38.10	19.262	S. 6 42 58.1	119.83					
<b>TUESDAY 4.</b>									
0	14 2 22.08	19.406	S. 7 30 45.6	119.10					
4	14 10 9.65	19.561	8 18 14.1	118.24					
8	14 18 1.08	19.727	9 5 20.1	117.23					
12	14 25 56.63	19.904	9 52 0.3	116.08					
16	14 33 56.56	20.092	10 38 11.0	114.77					
20	14 42 1.12	20.291	S. 11 23 48.3	113.31					
<b>WEDNESDAY 5.</b>									
0	14 50 10.59	20.500	S. 12 8 48.4	111.67					
4	14 58 25.21	20.719	12 53 7.2	109.86					
8	15 6 45.21	20.949	13 36 40.4	107.87					
12	15 15 10.84	21.188	14 19 23.9	105.71					
16	15 23 42.31	21.436	15 1 12.9	103.34					
20	15 32 19.82	21.692	S. 15 42 2.7	100.77					
<b>THURSDAY 6.</b>									
0	15 41 3.58	21.955	S. 16 21 48.5	98.01					
4	15 49 53.75	22.227	17 0 25.2	95.02					
8	15 58 50.49	22.503	17 37 47.6	91.82					
12	16 7 53.92	22.783	18 13 50.5	88.39					
16	16 17 4.15	23.068	18 48 28.4	84.72					
20	16 26 21.24	23.357	S. 19 21 35.7	80.83					



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: FRIDAY 7, SATURDAY 8, SUNDAY 9, MONDAY 10, TUESDAY 11, WEDNESDAY 12, THURSDAY 13, FRIDAY 14, SATURDAY 15, SUNDAY 16, MONDAY 17, TUESDAY 18, WEDNESDAY 19, THURSDAY 20.

GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: FRIDAY 21, SATURDAY 22, SUNDAY 23, MONDAY 24, TUESDAY 25, WEDNESDAY 26, THURSDAY 27, FRIDAY 28, SATURDAY 29, SUNDAY 30, MONDAY 31, TUESDAY, SEPT. 1. Includes PHASES OF THE MOON section at the bottom.



GREENWICH MEAN TIME.							
Day.	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	220 25 25.0	226 43 37.2	N. 3 59 49.0	N. 3 37 55.0	5.54	4 3.5	16 26.7
2	233 5 45.9	239 32 17.4	3 13 4.7	2 45 29.8	6.54	4 50.7	17 15.5
3	246 3 38.0	252 40 13.5	2 15 24.7	1 43 6.7	7.54	5 41.4	18 8.3
4	259 22 27.9	266 10 42.1	N. 1 8 56.3	N. 0 33 17.3	8.54	6 36.2	19 5.1
5	273 5 12.4	280 6 8.8	S. 0 3 22.7	S. 0 40 32.4	9.54	7 34.8	20 5.1
6	287 13 33.1	294 27 17.5	1 17 36.6	1 53 56.9	10.54	8 35.8	21 6.7
7	301 47 2.5	309 12 16.3	2 28 52.7	3 1 41.4	11.54	9 37.5	22 8.0
8	316 42 14.6	324 16 0.2	3 31 41.0	3 58 11.1	12.54	10 38.0	23 7.3
9	331 52 24.7	339 30 11.0	4 20 35.3	4 38 23.6	13.54	11 36.0	* *
10	347 7 56.7	354 44 17.1	4 51 13.1	4 58 49.7	14.54	12 31.3	0 4.0
11	2 17 49.8	9 47 18.1	5 1 8.6	4 58 14.5	15.54	13 24.3	0 58.0
12	17 11 35.1	24 29 45.2	4 50 20.0	4 37 45.3	16.54	14 15.9	1 50.2
13	31 41 6.3	38 45 10.4	4 20 55.7	4 0 20.1	17.54	15 6.7	2 41.3
14	45 41 42.9	52 30 41.8	3 36 30.0	3 9 57.2	18.54	15 57.6	3 32.2
15	59 12 16.3	65 46 44.6	2 41 13.4	2 10 48.7	19.54	16 48.9	4 23.2
16	72 14 32.8	78 36 12.2	1 39 11.8	1 6 49.4	20.54	17 40.5	5 14.7
17	84 52 18.1	91 3 29.1	S. 0 34 5.7	S. 0 1 23.3	21.54	18 32.1	6 6.3
18	97 10 24.7	103 13 44.5	N. 0 30 57.2	N. 1 2 36.9	22.54	19 22.9	6 57.6
19	109 14 7.6	115 12 11.8	1 33 18.0	2 2 44.0	23.54	20 12.5	7 47.9
20	121 8 33.2	127 3 45.4	2 30 39.4	2 56 49.8	24.54	21 0.3	8 36.6
21	132 58 19.5	138 52 43.4	3 21 1.0	3 42 59.7	25.54	21 46.1	9 23.4
22	144 47 22.3	150 42 37.9	4 2 33.5	4 19 30.6	26.54	22 30.1	10 8.3
23	156 38 49.0	162 36 11.6	4 33 40.1	4 44 52.1	27.54	23 12.7	10 51.6
24	168 34 59.1	174 35 22.0	4 52 57.9	4 57 50.3	28.54	23 54.4	11 33.6
25	180 37 29.2	186 41 27.9	4 59 23.3	4 57 33.1	29.54	* *	12 15.2
26	192 47 24.1	198 55 23.6	4 52 17.8	4 43 37.4	0.88	0 36.1	12 57.1
27	205 5 31.7	211 17 54.8	4 31 34.3	4 16 12.8	1.88	1 18.4	13 40.1
28	217 32 40.2	223 49 56.5	3 57 39.9	3 36 4.8	2.88	2 2.2	14 24.9
29	230 9 54.0	236 32 45.3	3 11 39.0	2 44 36.2	3.88	2 48.4	15 12.6
30	242 58 44.8	249 28 8.8	2 15 12.7	1 43 46.7	4.88	3 37.6	16 3.5
31	256 1 14.9	262 38 21.7	N. 1 10 39.0	N. 0 36 12.6	5.88	4 30.3	16 57.9

GREENWICH MEAN TIME.									
Day.	THE MOON'S								
	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	' / "	' / "	' / "	' / "		h m s	s	° / ' / "	"
1	15 12.89	15 18.13	55 44.58	56 3.82					
2	15 23.83	15 29.93	56 24.67	56 47.03					
3	15 36.40	15 43.20	57 10.75	57 35.64					
4	15 50.23	15 57.38	58 1.39	58 27.64					
5	16 4.57	16 11.64	58 53.97	59 19.85					
6	16 18.42	16 24.74	59 44.70	60 7.88					
7	16 30.43	16 35.31	60 28.73	60 46.59					
8	16 39.20	16 41.97	61 0.86	61 10.99					
9	16 43.49	16 43.68	61 16.54	61 17.26					
10	16 42.53	16 40.07	61 13.05	61 4.02					
11	16 36.35	16 31.50	60 50.40	60 32.63					
12	16 25.67	16 19.06	60 11.30	59 47.06					
13	16 11.83	16 4.19	59 20.57	58 52.54					
14	15 56.32	15 48.41	58 23.70	57 54.70					
15	15 40.60	15 33.03	57 26.11	56 58.40					
16	15 25.83	15 19.09	56 32.02	56 7.31					
17	15 12.88	15 7.24	55 44.54	55 23.90					
18	15 2.22	14 57.83	55 5.50	54 49.41					
19	14 54.08	14 50.97	54 35.67	54 24.28					
20	14 48.49	14 46.59	54 15.17	54 8.26					
21	14 45.28	14 44.52	54 3.46	54 0.68					
22	14 44.28	14 44.51	53 59.78	54 0.62					
23	14 45.17	14 46.25	54 3.05	54 6.99					
24	14 47.70	14 49.50	54 12.31	54 18.89					
25	14 51.61	14 54.02	54 26.63	54 35.45					
26	14 56.71	14 59.66	54 45.29	54 56.10					
27	15 2.86	15 6.31	55 7.84	55 20.49					
28	15 10.02	15 13.97	55 34.06	55 48.55					
29	15 18.16	15 22.61	56 3.94	56 20.24					
30	15 27.31	15 32.25	56 37.45	56 55.53					
31	15 37.41	15 42.76	57 14.42	57 34.03					
<b>TUESDAY 1.</b>									
0	14 37 5.62	19.865	S. 11 9 11.2	112.77					
4	14 45 4.45	20.039	11 53 58.3	111.12					
8	14 53 7.58	20.223	12 38 4.0	109.32					
12	15 1 15.24	20.416	13 21 24.4	107.35					
16	15 9 27.63	20.618	14 3 55.8	105.22					
20	15 17 44.97	20.828	S. 14 45 34.1	102.93					
<b>WEDNESDAY 2.</b>									
0	15 26 7.44	21.046	S. 15 26 15.2	100.47					
4	15 34 35.24	21.272	16 5 54.8	97.81					
8	15 43 8.53	21.504	16 44 28.7	94.97					
12	15 51 47.46	21.742	17 21 52.3	91.96					
16	16 0 32.18	21.986	17 58 1.1	88.74					
20	16 9 22.80	22.233	S. 18 32 50.4	85.32					
<b>THURSDAY 3.</b>									
0	16 18 19.42	22.485	S. 19 6 15.4	81.72					
4	16 27 22.13	22.740	19 38 11.4	77.91					
8	16 36 30.96	22.996	20 8 33.5	73.90					
12	16 45 45.04	23.252	20 37 16.8	69.67					
16	16 55 7.07	23.508	21 4 16.3	65.24					
20	17 4 34.30	23.761	S. 21 29 27.0	60.61					
<b>FRIDAY 4.</b>									
0	17 14 7.56	24.010	S. 21 52 44.1	55.77					
4	17 23 46.75	24.254	22 14 2.7	50.73					
8	17 33 31.73	24.492	22 33 18.0	45.50					
12	17 43 22.30	24.721	22 50 25.4	40.07					
16	17 53 18.26	24.941	23 5 20.2	34.46					
20	18 3 19.36	25.148	S. 23 17 58.2	28.67					
<b>SATURDAY 5.</b>									
0	18 13 25.29	25.344	S. 23 28 15.3	22.72					
4	18 23 35.75	25.525	23 36 7.6	16.62					
8	18 33 50.36	25.690	23 41 31.7	10.37					
12	18 44 8.74	25.839	23 44 24.3	3.99					
16	18 54 30.47	25.969	23 44 42.6	2.48					
20	19 4 55.13	26.081	S. 23 42 24.3	9.05					
<b>SUNDAY 6.</b>									
0	19 15 22.24	26.175	S. 23 37 27.4	15.69					
4	19 25 51.33	26.247	23 29 50.5	22.39					
8	19 36 21.92	26.298	23 19 32.6	29.10					
12	19 46 53.51	26.330	23 6 33.4	35.82					
16	19 57 25.61	26.341	22 50 52.9	42.53					
20	20 7 57.73	26.332	S. 22 32 31.9	49.21					



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days Monday 7 to Sunday 13 and Monday 14 to Sunday 20.

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days Monday 21 to Thursday Oct 1 and Phases of the Moon.



GREENWICH MEAN TIME.

Day.	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	256 1 14.9	262 38 21.7	N. 1 10 39.0	N. 0 36 12.6	5.88	4 30.3	16 57.9
2	269 19 47.6	276 5 50.4	N. 0 0 52.9	S. 0 34 52.5	6.88	5 26.3	17 55.3
3	282 56 45.4	289 52 44.6	S. 1 10 33.6	1 45 38.3	7.88	6 24.7	18 54.5
4	296 53 54.8	304 0 16.1	2 19 32.9	2 51 42.1	8.88	7 24.2	19 53.8
5	311 11 40.6	318 27 50.6	3 21 30.1	3 48 21.3	9.88	8 23.1	20 52.0
6	325 48 18.2	333 12 25.0	4 11 41.6	4 30 59.9	10.88	9 20.3	21 48.2
7	340 39 21.6	348 8 9.5	4 45 49.3	4 55 48.8	11.88	10 15.5	22 42.3
8	355 37 43.1	3 6 51.5	5 0 44.4	5 0 29.9	12.88	11 8.7	23 34.9
9	10 34 22.4	17 59 5.1	4 55 7.5	4 44 47.8	13.88	12 0.8	* *
10	25 19 53.5	32 35 49.5	4 29 48.9	4 10 35.0	14.88	12 52.4	0 26.6
11	39 46 4.5	46 50 1.3	3 47 35.4	3 21 22.8	15.88	13 44.3	1 18.3
12	53 47 14.5	60 37 30.6	2 52 31.4	2 21 35.6	16.88	14 36.8	2 10.5
13	67 20 47.2	73 57 12.3	1 49 9.4	1 15 44.9	17.88	15 29.9	3 3.3
14	80 27 2.0	86 50 40.0	S. 0 41 51.7	S. 0 7 56.7	18.88	16 23.1	3 56.5
15	93 8 36.1	99 21 24.1	N. 0 25 35.6	N. 0 58 23.4	19.88	17 15.6	4 49.5
16	105 29 41.0	111 34 5.8	1 30 7.2	2 0 29.8	20.88	18 6.6	5 41.3
17	117 35 18.5	123 33 59.7	2 29 15.4	2 56 10.0	21.88	18 55.6	6 31.4
18	129 30 48.9	135 26 24.5	3 21 0.4	3 43 34.9	22.88	19 42.3	7 19.2
19	141 21 23.3	147 16 19.8	4 3 42.0	4 21 11.2	23.88	20 26.9	8 4.9
20	153 11 46.2	159 8 11.8	4 35 52.8	4 47 37.6	24.88	21 9.9	8 48.6
21	165 6 2.3	171 5 40.4	4 56 16.6	5 1 42.6	25.88	21 51.9	9 31.0
22	177 7 25.2	183 11 32.5	5 3 48.9	5 2 30.4	26.88	22 33.5	10 12.7
23	189 18 14.4	195 27 40.0	4 57 43.6	4 49 27.1	27.88	23 15.8	10 54.5
24	201 39 55.3	207 55 3.7	4 37 41.4	4 22 29.6	28.88	23 59.5	11 37.4
25	214 13 6.4	220 34 3.1	4 3 57.8	3 42 14.6	0.22	* *	12 22.1
26	226 57 52.2	233 24 31.9	3 17 32.2	2 50 5.3	1.22	0 45.4	13 9.5
27	239 54 0.3	246 26 16.0	2 20 11.7	1 48 12.0	2.22	1 34.3	14 0.0
28	253 1 18.7	259 39 9.5	1 14 29.5	N. 0 39 29.7	3.22	2 26.6	14 53.9
29	266 19 50.3	273 3 24.6	N. 0 3 40.1	S. 0 32 30.2	4.22	3 22.0	15 50.6
30	279 49 56.6	286 39 31.3	S. 1 8 30.5	1 43 49.4	5.22	4 10.6	16 48.9
31	293 32 12.9	300 28 4.8	2 17 55.1	2 50 15.3	6.22	5 18.1	17 47.2
32	307 27 8.0	314 29 20.5	S. 3 20 18.3	S. 3 47 33.2	7.22	6 16.0	18 44.3

GREENWICH MEAN TIME.

Day.	THE MOON'S								
	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	' / "	' / "	' / "	' / "		° / ' / "		° / ' / "	
1	15 37.41	15 42.76	57 14.42	57 34.03					
2	15 48.27	15 53.88	57 54.21	58 14.77					
3	15 59.53	16 5.13	58 35.47	58 56.00					
4	16 10.58	16 15.77	59 15.98	59 34.98					
5	16 20.56	16 24.81	59 52.54	60 8.16					
6	16 28.41	16 31.21	60 21.33	60 31.56					
7	16 33.08	16 33.95	60 38.44	60 41.62					
8	16 33.73	16 32.39	60 40.81	60 35.88					
9	16 29.93	16 26.42	60 26.90	60 14.02					
10	16 21.91	16 16.54	59 57.51	59 37.81					
11	16 10.44	16 3.76	59 15.45	58 51.01					
12	15 56.69	15 49.39	58 25.09	57 58.31					
13	15 42.01	15 34.71	57 31.28	57 4.54					
14	15 27.63	15 20.89	56 38.61	56 13.93					
15	15 14.60	15 8.84	55 50.87	55 29.73					
16	15 3.65	14 59.11	55 10.75	54 54.11					
17	14 55.24	14 52.06	54 39.93	54 28.30					
18	14 49.59	14 47.81	54 19.23	54 12.70					
19	14 46.71	14 46.27	54 8.68	54 7.08					
20	14 46.46	14 47.24	54 7.78	54 10.64					
21	14 48.58	14 50.41	54 15.51	54 22.23					
22	14 52.69	14 55.37	54 30.59	54 40.40					
23	14 58.39	15 1.70	54 51.46	55 3.58					
24	15 5.24	15 8.96	55 16.55	55 30.18					
25	15 12.82	15 16.76	55 44.31	55 58.78					
26	15 20.76	15 24.79	56 13.46	56 28.23					
27	15 28.83	15 32.84	56 43.00	56 57.69					
28	15 36.82	15 40.75	57 12.25	57 26.66					
29	15 44.63	15 48.47	57 40.90	57 54.92					
30	15 52.22	15 55.89	58 8.69	58 22.16					
31	15 59.47	16 2.91	58 35.26	58 47.88					
32	16 6.19	16 9.25	58 59.89	59 11.11					
<b>THURSDAY 1.</b>									
		h m s	s	° / ' / "					
0	16 59 45.74	23.255	S. 21 32 40.0	62.09					
4	17 9 6.43	23.467	21 56 34.3	57.40					
8	17 18 32.15	23.675	22 18 33.7	52.52					
12	17 28 2.78	23.877	22 38 34.2	47.49					
16	17 37 38.16	24.070	22 56 31.7	42.27					
20	17 47 18.09	24.256	S. 23 12 22.5	36.92					
<b>FRIDAY 2.</b>									
0	17 57 2.36	24.432	S. 23 26 2.8	31.42					
4	18 6 50.72	24.597	23 37 29.2	25.77					
8	18 16 42.91	24.750	23 46 38.5	19.99					
12	18 26 38.61	24.890	23 53 27.8	14.09					
16	18 36 37.52	25.017	23 57 54.3	8.09					
20	18 46 39.28	25.128	S. 23 59 55.6	2.00					
<b>SATURDAY 3.</b>									
0	18 56 43.55	25.225	S. 23 59 29.8	4.17					
4	19 6 49.95	25.306	23 56 35.0	10.41					
8	19 16 58.10	25.370	23 51 10.0	16.68					
12	19 27 7.60	25.418	23 43 13.9	22.99					
16	19 37 18.06	25.450	23 32 46.0	29.32					
20	19 47 29.09	25.466	S. 23 19 46.3	35.65					
<b>SUNDAY 4.</b>									
0	19 57 40.30	25.466	S. 23 4 15.0	41.96					
4	20 7 51.31	25.449	22 46 12.8	48.22					
8	20 18 1.74	25.417	22 25 41.0	54.42					
12	20 28 11.25	25.372	22 2 41.1	60.56					
16	20 38 19.50	25.312	21 37 15.1	66.60					
20	20 48 26.16	25.241	S. 21 9 25.4	72.52					
<b>MONDAY 5.</b>									
0	20 58 30.96	25.157	S. 20 39 14.7	78.33					
4	21 8 33.63	25.063	20 6 46.3	84.00					
8	21 18 33.93	24.960	19 32 3.8	89.51					
12	21 28 31.66	24.849	18 55 11.2	94.84					
16	21 38 26.63	24.732	18 16 12.5	100.00					
20	21 48 18.70	24.607	S. 17 35 12.6	104.96					
<b>TUESDAY 6.</b>									
0	21 58 7.75	24.479	S. 16 52 16.1	109.71					
4	22 7 53.69	24.348	16 7 28.4	114.23					
8	22 17 36.46	24.215	15 20 54.8	118.53					
12	22 27 16.03	24.082	14 32 40.9	122.58					
16	22 36 52.39	23.948	13 42 52.8	126.38					
20	22 46 25.57	23.817	S. 12 51 36.3	129.94					



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns for Hour, Right Ascension, Var. in 10m, Declination, and Var. in 10m. Rows are organized by day from Wednesday 7 to Tuesday 20.

GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns for Hour, Right Ascension, Var. in 10m, Declination, and Var. in 10m. Rows are organized by day from Wednesday 21 to Sunday, Nov. 1, followed by Phases of the Moon.

PHASES OF THE MOON.

Table showing moon phases: First Quarter, Full Moon, Last Quarter, New Moon, Perigee, Apogee with corresponding times in hours and minutes.



GREENWICH MEAN TIME.

THE MOON'S

Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	307 27 8.0	314 29 20.5	S. 3 20 18.3	S. 3 47 33.2	7.22	6 16.0	18 44.3
2	321 34 36.1	328 42 43.7	4 11 30.7	4 31 43.8	8.22	7 12.0	19 39.2
3	335 53 26.4	343 6 20.6	4 47 48.8	4 59 25.2	9.22	8 5.9	20 32.1
4	350 20 56.2	357 36 37.2	5 6 17.8	5 8 16.6	10.22	8 57.9	21 23.4
5	4 52 42.2	12 8 25.1	5 5 17.9	4 57 24.5	11.22	9 48.7	22 13.9
6	19 22 57.9	26 35 31.3	4 44 46.0	4 27 38.1	12.22	10 39.2	23 4.6
7	33 45 17.1	40 51 30.3	4 6 22.7	3 41 26.6	13.22	11 30.3	23 56.2
8	47 53 31.0	54 50 45.3	3 13 20.7	2 42 37.9	14.22	12 22.4	* *
9	61 42 46.6	68 29 16.3	2 9 53.2	1 35 41.1	15.22	13 15.9	0 49.0
10	75 10 3.7	81 45 6.3	S. 1 0 35.5	S. 0 25 8.7	16.22	14 9.9	1 42.8
11	88 14 28.8	94 38 23.4	N. 0 10 9.7	N. 0 44 52.8	17.22	15 4.0	2 37.1
12	100 57 7.9	107 11 5.6	1 18 36.3	1 50 59.0	18.22	15 57.0	3 30.7
13	113 20 44.2	119 26 34.5	2 21 42.3	2 50 30.0	19.22	16 47.8	4 22.7
14	125 29 10.6	131 29 8.4	3 17 8.0	3 41 24.1	20.22	17 36.1	5 12.3
15	137 27 5.0	143 23 38.1	4 3 7.4	4 22 8.3	21.22	18 21.8	5 59.2
16	149 19 25.6	155 15 4.8	4 38 18.0	4 51 28.7	22.22	19 5.3	6 43.8
17	161 11 12.1	167 8 22.4	5 1 33.1	5 8 24.6	23.22	19 47.4	7 26.5
18	173 7 8.8	179 8 1.8	5 11 57.1	5 12 5.4	24.22	20 28.8	8 8.1
19	185 11 29.4	191 17 56.1	5 8 45.4	5 1 54.0	25.22	21 10.6	8 49.6
20	197 27 43.0	203 41 7.3	4 51 29.8	4 37 33.3	26.22	21 53.5	9 31.8
21	209 58 22.3	216 19 36.6	4 20 7.4	3 59 17.7	27.22	22 38.8	10 15.8
22	222 44 55.1	229 14 18.1	3 35 13.2	3 8 5.9	28.22	23 27.1	11 2.5
23	235 47 42.3	242 25 0.6	2 38 11.8	2 5 50.7	29.22	* *	11 52.6
24	249 6 2.7	255 50 35.7	1 31 26.2	N. 0 55 25.2	0.59	0 19.1	12 46.5
25	262 38 24.6	269 29 13.0	N. 0 18 17.8	S. 0 19 23.3	1.59	1 14.7	13 43.7
26	276 22 43.8	283 18 39.4	S. 0 57 3.9	1 34 8.1	2.59	2 13.2	14 43.0
27	290 16 42.3	297 16 35.5	2 10 0.5	2 44 5.9	3.59	3 12.8	15 42.4
28	304 18 2.9	311 20 48.8	3 15 50.8	3 44 43.8	4.59	4 11.7	16 40.4
29	318 24 38.2	325 29 16.4	4 10 16.2	4 32 2.8	5.59	5 8.4	17 35.7
30	332 34 28.8	339 40 0.6	4 49 42.1	5 2 57.0	6.59	6 2.3	18 28.3
31	346 45 36.5	353 51 0.3	S. 5 11 35.0	S. 5 15 28.0	7.59	6 53.7	19 18.7

GREENWICH MEAN TIME.

THE MOON'S

Day.	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	' / "	' / "	' / "	' / "		h m s	s	° / ' / "	"
1	16 6.10	16 9.25	58 59.89	59 11.11					
2	16 12.05	16 14.50	59 21.34	59 30.33					
3	16 16.54	16 18.10	59 37.82	59 43.53					
4	16 19.09	16 19.45	59 47.18	59 48.53					
5	16 19.13	16 18.07	59 47.34	59 43.42					
6	16 16.24	16 13.64	59 36.70	59 27.17					
7	16 10.29	16 6.22	59 14.89	59 0.01					
8	16 1.53	15 56.29	58 42.81	58 23.62					
9	15 50.63	15 44.63	58 2.85	57 40.90					
10	15 38.44	15 32.19	57 18.22	56 55.30					
11	15 25.99	15 19.97	56 32.61	56 10.57					
12	15 14.25	15 8.91	55 49.57	55 30.00					
13	15 4.05	14 59.72	55 12.18	54 56.35					
14	14 56.01	14 52.94	54 42.73	54 31.51					
15	14 50.57	14 48.92	54 22.83	54 16.76					
16	14 47.98	14 47.77	54 13.32	54 12.54					
17	14 48.27	14 49.46	54 14.38	54 18.76					
18	14 51.32	14 53.80	54 25.56	54 34.64					
19	14 56.85	15 0.42	54 45.83	54 58.90					
20	15 4.43	15 8.82	55 13.60	55 29.66					
21	15 13.49	15 18.37	55 46.79	56 4.68					
22	15 23.37	15 28.41	56 23.01	56 41.45					
23	15 33.38	15 38.22	56 59.68	57 17.39					
24	15 42.84	15 47.18	57 34.32	57 50.23					
25	15 51.19	15 54.82	58 4.93	58 18.26					
26	15 58.06	16 0.88	58 30.12	58 40.46					
27	16 3.30	16 5.29	58 49.28	58 56.60					
28	16 6.90	16 8.13	59 2.49	59 7.01					
29	16 9.02	16 9.57	59 10.25	59 12.27					
30	16 9.81	16 9.74	59 13.14	59 12.89					
31	16 9.38	16 8.72	59 11.56	59 9.13					
<b>SUNDAY 1.</b>									
0	20 43 4.00	24.681	S. 21 38 40.7	67.97					
4	20 52 55.08	24.575	21 10 22.6	73.52					
8	21 2 43.53	24.461	20 39 52.9	78.93					
12	21 12 29.15	24.339	20 7 15.0	84.20					
16	21 22 11.79	24.212	19 32 32.7	89.30					
20	21 31 51.34	24.081	S. 18 55 49.9	94.24					
<b>MONDAY 2.</b>									
0	21 41 27.68	23.947	S. 18 17 10.7	98.99					
4	21 51 0.76	23.809	17 36 39.6	103.56					
8	22 0 30.53	23.672	16 54 21.1	107.94					
12	22 9 57.00	23.534	16 10 19.8	112.12					
16	22 19 20.17	23.397	15 24 40.7	116.09					
20	22 28 40.08	23.263	S. 14 37 28.9	119.86					
<b>TUESDAY 3.</b>									
0	22 37 56.81	23.132	S. 13 48 49.2	123.41					
4	22 47 10.43	23.004	12 58 47.2	126.72					
8	22 56 21.06	22.882	12 7 28.0	129.82					
12	23 5 28.81	22.764	11 14 57.3	132.69					
16	23 14 33.83	22.654	10 21 20.5	135.33					
20	23 23 36.27	22.551	S. 9 26 43.1	137.73					
<b>WEDNESDAY 4.</b>									
0	23 32 36.31	22.453	S. 8 31 10.9	139.91					
4	23 41 34.13	22.366	7 34 49.6	141.83					
8	23 50 29.92	22.285	6 37 44.8	143.52					
12	23 59 23.88	22.213	5 40 2.4	144.97					
16	0 8 16.22	22.150	4 41 48.1	146.17					
20	0 17 7.16	22.096	S. 3 43 7.9	147.13					
<b>THURSDAY 5.</b>									
0	0 25 56.91	22.051	S. 2 44 7.6	147.84					
4	0 34 45.68	22.016	1 44 53.2	148.31					
8	0 43 33.69	21.987	S. 0 45 30.6	148.52					
12	0 52 21.17	21.970	N. 0 13 54.3	148.50					
16	1 1 8.34	21.962	1 13 15.7	148.23					
20	1 9 55.41	21.962	N. 2 12 27.6	147.72					
<b>FRIDAY 6.</b>									
0	1 18 42.60	21.972	N. 3 11 24.3	146.96					
4	1 27 30.10	21.988	4 9 59.8	145.96					
8	1 36 18.12	22.014	5 8 8.4	144.72					
12	1 45 6.85	22.047	6 5 44.4	143.23					
16	1 53 56.45	22.087	7 2 41.9	141.52					
20	2 2 47.12	22.136	N. 7 58 55.4	139.57					



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: SATURDAY 7, SUNDAY 8, MONDAY 9, TUESDAY 10, WEDNESDAY 11, THURSDAY 12, FRIDAY 13, SATURDAY 14, SUNDAY 15, MONDAY 16, TUESDAY 17, WEDNESDAY 18, THURSDAY 19, FRIDAY 20.

GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days: SATURDAY 21, SUNDAY 22, MONDAY 23, TUESDAY 24, WEDNESDAY 25, THURSDAY 26, FRIDAY 27, SATURDAY 28, SUNDAY 29, MONDAY 30, TUESDAY, DEC. 1. Includes PHASES OF THE MOON section at the bottom.



GREENWICH MEAN TIME.

THE MOON'S

Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	346 45 36.5	353 51 0.3	S. 5 11 35.0	S. 5 15 28.0	7.59	6 53.7	19 18.7
2	0 55 54.5	8 0 0.6	5 14 33.1	5 8 52.2	8.59	7 43.4	20 7.8
3	15 2 58.7	22 4 28.0	4 58 32.5	4 43 45.8	9.59	8 32.2	20 56.7
4	29 4 6.7	36 1 32.7	4 24 48.7	4 2 1.8	10.59	9 21.4	21 46.3
5	42 56 23.9	49 48 19.2	3 35 49.9	3 6 40.8	11.59	10 11.6	22 37.4
6	56 36 58.6	63 22 4.2	2 35 4.6	2 1 32.7	12.59	11 3.5	23 30.1
7	70 3 20.9	76 40 36.7	1 26 37.9	S. 0 50 52.4	13.59	11 56.9	* *
8	83 13 43.1	89 42 35.7	S. 0 14 47.7	N. 0 21 6.1	14.59	12 51.2	0 24.0
9	96 7 13.9	102 27 41.8	N. 0 56 21.0	1 30 31.5	15.59	13 45.3	1 18.4
10	108 44 7.4	114 56 42.8	2 3 14.4	2 34 9.4	16.59	14 37.8	2 11.8
11	121 5 43.8	127 11 30.2	3 2 58.9	3 29 27.9	17.59	15 27.8	3 3.1
12	133 14 25.0	139 14 54.1	3 53 23.4	4 14 34.5	18.59	16 15.1	3 51.8
13	145 13 26.2	151 10 31.8	4 32 52.1	4 48 8.5	19.59	16 59.7	4 37.7
14	157 6 43.7	163 2 36.2	5 0 17.2	5 9 13.1	20.59	17 42.2	5 21.2
15	168 58 44.4	174 55 43.7	5 14 51.5	5 17 8.4	21.59	18 23.5	6 2.9
16	180 54 9.9	186 54 38.7	5 16 0.8	5 11 26.1	22.59	19 4.5	6 43.9
17	192 57 44.6	199 4 0.5	5 3 22.9	4 51 50.7	23.59	19 46.2	7 25.2
18	205 13 57.5	211 28 3.9	4 36 50.4	4 18 24.7	24.59	20 29.7	8 7.7
19	217 46 44.9	224 10 21.2	3 56 38.4	3 31 38.8	25.59	21 16.2	8 52.5
20	230 39 9.0	237 13 19.1	3 3 37.1	2 32 47.3	26.59	22 6.4	9 40.8
21	243 52 56.1	250 37 58.4	1 59 27.8	1 24 1.5	27.59	23 1.0	10 33.2
22	257 28 17.7	264 23 38.9	N. 0 46 55.5	N. 0 8 41.2	28.59	23 59.6	11 29.9
23	271 23 40.1	278 27 53.1	S. 0 30 6.2	S. 1 8 48.7	0.01	* *	12 29.9
24	285 35 44.6	292 46 36.6	1 46 45.9	2 23 17.1	1.01	1 0.6	13 31.4
25	299 59 47.6	307 14 34.5	2 57 41.8	3 29 21.8	2.01	2 2.0	14 32.1
26	314 30 13.4	321 46 1.4	3 57 42.6	4 22 13.7	3.01	3 1.5	15 30.1
27	329 1 18.0	336 15 25.8	4 42 30.2	4 58 12.9	4.01	3 57.9	16 24.8
28	343 27 51.5	350 38 7.1	5 9 9.2	5 15 12.4	5.01	4 51.0	17 16.5
29	357 45 49.2	4 50 39.4	5 16 21.6	5 12 41.3	6.01	5 41.4	18 5.9
30	11 52 23.9	18 50 53.3	5 4 20.8	4 51 34.1	7.01	6 30.1	18 54.3
31	25 46 1.9	32 37 46.5	4 34 38.5	4 13 54.3	8.01	7 18.4	19 42.6
32	39 26 6.6	46 11 3.4	S. 3 49 44.7	S. 3 22 34.9	9.01	8 7.1	20 32.0

GREENWICH MEAN TIME.

THE MOON'S

Day.	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.				
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
	' / "	' / "	' / "	' / "		° / ' / "		° / ' / "	
1	16 9.38	16 8.72	59 11.56	59 9.13					
2	16 7.74	16 6.44	59 5.57	59 0.83					
3	16 4.82	16 2.82	58 54.85	58 47.56					
4	16 0.47	15 57.73	58 38.92	58 28.91					
5	15 54.62	15 51.15	58 17.52	58 4.76					
6	15 47.31	15 43.15	57 50.69	57 35.44					
7	15 38.71	15 34.04	57 19.17	57 2.08					
8	15 29.21	15 24.31	56 44.41	56 26.45					
9	15 19.40	15 14.59	56 8.48	55 50.80					
10	15 9.93	15 5.52	55 33.73	55 17.58					
11	15 1.44	14 57.77	55 2.65	54 49.20					
12	14 54.57	14 51.92	54 37.49	54 27.77					
13	14 49.86	14 48.45	54 20.23	54 15.03					
14	14 47.70	14 47.66	54 12.29	54 12.13					
15	14 48.33	14 49.74	54 14.62	54 19.77					
16	14 51.86	14 54.70	54 27.57	54 37.97					
17	14 58.22	15 2.37	54 50.86	55 6.09					
18	15 7.13	15 12.40	55 23.48	55 42.76					
19	15 18.09	15 24.13	56 3.64	56 25.77					
20	15 30.41	15 36.81	56 48.77	57 12.21					
21	15 43.19	15 49.42	57 35.59	57 58.43					
22	15 55.37	16 0.92	58 20.25	58 40.58					
23	16 5.94	16 10.34	58 58.98	59 15.06					
24	16 14.01	16 16.90	59 28.52	59 39.14					
25	16 18.98	16 20.25	59 46.79	59 51.45					
26	16 20.73	16 20.46	59 53.20	59 52.19					
27	16 19.49	16 17.92	59 48.65	59 42.84					
28	16 15.80	16 13.24	59 35.09	59 25.72					
29	16 10.32	16 7.10	59 15.00	59 3.21					
30	16 3.65	16 0.05	58 50.61	58 37.41					
31	15 56.33	15 52.53	58 23.77	58 9.85					
32	15 48.69	15 44.79	57 55.74	57 41.48					

TUESDAY 1.			
h	m	s	° / ' / "
0	23 19	26.34	22.121 S. 10 0 46.3
4	23 28	15.73	21.997 9 6 42.7
8	23 37	2.28	21.883 8 11 52.4
12	23 45	46.20	21.779 7 16 20.9
16	23 54	27.74	21.685 6 20 13.3
20	0 3	7.15	21.600 S. 5 23 34.8

WEDNESDAY 2.			
h	m	s	° / ' / "
0	0 11	44.66	21.527 S. 4 26 30.6
4	0 20	20.54	21.465 3 29 5.8
8	0 28	55.05	21.413 2 31 25.6
12	0 37	28.45	21.372 1 33 34.9
16	0 46	0.99	21.342 S. 0 35 39.0
20	0 54	32.93	21.322 N. 0 22 17.0

THURSDAY 3.			
h	m	s	° / ' / "
0	1 3	4.52	21.313 N. 1 20 8.2
4	1 11	36.03	21.314 2 17 49.4
8	1 20	7.70	21.326 3 15 15.7
12	1 28	39.77	21.348 4 12 22.1
16	1 37	12.47	21.378 5 9 3.6
20	1 45	46.04	21.420 N. 6 5 15.1

FRIDAY 4.			
h	m	s	° / ' / "
0	1 54	20.69	21.469 N. 7 0 51.9
4	2 2	56.63	21.527 7 55 48.8
8	2 11	34.06	21.593 8 50 0.9
12	2 20	13.15	21.666 9 43 23.4
16	2 28	54.09	21.747 10 35 51.4
20	2 37	37.02	21.832 N. 11 27 20.0

SATURDAY 5.			
h	m	s	° / ' / "
0	2 46	22.08	21.923 N. 12 17 44.6
4	2 55	9.40	22.021 13 7 0.3
8	3 3	59.08	22.120 13 55 2.6
12	3 12	51.21	22.223 14 41 46.9
16	3 21	45.83	22.329 15 27 8.6
20	3 30	43.00	22.435 N. 16 11 3.4

SUNDAY 6.			
h	m	s	° / ' / "
0	3 39	42.72	22.542 N. 16 53 27.2
4	3 48	44.99	22.647 17 34 15.7
8	3 57	49.77	22.751 18 13 25.0
12	4 6	57.01	22.852 18 50 51.4
16	4 16	6.63	22.949 19 26 31.1
20	4 25	18.52	23.041 N. 20 0 20.7



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days Monday 7 to Sunday 13, Monday 14 to Sunday 20, Tuesday 8 to Sunday 13, Wednesday 9 to Sunday 16, Thursday 10 to Sunday 17, Friday 11 to Sunday 18, Saturday 12 to Sunday 19, and Sunday 13 to Sunday 20.

GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m, Declination, Var. in 10m. Rows for days Monday 21 to Friday 25, Saturday 26, Sunday 27, Monday 28 to Friday 31, and Friday, Jan. 1, 1909. Includes a section for PHASES OF THE MOON with dates Dec 7, 15, 22, 29 and Dec 14, 26.



GREENWICH MEAN TIME.

JANUARY.						FEBRUARY.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	20 36 51.70	12.84	S. 20 19 38.7	45.93	1 58.0	1	23 5 25.54	11.24	S. 7 13 44.5	75.60	2 24.3
2	20 41 59.15	12.78	20 0 58.9	47.37	1 59.2	2	23 9 54.82	11.20	6 43 24.6	76.04	2 24.8
3	20 47 5.25	12.73	19 41 44.9	48.78	2 0.3	3	23 14 23.28	11.17	6 12 54.6	76.45	2 25.3
4	20 52 10.00	12.67	19 21 57.4	50.16	2 1.4	4	23 18 50.95	11.14	5 42 15.2	76.82	2 25.9
5	20 57 13.37	12.61	19 1 37.2	51.51	2 2.5	5	23 23 17.86	11.11	5 11 27.3	77.16	2 26.4
6	21 2 15.35	12.55	S. 18 40 45.0	52.82	2 3.6	6	23 27 44.04	11.08	S. 4 40 31.5	77.47	2 26.9
7	21 7 15.94	12.50	18 19 21.6	54.10	2 4.7	7	23 32 9.53	11.05	4 9 28.6	77.75	2 27.3
8	21 12 15.13	12.44	17 57 27.7	55.35	2 5.8	8	23 36 34.37	11.02	3 38 19.5	78.00	2 27.8
9	21 17 12.91	12.38	17 35 4.1	56.57	2 6.8	9	23 40 58.58	11.00	3 7 4.9	78.21	2 28.3
10	21 22 9.29	12.32	17 12 11.6	57.76	2 7.8	10	23 45 22.21	10.97	2 35 45.5	78.39	2 28.7
11	21 27 4.27	12.26	S. 16 48 51.0	58.93	2 8.7	11	23 49 45.29	10.95	S. 2 4 22.0	78.54	2 29.2
12	21 31 57.86	12.20	16 25 3.1	60.06	2 9.7	12	23 54 7.86	10.93	1 32 55.3	78.66	2 29.6
13	21 36 50.07	12.15	16 0 48.7	61.15	2 10.6	13	23 58 29.06	10.91	1 1 26.1	78.75	2 30.0
14	21 41 40.90	12.09	15 36 8.5	62.20	2 11.5	14	0 2 51.62	10.89	S. 0 29 55.0	78.81	2 30.4
15	21 46 30.37	12.03	15 11 3.4	63.22	2 12.4	15	0 7 12.88	10.88	N. 0 1 37.2	78.85	2 30.8
16	21 51 18.50	11.98	S. 14 45 34.1	64.20	2 13.3	16	0 11 33.78	10.86	N. 0 33 9.8	78.86	2 31.3
17	21 56 5.30	11.92	14 19 41.5	65.15	2 14.1	17	0 15 54.36	10.85	1 4 42.0	78.83	2 31.7
18	22 0 50.79	11.87	13 53 26.3	66.07	2 14.9	18	0 20 14.66	10.84	1 36 13.1	78.77	2 32.0
19	22 5 35.00	11.82	13 26 49.4	66.96	2 15.7	19	0 24 34.72	10.83	2 7 42.4	78.68	2 32.4
20	22 10 17.95	11.76	12 59 51.5	67.82	2 16.5	20	0 28 54.57	10.82	2 39 9.3	78.55	2 32.8
21	22 14 59.66	11.71	S. 12 32 33.4	68.66	2 17.2	21	0 33 14.25	10.82	N. 3 10 33.0	78.39	2 33.2
22	22 19 40.17	11.66	12 4 55.9	69.46	2 18.0	22	0 37 33.80	10.81	3 41 52.9	78.21	2 33.6
23	22 24 19.50	11.62	11 36 59.8	70.22	2 18.7	23	0 41 53.26	10.81	4 13 8.2	78.01	2 34.0
24	22 28 57.68	11.57	11 8 45.8	70.95	2 19.4	24	0 46 12.67	10.81	4 44 18.3	77.79	2 34.4
25	22 33 34.74	11.52	10 40 14.8	71.64	2 20.0	25	0 50 32.06	10.81	5 15 22.4	77.54	2 34.7
26	22 38 10.71	11.48	S. 10 11 27.5	72.29	2 20.7	26	0 54 51.47	10.81	N. 5 46 19.9	77.26	2 35.1
27	22 42 45.63	11.43	9 42 24.6	72.92	2 21.3	27	0 59 10.93	10.81	6 17 10.1	76.95	2 35.5
28	22 47 19.53	11.39	9 13 7.0	73.52	2 21.9	28	1 3 30.47	10.82	6 47 52.2	76.60	2 35.9
29	22 51 52.43	11.35	8 43 35.4	74.09	2 22.5	29	1 7 50.14	10.82	7 18 25.7	76.21	2 36.3
30	22 56 24.38	11.31	8 13 50.6	74.63	2 23.1	30	1 12 9.95	10.83	N. 7 48 49.8	75.79	2 36.7
31	23 0 55.40	11.27	7 43 53.4	75.13	2 23.7						
32	23 5 25.54	11.24	S. 7 13 44.5	75.60	2 24.3						

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	5.77	5.86	5.96	6.06	6.17	6.30	Semidiameter.	6.45	6.60	6.75	6.91	7.09	7.28
Hor. Parallax.	6.05	6.14	6.24	6.35	6.47	6.60	Hor. Parallax.	6.76	6.91	7.07	7.24	7.43	7.63

GREENWICH MEAN TIME.

MARCH.						APRIL.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	1 12 9.95	10.83	N. 7 48 49.8	75.79	2 36.7	1	3 29 12.45	11.31	N. 21 11 10.4	49.36	2 51.5
2	1 16 29.93	10.84	8 19 3.8	75.34	2 37.1	2	3 33 44.04	11.32	21 30 40.2	48.12	2 52.1
3	1 20 50.11	10.85	8 49 7.1	74.87	2 37.5	3	3 38 15.88	11.33	21 49 39.7	46.85	2 52.7
4	1 25 10.51	10.86	9 18 58.9	74.38	2 37.9	4	3 42 47.91	11.34	22 8 8.6	45.56	2 53.3
5	1 29 31.16	10.87	9 48 38.4	73.86	2 38.2	5	3 47 20.10	11.34	22 26 6.3	44.25	2 53.9
6	1 33 52.07	10.88	N. 10 18 5.0	73.32	2 38.6	6	3 51 52.39	11.35	N. 22 43 32.5	42.92	2 54.5
7	1 38 13.27	10.89	10 47 17.9	72.74	2 39.1	7	3 56 24.74	11.35	23 0 26.6	41.58	2 55.1
8	1 42 34.78	10.90	11 16 16.5	72.13	2 39.5	8	4 0 57.09	11.35	23 16 48.2	40.22	2 55.7
9	1 46 56.61	10.92	11 45 0.0	71.49	2 39.9	9	4 5 29.39	11.34	23 32 37.0	38.84	2 56.3
10	1 51 18.79	10.93	12 13 27.8	70.82	2 40.3	10	4 10 1.57	11.34	23 47 52.7	37.45	2 56.9
11	1 55 41.33	10.95	N. 12 41 39.2	70.11	2 40.8	11	4 14 33.58	11.33	N. 24 2 34.8	36.05	2 57.4
12	2 0 4.24	10.96	13 9 33.4	69.37	2 41.2	12	4 19 5.35	11.32	24 16 43.1	34.64	2 58.0
13	2 4 27.54	10.98	13 37 9.8	68.61	2 41.7	13	4 23 36.81	11.31	24 30 17.3	33.22	2 58.6
14	2 8 51.24	11.00	14 4 27.8	67.83	2 42.1	14	4 28 7.89	11.29	24 43 17.2	31.78	2 59.2
15	2 13 15.36	11.01	14 31 26.6	67.03	2 42.6	15	4 32 38.52	11.27	24 55 42.4	30.33	2 59.7
16	2 17 39.90	11.03	N. 14 58 5.6	66.20	2 43.0	16	4 37 8.61	11.24	N. 25 7 32.9	28.88	3 0.3
17	2 22 4.88	11.05	15 24 24.1	65.34	2 43.5	17	4 41 38.10	11.21	25 18 48.5	27.42	3 0.9
18	2 26 30.30	11.07	15 50 21.5	64.45	2 44.0	18	4 46 6.91	11.18	25 29 29.0	25.96	3 1.4
19	2 30 56.16	11.09	16 15 57.2	63.53	2 44.5	19	4 50 34.95	11.15	25 39 34.4	24.49	3 1.9
20	2 35 22.48	11.11	16 41 10.5	62.58	2 45.0	20	4 55 2.14	11.11	25 49 4.6	23.02	3 2.4
21	2 39 49.25	11.13	N. 17 6 0.8	61.61	2 45.5	21	4 59 28.40	11.08	N. 25 57 59.5	21.55	3 2.9
22	2 44 16.48	11.14	17 30 27.5	60.62	2 46.0	22	5 3 53.64	11.03	26 6 19.2	20.08	3 3.4
23	2 48 44.17	11.16	17 54 30.1	59.60	2 46.5	23	5 8 17.77	10.98	26 14 3.7	18.62	3 3.8
24	2 53 12.31	11.18	18 18 7.8	58.55	2 47.0	24	5 12 40.69	10.93	26 21 13.0	17.16	3 4.3
25	2 57 40.89	11.20	18 41 20.2	57.48	2 47.6	25	5 17 2.31	10.87	26 27 47.4	15.70	3 4.7
26	3 2 9.92	11.22	N. 19 4 6.7	56.38	2 48.1	26	5 21 22.52	10.81	N. 26 33 46.8	14.25	3 5.1
27	3 6 39.37	11.24	19 26 26.8	55.26	2 48.7	27	5 25 41.23	10.75	26 39 11.4	12.81	3 5.5
28	3 11 9.24	11.25	19 48 19.8	54.12	2 49.2	28	5 29 58.31	10.68	26 44 1.5	11.38	3 5.8
29	3 15 39.51	11.27	20 9 45.1	52.96	2 49.8	29	5 34 13.67	10.60	26 48 17.2	9.95	3 6.1
30	3 20 10.15	11.28	20 30 42.4	51.78	2 50.4	30	5 38 27.17	10.52	26 51 58.7	8.53	3 6.4
31	3 24 41.14	11.30	N. 20 51 11.0	50.58	2 50.9	31	5 42 38.70	10.44	N. 26 55 6.3	7.12	3 6.6
32	3 29 12.45	11.31	N. 21 11 10.4	49.36	2 51.5						

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	7.46	7.67	7.92	8.19	8.49	8.81	Semidiameter.	9.24	9.64	10.08	10.58	11.13	11.74
Hor. Parallax.	7.81	8.04	8.30	8.58	8.89	9.23	Hor. Parallax.	9.68	10.10	10.56	11.08	11.66	12.30



GREENWICH MEAN TIME.

MAY.											JUNE.										
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.										
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.		Noon.	Noon.								
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m										
1	5 42 38.70	10.44	N.26 55 6.3	7.12	3 6.6	1	7 23 0.44	4.62	N.24 40 48.8	23.72	2 44.5										
2	5 46 48.13	10.35	26 57 40.4	5.73	3 6.8	2	7 24 47.43	4.30	24 31 13.1	24.16	2 42.3										
3	5 50 55.33	10.25	26 59 41.3	4.35	3 7.0	3	7 26 26.70	3.97	24 21 27.4	24.57	2 40.0										
4	5 55 0.16	10.15	27 1 9.4	2.99	3 7.1	4	7 27 58.00	3.63	24 11 32.7	24.95	2 37.6										
5	5 59 2.50	10.04	27 2 5.1	1.65	3 7.2	5	7 29 21.08	3.29	24 1 29.9	25.28	2 35.0										
6	6 3 2.20	9.93	N.27 2 28.7	0.33	3 7.3	6	7 30 35.69	2.93	N.23 51 19.8	25.57	2 32.3										
7	6 6 59.13	9.81	27 2 20.7	0.97	3 7.3	7	7 31 41.59	2.56	23 41 3.2	25.82	2 29.5										
8	6 10 53.13	9.69	27 1 41.8	2.25	3 7.2	8	7 32 38.54	2.18	23 30 41.0	26.03	2 26.5										
9	6 14 44.07	9.56	27 0 32.3	3.51	3 7.1	9	7 33 26.31	1.80	23 20 14.0	26.20	2 23.3										
10	6 18 31.80	9.42	26 58 52.9	4.75	3 7.0	10	7 34 4.67	1.40	23 9 43.1	26.34	2 20.0										
11	6 22 16.16	9.28	N.26 56 44.1	5.95	3 6.8	11	7 34 33.41	0.99	N.22 59 8.9	26.46	2 16.5										
12	6 25 57.01	9.13	26 54 6.7	7.12	3 6.5	12	7 34 52.34	0.58	22 48 32.3	26.55	2 12.9										
13	6 29 34.19	8.97	26 51 1.2	8.27	3 6.2	13	7 35 1.28	0.16	22 37 53.9	26.62	2 9.1										
14	6 33 7.53	8.81	26 47 28.3	9.41	3 5.8	14	7 35 0.10	0.26	22 27 14.3	26.67	2 5.1										
15	6 36 36.89	8.64	26 43 28.8	10.52	3 5.3	15	7 34 48.67	0.69	22 16 34.0	26.70	2 1.0										
16	6 40 2.11	8.46	N.26 39 3.4	11.60	3 4.8	16	7 34 26.92	1.12	N.22 5 53.5	26.70	1 56.7										
17	6 43 23.03	8.28	26 34 12.7	12.64	3 4.2	17	7 33 54.81	1.55	21 55 13.4	26.67	1 52.2										
18	6 46 39.47	8.09	26 28 57.7	13.64	3 3.5	18	7 33 12.35	1.99	21 44 34.2	26.62	1 47.6										
19	6 49 51.28	7.89	26 23 19.1	14.60	3 2.7	19	7 32 19.57	2.41	21 33 56.4	26.54	1 42.8										
20	6 52 58.29	7.69	26 17 17.7	15.51	3 1.9	20	7 31 16.58	2.84	21 23 20.3	26.45	1 37.8										
21	6 56 0.33	7.48	N.26 10 54.4	16.39	3 1.0	21	7 30 3.51	3.25	N.21 12 46.2	26.35	1 32.6										
22	6 58 57.22	7.26	26 4 10.2	17.24	3 0.0	22	7 28 40.57	3.66	21 2 14.5	26.24	1 27.3										
23	7 1 48.79	7.04	25 57 5.8	18.07	2 58.9	23	7 27 8.02	4.05	20 51 45.8	26.12	1 21.8										
24	7 4 34.85	6.80	25 49 42.1	18.87	2 57.7	24	7 25 26.21	4.43	20 41 20.5	25.98	1 16.2										
25	7 7 15.21	6.56	25 42 0.0	19.64	2 56.4	25	7 23 35.52	4.79	20 30 59.0	25.82	1 10.4										
26	7 9 49.66	6.31	N.25 34 0.5	20.36	2 55.0	26	7 21 36.43	5.13	N.20 20 41.7	25.63	1 4.5										
27	7 12 18.02	6.05	25 25 44.4	21.04	2 53.6	27	7 19 29.47	5.44	20 10 29.3	25.41	0 58.5										
28	7 14 40.05	5.78	25 17 12.7	21.67	2 52.0	28	7 17 15.26	5.73	20 0 22.6	25.16	0 52.3										
29	7 16 55.54	5.51	25 8 26.4	22.25	2 50.3	29	7 14 54.48	5.99	19 50 22.2	24.88	0 46.1										
30	7 19 4.25	5.22	24 59 26.3	22.77	2 48.5	30	7 12 27.88	6.22	19 40 28.8	24.56	0 39.7										
31	7 21 5.97	4.92	N.24 50 13.5	23.26	2 46.5	31	7 9 56.29	6.41	N.19 30 43.4	24.19	0 33.3										
32	7 23 0.44	4.62	N.24 40 48.8	23.72	2 44.5																

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	12.43	13.21	14.09	15.08	16.21	17.49	Semidiameter.	19.23	20.84	22.59	24.41	26.15	27.65
Hor. Parallax.	13.02	13.84	14.76	15.80	16.98	18.32	Hor. Parallax.	20.14	21.83	23.67	25.57	27.40	28.97

GREENWICH MEAN TIME.

JULY.											AUGUST.										
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.										
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.		Noon.	Noon.								
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m										
1	7 9 56.29	6.41	N.19 30 43.4	24.19	0 33.3	1	6 24 0.24	1.82	N.17 15 15.1	3.87	21 42.4										
2	7 7 20.57	6.56	19 21 7.5	23.78	0 26.7	2	6 24 48.34	2.18	17 16 54.5	4.41	21 39.4										
3	7 4 41.64	6.67	19 11 42.0	23.32	0 20.2	3	6 25 44.95	2.53	17 18 46.3	4.89	21 36.5										
4	7 2 0.47	6.75	19 2 28.0	22.81	0 13.6	4	6 26 49.84	2.87	17 20 48.8	5.29	21 33.8										
5	6 59 18.04	6.78	18 53 27.1	22.24	0 7.0	5	6 28 2.79	3.20	17 23 0.4	5.63	21 31.2										
6	6 56 35.35	6.77	N.18 44 40.7	21.61	{0 0.33}	6	6 29 23.57	3.52	N.17 25 19.4	5.91	21 28.7										
7	6 53 53.44	6.71	18 36 10.7	20.91	{23.537}	7	6 30 51.93	3.84	17 27 44.3	6.13	21 26.4										
8	6 51 13.29	6.62	18 27 58.2	20.14	23 40.6	8	6 32 27.65	4.14	17 30 13.6	6.29	21 24.1										
9	6 48 35.87	6.49	18 20 4.8	19.30	23 34.1	9	6 34 10.51	4.43	17 32 45.7	6.38	21 22.0										
10	6 46 2.16	6.31	18 12 32.4	18.40	23 27.7	10	6 36 0.28	4.71	17 35 19.1	6.40	21 20.0										
11	6 43 33.04	6.10	N.18 5 22.2	17.45	23 21.4	11	6 37 56.75	4.99	N.17 37 52.2	6.36	21 18.1										
12	6 41 9.39	5.86	17 58 35.5	16.44	23 15.2	12	6 39 59.71	5.25	17 40 23.5	6.25	21 16.3										
13	6 38 52.00	5.58	17 52 13.5	15.38	23 9.1	13	6 42 8.94	5.51	17 42 51.6	6.08	21 14.6										
14	6 36 41.61	5.28	17 46 17.6	14.27	23 3.1	14	6 44 24.22	5.76	17 45 15.1	5.85	21 13.0										
15	6 34 38.87	4.95	17 40 48.6	13.11	22 57.3	15	6 46 45.35	6.00	17 47 32.4	5.57	21 11.5										
16	6 32 44.35	4.59	N.17 35 47.2	11.94	22 51.6	16	6 49 12.13	6.23	N.17 49 42.4	5.24	21 10.1										
17	6 30 58.56	4.22	17 31 14.0	10.77	22 46.1	17	6 51 44.33	6.45	17 51 43.7	4.85	21 8.7										
18	6 29 21.91	3.83	17 27 9.2	9.59	22 40.7	18	6 54 21.77	6.67	17 53 35.0	4.41	21 7.5										
19	6 27 54.73	3.43	17 23 33.0	8.40	22 35.5	19	6 57 4.24	6.87	17 55 15.1	3.92	21 6.3										
20	6 26 37.26	3.02	17 20 25.2	7.21	22 30.4	20	6 59 51.55	7.07	17 56 43.0	3.38	21 5.2										
21	6 25 29.70	2.61	N.17 17 45.5	6.05	22 25.5	21	7 2 43.51	7.26	N.17 57 57.4	2.80	21 4.2										
22	6 24 32.16	2.19	17 15 33.4	4.92	22 20.8	22	7 5 39.93	7.44	17 58 57.3	2.18	21 3.3										
23	6 23 44.70	1.77	17 13 48.3	3.82	22 16.2	23	7 8 40.64	7.62	17 59 41.6	1.51	21 2.4										
24	6 23 7.33	1.35	17 12 29.3	2.76	22 11.8	24	7 11 45.46	7.78	18 0 9.5	0.80	21 1.6										
25	6 22 40.02	0.93	17 11 35.4	1.74	22 7.6	25	7 14 54.23	7.95	18 0 19.8	0.05	21 0.9										
26	6 22 22.69	0.52	N.17 11 5.5	0.77	22 3.5	26	7 18 6.80	8.10	N.18 0 12.0	0.73	21 0.2										
27	6 22 15.23	0.11	17 10 58.4	0.15	21 59.6	27	7 21 22.99	8.25	17 59 44.9	1.54	20 59.6										
28	6 22 17.50	0.29	17 11 12.6	1.02	21 55.9	28	7 24 42.67	8.39	17 58 57.9	2.39	20 59.0										
29	6 22 29.32	0.69	17 11 46.7	1.83	21 52.3	29	7 28 5.68	8.53	17 57 50.2	3.27	20 58.5										
30	6 22 50.52	1.08	17 12 39.6	2.58	21 48.8	30	7 31 31.90	8.66	17 56 21.0	4.17	20 58.0										
31	6 23 20.89	1.46	N.17 13 49.6	3.26	21 45.5	31	7 35 1.18	8.78	N.17 54 29.7	5.10	20 57.6										
32	6 24 0.24	1.82	N.17 15 15.1	3.87	21 42.4	32	7 38 33.39	8.90	N.17 52 15.7	6.06	20 57.2										

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	28.65	28.96	28.52	27.43	25.89	24.15	Semidiameter.	22.03	20.36	18.83	17.45	16.22	15.13
Hor. Parallax.	30.01	30.34	29.88	28.73	27.12	25.30	Hor. Parallax.	23.08	21.33	19.72	18.28	16.99	15.85



GREENWICH MEAN TIME.

SEPTEMBER.						OCTOBER.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	7 38 33.39	8.90	N.17 52 15.7	6.06	20 57.2	1	9 39 8.34	10.70	N.13 19 36.6	39.89	21 0.2
2	7 42 8.41	9.02	17 49 38.3	7.05	20 56.9	2	9 43 25.28	10.71	13 3 26.2	40.97	21 0.5
3	7 45 46.12	9.12	17 46 37.1	8.06	20 56.7	3	9 47 42.62	10.73	12 46 50.0	42.04	21 0.9
4	7 49 26.41	9.23	17 43 11.4	9.09	20 56.4	4	9 52 0.33	10.74	12 29 48.4	43.10	21 1.2
5	7 53 9.17	9.33	17 39 20.8	10.14	20 56.2	5	9 56 18.39	10.76	12 12 21.8	44.14	21 1.6
6	7 56 54.29	9.43	N.17 35 4.8	11.21	20 56.1	6	10 0 36.76	10.77	N.11 54 30.5	45.16	21 2.0
7	8 0 41.66	9.52	17 30 23.0	12.29	20 56.0	7	10 4 55.42	10.78	11 36 15.0	46.15	21 2.3
8	8 4 31.19	9.61	17 25 15.0	13.39	20 55.9	8	10 9 14.35	10.79	11 17 35.5	47.13	21 2.7
9	8 8 22.79	9.69	17 19 40.4	14.51	20 55.8	9	10 13 33.54	10.80	10 58 32.5	48.10	21 3.1
10	8 12 16.35	9.77	17 13 38.9	15.64	20 55.8	10	10 17 52.97	10.81	10 39 6.4	49.05	21 3.5
11	8 16 11.80	9.85	N.17 7 10.1	16.78	20 55.8	11	10 22 12.61	10.82	N.10 19 17.7	49.99	21 3.9
12	8 20 9.04	9.92	17 0 13.8	17.92	20 55.8	12	10 26 32.46	10.83	9 59 6.8	50.91	21 4.3
13	8 24 7.98	9.99	16 52 49.8	19.07	20 55.9	13	10 30 52.49	10.84	9 38 34.2	51.81	21 4.7
14	8 28 8.53	10.06	16 44 57.8	20.23	20 56.0	14	10 35 12.70	10.85	9 17 40.3	52.69	21 5.0
15	8 32 10.60	10.12	16 36 37.8	21.40	20 56.1	15	10 39 33.07	10.85	8 56 25.9	53.54	21 5.4
16	8 36 14.11	10.18	N.16 27 49.5	22.58	20 56.2	16	10 43 53.59	10.86	N. 8 34 51.3	54.36	21 5.9
17	8 40 18.97	10.23	16 18 32.9	23.78	20 56.4	17	10 48 14.26	10.86	8 12 57.1	55.15	21 6.3
18	8 44 25.10	10.28	16 8 47.9	24.98	20 56.6	18	10 52 35.06	10.87	7 50 43.9	55.92	21 6.7
19	8 48 32.43	10.33	15 58 34.6	26.17	20 56.8	19	10 56 55.98	10.88	7 28 12.2	56.67	21 7.1
20	8 52 40.87	10.37	15 47 52.9	27.35	20 57.0	20	11 1 17.03	10.88	7 5 22.6	57.40	21 7.5
21	8 56 50.35	10.42	N.15 36 42.9	28.52	20 57.2	21	11 5 38.20	10.89	N. 6 42 15.8	58.11	21 7.9
22	9 1 0.80	10.45	15 25 4.6	29.68	20 57.5	22	11 9 59.49	10.89	6 18 52.3	58.81	21 8.3
23	9 5 12.15	10.49	15 12 58.3	30.84	20 57.7	23	11 14 20.89	10.89	5 55 12.9	59.48	21 8.7
24	9 9 24.34	10.52	15 0 24.0	32.00	20 58.0	24	11 18 42.42	10.90	5 31 18.1	60.11	21 9.1
25	9 13 37.30	10.55	14 47 21.8	33.15	20 58.3	25	11 23 4.07	10.91	5 7 8.5	60.71	21 9.6
26	9 17 50.98	10.58	N.14 33 52.0	34.30	20 58.6	26	11 27 25.85	10.91	N. 4 42 44.8	61.28	21 10.0
27	9 22 5.33	10.61	14 19 54.7	35.45	20 58.9	27	11 31 47.78	10.92	4 18 7.7	61.81	21 10.4
28	9 26 20.28	10.64	14 5 30.3	36.58	20 59.2	28	11 36 9.85	10.92	3 53 17.8	62.32	21 10.8
29	9 30 35.80	10.66	13 50 39.0	37.70	20 59.5	29	11 40 32.09	10.93	3 28 15.9	62.81	21 11.3
30	9 34 51.83	10.68	13 35 21.0	38.80	20 59.9	30	11 44 54.50	10.94	3 3 2.5	63.27	21 11.7
31	9 39 8.34	10.70	N.13 19 36.6	39.89	21 0.2	31	11 49 17.10	10.95	N. 2 37 38.3	63.71	21 12.1
						32	11 53 39.90	10.96	N. 2 12 3.9	64.13	21 12.6

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	13.99	13.15	12.41	11.74	11.15	10.62	Semidiameter.	10.13	9.70	9.30	8.94	8.61	8.31
Hor. Parallax.	14.66	13.78	13.00	12.30	11.68	11.12	Hor. Parallax.	10.61	10.16	9.74	9.37	9.02	8.71

GREENWICH MEAN TIME.

NOVEMBER.						DECEMBER.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	11 53 39.90	10.96	N. 2 12 3.9	64.13	21 12.6	1	14 8 38.74	11.70	S. 10 55 40.8	62.46	21 29.5
2	11 58 2.93	10.96	1 46 20.1	64.52	21 13.0	2	14 13 19.97	11.74	11 20 33.3	61.91	21 30.3
3	12 2 26.20	10.97	1 20 27.5	64.87	21 13.5	3	14 18 2.20	11.78	11 45 12.1	61.33	21 31.1
4	12 6 49.75	10.99	0 54 26.8	65.19	21 13.9	4	14 22 45.44	11.82	12 9 36.5	60.71	21 31.9
5	12 11 13.59	11.00	0 28 18.6	65.48	21 14.4	5	14 27 29.73	11.87	12 33 45.6	60.05	21 32.7
6	12 15 37.75	11.01	N. 0 2 3.6	65.75	21 14.9	6	14 32 15.09	11.91	S. 12 57 38.7	59.36	21 33.5
7	12 20 2.25	11.03	S. 0 24 17.5	65.99	21 15.3	7	14 37 1.53	11.96	13 21 15.0	58.64	21 34.4
8	12 24 27.12	11.04	0 50 44.0	66.20	21 15.8	8	14 41 49.07	12.01	13 44 33.7	57.89	21 35.2
9	12 28 52.38	11.06	1 17 15.3	66.38	21 16.3	9	14 46 37.74	12.05	14 7 34.1	57.11	21 36.1
10	12 33 18.06	11.08	1 43 50.6	66.53	21 16.8	10	14 51 27.54	12.10	14 30 15.3	56.30	21 37.0
11	12 37 44.19	11.10	S. 2 10 29.2	66.66	21 17.3	11	14 56 18.50	12.15	S. 14 52 36.5	55.45	21 38.0
12	12 42 10.79	11.12	2 37 10.4	66.76	21 17.8	12	15 1 10.63	12.20	15 14 37.0	54.57	21 38.9
13	12 46 37.89	11.14	3 3 53.5	66.82	21 18.3	13	15 6 3.94	12.25	15 36 15.9	53.66	21 39.9
14	12 51 5.50	11.16	3 30 37.8	66.85	21 18.8	14	15 10 58.43	12.30	15 57 32.5	52.71	21 40.9
15	12 55 33.66	11.19	3 57 22.5	66.85	21 19.4	15	15 15 54.12	12.35	16 18 25.9	51.72	21 41.9
16	13 0 2.39	11.21	S. 4 24 6.8	66.82	21 19.9	16	15 20 51.01	12.40	S. 16 38 55.4	50.71	21 42.9
17	13 4 31.72	11.23	4 50 50.0	66.76	21 20.5	17	15 25 49.10	12.45	16 59 0.2	49.66	21 43.9
18	13 9 1.67	11.26	5 17 31.3	66.66	21 21.0	18	15 30 48.38	12.50	17 18 39.4	48.58	21 45.0
19	13 13 32.27	11.29	5 44 10.0	66.53	21 21.6	19	15 35 48.86	12.55	17 37 52.4	47.47	21 46.1
20	13 18 3.53	11.32	6 10 45.2	66.37	21 22.2	20	15 40 50.53	12.59	17 56 38.3	46.33	21 47.2
21	13 22 35.49	11.35	S. 6 37 16.2	66.19	21 22.8	21	15 45 53.39	12.64	S. 18 14 56.4	45.16	21 48.3
22	13 27 8.17	11.38	7 3 42.2	65.97	21 23.4	22	15 50 57.42	12.69	18 32 45.9	43.95	21 49.5
23	13 31 41.60	11.41	7 30 2.4	65.71	21 24.0	23	15 56 2.61	12.74	18 50 6.1	42.70	21 50.6
24	13 36 15.79	11.44	7 56 16.1	65.42	21 24.7	24	16 1 8.95	12.79	19 6 56.3	41.43	21 51.8
25	13 40 50.78	11.47	8 22 22.4	65.09	21 25.3	25	16 6 16.42	12.83	19 23 15.6	40.14	21 53.0
26	13 45 26.58	11.51	S. 8 48 20.5	64.73	21 26.0	26	16 11 25.01	12.88	S. 19 39 3.5	38.82	21 54.2
27	13 50 3.24	11.55	9 14 9.6	64.34	21 26.7	27	16 16 34.69	12.93	19 54 19.2	37.48	21 55.4
28	13 54 40.74	11.58	9 39 49.0	63.92	21 27.4	28	16 21 45.44	12.97	20 9 2.1	36.10	21 56.7
29	13 59 19.15	11.62	10 5 17.9	63.47	21 28.1	29	16 26 57.24	13.01	20 23 11.5	34.69	21 58.0
30	14 3 58.47	11.66	10 30 35.4	62.98	21 28.8	30	16 32 10.06	13.06	20 36 46.8	33.25	21 59.3
31	14 8 38.74	11.70	S. 10 55 40.8	62.46	21 29.5	31	16 37 23.88	13.10	S. 20 49 47.4	31.79	22 0.6
						32	16 42 38.67	13.14	S. 21 2 12.6	30.31	22 1.9

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	31st.
Semidiameter.	7.98	7.73	7.50	7.29	7.09	6.91	Semidiameter.	6.75	6.59	6.45	6.31	6.18	6.07	5.96
Hor. Parallax.	8.36	8.10	7.86	7.64	7.43	7.24	Hor. Parallax.	7.07	6.90	6.75	6.61	6.48	6.36	6.25



GREENWICH MEAN TIME.

JANUARY.						FEBRUARY.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	23 35 46.10	6.37	S. 3 9 51.3	44.66	4 56.5	1	0 54 54.38	6.42	N. 5 57 52.6	42.74	4 13.5
2	23 38 19.05	6.37	2 51 58.9	44.69	4 55.1	2	0 57 28.59	6.43	6 14 56.8	42.59	4 12.1
3	23 40 51.98	6.37	2 34 5.9	44.72	4 53.7	3	1 0 2.93	6.43	6 31 57.4	42.44	4 10.7
4	23 43 24.90	6.37	2 16 12.4	44.75	4 52.3	4	1 2 37.40	6.44	6 48 54.3	42.28	4 9.4
5	23 45 57.82	6.37	1 58 18.5	44.76	4 50.9	5	1 5 12.00	6.45	7 5 47.2	42.12	4 8.0
6	23 48 30.73	6.37	S. 1 40 24.5	44.75	4 49.5	6	1 7 46.74	6.45	N. 7 22 36.1	41.95	4 6.6
7	23 51 3.64	6.37	1 22 30.5	44.74	4 48.1	7	1 10 21.61	6.46	7 39 20.8	41.77	4 5.3
8	23 53 36.54	6.37	1 4 36.6	44.73	4 46.8	8	1 12 56.62	6.46	7 56 1.1	41.59	4 3.9
9	23 56 9.44	6.37	0 46 43.0	44.71	4 45.4	9	1 15 31.78	6.47	8 12 36.9	41.40	4 2.6
10	23 58 42.34	6.37	0 28 49.9	44.69	4 44.0	10	1 18 7.08	6.47	8 29 8.0	41.20	4 1.2
11	0 1 15.24	6.37	S. 0 10 57.4	44.67	4 42.6	11	1 20 42.53	6.48	N. 8 45 34.4	41.00	3 59.8
12	0 3 48.14	6.37	N. 0 6 54.4	44.64	4 41.2	12	1 23 18.13	6.49	9 1 55.9	40.79	3 58.5
13	0 6 21.05	6.37	0 24 45.3	44.60	4 39.8	13	1 25 53.88	6.49	9 18 12.4	40.58	3 57.2
14	0 8 53.96	6.37	0 42 35.1	44.55	4 38.4	14	1 28 29.79	6.50	9 34 23.7	40.36	3 55.8
15	0 11 26.89	6.37	1 0 23.6	44.49	4 37.0	15	1 31 5.86	6.51	9 50 29.8	40.14	3 54.5
16	0 13 59.84	6.37	N. 1 18 10.8	44.43	4 35.6	16	1 33 42.10	6.51	N. 10 6 30.4	39.92	3 53.1
17	0 16 32.81	6.37	1 35 56.5	44.36	4 34.2	17	1 36 18.51	6.52	10 22 25.5	39.69	3 51.8
18	0 19 5.81	6.38	1 53 40.6	44.29	4 32.8	18	1 38 55.09	6.53	10 38 14.9	39.45	3 50.5
19	0 21 38.84	6.38	2 11 22.8	44.21	4 31.4	19	1 41 31.85	6.54	10 53 58.5	39.20	3 49.1
20	0 24 11.91	6.38	2 29 3.1	44.13	4 30.0	20	1 44 8.81	6.54	11 9 36.3	38.95	3 47.8
21	0 26 45.03	6.38	N. 2 46 41.4	44.05	4 28.7	21	1 46 45.96	6.55	N. 11 25 8.1	38.70	3 46.5
22	0 29 18.20	6.38	3 4 17.5	43.96	4 27.3	22	1 49 23.30	6.56	11 40 33.7	38.44	3 45.2
23	0 31 51.43	6.39	3 21 51.3	43.86	4 25.9	23	1 52 0.85	6.57	11 55 53.1	38.18	3 43.9
24	0 34 24.73	6.39	3 39 22.7	43.76	4 24.5	24	1 54 38.61	6.58	12 11 6.3	37.92	3 42.6
25	0 36 58.10	6.39	3 56 51.6	43.65	4 23.1	25	1 57 16.59	6.59	12 26 13.1	37.65	3 41.3
26	0 39 31.55	6.40	N. 4 14 17.8	43.54	4 21.7	26	1 59 54.78	6.60	N. 12 41 13.3	37.37	3 39.9
27	0 42 5.10	6.40	4 31 41.2	43.42	4 20.3	27	2 2 33.20	6.61	12 56 6.9	37.09	3 38.6
28	0 44 38.74	6.40	4 49 1.7	43.30	4 19.0	28	2 5 11.85	6.62	13 10 53.8	36.81	3 37.3
29	0 47 12.48	6.41	5 6 19.3	43.17	4 17.6	29	2 7 50.73	6.63	13 25 33.9	36.52	3 36.1
30	0 49 46.33	6.41	5 23 33.7	43.03	4 16.2	30	2 10 29.84	6.64	N. 13 40 7.1	36.23	3 34.8
31	0 52 20.30	6.42	N. 5 40 44.8	42.89	4 14.8						
32	0 54 54.38	6.42	N. 5 57 52.6	42.74	4 13.5						

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	3.41	3.32	3.22	3.13	3.05	2.97	Semidiameter.	2.88	2.82	2.75	2.68	2.62	2.56
Hor. Parallax.	6.42	6.24	6.06	5.89	5.74	5.59	Hor. Parallax.	5.42	5.29	5.16	5.04	4.92	4.81

GREENWICH MEAN TIME.

MARCH.						APRIL.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	2 10 29.84	6.64	N. 13 40 7.1	36.23	3 34.8	1	3 34 41.92	6.95	N. 20 3 36.2	24.96	2 56.8
2	2 13 9.19	6.65	13 54 33.2	35.93	3 33.5	2	3 37 28.82	6.96	20 13 30.2	24.53	2 55.6
3	2 15 48.79	6.66	14 8 52.1	35.63	3 32.2	3	3 40 15.96	6.97	20 23 14.0	24.10	2 54.5
4	2 18 28.63	6.67	14 23 3.8	35.32	3 30.9	4	3 43 3.32	6.98	20 32 47.4	23.67	2 53.3
5	2 21 8.70	6.68	14 37 8.0	35.01	3 29.6	5	3 45 50.91	6.99	20 42 10.4	23.24	2 52.2
6	2 23 49.01	6.69	N. 14 51 4.7	34.70	3 28.4	6	3 48 38.72	7.00	N. 20 51 22.9	22.80	2 51.0
7	2 26 29.56	6.69	15 4 53.7	34.38	3 27.1	7	3 51 26.74	7.01	21 0 24.8	22.36	2 49.9
8	2 29 10.35	6.70	15 18 35.0	34.06	3 25.9	8	3 54 14.96	7.01	21 9 16.1	21.92	2 48.8
9	2 31 51.37	6.71	15 32 8.4	33.73	3 24.6	9	3 57 3.39	7.02	21 17 56.7	21.47	2 47.6
10	2 34 32.63	6.72	15 45 33.7	33.39	3 23.3	10	3 59 52.02	7.03	21 26 26.5	21.02	2 46.5
11	2 37 14.13	6.73	N. 15 58 50.9	33.04	3 22.1	11	4 2 40.84	7.04	N. 21 34 45.4	20.56	2 45.4
12	2 39 55.87	6.74	16 11 59.8	32.70	3 20.8	12	4 5 29.85	7.05	21 42 53.4	20.10	2 44.2
13	2 42 37.85	6.75	16 25 0.4	32.35	3 19.6	13	4 8 19.05	7.05	21 50 50.3	19.64	2 43.1
14	2 45 20.07	6.76	16 37 52.5	32.00	3 18.3	14	4 11 8.42	7.06	21 58 36.2	19.18	2 42.0
15	2 48 2.52	6.77	16 50 36.0	31.64	3 17.1	15	4 13 57.97	7.07	22 6 11.0	18.72	2 40.9
16	2 50 45.21	6.78	N. 17 3 10.9	31.27	3 15.9	16	4 16 47.69	7.08	N. 22 13 34.5	18.25	2 39.8
17	2 53 28.15	6.79	17 15 37.0	30.90	3 14.7	17	4 19 37.58	7.08	22 20 46.8	17.78	2 38.7
18	2 56 11.33	6.80	17 27 54.2	30.53	3 13.5	18	4 22 27.63	7.09	22 27 47.8	17.31	2 37.6
19	2 58 54.75	6.81	17 40 2.5	30.16	3 12.2	19	4 25 17.84	7.10	22 34 37.5	16.83	2 36.5
20	3 1 38.42	6.82	17 52 1.8	29.78	3 11.0	20	4 28 8.21	7.10	22 41 15.8	16.36	2 35.4
21	3 4 22.33	6.84	N. 18 3 51.0	29.40	3 9.8	21	4 30 58.73	7.11	N. 22 47 42.6	15.88	2 34.3
22	3 7 6.49	6.85	18 15 32.8	29.01	3 8.6	22	4 33 49.40	7.11	22 53 58.0	15.40	2 33.2
23	3 9 50.90	6.86	18 27 4.3	28.62	3 7.4	23	4 36 40.22	7.12	23 0 1.9	14.92	2 32.1
24	3 12 35.56	6.87	18 38 26.5	28.23	3 6.2	24	4 39 31.18	7.13	23 5 54.2	14.44	2 31.0
25	3 15 20.48	6.88	18 49 39.2	27.83	3 5.0	25	4 42 22.27	7.13	23 11 35.0	13.96	2 29.9
26	3 18 5.65	6.89	N. 19 0 42.4	27.43	3 3.8	26	4 45 13.49	7.14	N. 23 17 4.1	13.48	2 28.8
27	3 20 51.07	6.90	19 11 35.9	27.03	3 2.7	27	4 48 4.84	7.14	23 22 21.6	12.99	2 27.7
28	3 23 36.74	6.91	19 22 19.7	26.62	3 1.5	28	4 50 56.31	7.15	23 27 27.5	12.50	2 26.6
29	3 26 22.66	6.92	19 32 53.7	26.21	3 0.3	29	4 53 47.88	7.15	23 32 21.6	12.01	2 25.5
30	3 29 8.83	6.93	19 43 17.9	25.80	2 59.1	30	4 56 39.55	7.16	23 37 4.0	11.52	2 24.5
31	3 31 55.25	6.94	N. 19 53 32.1	25.38	2 58.0	31	4 59 31.31	7.16	N. 23 41 34.6	11.03	2 23.4
32	3 34 41.92	6.95	N. 20 3 36.2	24.96	2 56.8						

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	2.52	2.47	2.41	2.36	2.32	2.28	Semidiameter.	2.23	2.19	2.16	2.13	2.09	2.06
Hor. Parallax.	4.73	4.63	4.54	4.45	4.36	4.28	Hor. Parallax.	4.20	4.12	4.06	3.99	3.93	3.88



GREENWICH MEAN TIME.

MAY.						JUNE.							
Day of Month.	Apparent Right Ascension.	Var. of R.A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R.A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.		
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.		Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m		
1	4 59 31.31	7.16	N.23 41 34.6	11.03	2 23.4	1	6 28 15.66	7.10	N.24 22 43.6	4.33	1 49.9		
2	5 2 23.15	7.16	23 45 53.3	10.54	2 22.3	2	6 31 6.09	7.10	24 20 53.9	4.81	1 48.8		
3	5 5 15.07	7.16	23 50 0.2	10.04	2 21.2	3	6 33 56.35	7.09	24 18 52.6	5.29	1 47.7		
4	5 8 7.05	7.17	23 53 55.2	9.54	2 20.1	4	6 36 46.43	7.08	24 16 39.8	5.77	1 46.6		
5	5 10 59.09	7.17	23 57 38.3	9.05	2 19.1	5	6 39 36.32	7.08	24 14 15.5	6.25	1 45.5		
6	5 13 51.17	7.17	N.24 1 9.4	8.55	2 18.0	6	6 42 26.01	7.07	N.24 11 39.8	6.73	1 44.4		
7	5 16 43.29	7.17	24 4 28.6	8.05	2 16.9	7	6 45 15.50	7.06	24 8 52.8	7.20	1 43.3		
8	5 19 35.43	7.17	24 7 35.8	7.55	2 15.9	8	6 48 4.78	7.05	24 5 54.4	7.67	1 42.1		
9	5 22 27.59	7.17	24 10 31.0	7.05	2 14.8	9	6 50 53.84	7.04	24 2 44.7	8.14	1 41.0		
10	5 25 19.77	7.17	24 13 14.3	6.55	2 13.7	10	6 53 42.67	7.03	23 59 23.8	8.60	1 39.9		
11	5 28 11.95	7.17	N.24 15 45.6	6.05	2 12.6	11	6 56 31.27	7.02	N.23 55 51.8	9.06	1 38.8		
12	5 31 4.12	7.17	24 18 4.8	5.55	2 11.6	12	6 59 19.64	7.01	23 52 8.7	9.52	1 37.6		
13	5 33 56.28	7.17	24 20 12.0	5.05	2 10.5	13	7 2 7.76	7.00	23 48 14.6	9.98	1 36.5		
14	5 36 48.41	7.17	24 22 7.3	4.55	2 9.4	14	7 4 55.63	6.99	23 44 9.5	10.44	1 35.3		
15	5 39 40.51	7.17	24 23 50.5	4.05	2 8.3	15	7 7 43.26	6.98	23 39 53.5	10.89	1 34.2		
16	5 42 32.58	7.17	N.24 25 21.7	3.55	2 7.3	16	7 10 30.63	6.97	N.23 35 26.6	11.34	1 33.0		
17	5 45 24.61	7.17	24 26 40.9	3.05	2 6.2	17	7 13 17.75	6.96	23 30 49.0	11.79	1 31.9		
18	5 48 16.59	7.17	24 27 48.2	2.55	2 5.1	18	7 16 4.61	6.95	23 26 0.7	12.24	1 30.7		
19	5 51 8.52	7.16	24 28 43.5	2.06	2 4.0	19	7 18 51.20	6.94	23 21 1.7	12.68	1 29.6		
20	5 54 0.39	7.16	24 29 26.9	1.56	2 3.0	20	7 21 37.53	6.93	23 15 52.1	13.12	1 28.4		
21	5 56 52.20	7.16	N.24 29 58.4	1.06	2 1.9	21	7 24 23.58	6.91	N.23 10 32.0	13.56	1 27.2		
22	5 59 43.93	7.16	24 30 17.9	0.56	2 0.8	22	7 27 9.36	6.90	23 5 1.5	13.99	1 26.0		
23	6 2 35.58	7.15	24 30 25.5	0.07	1 59.7	23	7 29 54.87	6.89	22 59 20.6	14.42	1 24.8		
24	6 5 27.15	7.15	24 30 21.3	0.42	1 58.6	24	7 32 40.10	6.88	22 53 29.4	14.85	1 23.7		
25	6 8 18.63	7.14	24 30 5.3	0.91	1 57.6	25	7 35 25.03	6.87	22 47 28.0	15.27	1 22.5		
26	6 11 10.00	7.14	N.24 29 37.4	1.40	1 56.5	26	7 38 9.67	6.85	N.22 41 16.4	15.69	1 21.3		
27	6 14 1.26	7.13	24 28 57.7	1.89	1 55.4	27	7 40 54.02	6.84	22 34 54.8	16.11	1 20.1		
28	6 16 52.41	7.13	24 28 6.3	2.38	1 54.3	28	7 43 38.07	6.83	22 28 23.2	16.53	1 18.9		
29	6 19 43.43	7.12	24 27 3.2	2.87	1 53.2	29	7 46 21.81	6.82	22 21 41.6	16.94	1 17.6		
30	6 22 34.32	7.12	24 25 48.3	3.36	1 52.1	30	7 49 5.24	6.80	22 14 50.2	17.35	1 16.4		
31	6 25 25.07	7.11	N.24 24 21.7	3.85	1 51.0	31	7 51 48.35	6.79	N.22 7 49.1	17.75	1 15.2		
32	6 28 15.66	7.10	N.24 22 43.6	4.33	1 49.9								
Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	2.03	2.01	1.99	1.96	1.93	1.91	Semidiameter.	1.89	1.87	1.86	1.84	1.83	1.82
Hor. Parallax.	3.82	3.77	3.73	3.68	3.64	3.60	Hor. Parallax.	3.56	3.52	3.49	3.46	3.44	3.41

GREENWICH MEAN TIME.

JULY.						AUGUST.							
Day of Month.	Apparent Right Ascension.	Var. of R.A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R.A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.		
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.		Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m		
1	7 51 48.35	6.79	N.22 7 49.1	17.75	1 15.2	1	9 13 19.63	6.36	N.17 17 42.4	28.44	0 34.5		
2	7 54 31.15	6.78	22 0 38.3	18.15	1 14.0	2	9 15 52.13	6.35	17 6 16.5	28.72	0 33.1		
3	7 57 13.62	6.76	21 53 18.0	18.55	1 12.7	3	9 18 24.31	6.33	16 54 43.8	29.00	0 31.7		
4	7 59 55.76	6.75	21 45 48.2	18.94	1 11.5	4	9 20 56.17	6.32	16 43 4.5	29.27	0 30.3		
5	8 2 37.58	6.74	21 38 9.0	19.33	1 10.3	5	9 23 27.71	6.31	16 31 18.7	29.54	0 28.9		
6	8 5 19.06	6.72	N.21 30 20.5	19.71	1 9.0	6	9 25 58.93	6.30	N.16 19 26.5	29.81	0 27.5		
7	8 8 0.20	6.71	21 22 22.7	20.09	1 7.7	7	9 28 29.84	6.28	16 7 27.9	30.07	0 26.1		
8	8 10 41.00	6.69	21 14 15.8	20.47	1 6.5	8	9 31 0.44	6.27	15 55 23.1	30.33	0 24.6		
9	8 13 21.46	6.68	21 5 59.8	20.85	1 5.2	9	9 33 30.73	6.26	15 43 12.2	30.58	0 23.2		
10	8 16 1.58	6.67	20 57 34.9	21.22	1 4.0	10	9 36 0.72	6.24	15 30 55.2	30.83	0 21.7		
11	8 18 41.36	6.65	N.20 49 1.2	21.59	1 2.7	11	9 38 30.42	6.23	N.15 18 32.2	31.08	0 20.3		
12	8 21 20.80	6.64	20 40 18.7	21.95	1 1.4	12	9 40 59.83	6.22	15 6 3.4	31.32	0 18.9		
13	8 23 59.89	6.62	20 31 27.5	22.31	1 0.1	13	9 43 28.95	6.21	14 53 28.8	31.56	0 17.4		
14	8 26 38.64	6.61	20 22 27.7	22.67	0 58.8	14	9 45 57.79	6.20	14 40 48.5	31.79	0 15.9		
15	8 29 17.06	6.59	20 13 19.3	23.02	0 57.5	15	9 48 26.36	6.19	14 28 2.6	32.02	0 14.5		
16	8 31 55.14	6.58	N.20 4 2.5	23.37	0 56.2	16	9 50 54.65	6.17	N.14 15 11.2	32.25	0 13.0		
17	8 34 32.89	6.57	19 54 37.4	23.72	0 54.9	17	9 53 22.68	6.16	14 2 14.4	32.48	0 11.5		
18	8 37 10.31	6.55	19 45 4.1	24.06	0 53.6	18	9 55 50.45	6.15	13 49 12.2	32.70	0 10.1		
19	8 39 47.39	6.54	19 35 22.6	24.40	0 52.2	19	9 58 17.97	6.14	13 36 4.8	32.92	0 8.6		
20	8 42 24.14	6.52	19 25 33.0	24.73	0 50.9	20	10 0 45.23	6.13	13 22 52.2	33.13	0 7.1		
21	8 45 0.56	6.51	N.19 15 35.5	25.06	0 49.6	21	10 3 12.25	6.12	N.13 9 34.5	33.34	0 5.6		
22	8 47 36.66	6.50	19 5 30.1	25.39	0 48.2	22	10 5 39.03	6.11	12 56 11.9	33.55	0 4.1		
23	8 50 12.43	6.48	18 55 16.8	25.71	0 46.9	23	10 8 5.56	6.10	12 42 44.4	33.75	0 2.6		
24	8 52 47.87	6.47	18 44 55.8	26.03	0 45.5	24	10 10 31.86	6.09	12 29 12.1	33.95	(0 1.1) 23 59.6		
25	8 55 22.98	6.46	18 34 27.3	26.34	0 44.2	25	10 12 57.93	6.08	12 15 35.1	34.14	23 58.1		
26	8 57 57.77	6.44	N.18 23 51.2	26.65	0 42.8	26	10 15 23.76	6.07	N.12 1 53.5	34.33	23 56.6		
27	9 0 32.23	6.43	18 13 7.7	26.96	0 41.5	27	10 17 49.37	6.06	11 48 7.5	34.51	23 55.0		
28	9 3 6.36	6.42	18 2 16.9	27.27	0 40.1	28	10 20 14.75	6.05	11 34 17.1	34.69	23 53.5		
29	9 5 40.17	6.40	17 51 18.9	27.57	0 38.7	29	10 22 39.91	6.04	11 20 22.4	34.86	23 52.0		
30	9 8 13.65	6.39	17 40 13.7	27.86	0 37.3	30	10 25 4.86	6.04	11 6 23.5	35.03	23 50.5		
31	9 10 46.80	6.38	N.17 29 1.5	28.15	0 35.9	31	10 27 29.59	6.03	N.10 52 20.5	35.20	23 48.9		
32	9 13 19.63	6.36	N.17 17 42.4	28.44	0 34.5	32	10 29 54.12	6.02	N.10 38 13.5	35.37	23 47.4		
Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	1.81	1.79	1.78	1.77	1.76	1.76	Semidiameter.	1.75	1.75	1.75	1.75	1.75	1.75
Hor. Parallax.	3.39	3.37	3.35	3.34	3.33	3.31	Hor. Parallax.	3.30	3.30	3.29	3.29	3.29	3.29



GREENWICH MEAN TIME.

SEPTEMBER.						OCTOBER,					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	10 29 54.12	6.02	N. 10 38 13.5	35.37	23 47.4	1	11 41 2.72	5.88	N. 3 11 16.0	38.55	23 0.3
2	10 32 18.44	6.01	10 24 2.6	35.53	23 45.9	2	11 43 23.73	5.88	2 55 50.1	38.60	22 58.7
3	10 34 42.57	6.00	10 9 48.0	35.69	23 44.3	3	11 45 44.72	5.88	2 40 23.2	38.64	22 57.1
4	10 37 6.50	5.99	9 55 29.7	35.84	23 42.8	4	11 48 5.69	5.88	2 24 55.3	38.67	22 55.5
5	10 39 30.24	5.99	9 41 7.7	35.99	23 41.2	5	11 50 26.65	5.87	2 9 26.5	38.71	22 53.9
6	10 41 53.80	5.98	N. 9 26 42.2	36.14	23 39.7	6	11 52 47.60	5.87	N. 1 53 57.0	38.74	22 52.3
7	10 44 17.19	5.97	9 12 13.3	36.28	23 38.1	7	11 55 8.56	5.87	1 38 26.8	38.77	22 50.7
8	10 46 40.41	5.96	8 57 41.1	36.42	23 36.6	8	11 57 29.53	5.88	1 22 56.0	38.79	22 49.1
9	10 49 3.46	5.96	8 43 5.6	36.55	23 35.0	9	11 59 50.51	5.88	1 7 24.7	38.81	22 47.5
10	10 51 26.36	5.95	8 28 27.0	36.68	23 33.4	10	12 2 11.52	5.88	0 51 52.9	38.83	22 46.0
11	10 53 49.11	5.95	N. 8 13 45.2	36.80	23 31.9	11	12 4 32.57	5.88	N. 0 36 20.7	38.84	22 44.4
12	10 56 11.72	5.94	7 59 0.4	36.92	23 30.3	12	12 6 53.66	5.88	0 20 48.2	38.85	22 42.8
13	10 58 34.19	5.93	7 44 12.8	37.04	23 28.7	13	12 9 14.79	5.88	N. 0 5 15.6	38.86	22 41.2
14	11 0 56.54	5.93	7 29 22.3	37.15	23 27.2	14	12 11 35.98	5.88	S. 0 10 17.1	38.86	22 39.6
15	11 3 18.77	5.92	7 14 29.0	37.26	23 25.6	15	12 13 57.24	5.89	0 25 49.9	38.86	22 38.0
16	11 5 40.89	5.92	N. 6 59 33.0	37.37	23 24.0	16	12 16 18.57	5.89	S. 0 41 22.6	38.85	22 36.4
17	11 8 2.90	5.92	6 44 34.5	37.48	23 22.5	17	12 18 39.97	5.89	0 56 55.1	38.85	22 34.8
18	11 10 24.81	5.91	6 29 33.5	37.58	23 20.9	18	12 21 1.45	5.90	1 12 27.4	38.84	22 33.3
19	11 12 46.63	5.91	6 14 30.1	37.68	23 19.3	19	12 23 23.02	5.90	1 27 59.3	38.82	22 31.7
20	11 15 8.35	5.90	5 59 24.3	37.78	23 17.7	20	12 25 44.68	5.90	1 43 30.8	38.80	22 30.1
21	11 17 29.99	5.90	N. 5 44 16.3	37.87	23 16.1	21	12 28 6.44	5.91	S. 1 59 1.7	38.77	22 28.5
22	11 19 51.55	5.90	5 29 6.2	37.96	23 14.6	22	12 30 28.30	5.91	2 14 31.9	38.74	22 26.9
23	11 22 13.03	5.89	5 13 54.1	38.04	23 13.0	23	12 32 50.26	5.92	2 30 1.4	38.70	22 25.4
24	11 24 34.44	5.89	4 58 40.0	38.12	23 11.4	24	12 35 12.33	5.92	2 45 30.0	38.66	22 23.8
25	11 26 55.79	5.89	4 43 24.1	38.19	23 9.8	25	12 37 34.52	5.93	3 0 57.7	38.62	22 22.2
26	11 29 17.07	5.89	N. 4 28 6.5	38.26	23 8.2	26	12 39 56.83	5.93	S. 3 16 24.3	38.58	22 20.7
27	11 31 38.30	5.88	4 12 47.3	38.33	23 6.6	27	12 42 19.27	5.94	3 31 49.7	38.53	22 19.1
28	11 33 59.47	5.88	3 57 26.5	38.39	23 5.0	28	12 44 41.84	5.94	3 47 13.8	38.47	22 17.5
29	11 36 20.59	5.88	3 42 4.3	38.45	23 3.5	29	12 47 4.54	5.95	4 2 36.5	38.41	22 16.0
30	11 38 41.67	5.88	3 26 40.8	38.50	23 1.9	30	12 49 27.38	5.96	4 17 57.8	38.35	22 14.4
31	11 41 2.72	5.88	N. 3 11 16.0	38.55	23 0.3	31	12 51 50.36	5.96	S. 4 33 17.5	38.28	22 12.8
						32	12 54 13.49	5.97	S. 4 48 35.5	38.21	22 11.3

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	1.75	1.75	1.75	1.76	1.77	1.78	Semidiameter.	1.79	1.80	1.81	1.82	1.84	1.85
Hor. Parallax.	3.29	3.30	3.31	3.32	3.33	3.34	Hor. Parallax.	3.36	3.38	3.40	3.43	3.45	3.48

GREENWICH MEAN TIME.

NOVEMBER.						DECEMBER.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	12 54 13.49	5.97	S. 4 48 35.5	38.21	22 11.3	1	14 7 29.28	6.27	S. 12 6 28.5	34.11	21 26.5
2	12 56 36.78	5.97	5 3 51.6	38.13	22 9.8	2	14 10 0.00	6.29	12 20 4.8	33.90	21 25.0
3	12 59 0.24	5.98	5 19 5.8	38.05	22 8.2	3	14 12 31.03	6.30	12 33 36.1	33.69	21 23.6
4	13 1 23.87	5.99	5 34 18.1	37.97	22 6.6	4	14 15 2.38	6.31	12 47 2.3	33.48	21 22.2
5	13 3 47.68	6.00	5 49 28.3	37.88	22 5.1	5	14 17 34.06	6.33	13 0 23.3	33.26	21 20.8
6	13 6 11.67	6.00	S. 6 4 36.3	37.79	22 3.6	6	14 20 6.07	6.34	S. 13 13 39.0	33.04	21 19.4
7	13 8 35.86	6.01	6 19 42.1	37.69	22 2.1	7	14 22 38.42	6.36	13 26 49.3	32.81	21 18.0
8	13 11 0.25	6.02	6 34 45.5	37.59	22 0.5	8	14 25 11.11	6.37	13 39 54.1	32.58	21 16.6
9	13 13 24.85	6.03	6 49 46.5	37.49	21 59.0	9	14 27 44.14	6.38	13 52 53.3	32.35	21 15.2
10	13 15 49.66	6.04	7 4 45.0	37.38	21 57.5	10	14 30 17.53	6.40	14 5 46.9	32.11	21 13.8
11	13 18 14.70	6.05	S. 7 19 40.9	37.27	21 56.0	11	14 32 51.27	6.41	S. 14 18 34.7	31.87	21 12.5
12	13 20 39.96	6.06	7 34 34.1	37.15	21 54.4	12	14 35 25.37	6.43	14 31 16.5	31.62	21 11.1
13	13 23 5.46	6.07	7 49 24.5	37.03	21 52.9	13	14 37 59.83	6.44	14 43 52.3	31.37	21 9.7
14	13 25 31.19	6.08	8 4 12.0	36.91	21 51.4	14	14 40 34.66	6.46	14 56 22.1	31.11	21 8.4
15	13 27 57.17	6.09	8 18 56.4	36.79	21 49.9	15	14 43 9.85	6.47	15 8 45.6	30.85	21 7.0
16	13 30 23.40	6.10	S. 8 33 37.7	36.66	21 48.4	16	14 45 45.41	6.49	S. 15 21 2.8	30.58	21 5.7
17	13 32 49.88	6.11	8 48 15.8	36.52	21 46.9	17	14 48 21.33	6.50	15 33 13.5	30.31	21 4.3
18	13 35 16.62	6.12	9 2 50.6	36.38	21 45.4	18	14 50 57.62	6.52	15 45 17.6	30.03	21 3.0
19	13 37 43.62	6.13	9 17 22.0	36.24	21 43.9	19	14 53 34.28	6.53	15 57 15.1	29.75	21 1.7
20	13 40 10.88	6.14	9 31 49.8	36.09	21 42.5	20	14 56 11.31	6.55	16 9 5.7	29.46	21 0.4
21	13 42 38.41	6.15	S. 9 46 13.9	35.94	21 41.0	21	14 58 48.70	6.57	S. 16 20 49.4	29.17	20 59.1
22	13 45 6.22	6.16	10 0 34.3	35.78	21 39.5	22	15 1 26.47	6.58	16 32 26.0	28.87	20 57.8
23	13 47 34.31	6.18	10 14 50.8	35.61	21 38.0	23	15 4 4.61	6.60	16 43 55.4	28.57	20 56.5
24	13 50 2.67	6.19	10 29 3.3	35.44	21 36.6	24	15 6 43.11	6.61	16 55 17.6	28.26	20 55.2
25	13 52 31.31	6.20	10 43 11.6	35.26	21 35.1	25	15 9 21.98	6.63	17 6 32.3	27.95	20 53.9
26	13 55 0.24	6.21	S. 10 57 15.7	35.08	21 33.7	26	15 12 1.21	6.64	S. 17 17 39.5	27.64	20 52.6
27	13 57 29.46	6.22	11 11 15.4	34.89	21 32.2	27	15 14 40.81	6.66	17 28 39.1	27.32	20 51.3
28	13 59 58.97	6.24	11 25 10.7	34.70	21 30.8	28	15 17 20.77	6.67	17 39 31.0	27.00	20 50.0
29	14 2 28.77	6.25	11 39 1.4	34.51	21 29.3	29	15 20 1.10	6.69	17 50 15.0	26.67	20 48.8
30	14 4 58.87	6.26	11 52 47.3	34.31	21 27.9	30	15 22 41.79	6.70	18 0 51.1	26.34	20 47.5
31	14 7 29.28	6.27	S. 12 6 28.5	34.11	21 26.5	31	15 25 22.85	6.72	S. 18 11 19.1	26.00	20 46.3
						32	15 28 4.28	6.73	S. 18 21 39.0	25.66	20 45.0

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	31st.
Semidiameter.	1.87	1.89	1.90	1.93	1.95	1.98	Semidiameter.	2.01	2.03	2.06	2.09	2.13	2.17	2.20
Hor. Parallax.	3.52	3.55	3.59	3.63	3.67	3.72	Hor. Parallax.	3.77	3.82	3.88	3.94	4.01	4.08	4.15



GREENWICH MEAN TIME.

JANUARY.						FEBRUARY.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	8 58 48.78	0.96	N.17 52 11.9	4.50	14 17.3	1	8 43 34.57	1.36	N.18 58 12.6	5.47	12 0.1
2	8 58 25.44	0.98	17 54 1.3	4.60	14 12.9	2	8 43 2.06	1.35	19 0 23.5	5.44	11 55.7
3	8 58 1.50	1.01	17 55 52.9	4.69	14 8.6	3	8 42 29.62	1.35	19 2 33.5	5.40	11 51.2
4	8 57 36.98	1.03	17 57 46.5	4.78	14 4.3	4	8 41 57.28	1.34	19 4 42.5	5.36	11 46.7
5	8 57 11.90	1.06	17 59 42.1	4.86	13 59.9	5	8 41 25.07	1.34	19 6 50.5	5.31	11 42.3
6	8 56 46.28	1.08	N.18 1 30.6	4.94	13 55.5	6	8 40 53.01	1.33	N.19 8 57.3	5.26	11 37.8
7	8 56 20.13	1.10	18 3 38.9	5.01	13 51.2	7	8 40 21.13	1.33	19 11 2.8	5.21	11 33.3
8	8 55 53.47	1.12	18 5 39.9	5.08	13 46.8	8	8 39 49.44	1.32	19 13 7.0	5.15	11 28.9
9	8 55 26.33	1.14	18 7 42.4	5.15	13 42.4	9	8 39 17.97	1.31	19 15 9.8	5.09	11 24.4
10	8 54 58.72	1.16	18 9 46.4	5.21	13 38.0	10	8 38 46.75	1.30	19 17 11.0	5.02	11 20.0
11	8 54 30.66	1.18	N.18 11 51.9	5.26	13 33.6	11	8 38 15.80	1.28	N.19 19 10.7	4.95	11 15.5
12	8 54 2.16	1.20	18 13 58.7	5.31	13 29.2	12	8 37 45.13	1.27	19 21 8.7	4.88	11 11.1
13	8 53 33.26	1.21	18 16 6.6	5.36	13 24.8	13	8 37 14.78	1.26	19 23 5.0	4.81	11 6.7
14	8 53 3.97	1.23	18 18 15.7	5.40	13 20.4	14	8 36 44.76	1.24	19 24 59.5	4.73	11 2.2
15	8 52 34.31	1.24	18 20 25.7	5.44	13 15.9	15	8 36 15.09	1.23	19 26 52.2	4.65	10 57.8
16	8 52 4.30	1.26	N.18 22 36.6	5.48	13 11.5	16	8 35 45.80	1.21	N.19 28 42.9	4.57	10 53.4
17	8 51 33.96	1.27	18 24 48.4	5.51	13 7.1	17	8 35 16.90	1.20	19 30 31.7	4.49	10 49.0
18	8 51 3.32	1.28	18 27 0.9	5.54	13 2.6	18	8 34 48.41	1.18	19 32 18.4	4.40	10 44.6
19	8 50 32.39	1.29	18 29 13.9	5.56	12 58.1	19	8 34 20.36	1.16	19 34 3.0	4.31	10 40.2
20	8 50 1.20	1.30	18 31 27.4	5.58	12 53.7	20	8 33 52.77	1.14	19 35 45.5	4.22	10 35.8
21	8 49 29.76	1.31	N.18 33 41.4	5.59	12 49.3	21	8 33 25.65	1.12	N.19 37 25.8	4.13	10 31.4
22	8 48 58.11	1.32	18 35 55.7	5.60	12 44.8	22	8 32 59.01	1.10	19 39 3.9	4.04	10 27.1
23	8 48 26.26	1.33	18 38 10.1	5.60	12 40.3	23	8 32 32.87	1.08	19 40 39.7	3.94	10 22.7
24	8 47 54.23	1.34	18 40 24.6	5.59	12 35.9	24	8 32 7.26	1.06	19 42 13.1	3.84	10 18.3
25	8 47 22.05	1.34	18 42 39.2	5.59	12 31.4	25	8 31 42.19	1.03	19 43 44.2	3.74	10 14.0
26	8 46 49.74	1.35	N.18 44 53.7	5.58	12 26.9	26	8 31 17.67	1.01	N.19 45 12.8	3.64	10 9.7
27	8 46 17.33	1.35	18 47 7.9	5.58	12 22.5	27	8 30 53.72	0.99	19 46 39.0	3.54	10 5.4
28	8 45 44.84	1.36	18 49 21.8	5.56	12 18.0	28	8 30 30.37	0.96	19 48 2.7	3.44	10 1.0
29	8 45 12.29	1.36	18 51 35.4	5.54	12 13.5	29	8 30 7.62	0.94	19 49 23.9	3.33	9 56.7
30	8 44 39.71	1.36	18 53 48.4	5.52	12 9.1	30	8 29 45.49	0.91	N.19 50 42.6	3.22	9 52.4
31	8 44 7.13	1.36	N.18 56 0.9	5.50	12 4.6						
32	8 43 34.57	1.36	N.18 58 12.6	5.47	12 0.1						

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	20.53	20.72	20.87	20.98	21.06	21.10	Semidiameter.	21.10	21.05	20.97	20.85	20.69	20.50
Hor. Parallax.	1.98	2.00	2.02	2.03	2.03	2.04	Hor. Parallax.	2.04	2.03	2.03	2.01	2.00	1.98

GREENWICH MEAN TIME.

MARCH.						APRIL.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	8 29 45.49	0.91	N.19 50 42.6	3.22	9 52.4	1	8 24 19.46	0.06	N.20 8 46.0	0.33	7 45.3
2	8 29 24.00	0.88	19 51 58.7	3.11	9 48.2	2	8 24 21.36	0.10	20 8 36.7	0.45	7 41.4
3	8 29 3.16	0.85	19 53 12.1	3.00	9 43.9	3	8 24 24.05	0.13	20 8 24.7	0.56	7 37.5
4	8 28 42.99	0.83	19 54 22.9	2.89	9 39.6	4	8 24 27.53	0.16	20 8 9.9	0.67	7 33.7
5	8 28 23.50	0.80	19 55 31.0	2.78	9 35.4	5	8 24 31.79	0.19	20 7 52.4	0.78	7 29.8
6	8 28 4.70	0.77	N.19 56 36.4	2.67	9 31.1	6	8 24 36.83	0.23	N.20 7 32.3	0.89	7 25.9
7	8 27 46.60	0.74	19 57 39.1	2.56	9 26.9	7	8 24 42.64	0.26	20 7 9.5	1.01	7 22.1
8	8 27 29.21	0.71	19 58 39.1	2.45	9 22.7	8	8 24 49.23	0.29	20 6 44.0	1.12	7 18.3
9	8 27 12.53	0.68	19 59 36.3	2.34	9 18.5	9	8 24 56.58	0.32	20 6 15.9	1.23	7 14.5
10	8 26 56.58	0.65	20 0 30.8	2.22	9 14.3	10	8 25 4.69	0.35	20 5 45.1	1.34	7 10.7
11	8 26 41.37	0.62	N.20 1 22.5	2.10	9 10.1	11	8 25 13.55	0.39	N.20 5 11.7	1.45	7 6.9
12	8 26 26.90	0.59	20 2 11.4	1.98	9 6.0	12	8 25 23.16	0.42	20 4 35.7	1.56	7 3.1
13	8 26 13.17	0.56	20 2 57.6	1.87	9 1.8	13	8 25 33.52	0.45	20 3 57.1	1.66	6 59.4
14	8 26 0.19	0.53	20 3 41.0	1.75	8 57.7	14	8 25 44.62	0.48	20 3 15.9	1.77	6 55.6
15	8 25 47.97	0.49	20 4 21.6	1.64	8 53.5	15	8 25 56.44	0.51	20 2 32.1	1.87	6 51.9
16	8 25 36.52	0.46	N.20 4 59.4	1.52	8 49.4	16	8 26 8.99	0.54	N.20 1 45.8	1.98	6 48.2
17	8 25 25.83	0.43	20 5 34.4	1.40	8 45.3	17	8 26 22.26	0.57	20 0 57.0	2.09	6 44.5
18	8 25 15.91	0.40	20 6 6.6	1.29	8 41.2	18	8 26 36.24	0.60	20 0 5.6	2.19	6 40.8
19	8 25 6.77	0.37	20 6 36.0	1.17	8 37.1	19	8 26 50.93	0.63	19 59 11.7	2.30	6 37.1
20	8 24 58.41	0.33	20 7 2.6	1.06	8 33.1	20	8 27 6.32	0.66	19 58 15.2	2.40	6 33.4
21	8 24 50.83	0.30	N.20 7 26.5	0.94	8 29.0	21	8 27 22.40	0.68	N.19 57 16.2	2.51	6 29.8
22	8 24 44.03	0.27	20 7 47.6	0.82	8 25.0	22	8 27 39.17	0.71	19 56 14.8	2.61	6 26.1
23	8 24 38.02	0.23	20 8 5.9	0.70	8 20.9	23	8 27 56.63	0.74	19 55 10.9	2.72	6 22.5
24	8 24 32.79	0.20	20 8 21.4	0.59	8 16.9	24	8 28 14.76	0.77	19 54 4.5	2.82	6 18.9
25	8 24 28.35	0.17	20 8 34.2	0.47	8 12.9	25	8 28 33.57	0.80	19 52 55.7	2.92	6 15.2
26	8 24 24.70	0.14	N.20 8 44.2	0.36	8 8.9	26	8 28 53.04	0.83	N.19 51 44.4	3.02	6 11.6
27	8 24 21.84	0.10	20 8 51.4	0.24	8 5.0	27	8 29 13.17	0.85	19 50 30.7	3.12	6 8.0
28	8 24 19.78	0.07	20 8 55.8	0.12	8 1.0	28	8 29 33.96	0.88	19 49 14.6	3.22	6 4.4
29	8 24 18.51	0.04	20 8 57.5	0.01	7 57.0	29	8 29 55.39	0.91	19 47 56.0	3.32	6 0.9
30	8 24 18.03	0.00	20 8 56.4	0.11	7 53.1	30	8 30 17.46	0.93	19 46 35.0	3.42	5 57.3
31	8 24 18.35	0.03	N.20 8 52.6	0.22	7 49.2	31	8 30 40.17	0.96	N.19 45 11.6	3.52	5 53.7
32	8 24 19.46	0.06	N.20 8 46.0	0.33	7 45.3						

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	20.35	20.13	19.88	19.62	19.36	19.07	Semidiameter.	18.73	18.44	18.16	17.88	17.61	17.35
Hor. Parallax.	1.97	1.94	1.92	1.89	1.87	1.84	Hor. Parallax.	1.81	1.78	1.75	1.73	1.70	1.67



GREENWICH MEAN TIME.

MAY.						JUNE.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	8 30 40.17	0.96	N. 19 45 11.6	3.52	5 53.7	1	8 46 54.49	1.61	N. 18 43 29.0	6.36	4 8.1
2	8 31 3.50	0.99	19 43 45.9	3.62	5 50.2	2	8 47 33.33	1.63	18 40 55.5	6.44	4 4.8
3	8 31 27.45	1.01	19 42 17.8	3.72	5 46.7	3	8 48 12.55	1.64	18 38 20.0	6.52	4 1.5
4	8 31 52.01	1.04	19 40 47.3	3.82	5 43.2	4	8 48 52.15	1.66	18 35 42.5	6.60	3 58.2
5	8 32 17.17	1.06	19 39 14.5	3.92	5 39.7	5	8 49 32.12	1.67	18 33 3.1	6.68	3 55.0
6	8 32 42.92	1.09	N. 19 37 39.4	4.01	5 36.2	6	8 50 12.44	1.69	N. 18 30 21.7	6.77	3 51.7
7	8 33 9.26	1.11	19 36 1.9	4.11	5 32.7	7	8 50 53.11	1.70	18 27 38.4	6.85	3 48.5
8	8 33 36.17	1.13	19 34 22.1	4.21	5 29.2	8	8 51 34.13	1.72	18 24 53.1	6.93	3 45.2
9	8 34 3.65	1.16	19 32 40.1	4.30	5 25.7	9	8 52 15.49	1.73	18 22 5.9	7.01	3 42.0
10	8 34 31.69	1.18	19 30 55.8	4.40	5 22.2	10	8 52 57.18	1.74	18 19 16.8	7.09	3 38.7
11	8 35 0.28	1.20	N. 19 29 9.2	4.49	5 18.8	11	8 53 39.19	1.76	N. 18 16 25.9	7.17	3 35.5
12	8 35 29.41	1.23	19 27 20.4	4.59	5 15.3	12	8 54 21.51	1.77	18 13 33.1	7.25	3 32.2
13	8 35 59.07	1.25	19 25 29.3	4.68	5 11.9	13	8 55 4.15	1.78	18 10 38.5	7.32	3 29.0
14	8 36 29.26	1.27	19 23 36.0	4.77	5 8.5	14	8 55 47.09	1.80	18 7 42.0	7.40	3 25.8
15	8 36 59.97	1.29	19 21 40.5	4.86	5 5.0	15	8 56 30.32	1.81	18 4 43.7	7.47	3 22.6
16	8 37 31.19	1.31	N. 19 19 42.8	4.95	5 1.6	16	8 57 13.85	1.82	N. 18 1 43.6	7.55	3 19.4
17	8 38 2.91	1.33	19 17 42.9	5.04	4 58.2	17	8 57 57.66	1.83	17 58 41.6	7.63	3 16.2
18	8 38 35.13	1.35	19 15 40.8	5.13	4 54.8	18	8 58 41.77	1.84	17 55 37.8	7.70	3 13.0
19	8 39 7.84	1.37	19 13 36.6	5.22	4 51.4	19	8 59 26.15	1.86	17 52 32.3	7.77	3 9.8
20	8 39 41.03	1.39	19 11 30.2	5.31	4 48.1	20	9 0 10.78	1.87	17 49 25.0	7.84	3 6.6
21	8 40 14.70	1.41	N. 19 9 21.7	5.40	4 44.7	21	9 0 55.67	1.88	N. 17 46 16.0	7.92	3 3.4
22	8 40 48.83	1.43	19 7 11.0	5.49	4 41.3	22	9 1 40.84	1.89	17 43 5.2	7.99	3 0.2
23	8 41 23.43	1.45	19 4 58.2	5.58	4 38.0	23	9 2 26.26	1.90	17 39 52.7	8.06	2 57.0
24	8 41 58.48	1.47	19 2 43.3	5.67	4 34.6	24	9 3 11.93	1.91	17 36 38.5	8.13	2 53.9
25	8 42 33.98	1.49	19 0 26.3	5.76	4 31.3	25	9 3 57.84	1.92	17 33 22.6	8.20	2 50.7
26	8 43 9.93	1.51	N. 18 58 7.1	5.84	4 27.9	26	9 4 43.99	1.93	N. 17 30 5.0	8.27	2 47.5
27	8 43 46.31	1.52	18 55 45.9	5.93	4 24.6	27	9 5 30.36	1.94	17 26 45.7	8.34	2 44.4
28	8 44 23.12	1.54	18 53 22.6	6.01	4 21.3	28	9 6 16.96	1.95	17 23 24.8	8.41	2 41.2
29	8 45 0.35	1.56	18 50 57.3	6.10	4 18.0	29	9 7 3.78	1.96	17 20 2.2	8.48	2 38.1
30	8 45 37.99	1.58	18 48 29.9	6.19	4 14.7	30	9 7 50.81	1.96	17 16 38.0	8.54	2 34.9
31	8 46 16.04	1.59	N. 18 46 0.5	6.27	4 11.4	31	9 8 38.04	1.97	N. 17 13 12.3	8.61	2 31.8
32	8 46 54.49	1.61	N. 18 43 29.0	6.36	4 8.1						

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	17.08	16.83	16.58	16.36	16.14	15.94	Semidiameter.	15.71	15.53	15.37	15.21	15.07	14.94
Hor. Parallax.	1.65	1.63	1.60	1.58	1.56	1.54	Hor. Parallax.	1.52	1.50	1.48	1.47	1.46	1.44

GREENWICH MEAN TIME.

JULY.						AUGUST.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.		
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	9 8 38.04	1.97	N. 17 13 12.3	8.61	2 31.8	1	9 34 13.77	2.12	N. 15 15 21.4	10.27	0 55.3
2	9 9 25.47	1.98	17 9 45.0	8.68	2 28.6	2	9 35 4.76	2.13	15 11 14.4	10.31	0 52.3
3	9 10 13.09	1.99	17 6 16.0	8.74	2 25.5	3	9 35 55.78	2.13	15 7 6.5	10.35	0 49.2
4	9 11 0.90	2.00	17 2 45.5	8.80	2 22.3	4	9 36 46.84	2.13	15 2 57.6	10.39	0 46.1
5	9 11 48.89	2.00	16 59 13.5	8.86	2 19.2	5	9 37 37.92	2.13	14 58 47.9	10.43	0 43.0
6	9 12 37.05	2.01	N. 16 55 40.0	8.93	2 16.1	6	9 38 29.02	2.13	N. 14 54 37.3	10.46	0 39.9
7	9 13 25.38	2.02	16 52 5.0	8.99	2 12.9	7	9 39 20.14	2.13	14 50 25.9	10.50	0 36.8
8	9 14 13.87	2.02	16 48 28.5	9.05	2 9.8	8	9 40 11.27	2.13	14 46 13.7	10.53	0 33.8
9	9 15 2.51	2.03	16 44 50.6	9.11	2 6.7	9	9 41 2.40	2.13	14 42 0.7	10.56	0 30.7
10	9 15 51.31	2.04	16 41 11.3	9.17	2 3.6	10	9 41 53.54	2.13	14 37 47.0	10.59	0 27.6
11	9 16 40.25	2.04	N. 16 37 30.6	9.23	2 0.4	11	9 42 44.68	2.13	N. 14 33 32.5	10.62	0 24.5
12	9 17 29.33	2.05	16 33 48.5	9.29	1 57.3	12	9 43 35.82	2.13	14 29 17.3	10.65	0 21.4
13	9 18 18.55	2.05	16 30 5.0	9.34	1 54.2	13	9 44 26.95	2.13	14 25 1.4	10.68	0 18.3
14	9 19 7.91	2.06	16 26 20.2	9.40	1 51.1	14	9 45 18.07	2.13	14 20 44.9	10.70	0 15.3
15	9 19 57.39	2.06	16 22 34.0	9.45	1 48.0	15	9 46 9.17	2.13	14 16 27.7	10.73	0 12.2
16	9 20 46.99	2.07	N. 16 18 46.5	9.51	1 44.9	16	9 47 0.26	2.13	N. 14 12 9.9	10.76	0 9.1
17	9 21 36.71	2.07	16 14 57.7	9.57	1 41.8	17	9 47 51.33	2.13	14 7 51.5	10.78	0 6.0
18	9 22 26.55	2.08	16 11 7.7	9.62	1 38.7	18	9 48 42.37	2.13	14 3 32.5	10.80	0 2.9
19	9 23 16.50	2.08	16 7 16.3	9.67	1 35.6	19	9 49 33.38	2.13	13 59 12.9	10.82	23 56.7
20	9 24 6.56	2.09	16 3 23.6	9.72	1 32.5	20	9 50 24.36	2.12	13 54 52.9	10.84	23 53.6
21	9 24 56.72	2.09	N. 15 59 29.7	9.77	1 29.4	21	9 51 15.30	2.12	N. 13 50 32.4	10.86	23 50.5
22	9 25 46.97	2.10	15 55 34.6	9.82	1 26.3	22	9 52 6.19	2.12	13 46 11.4	10.88	23 47.5
23	9 26 37.32	2.10	15 51 38.2	9.87	1 23.2	23	9 52 57.04	2.12	13 41 50.0	10.90	23 44.4
24	9 27 27.76	2.10	15 47 40.7	9.92	1 20.1	24	9 53 47.84	2.12	13 37 28.2	10.92	23 41.3
25	9 28 18.28	2.11	15 43 42.1	9.97	1 17.0	25	9 54 38.58	2.11	13 33 6.1	10.93	23 38.2
26	9 29 8.87	2.11	N. 15 39 42.4	10.02	1 13.9	26	9 55 29.25	2.11	N. 13 28 43.6	10.95	23 35.1
27	9 29 59.54	2.11	15 35 41.5	10.06	1 10.8	27	9 56 19.85	2.11	13 24 20.8	10.96	23 32.0
28	9 30 50.27	2.12	15 31 39.5	10.11	1 7.7	28	9 57 10.38	2.10	13 19 57.7	10.97	23 28.9
29	9 31 41.07	2.12	15 27 36.5	10.15	1 4.6	29	9 58 0.83	2.10	13 15 34.4	10.98	23 25.8
30	9 32 31.92	2.12	15 23 32.5	10.19	1 1.5	30	9 58 51.20	2.10	13 11 10.8	10.98	23 22.7
31	9 33 22.82	2.12	N. 15 19 27.4	10.23	0 58.4	31	9 59 41.48	2.09	N. 13 6 47.1	10.99	23 19.6
32	9 34 13.77	2.12	N. 15 15 21.4	10.27	0 55.3	32	10 0 31.67	2.09	N. 13 2 23.3	10.99	23 16.5

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	14.82	14.72	14.62	14.53	14.47	14.41	Semidiameter.	14.35	14.31	14.29	14.29	14.30	14.32
Hor. Parallax.	1.43	1.42	1.41	1.40	1.40	1.39	Hor. Parallax.	1.39	1.38	1.38	1.38	1.38	1.38



GREENWICH MEAN TIME.

SEPTEMBER.						OCTOBER.							
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.		
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.		Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m		
1	10 0 31'67	2'09	N.13 2 23'3	10'99	23 16'5	1	10 24 32'95	1'89	N.10 52 9'4	10'48	21 42'4		
2	10 1 21'76	2'09	12 57 59'4	11'00	23 13'4	2	10 25 18'07	1'88	10 47 58'2	10'44	21 39'2		
3	10 2 11'75	2'08	12 53 35'4	11'00	23 10'3	3	10 26 2'95	1'87	10 43 48'1	10'40	21 36'0		
4	10 3 1'63	2'08	12 49 11'4	11'00	23 7'2	4	10 26 47'58	1'86	10 39 39'1	10'35	21 32'8		
5	10 3 51'40	2'07	12 44 47'4	11'00	23 4'1	5	10 27 31'95	1'84	10 35 31'2	10'31	21 29'6		
6	10 4 41'06	2'07	N.12 40 23'4	11'00	23 1'0	6	10 28 16'07	1'83	N.10 31 24'4	10'26	21 26'4		
7	10 5 30'60	2'06	12 35 59'5	11'00	22 57'9	7	10 28 59'93	1'82	10 27 18'8	10'21	21 23'2		
8	10 6 20'01	2'06	12 31 35'7	11'00	22 54'8	8	10 29 43'52	1'81	10 23 14'4	10'16	21 20'0		
9	10 7 9'30	2'05	12 27 12'0	10'99	22 51'6	9	10 30 26'84	1'80	10 19 11'3	10'11	21 16'8		
10	10 7 58'46	2'05	12 22 48'4	10'98	22 48'5	10	10 31 9'89	1'79	10 15 9'5	10'05	21 13'6		
11	10 8 47'48	2'04	N.12 18 25'0	10'97	22 45'4	11	10 31 52'66	1'78	N.10 11 9'1	9'99	21 10'3		
12	10 9 36'37	2'03	12 14 1'8	10'96	22 42'3	12	10 32 35'15	1'76	10 7 10'0	9'93	21 7'1		
13	10 10 25'11	2'03	12 9 38'9	10'95	22 39'2	13	10 33 17'35	1'75	10 3 12'4	9'87	21 3'9		
14	10 11 13'71	2'02	12 5 16'3	10'94	22 36'0	14	10 33 59'25	1'74	9 59 16'2	9'81	21 0'6		
15	10 12 2'16	2'02	12 0 53'9	10'92	22 32'9	15	10 34 40'84	1'73	9 55 21'5	9'74	20 57'4		
16	10 12 50'46	2'01	N.11 56 31'9	10'91	22 29'8	16	10 35 22'13	1'71	N. 9 51 28'4	9'68	20 54'1		
17	10 13 38'60	2'00	11 52 10'3	10'89	22 26'6	17	10 36 3'11	1'70	9 47 36'9	9'61	20 50'9		
18	10 14 26'58	2'00	11 47 49'1	10'87	22 23'5	18	10 36 43'77	1'69	9 43 47'0	9'54	20 47'6		
19	10 15 14'39	1'99	11 43 28'3	10'85	22 20'3	19	10 37 24'10	1'67	9 39 58'8	9'47	20 44'4		
20	10 16 2'02	1'98	11 39 8'0	10'83	22 17'2	20	10 38 4'10	1'66	9 36 12'4	9'39	20 41'1		
21	10 16 49'47	1'97	N.11 34 48'3	10'81	22 14'1	21	10 38 43'76	1'65	N. 9 32 27'7	9'32	20 37'8		
22	10 17 36'74	1'97	11 30 29'2	10'79	22 10'9	22	10 39 23'08	1'63	9 28 44'9	9'24	20 34'5		
23	10 18 23'82	1'96	11 26 10'6	10'76	22 7'8	23	10 40 2'05	1'62	9 25 4'0	9'16	20 31'2		
24	10 19 10'70	1'95	11 21 52'7	10'73	22 4'6	24	10 40 40'66	1'60	9 21 25'0	9'08	20 27'9		
25	10 19 57'38	1'94	11 17 35'5	10'70	22 1'4	25	10 41 18'90	1'59	9 17 48'0	8'99	20 24'6		
26	10 20 43'86	1'93	N.11 13 19'1	10'67	21 58'3	26	10 41 56'77	1'57	N. 9 14 13'1	8'91	20 21'3		
27	10 21 30'12	1'92	11 9 3'4	10'63	21 55'1	27	10 42 34'27	1'55	9 10 40'3	8'82	20 18'0		
28	10 22 16'17	1'91	11 4 48'6	10'60	21 51'9	28	10 43 11'38	1'54	9 7 9'6	8'73	20 14'7		
29	10 23 1'99	1'91	11 0 34'6	10'56	21 48'8	29	10 43 48'10	1'52	9 3 41'1	8'64	20 11'3		
30	10 23 47'59	1'90	10 56 21'5	10'52	21 45'6	30	10 44 24'43	1'51	9 0 14'9	8'54	20 8'0		
31	10 24 32'95	1'89	N.10 52 9'4	10'48	21 42'4	31	10 45 0'35	1'49	N. 8 56 50'9	8'45	20 4'7		
						32	10 45 35'87	1'47	N. 8 53 29'3	8'35	20 1'3		
Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	14'35	14'38	14'43	14'49	14'57	14'66	Semidiameter.	14'76	14'87	14'99	15'13	15'28	15'43
Hor. Parallax.	1'39	1'39	1'39	1'40	1'41	1'42	Hor. Parallax.	1'43	1'44	1'45	1'46	1'48	1'49

GREENWICH MEAN TIME.

NOVEMBER.						DECEMBER.								
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.			
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.				
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m			
1	10 45 35'87	1'47	N. 8 53 29'3	8'35	20 1'3	1	10 59 41'76	0'84	N. 7 34 34'7	4'50	18 17'2			
2	10 46 10'97	1'46	8 50 10'0	8'25	19 58'0	2	11 0 1'54	0'81	7 32 48'7	4'34	18 13'6			
3	10 46 45'65	1'44	8 46 53'2	8'15	19 54'6	3	11 0 20'72	0'79	7 31 6'5	4'18	18 10'0			
4	10 47 19'91	1'42	8 43 38'8	8'04	19 51'2	4	11 0 39'28	0'76	7 29 28'1	4'02	18 6'3			
5	10 47 53'74	1'40	8 40 26'9	7'94	19 47'8	5	11 0 57'23	0'74	7 27 53'6	3'86	18 2'7			
6	10 48 27'14	1'38	N. 8 37 17'6	7'83	19 44'5	6	11 1 14'55	0'71	N. 7 26 23'0	3'69	17 59'0			
7	10 49 0'10	1'36	8 34 10'9	7'72	19 41'1	7	11 1 31'24	0'68	7 24 56'4	3'53	17 55'4			
8	10 49 32'61	1'35	8 31 6'8	7'61	19 37'7	8	11 1 47'30	0'66	7 23 33'7	3'36	17 51'7			
9	10 50 4'67	1'33	8 28 5'4	7'50	19 34'3	9	11 2 2'72	0'63	7 22 15'1	3'19	17 48'0			
10	10 50 36'27	1'31	8 25 6'8	7'38	19 30'8	10	11 2 17'49	0'60	7 21 0'6	3'02	17 44'3			
11	10 51 7'41	1'29	N. 8 22 10'9	7'27	19 27'4	11	11 2 31'61	0'57	N. 7 19 50'2	2'85	17 40'6			
12	10 51 38'07	1'27	8 19 17'9	7'15	19 24'0	12	11 2 45'08	0'55	7 18 43'9	2'68	17 36'9			
13	10 52 8'26	1'25	8 16 27'7	7'03	19 20'6	13	11 2 57'88	0'52	7 17 41'7	2'50	17 33'2			
14	10 52 37'96	1'23	8 13 40'5	6'90	19 17'1	14	11 3 10'01	0'49	7 16 43'8	2'33	17 29'4			
15	10 53 7'16	1'21	8 10 56'2	6'78	19 13'7	15	11 3 21'47	0'46	7 15 50'1	2'15	17 25'7			
16	10 53 35'87	1'19	N. 8 8 15'0	6'65	19 10'2	16	11 3 32'25	0'44	N. 7 15 0'7	1'97	17 21'9			
17	10 54 4'07	1'16	8 5 36'9	6'52	19 6'7	17	11 3 42'35	0'41	7 14 15'5	1'79	17 18'1			
18	10 54 31'76	1'14	8 3 1'9	6'39	19 3'2	18	11 3 51'75	0'38	7 13 34'7	1'61	17 14'4			
19	10 54 58'92	1'12	8 0 30'1	6'25	18 59'7	19	11 4 0'46	0'35	7 12 58'3	1'43	17 10'6			
20	10 55 25'56	1'10	7 58 1'5	6'12	18 56'2	20	11 4 8'48	0'32	7 12 26'2	1'25	17 6'8			
21	10 55 51'66	1'08	N. 7 55 36'2	5'98	18 52'7	21	11 4 15'79	0'29	N. 7 11 58'5	1'06	17 2'9			
22	10 56 17'22	1'05	7 53 14'2	5'84	18 49'2	22	11 4 22'39	0'26	7 11 35'3	0'88	16 59'1			
23	10 56 42'23	1'03	7 50 55'6	5'70	18 45'7	23	11 4 28'28	0'23	7 11 16'5	0'70	16 55'3			
24	10 57 6'69	1'01	7 48 40'5	5'55	18 42'2	24	11 4 33'46	0'20	7 11 2'2	0'51	16 51'4			
25	10 57 30'58	0'98	7 46 28'8	5'41	18 38'6	25	11 4 37'93	0'17	7 10 52'4	0'32	16 47'5			
26	10 57 53'90	0'96	N. 7 44 20'7	5'26	18 35'1	26	11 4 41'68	0'14	N. 7 10 47'1	0'13	16 43'7			
27	10 58 16'64	0'94	7 42 16'2	5'11	18 31'5	27	11 4 44'71	0'11	7 10 46'3	0'06	16 39'8			
28	10 58 38'81	0'91	7 40 15'3	4'96	18 27'9	28	11 4 47'02	0'08	7 10 50'0	0'25	16 35'9			
29	10 59 0'39	0'89	7 38 18'0	4'80	18 24'4	29	11 4 48'62	0'05	7 10 58'2	0'44	16 31'9			
30	10 59 21'37	0'86	7 36 24'5	4'65	18 20'8	30	11 4 49'49	0'02	7 11 10'9	0'62	16 28'0			
31	10 59 41'76	0'84	N. 7 34 34'7	4'50	18 17'2	31	11 4 49'64	0'01	N. 7 11 28'0	0'81	16 24'1			
						32	11 4 49'07	0'04	N. 7 11 49'7	1'00	16 20'1			
Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	31st.
Semidiameter.	15'65	15'84	16'04	16'26	16'48	16'71	Semidiameter.	16'96	17'22	17'47	17'73	18'02	18'29	18'57
Hor. Parallax.	1'51	1'53	1'55	1'57	1'59	1'61	Hor. Parallax.	1'64	1'66	1'69	1'71	1'74	1'77	1'79



GREENWICH MEAN TIME.

JANUARY.						FEBRUARY.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	23 33 43.79	0.57	S. 5 13 40.7	4.18	4 54.0	1	23 43 11.66	0.93	S. 4 7 34.1	6.31	3 1.5
2	23 33 57.71	0.59	5 11 59.4	4.26	4 50.3	2	23 43 34.02	0.94	4 5 2.1	6.36	2 58.0
3	23 34 11.95	0.60	5 10 16.1	4.35	4 46.6	3	23 43 56.60	0.95	4 2 28.9	6.41	2 54.4
4	23 34 26.52	0.61	5 8 30.8	4.43	4 42.9	4	23 44 19.37	0.95	3 59 54.5	6.46	2 50.9
5	23 34 41.42	0.63	5 6 43.6	4.51	4 39.2	5	23 44 42.34	0.96	3 57 19.0	6.50	2 47.3
6	23 34 56.64	0.64	S. 5 4 54.3	4.59	4 35.5	6	23 45 5.51	0.97	S. 3 54 42.3	6.55	2 43.8
7	23 35 12.17	0.65	5 3 3.1	4.67	4 31.9	7	23 45 28.87	0.98	3 52 4.6	6.60	2 40.2
8	23 35 28.02	0.67	5 1 10.0	4.75	4 28.2	8	23 45 52.40	0.99	3 49 25.9	6.64	2 36.7
9	23 35 44.18	0.68	4 59 15.0	4.83	4 24.5	9	23 46 16.11	0.99	3 46 46.1	6.68	2 33.1
10	23 36 0.64	0.69	4 57 18.2	4.91	4 20.9	10	23 46 40.01	1.00	3 44 5.3	6.72	2 29.6
11	23 36 17.40	0.70	S. 4 55 19.5	4.98	4 17.2	11	23 47 4.08	1.01	S. 3 41 23.6	6.76	2 26.1
12	23 36 34.46	0.72	4 53 19.1	5.06	4 13.6	12	23 47 28.31	1.01	3 38 41.0	6.80	2 22.5
13	23 36 51.81	0.73	4 51 16.9	5.13	4 9.9	13	23 47 52.70	1.02	3 35 57.5	6.84	2 19.0
14	23 37 9.45	0.74	4 49 12.9	5.20	4 6.3	14	23 48 17.24	1.03	3 33 13.0	6.88	2 15.5
15	23 37 27.37	0.75	4 47 7.3	5.27	4 2.7	15	23 48 41.94	1.03	3 30 27.7	6.91	2 12.0
16	23 37 45.57	0.77	S. 4 45 0.0	5.34	3 59.0	16	23 49 6.79	1.04	S. 3 27 41.7	6.94	2 8.4
17	23 38 4.04	0.78	4 42 50.9	5.41	3 55.4	17	23 49 31.78	1.04	3 24 54.9	6.97	2 4.9
18	23 38 22.79	0.79	4 40 40.2	5.48	3 51.8	18	23 49 56.92	1.05	3 22 7.3	7.00	2 1.4
19	23 38 41.80	0.80	4 38 27.9	5.55	3 48.1	19	23 50 22.20	1.06	3 19 19.0	7.03	1 57.9
20	23 39 1.08	0.81	4 36 14.1	5.61	3 44.5	20	23 50 47.61	1.06	3 16 30.0	7.06	1 54.4
21	23 39 20.62	0.82	S. 4 33 58.7	5.67	3 40.9	21	23 51 13.15	1.07	S. 3 13 40.3	7.09	1 50.9
22	23 39 40.42	0.83	4 31 41.7	5.74	3 37.3	22	23 51 38.81	1.07	3 10 49.9	7.12	1 47.4
23	23 40 0.47	0.84	4 29 23.3	5.80	3 33.7	23	23 52 4.59	1.08	3 7 58.9	7.15	1 43.9
24	23 40 20.77	0.85	4 27 3.4	5.86	3 30.1	24	23 52 30.48	1.08	3 5 7.4	7.17	1 40.4
25	23 40 41.31	0.86	4 24 42.1	5.92	3 26.5	25	23 52 56.49	1.09	3 2 15.3	7.19	1 36.9
26	23 41 2.10	0.87	S. 4 22 19.3	5.98	3 22.9	26	23 53 22.61	1.09	S. 2 59 22.7	7.21	1 33.4
27	23 41 23.12	0.88	4 19 55.1	6.04	3 19.4	27	23 53 48.84	1.10	2 56 29.5	7.23	1 29.9
28	23 41 44.38	0.89	4 17 29.5	6.10	3 15.8	28	23 54 15.17	1.10	2 53 35.8	7.25	1 26.4
29	23 42 5.87	0.90	4 15 2.6	6.16	3 12.2	29	23 54 41.60	1.10	2 50 41.7	7.27	1 22.9
30	23 42 27.58	0.91	4 12 34.4	6.21	3 8.7	30	23 55 8.12	1.11	S. 2 47 47.2	7.28	1 19.4
31	23 42 49.51	0.92	S. 4 10 4.9	6.26	3 5.1						
32	23 43 11.66	0.93	S. 4 7 34.1	6.31	3 1.5						

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	7.85	7.78	7.72	7.66	7.61	7.57	Semidiameter.	7.52	7.48	7.43	7.41	7.39	7.36
Hor. Parallax.	0.90	0.89	0.89	0.88	0.87	0.87	Hor. Parallax.	0.86	0.86	0.85	0.85	0.84	0.84

GREENWICH MEAN TIME.

MARCH.						APRIL.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	23 55 8.12	1.11	S. 2 47 47.2	7.28	1 19.4	1	0 9 12.13	1.14	S. 1 16 44.7	7.22	23 28.0
2	23 55 34.73	1.11	2 44 52.2	7.30	1 15.9	2	0 9 39.36	1.13	1 13 51.6	7.20	23 24.5
3	23 56 1.41	1.11	2 41 56.9	7.32	1 12.5	3	0 10 6.54	1.13	1 10 59.0	7.18	23 21.0
4	23 56 28.17	1.12	2 39 1.3	7.33	1 9.0	4	0 10 33.67	1.13	1 8 7.0	7.16	23 17.6
5	23 56 55.01	1.12	2 36 5.3	7.34	1 5.5	5	0 11 0.75	1.13	1 5 15.5	7.13	23 14.1
6	23 57 21.92	1.12	S. 2 33 9.1	7.35	1 2.0	6	0 11 27.77	1.13	S. 1 2 24.6	7.11	23 10.6
7	23 57 48.89	1.13	2 30 12.7	7.35	0 58.6	7	0 11 54.73	1.12	0 59 34.3	7.09	23 7.1
8	23 58 15.92	1.13	2 27 16.1	7.36	0 55.1	8	0 12 21.62	1.12	0 56 44.7	7.06	23 3.6
9	23 58 43.01	1.13	2 24 19.2	7.36	0 51.6	9	0 12 48.45	1.12	0 53 55.7	7.03	23 0.1
10	23 59 10.15	1.13	2 21 22.2	7.37	0 48.1	10	0 13 15.20	1.11	0 51 7.4	7.00	22 56.6
11	23 59 37.33	1.13	S. 2 18 25.1	7.38	0 44.6	11	0 13 41.87	1.11	S. 0 48 19.8	6.97	22 53.2
12	0 0 4.56	1.14	2 15 27.9	7.38	0 41.1	12	0 14 8.46	1.11	0 45 32.9	6.94	22 49.7
13	0 0 31.83	1.14	2 12 30.6	7.38	0 37.6	13	0 14 34.96	1.10	0 42 46.8	6.91	22 46.2
14	0 0 59.13	1.14	2 9 33.3	7.39	0 34.1	14	0 15 1.37	1.10	0 40 1.5	6.88	22 42.7
15	0 1 26.46	1.14	2 6 36.0	7.39	0 30.7	15	0 15 27.70	1.10	0 37 17.0	6.84	22 39.2
16	0 1 53.82	1.14	S. 2 3 38.7	7.39	0 27.2	16	0 15 53.93	1.09	S. 0 34 33.4	6.81	22 35.7
17	0 2 21.20	1.14	2 0 41.4	7.38	0 23.7	17	0 16 20.05	1.09	0 31 50.6	6.77	22 32.2
18	0 2 48.60	1.14	1 57 44.2	7.38	0 20.2	18	0 16 46.07	1.08	0 29 8.7	6.73	22 28.7
19	0 3 16.01	1.14	1 54 47.1	7.37	0 16.7	19	0 17 12.00	1.08	0 26 27.6	6.69	22 25.2
20	0 3 43.44	1.14	1 51 50.1	7.37	0 13.3	20	0 17 37.82	1.07	0 23 47.5	6.65	22 21.7
21	0 4 10.88	1.14	S. 1 48 53.3	7.36	0 9.8	21	0 18 3.52	1.07	S. 0 21 8.4	6.61	22 18.2
22	0 4 38.33	1.14	1 45 56.6	7.35	0 6.3	22	0 18 29.10	1.06	0 18 30.2	6.57	22 14.7
23	0 5 5.77	1.14	1 43 0.1	7.35	0 2.8	23	0 18 54.57	1.06	0 15 53.0	6.53	22 11.1
24	0 5 33.21	1.14	1 40 3.8	7.34	23 55.8	24	0 19 19.91	1.05	0 13 16.8	6.49	22 7.6
25	0 6 0.64	1.14	1 37 7.8	7.33	23 52.4	25	0 19 45.12	1.05	0 10 41.7	6.44	22 4.1
26	0 6 28.07	1.14	S. 1 34 12.0	7.32	23 48.9	26	0 20 10.19	1.04	S. 0 8 7.7	6.40	22 0.6
27	0 6 55.48	1.14	1 31 16.6	7.31	23 45.4	27	0 20 35.13	1.04	0 5 34.7	6.35	21 57.1
28	0 7 22.86	1.14	1 28 21.5	7.30	23 41.9	28	0 20 59.93	1.03	0 3 2.9	6.30	21 53.5
29	0 7 50.22	1.14	1 25 26.7	7.28	23 38.4	29	0 21 24.58	1.02	S. 0 0 32.2	6.25	21 50.0
30	0 8 17.56	1.14	1 22 32.3	7.26	23 34.9	30	0 21 49.09	1.02	N. 0 1 57.3	6.20	21 46.5
31	0 8 44.86	1.14	S. 1 19 38.3	7.24	23 31.5	31	0 22 13.44	1.01	N. 0 4 25.6	6.15	21 42.9
32	0 9 12.13	1.14	S. 1 16 44.7	7.22	23 28.0						

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	7.35	7.33	7.32	7.31	7.31	7.31	Semidiameter.	7.32	7.34	7.35	7.37	7.40	7.43
Hor. Parallax.	0.84	0.84	0.84	0.84	0.84	0.84	Hor. Parallax.	0.84	0.84	0.84	0.84	0.85	0.85



GREENWICH MEAN TIME.

MAY.						JUNE.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	0 22 13.44	1.01	N. 0 4 25.6	6.15	21 42.9	1	0 33 12.03	0.74	N. 1 8 59.5	4.13	19 51.9
2	0 22 37.63	1.01	0 6 52.6	6.10	21 39.4	2	0 33 29.54	0.72	1 10 37.4	4.05	19 48.2
3	0 23 1.66	1.00	0 9 18.4	6.05	21 35.9	3	0 33 46.77	0.71	1 12 13.3	3.97	19 44.6
4	0 23 25.53	0.99	0 11 42.9	6.00	21 32.4	4	0 34 3.72	0.70	1 13 47.3	3.88	19 41.0
5	0 23 49.23	0.98	0 14 6.1	5.94	21 28.8	5	0 34 20.40	0.69	1 15 19.3	3.80	19 37.3
6	0 24 12.75	0.98	N. 0 16 28.0	5.89	21 25.3	6	0 34 36.79	0.68	N. 1 16 49.3	3.72	19 33.7
7	0 24 36.09	0.97	0 18 48.5	5.83	21 21.7	7	0 34 52.89	0.67	1 18 17.3	3.64	19 30.0
8	0 24 59.25	0.96	0 21 7.6	5.77	21 18.2	8	0 35 8.70	0.65	1 19 43.3	3.55	19 26.3
9	0 25 22.23	0.95	0 23 25.4	5.71	21 14.6	9	0 35 24.23	0.64	1 21 7.4	3.46	19 22.6
10	0 25 45.02	0.95	0 25 41.7	5.65	21 11.1	10	0 35 39.46	0.63	1 22 29.4	3.38	19 18.9
11	0 26 7.62	0.94	N. 0 27 56.6	5.59	21 7.5	11	0 35 54.39	0.62	N. 1 23 49.3	3.30	19 15.2
12	0 26 30.03	0.93	0 30 9.9	5.53	21 4.0	12	0 36 9.02	0.60	1 25 7.1	3.21	19 11.5
13	0 26 52.24	0.92	0 32 21.8	5.47	21 0.4	13	0 36 23.35	0.59	1 26 22.9	3.12	19 7.8
14	0 27 14.25	0.91	0 34 32.2	5.41	20 56.9	14	0 36 37.38	0.58	1 27 36.6	3.03	19 4.1
15	0 27 36.05	0.90	0 36 41.1	5.34	20 53.3	15	0 36 51.09	0.57	1 28 48.1	2.94	19 0.4
16	0 27 57.65	0.90	N. 0 38 48.5	5.28	20 49.7	16	0 37 4.49	0.55	N. 1 29 57.5	2.85	18 56.7
17	0 28 19.04	0.89	0 40 54.3	5.22	20 46.1	17	0 37 17.58	0.54	1 31 4.8	2.76	18 53.0
18	0 28 40.21	0.88	0 42 58.5	5.15	20 42.5	18	0 37 30.35	0.53	1 32 9.9	2.67	18 49.3
19	0 29 1.16	0.87	0 45 1.1	5.08	20 38.9	19	0 37 42.80	0.51	1 33 12.8	2.58	18 45.5
20	0 29 21.89	0.86	0 47 2.1	5.01	20 35.3	20	0 37 54.93	0.50	1 34 13.6	2.49	18 41.8
21	0 29 42.40	0.85	N. 0 49 1.5	4.94	20 31.7	21	0 38 6.73	0.49	N. 1 35 12.2	2.40	18 38.1
22	0 30 2.68	0.84	0 50 59.2	4.87	20 28.1	22	0 38 18.20	0.47	1 36 8.5	2.31	18 34.3
23	0 30 22.73	0.83	0 52 55.2	4.80	20 24.5	23	0 38 29.33	0.46	1 37 2.6	2.21	18 30.6
24	0 30 42.54	0.82	0 54 49.5	4.73	20 20.9	24	0 38 40.13	0.44	1 37 54.4	2.11	18 26.8
25	0 31 2.11	0.81	0 56 42.1	4.65	20 17.3	25	0 38 50.59	0.43	1 38 44.0	2.02	18 23.0
26	0 31 21.43	0.80	N. 0 58 32.9	4.58	20 13.6	26	0 39 0.71	0.42	N. 1 39 31.3	1.93	18 19.3
27	0 31 40.50	0.79	1 0 21.9	4.51	20 10.0	27	0 39 10.49	0.40	1 40 16.3	1.83	18 15.5
28	0 31 59.33	0.78	1 2 9.1	4.43	20 6.4	28	0 39 19.92	0.39	1 40 59.0	1.73	18 11.7
29	0 32 17.90	0.77	1 3 54.5	4.35	20 2.8	29	0 39 29.00	0.37	1 41 39.4	1.63	18 7.9
30	0 32 36.21	0.76	1 5 38.0	4.27	19 59.1	30	0 39 37.73	0.36	1 42 17.4	1.54	18 4.1
31	0 32 54.25	0.75	N. 1 7 19.7	4.20	19 55.5	31	0 39 46.10	0.34	N. 1 42 53.1	1.45	18 0.3
32	0 33 12.03	0.74	N. 1 8 59.5	4.13	19 51.9						

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	7.47	7.50	7.53	7.58	7.62	7.67	Semidiameter.	7.75	7.81	7.87	7.94	8.00	8.07
Hor. Parallax.	0.85	0.86	0.86	0.87	0.87	0.88	Hor. Parallax.	0.89	0.89	0.90	0.91	0.92	0.92

GREENWICH MEAN TIME.

JULY.						AUGUST.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	0 39 46.10	0.34	N. 1 42 53.1	1.45	18 0.3	1	0 41 3.27	0.14	N. 1 41 44.6	1.62	15 59.6
2	0 39 54.11	0.33	1 43 26.5	1.35	17 56.5	2	0 40 59.77	0.15	1 41 4.7	1.71	15 55.6
3	0 40 1.77	0.31	1 43 57.5	1.25	17 52.7	3	0 40 55.90	0.17	1 40 22.5	1.80	15 51.6
4	0 40 9.07	0.30	1 44 26.2	1.15	17 48.9	4	0 40 51.65	0.18	1 39 38.1	1.90	15 47.6
5	0 40 16.01	0.28	1 44 52.5	1.05	17 45.1	5	0 40 47.04	0.20	1 38 51.4	1.99	15 43.6
6	0 40 22.59	0.27	N. 1 45 16.5	0.95	17 41.2	6	0 40 42.07	0.21	N. 1 38 2.6	2.08	15 39.6
7	0 40 28.80	0.25	1 45 38.0	0.85	17 37.4	7	0 40 36.74	0.23	1 37 11.6	2.17	15 35.6
8	0 40 34.65	0.24	1 45 57.2	0.75	17 33.6	8	0 40 31.06	0.24	1 36 18.4	2.26	15 31.6
9	0 40 40.13	0.22	1 46 14.0	0.65	17 29.7	9	0 40 25.02	0.26	1 35 23.1	2.35	15 27.5
10	0 40 45.25	0.21	1 46 28.4	0.55	17 25.9	10	0 40 18.63	0.27	1 34 25.7	2.44	15 23.5
11	0 40 50.00	0.19	N. 1 46 40.4	0.45	17 22.1	11	0 40 11.89	0.29	N. 1 33 26.2	2.53	15 19.5
12	0 40 54.38	0.18	1 46 50.1	0.35	17 18.2	12	0 40 4.79	0.30	1 32 24.7	2.61	15 15.4
13	0 40 58.39	0.16	1 46 57.4	0.25	17 14.4	13	0 39 57.36	0.32	1 31 21.1	2.69	15 11.4
14	0 41 2.03	0.14	1 47 2.3	0.15	17 10.5	14	0 39 49.59	0.33	1 30 15.5	2.78	15 7.3
15	0 41 5.30	0.13	1 47 4.9	0.05	17 6.6	15	0 39 41.48	0.35	1 29 7.9	2.86	15 3.2
16	0 41 8.20	0.11	N. 1 47 5.1	0.05	17 2.7	16	0 39 33.03	0.36	N. 1 27 58.3	2.94	14 59.1
17	0 41 10.72	0.10	1 47 2.9	0.15	16 58.8	17	0 39 24.25	0.37	1 26 46.7	3.02	14 55.0
18	0 41 12.87	0.08	1 46 58.3	0.25	16 54.9	18	0 39 15.15	0.39	1 25 33.3	3.10	14 50.9
19	0 41 14.64	0.07	1 46 51.3	0.34	16 51.0	19	0 39 5.72	0.40	1 24 18.0	3.18	14 46.8
20	0 41 16.03	0.05	1 46 41.9	0.44	16 47.1	20	0 38 55.96	0.41	1 23 0.8	3.25	14 42.7
21	0 41 17.05	0.04	N. 1 46 30.1	0.54	16 43.1	21	0 38 45.88	0.43	N. 1 21 41.8	3.32	14 38.6
22	0 41 17.69	0.02	1 46 16.0	0.64	16 39.2	22	0 38 35.50	0.44	1 20 21.0	3.39	14 34.5
23	0 41 17.95	0.00	1 45 59.5	0.74	16 35.3	23	0 38 24.81	0.45	1 18 58.5	3.46	14 30.4
24	0 41 17.83	0.01	1 45 40.6	0.84	16 31.3	24	0 38 13.81	0.46	1 17 34.3	3.53	14 26.3
25	0 41 17.33	0.03	1 45 19.3	0.94	16 27.4	25	0 38 2.51	0.48	1 16 8.3	3.60	14 22.2
26	0 41 16.45	0.05	N. 1 44 55.6	1.04	16 23.5	26	0 37 50.93	0.49	N. 1 14 40.7	3.67	14 18.0
27	0 41 15.19	0.06	1 44 29.6	1.14	16 19.5	27	0 37 39.06	0.50	1 13 11.6	3.74	14 13.9
28	0 41 13.55	0.08	1 44 1.2	1.24	16 15.5	28	0 37 26.91	0.51	1 11 40.9	3.81	14 9.8
29	0 41 11.54	0.09	1 43 30.5	1.33	16 11.6	29	0 37 14.48	0.52	1 10 8.6	3.87	14 5.6
30	0 41 9.15	0.11	1 42 57.5	1.43	16 7.6	30	0 37 1.79	0.53	1 8 34.9	3.93	14 1.5
31	0 41 6.40	0.12	N. 1 42 22.2	1.53	16 3.6	31	0 36 48.84	0.55	N. 1 6 59.8	3.99	13 57.4
32	0 41 3.27	0.14	N. 1 41 44.6	1.62	15 59.6	32	0 36 35.63	0.56	N. 1 5 23.4	4.05	13 53.2

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	8.14	8.21	8.28	8.35	8.43	8.50	Semidiameter.	8.59	8.66	8.73	8.79	8.85	8.90
Hor. Parallax.	0.93	0.94	0.95	0.96	0.97	0.98	Hor. Parallax.	0.98	0.98	0.99	1.00	1.01	1.02



GREENWICH MEAN TIME.

SEPTEMBER.						OCTOBER.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	0 36 35.63	0.56	N. 1 5 23.4	4.05	13 53.2	1	0 28 38.08	0.72	N. 0 10 52.9	4.68	11 47.3
2	0 36 22.17	0.57	1 3 45.6	4.10	13 49.1	2	0 28 20.83	0.72	0 9 0.7	4.66	11 43.1
3	0 36 8.48	0.58	1 2 6.6	4.15	13 44.9	3	0 28 3.60	0.72	0 7 8.9	4.64	11 38.9
4	0 35 54.55	0.59	1 0 26.4	4.20	13 40.7	4	0 27 46.39	0.72	0 5 17.6	4.62	11 34.7
5	0 35 40.39	0.59	0 58 44.9	4.25	13 36.5	5	0 27 29.22	0.72	0 3 27.0	4.60	11 30.4
6	0 35 26.01	0.60	N. 0 57 2.3	4.30	13 32.4	6	0 27 12.09	0.71	N. 0 1 37.0	4.57	11 26.2
7	0 35 11.43	0.61	0 55 18.8	4.35	13 28.2	7	0 26 55.00	0.71	S. 0 0 12.4	4.54	11 22.0
8	0 34 56.65	0.62	0 53 34.2	4.39	13 24.0	8	0 26 37.97	0.71	0 2 1.0	4.51	11 17.8
9	0 34 41.66	0.63	0 51 48.6	4.43	13 19.8	9	0 26 21.02	0.71	0 3 48.7	4.48	11 13.5
10	0 34 26.48	0.64	0 50 2.1	4.46	13 15.6	10	0 26 4.14	0.70	0 5 35.6	4.44	11 9.3
11	0 34 11.13	0.64	N. 0 48 14.8	4.49	13 11.5	11	0 25 47.35	0.70	S. 0 7 21.6	4.40	11 5.1
12	0 33 55.60	0.65	0 46 26.7	4.52	13 7.3	12	0 25 30.65	0.69	0 9 6.7	4.36	11 0.9
13	0 33 39.89	0.66	0 44 37.7	4.55	13 3.1	13	0 25 14.06	0.69	0 10 50.7	4.31	10 56.7
14	0 33 24.02	0.67	0 42 48.1	4.58	12 58.9	14	0 24 57.57	0.68	0 12 33.6	4.26	10 52.5
15	0 33 8.01	0.67	0 40 57.9	4.61	12 54.7	15	0 24 41.20	0.68	0 14 15.4	4.21	10 48.3
16	0 32 51.85	0.68	N. 0 39 7.1	4.63	12 50.5	16	0 24 24.96	0.67	S. 0 15 56.1	4.16	10 44.1
17	0 32 35.55	0.68	0 37 15.6	4.65	12 46.3	17	0 24 8.87	0.67	0 17 35.5	4.11	10 39.9
18	0 32 19.12	0.69	0 35 23.7	4.67	12 42.1	18	0 23 52.93	0.66	0 19 13.5	4.05	10 35.7
19	0 32 2.58	0.69	0 33 31.4	4.69	12 37.9	19	0 23 37.13	0.65	0 20 50.2	3.99	10 31.5
20	0 31 45.92	0.70	0 31 38.7	4.70	12 33.7	20	0 23 21.50	0.65	0 22 25.6	3.93	10 27.3
21	0 31 29.16	0.70	N. 0 29 45.7	4.71	12 29.5	21	0 23 6.05	0.64	S. 0 23 59.4	3.87	10 23.1
22	0 31 12.31	0.70	0 27 52.4	4.72	12 25.3	22	0 22 50.78	0.63	0 25 31.7	3.81	10 19.0
23	0 30 55.38	0.71	0 25 59.0	4.72	12 21.1	23	0 22 35.70	0.62	0 27 2.5	3.74	10 14.8
24	0 30 38.38	0.71	0 24 5.5	4.72	12 16.8	24	0 22 20.82	0.62	0 28 31.7	3.67	10 10.6
25	0 30 21.31	0.71	0 22 11.9	4.73	12 12.6	25	0 22 6.15	0.61	0 29 59.2	3.60	10 6.4
26	0 30 4.18	0.71	N. 0 20 18.3	4.73	12 8.4	26	0 21 51.70	0.60	S. 0 31 24.9	3.53	10 2.3
27	0 29 47.01	0.72	0 18 24.8	4.73	12 4.2	27	0 21 37.47	0.59	0 32 48.9	3.46	9 58.1
28	0 29 29.81	0.72	0 16 31.5	4.72	11 59.9	28	0 21 23.47	0.58	0 34 11.1	3.38	9 53.9
29	0 29 12.58	0.72	0 14 38.3	4.71	11 55.7	29	0 21 9.72	0.57	0 35 31.4	3.30	9 49.8
30	0 28 55.33	0.72	0 12 45.4	4.70	11 51.5	30	0 20 56.22	0.56	0 36 49.8	3.22	9 45.6
31	0 28 38.08	0.72	N. 0 10 52.9	4.68	11 47.3	31	0 20 42.98	0.55	S. 0 38 6.3	3.14	9 41.5
						32	0 20 29.99	0.54	S. 0 39 20.8	3.06	9 37.4

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.
Semidiameter.	8.96	8.99	9.03	9.06	9.07	9.08	Semidiameter.	9.09	9.08	9.07	9.05	9.01	8.98
Hor. Parallax.	1.02	1.03	1.03	1.04	1.04	1.04	Hor. Parallax.	1.04	1.04	1.04	1.04	1.03	1.03

GREENWICH MEAN TIME.

NOVEMBER.						DECEMBER.					
Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.	Day of Month.	Apparent Right Ascension.	Var. of R. A. for 1 Hour.	Apparent Declination.	Var. of Decl. for 1 Hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.	Noon.	Noon.	
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	0 20 29.99	0.54	S. 0 39 20.8	3.06	9 37.4	1	0 16 29.80	0.11	S. 0 58 42.9	0.03	7 35.5
2	0 20 17.28	0.52	0 40 33.2	2.98	9 33.2	2	0 16 27.47	0.09	0 58 42.4	0.08	7 31.5
3	0 20 4.84	0.51	0 41 43.5	2.89	9 29.1	3	0 16 25.55	0.07	0 58 39.2	0.19	7 27.6
4	0 19 52.69	0.50	0 42 51.8	2.80	9 25.0	4	0 16 24.02	0.06	0 58 33.4	0.30	7 23.6
5	0 19 40.82	0.49	0 43 57.9	2.71	9 20.8	5	0 16 22.88	0.04	0 58 24.9	0.41	7 19.7
6	0 19 29.25	0.48	S. 0 45 1.8	2.62	9 16.7	6	0 16 22.14	0.02	S. 0 58 13.9	0.52	7 15.7
7	0 19 17.98	0.46	0 46 3.6	2.53	9 12.6	7	0 16 21.80	0.01	0 58 0.2	0.63	7 11.8
8	0 19 7.01	0.45	0 47 3.2	2.44	9 8.5	8	0 16 21.86	0.01	0 57 43.9	0.74	7 7.8
9	0 18 56.35	0.44	0 48 0.5	2.35	9 4.4	9	0 16 22.31	0.03	0 57 24.9	0.85	7 3.9
10	0 18 46.01	0.42	0 48 55.5	2.25	9 0.3	10	0 16 23.16	0.04	0 57 3.3	0.96	7 0.0
11	0 18 35.99	0.41	S. 0 49 48.2	2.15	8 56.2	11	0 16 24.41	0.06	S. 0 56 39.1	1.06	6 56.1
12	0 18 26.29	0.40	0 50 38.6	2.05	8 52.1	12	0 16 26.06	0.08	0 56 12.2	1.17	6 52.2
13	0 18 16.92	0.38	0 51 26.6	1.95	8 48.0	13	0 16 28.11	0.09	0 55 42.8	1.28	6 48.3
14	0 18 7.89	0.37	0 52 12.2	1.85	8 44.0	14	0 16 30.55	0.11	0 55 10.7	1.39	6 44.4
15	0 17 59.20	0.36	0 52 55.4	1.75	8 39.9	15	0 16 33.39	0.13	0 54 36.1	1.50	6 40.5
16	0 17 50.85	0.34	S. 0 53 36.3	1.65	8 35.8	16	0 16 36.63	0.14	S. 0 53 58.9	1.60	6 36.7
17	0 17 42.85	0.33	0 54 14.7	1.55	8 31.8	17	0 16 40.27	0.16	0 53 19.1	1.71	6 32.8
18	0 17 35.21	0.31	0 54 50.6	1.45	8 27.7	18	0 16 44.32	0.18	0 52 36.7	1.82	6 28.9
19	0 17 27.93	0.30	0 55 23.9	1.35	8 23.6	19	0 16 48.76	0.19	0 51 51.7	1.93	6 25.1
20	0 17 21.00	0.28	0 55 54.7	1.24	8 19.6	20	0 16 53.60	0.21	0 51 4.2	2.04	6 21.2
21	0 17 14.44	0.27	S. 0 56 23.0	1.13	8 15.5	21	0 16 58.83	0.23	S. 0 50 14.2	2.14	6 17.4
22	0 17 8.26	0.25	0 56 48.7	1.02	8 11.5	22	0 17 4.46	0.24	0 49 21.6	2.25	6 13.5
23	0 17 2.45	0.23	0 57 11.9	0.91	8 7.4	23	0 17 10.48	0.26	0 48 26.5	2.35	6 9.7
24	0 16 57.02	0.22	0 57 32.5	0.79	8 3.4	24	0 17 16.89	0.28	0 47 28.9	2.45	6 5.9
25	0 16 51.97	0.20	0 57 50.5	0.68	7 59.4	25	0 17 23.69	0.29	0 46 28.8	2.56	6 2.0
26	0 16 47.30	0.19	S. 0 58 5.8	0.57	7 55.4	26	0 17 30.88	0.31	S. 0 45 26.3	2.66	5 58.2
27	0 16 43.02	0.17	0 58 18.5	0.46	7 51.4	27	0 17 38.46	0.33	0 44 21.3	2.76	5 54.4
28	0 16 39.13	0.15	0 58 28.6	0.35	7 47.4	28	0 17 46.42	0.34	0 43 13.9	2.86	5 50.6
29	0 16 35.63	0.14	0 58 36.0	0.24	7 43.4	29	0 17 54.76	0.36	0 42 4.1	2.96	5 46.8
30	0 16 32.52	0.12	0 58 40.8	0.13	7 39.5	30	0 18 3.48	0.37	0 40 51.9	3.06	5 43.1
31	0 16 29.80	0.11	S. 0 58 42.9	0.03	7 35.5	31	0 18 12.58	0.39	S. 0 39 37.3	3.16	5 39.3
						32	0 18 22.05	0.40	S. 0 38 20.4	3.25	5 35.5

Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	Day of the Month.	1st.	6th.	11th.	16th.	21st.	26th.	31st.
Semidiameter.	8.92	8.87	8.81	8.75	8.70	8.62	Semidiameter.	8.55	8.48	8.40	8.33	8.25	8.18	8.11
Hor. Parallax.	1.02	1.02	1.01	1.01	1.00	0.99	Hor. Parallax.	0.98	0.97	0.96	0.95	0.94	0.94	0.93



\* \* These Mean Places cannot be used for accurate determinations of Longitude or Latitude, but serve for ordinary sea observations. The Apparent Places of 133 stars are given on pages 105-139.

FOR JANUARY 1921<sup>d</sup>

Star's Name.	Mag.	Right Ascension.	Annual Variation.	Declination.	Annual Variation.
		h m s	s	° ' "	"
α Andromedæ	2.1	0 3 37.782	+ 3.0948	N. 28 34 57.06	+ 19.881
β Cassiopeiæ	2.4	0 4 15.775	3.1815	N. 58 38 32.52	19.862
γ Pegasi ( <i>Algenib</i> )	2.9	0 8 29.818	3.0858	N. 14 40 19.66	20.023
ι Ceti	3.8	0 14 44.446	3.0570	S. 9 20 1.94	19.975
β Hydri	2.9	0 20 55.801	3.2119	S. 77 46 20.60	20.281
α Phœnicis	2.4	0 21 44.360	+ 2.9739	S. 42 48 20.16	+ 19.553
δ Andromedæ	3.5	0 34 24.334	3.2007	N. 30 21 27.08	19.724
α Cassiopeiæ var.	2.2-2.8	0 35 16.803	3.3832	N. 56 1 58.45	19.776
β Ceti	2.2	0 38 58.330	3.0128	S. 18 29 29.00	19.708
γ Cassiopeiæ	2.3	0 51 8.866	3.5933	N. 60 13 7.39	19.543
μ Andromedæ	3.9	0 51 38.577	+ 3.3191	N. 38 0 1.72	+ 19.569
β Phœnicis	3.4	1 1 58.684	2.6809	S. 47 12 41.65	19.293
β Andromedæ	2.4	1 4 34.612	3.3489	N. 35 7 58.67	19.138
θ Ceti	3.8	1 19 25.465	2.9977	S. 8 39 28.37	18.639
δ Cassiopeiæ	2.8	1 19 47.355	3.8955	N. 59 45 27.09	18.806
γ Phœnicis	3.3	1 24 22.242	+ 2.6085	S. 43 47 22.48	+ 18.478
α Ursæ Minoris ( <i>Polaris</i> )	2.1	1 26 1.592	27.0183	N. 88 48 56.29	18.647
η Piscium	3.7	1 26 33.486	3.2049	N. 14 52 18.46	18.630
α Eridani ( <i>Achernar</i> )	0.5	1 34 17.321	2.2372	S. 57 42 14.60	18.332
ζ Ceti	3.9	1 46 55.144	2.9599	S. 10 47 21.24	17.876
ε Cassiopeiæ	3.5	1 47 45.950	+ 4.2778	N. 63 13 2.62	+ 17.855
β Arietis	2.7	1 49 33.287	3.3071	N. 20 21 30.94	17.687
α Hydri	3.0	1 55 51.907	1.8820	S. 62 1 2.41	17.564
γ <sup>1</sup> Andromedæ	2.2	1 58 14.831	3.6686	N. 41 53 19.10	17.385
α Arietis	2.2	2 1 59.049	3.3748	N. 23 1 39.94	17.128
β Trianguli	3.1	2 4 3.919	+ 3.5595	N. 34 33 8.87	+ 17.134
φ Eridani	3.7	2 13 13.284	2.1415	S. 51 56 16.33	16.724
γ <sup>2</sup> Ceti	3.0	2 38 31.925	3.1053	N. 2 50 54.49	15.287
θ Eridani	3.0	2 54 46.474	2.2768	S. 40 40 22.91	14.517
α Ceti	2.8	2 57 28.126	3.1326	N. 3 43 45.16	14.251
γ Persei	3.1	2 58 7.597	+ 4.3242	N. 53 8 48.35	+ 14.284
β Persei ( <i>Algol</i> ) var.	2.2-3.7	3 2 10.691	3.8911	N. 40 36 6.25	14.035
α Persei	1.9	3 17 44.925	4.2658	N. 49 32 3.57	13.006
ο Tauri	3.8	3 19 51.637	3.2247	N. 8 42 20.09	12.819
ε Eridani	3.8	3 28 35.716	2.8248	S. 9 46 9.02	12.325
δ Persei	3.2	3 36 22.174	+ 4.2573	N. 47 29 38.40	+ 11.718
δ Eridani	3.7	3 38 50.439	2.8726	S. 10 4 28.23	12.310
17 Tauri	3.8	3 39 24.584	3.5567	N. 23 49 28.44	11.488
η Tauri	3.0	3 42 0.792	3.5604	N. 23 49 16.16	11.301
ζ Persei	3.0	3 48 20.751	+ 3.7641	N. 31 36 39.52	10.876
γ Hydri	3.1	3 48 39.225	- 0.9722	S. 74 31 15.87	+ 10.987
ε Persei	3.0	3 51 40.619	+ 4.0173	N. 39 44 40.85	10.618
γ <sup>1</sup> Eridani	3.3	3 53 44.205	2.7981	S. 13 46 11.23	10.382
α Horologii	3.8	4 10 57.186	1.9872	S. 42 31 16.16	8.950
α Reticuli	3.4	4 13 14.191	+ 0.7636	S. 62 42 14.39	+ 9.048

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Star's Name.	Mag.	Right Ascension.	Annual Variation.	Declination.	Annual Variation.
		h m s	s	° ' "	"
υ <sup>4</sup> Eridani	3.8	4 14 24.664	+ 2.2669	S. 34 1 20.68	+ 8.911
γ Tauri	3.9	4 14 33.376	3.4108	N. 15 24 21.62	8.873
ε Tauri	3.7	4 23 14.582	3.4999	N. 18 58 37.00	8.177
α Tauri ( <i>Aldebaran</i> )	1.1	4 30 38.401	3.4393	N. 16 19 29.62	7.428
α Doradûs	3.5	4 32 0.459	1.2941	S. 55 14 6.28	7.497
π <sup>1</sup> Orionis	3.3	4 44 50.688	+ 3.2547	N. 6 48 4.61	+ 6.478
ι Aurigæ	2.9	4 51 0.025	3.9029	N. 33 1 15.81	5.920
ε Aurigæ var.	3.0-4.5	4 55 21.914	4.2999	N. 43 41 16.26	5.564
η Aurigæ	3.3	5 0 3.692	4.2030	N. 41 6 38.56	5.108
ε Leporis	3.4	5 1 33.967	2.5383	S. 22 29 39.02	4.991
β Eridani	2.9	5 3 19.606	+ 2.9489	S. 5 12 17.35	+ 4.830
μ Leporis	3.3	5 8 47.916	2.6938	S. 16 18 50.03	4.411
α Aurigæ ( <i>Capella</i> )	0.2	5 9 53.451	4.4277	N. 45 54 18.65	3.916
β Orionis ( <i>Rigel</i> )	0.3	5 10 6.952	2.8820	S. 8 18 26.64	4.327
η Orionis (mean)	3.4	5 19 51.050	3.0155	S. 2 28 52.47	3.489
γ Orionis ( <i>Bellatrix</i> )	1.7	5 20 11.759	+ 3.2166	N. 6 16 0.73	+ 3.444
β Tauri	1.8	5 20 28.516	3.7908	N. 28 31 49.37	3.260
β Leporis	3.0	5 24 18.208	2.5701	S. 20 49 56.22	3.019
δ Orionis var.	2.2-2.7	5 27 18.360	3.0640	S. 0 22 0.14	2.845
α Leporis	2.7	5 28 40.346	2.6455	S. 17 53 15.68	2.729
ι Orionis	3.0	5 30 55.952	+ 2.9340	S. 5 58 11.30	+ 2.531
ε Orionis	1.7	5 31 32.684	3.0433	S. 1 15 36.38	2.481
ζ Tauri	3.0	5 32 8.757	3.5846	N. 21 5 13.03	2.396
β Doradûs	3.7	5 32 49.641	0.5181	S. 62 33 0.57	2.345
ζ Orionis ( <i>Ist*</i> )	2.0	5 36 6.985	3.0268	S. 1 59 26.94	2.069
α Columbæ	2.7	5 36 19.057	+ 2.1723	S. 34 7 22.13	+ 2.028
κ Orionis	2.2	5 43 23.583	2.8447	S. 9 42 6.52	1.446
β Columbæ	3.1	5 47 42.921	2.1127	S. 35 48 9.44	1.461
α Orionis ( <i>Betelgeuse</i> ) var.	1.0-1.4	5 50 11.453	3.2477	N. 7 23 25.71	0.865
β Aurigæ	2.1	5 52 46.848	4.4016	N. 44 56 19.85	0.622
θ Aurigæ	2.7	5 53 26.861	+ 4.0915	N. 37 12 24.46	+ 0.479
η Geminorum var.	3.2-4.2	6 9 19.494	3.6227	N. 22 32 2.62	- 0.834
ζ Canis Majoris	3.2	6 16 46.813	2.3017	S. 30 1 20.48	1.492
μ Geminorum	3.2	6 17 23.710	3.6308	N. 22 33 41.22	1.637
β Canis Majoris	2.0	6 18 38.881	2.6415	S. 17 54 34.89	1.628
α Argûs ( <i>Canopus</i> )	-1.0	6 21 54.578	+ 1.3319	S. 52 38 42.83	- 1.905
γ Geminorum	1.9	6 32 23.860	3.4671	N. 16 28 42.12	2.876
v Argûs	3.2	6 34 56.853	1.8366	S. 43 6 53.89	3.065
ε Geminorum	3.2	6 38 16.353	3.6931	N. 25 13 22.32	3.353
ξ Geminorum	3.4	6 40 7.580	3.3685	N. 12 59 43.39	3.687
α Canis Majoris ( <i>Sirius</i> )	-1.4	6 41 5.452	+ 2.6435	S. 16 35 22.00	- 4.784
α Pictoris	3.3	6 47 14.916	0.6180	S. 61 50 33.08	3.866
τ Argûs	2.8	6 47 39.189	1.4884	S. 50 30 18.03	4.246
ε Canis Majoris	1.6	6 55 0.600	2.3573	S. 28 50 47.10	4.765
22 Canis Majoris	3.5	6 58 3.243	+ 2.3897	S. 27 48 9.26	- 5.023



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Star's Name.	Mag.	Right Ascension.			Declination.	Annual Variation.
		h	m	s		
ζ Geminorum ..... var.	3'7-4'5	6	58	39'201	N. 20 42 20'99	- 5'084
ο <sup>2</sup> Canis Majoris .....	3'0	6	59	10'977	S. 23 41 54'12	5'115
δ Canis Majoris .....	2'0	7	4	38'988	S. 26 14 48'05	5'578
π Argūs.....	2'7	7	13	53'610	S. 36 55 55'58	6'363
δ Geminorum .....	3'6	7	14	37'805	N. 22 9 8'40	6'430
δ Volantis.....	3'9	7	16	53'127	S. 67 47 10'89	- 6'606
η Canis Majoris .....	2'4	7	20	27'407	S. 20 7 23'50	6'888
ζ Canis Minoris .....	3'1	7	22	9'749	N. 8 28 30'83	7'083
σ Argūs.....	3'0	7	26	18'684	S. 43 6 53'26	7'194
α <sup>2</sup> Geminorum (Castor) .....	2'0	7	28	43'900	N. 32 5 28'13	7'653
α <sup>1</sup> Geminorum .....	2'8	αα - 0'286	+ 3'8341	αδ - 4'03	- 7'653	
α Canis Minoris (Procyon) ...	0'5	7	34	29'169	N. 5 27 30'19	0'072
β Geminorum (Pollux).....	1'2	7	39	41'284	N. 28 14 56'34	8'505
ξ Argūs.....	3'4	7	45	25'503	S. 24 37 42'34	8'901
ζ Argūs.....	2'3	8	0	21'013	S. 39 44 37'57	10'057
15 Argūs.....	2'9	8	3	37'545	S. 24 2 18'86	- 10'246
γ Argūs.....	1'9	8	6	41'898	S. 47 3 54'85	10'538
β Cancri .....	3'7	8	11	31'613	N. 9 28 10'51	10'938
ε Argūs.....	1'7	8	20	37'608	S. 59 12 47'69	11'536
30 Monocerotis .....	3'9	8	21	3'871	S. 3 36 20'94	11'596
ο Urse Majoris .....	3'5	8	22	37'803	N. 61 1 35'19	- 11'800
α Mali .....	3'7	8	39	53'686	S. 32 51 15'77	12'869
ε Hydrae .....	3'5	8	41	54'321	N. 6 45 24'64	13'063
δ Argūs.....	2'0	8	42	9'636	S. 54 22 16'24	13'130
ζ Hydrae .....	3'3	8	50	31'932	N. 6 17 46'07	13'572
ι Urse Majoris .....	3'1	8	52	54'844	N. 48 24 12'22	- 13'981
λ Argūs.....	2'3	9	4	36'606	S. 43 3 39'54	14'465
β Argūs.....	1'7	9	12	11'626	S. 60 20 17'47	14'815
ι Argūs.....	2'2	9	14	37'553	S. 58 53 20'11	15'045
α Lyncis .....	3'4	9	15	27'227	N. 34 46 55'31	15'087
κ Argūs.....	2'6	9	19	15'820	S. 54 37 3'81	- 15'333
α Hydrae .....	2'2	9	23	4'012	S. 8 15 33'88	15'496
θ Urse Majoris .....	3'3	9	26	42'620	N. 52 5 49'68	16'272
↓ Argūs.....	3'5	9	27	4'449	S. 43 3 50'02	15'709
N Velorum .....	3'0	9	28	25'559	S. 56 37 41'55	15'816
ο Leonis .....	3'8	9	36	14'523	N. 10 18 40'73	- 16'265
ε Leonis .....	3'1	9	40	37'890	N. 24 11 53'40	16'476
α Leonis (Regulus) .....	1'3	10	3	28'435	N. 12 25 1'69	17'513
γ Carinae .....	3'4	10	14	0'550	S. 60 52 20'52	17'940
γ <sup>1</sup> Leonis .....	2'5	10	14	54'131	N. 20 18 25'93	18'127
γ <sup>2</sup> Leonis .....	3'7	αα + 0'247	+ 3'3126	αδ - 1'73	- 18'127	
μ Urse Majoris .....	3'2	10	16	51'165	N. 41 57 45'04	18'024
ρ Leonis .....	3'8	10	27	58'103	N. 9 46 49'10	18'456
θ Argūs.....	3'0	10	39	40'302	S. 63 54 45'97	18'855
η Argūs..... var.	1 7½	10	41	29'352	S. 59 12 2'52	- 18'891

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Star's Name.	Mag.	Right Ascension.			Declination.	Annual Variation.
		h	m	s		
μ Argūs.....	2'8	10	42	48'601	+ 2'5722	S. 48 56 2'88 - 19'001
ν Hydrae .....	3'3	10	45	5'068	2'9579	S. 15 42 42'65 18'775
β Urse Majoris .....	2'4	10	56	17'815	3'6447	N. 56 52 32'67 19'252
α Urse Majoris (Dubhe) ...	2'0	10	58	3'557	3'7338	N. 62 14 52'26 19'390
ψ Urse Majoris .....	3'2	11	4	29'764	3'3875	N. 44 59 52'30 19'494
δ Leonis .....	2'6	11	9	13'064	+ 3'1961	N. 21 1 40'32 - 19'697
θ Leonis .....	3'4	11	9	24'803	3'1511	N. 15 55 57'15 19'645
δ Crateris .....	3'8	11	14	44'400	2'9970	S. 14 16 50'01 19'462
ξ Hydrae .....	3'7	11	28	28'492	2'9451	S. 31 20 54'80 19'911
λ Centauri .....	3'3	11	31	31'901	2'7472	S. 62 30 38'59 19'919
β Leonis (Denebola) .....	2'2	11	44	22'090	+ 3'0629	N. 15 5 10'99 - 20'118
β Virginis.....	3'8	11	45	54'184	3'1252	N. 2 16 59'71 20'283
γ Urse Majoris .....	2'5	11	48	59'814	3'1728	N. 54 12 22'64 20'019
δ Centauri .....	2'8	12	3	35'138	3'0928	S. 50 12 36'54 20'073
ε Corvi .....	3'2	12	5	23'479	3'0802	S. 22 6 29'26 20'038
δ Crucis.....	3'1	12	10	15'502	+ 3'1715	S. 58 14 14'76 - 20'065
δ Urse Majoris .....	3'4	12	10	52'745	2'9876	N. 57 32 37'66 20'018
γ Corvi .....	2'7	12	11	4'372	3'0809	S. 17 1 51'79 20'006
α <sup>1</sup> Crucis.....	1'0	12	21	28'388	3'3077	S. 62 35 21'47 19'997
α <sup>2</sup> Crucis.....	1½	αα + 0'630	3'3077	αδ - 3'05	19'997	
δ <sup>2</sup> Corvi .....	3'1	12	25	6'157	+ 3'1004	S. 16 0 11'83 - 20'074
γ Crucis.....	1'6	12	26	3'309	3'2999	S. 56 35 52'67 20'177
β Corvi .....	3'0	12	29	33'100	3'1443	S. 22 53 16'96 19'941
α Muscae.....	2'9	12	31	41'222	3'5350	S. 68 37 43'25 19'884
γ Centauri .....	2'4	12	36	26'310	3'2919	S. 48 27 16'80 19'812
γ <sup>1</sup> Virginis.....	3'5	12	36	59'821	+ 3'0395	S. 0 56 39'01 - 19'781
γ <sup>2</sup> Virginis.....	3'5	αα + 0'223	3'0395	αδ - 5'22	19'781	
β Muscae.....	3'3	12	40	37'655	3'6364	S. 67 36 16'16 19'758
β Crucis.....	1'5	12	42	20'320	3'4780	S. 59 11 9'54 19'737
ε Urse Majoris .....	1'8	12	49	59'096	2'6499	N. 56 27 32'68 19'583
δ Virginis.....	3'7	12	50	58'122	+ 3'0206	N. 3 53 50'27 - 19'612
α Canum Venaticorum .....	2'8	12	51	43'558	2'8116	N. 38 48 54'35 19'489
ε Virginis.....	3'0	12	57	35'835	2'9865	N. 11 27 12'53 19'401
γ Hydrae .....	3'3	13	13	55'043	3'2542	S. 22 41 10'68 19'064
ι Centauri .....	3'0	13	15	25'217	3'3597	S. 36 13 37'87 19'067
ζ <sup>1</sup> Urse Majoris .....	2'1	13	20	13'446	+ 2'4233	N. 55 24 20'37 - 18'860
α Virginis (Spica) .....	1'2	13	20	20'679	3'1563	S. 10 40 52'53 18'858
ζ Virginis.....	3'4	13	30	0'246	3'0541	S. 0 7 32'51 18'480
ε Centauri .....	2'6	13	34	3'120	3'7764	S. 52 59 56'21 18'420
η Urse Majoris .....	1'9	13	43	55'027	2'3686	N. 49 46 19'90 18'043
μ Centauri .....	3'3	13	44	4'162	+ 3'5977	S. 42 0 55'83 - 18'035
ζ Centauri .....	2'8	13	49	47'703	3'7226	S. 46 50 8'82 17'852
η Boötis.....	2'8	13	50	18'257	2'8567	N. 18 51 31'08 18'130
β Centauri .....	0'8	13	57	19'400	4'2003	S. 59 55 46'06 17'508
π Hydrae .....	3'5	14	1	7'764	+ 3'4079	S. 26 14 22'17 - 17'455



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Star's Name.	Mag.	Right Ascension.	Annual Variation.	Declination.	Annual Variation.
		h m s	s	° ' "	"
θ Centauri	2.1	14 1 15.849	+ 3.5175	S. 35 55 3.48	- 17.828
α Draconis	3.6	14 1 53.935	1.6241	N. 64 48 55.35	17.265
α Boötis ( <i>Arcturus</i> )	0.3	14 11 27.882	2.7353	N. 19 39 39.87	18.839
ρ Boötis	3.7	14 27 51.929	2.5866	N. 30 46 29.76	15.902
γ Boötis	3.0	14 28 22.445	2.4173	N. 38 42 37.42	15.844
η Centauri	2.7	14 29 39.661	+ 3.7943	S. 41 45 14.48	- 15.952
α <sup>2</sup> Centauri	1	14 33 21.308	4.0499	S. 60 27 13.62	14.996
α <sup>1</sup> Centauri	3.2	α - 1.543	4.0499	δ - 17.39	14.996
α Circini	3.4	14 35 3.571	4.7994	S. 64 34 29.75	15.867
α Lupi	2.5	14 35 48.298	3.9694	S. 46 59 37.39	15.623
ε <sup>2</sup> Boötis	2.6	14 40 58.152	+ 2.6203	N. 27 27 42.10	- 15.291
α Libræ	2.9	14 45 47.188	+ 3.3128	S. 15 39 35.41	15.101
β Ursæ Minoris	2.2	14 50 57.924	- 0.2110	N. 74 31 53.30	14.720
β Lupi	2.7	14 52 29.970	+ 3.9105	S. 42 45 49.97	14.691
κ Centauri	3.3	14 53 10.516	3.8907	S. 41 44 7.09	14.615
β Boötis	3.6	14 58 28.842	+ 2.2600	N. 40 45 11.13	- 14.307
20 Libræ	3.4	14 58 40.973	3.5035	S. 24 55 14.61	14.302
ζ Lupi	3.5	15 5 40.206	4.2881	S. 51 44 57.85	13.883
γ Trianguli Australis	3.0	15 10 18.418	5.5435	S. 68 20 25.33	13.562
δ Boötis	3.5	15 11 47.632	2.4192	N. 33 39 27.45	13.551
β Libræ	2.8	15 12 3.272	+ 3.2241	S. 9 2 37.97	- 13.432
γ Ursæ Minoris	3.1	15 20 52.118	- 0.1205	N. 72 9 40.82	12.814
ι Draconis	3.4	15 22 52.995	+ 1.3325	N. 59 17 17.05	12.681
γ Lupi	3.0	15 29 0.356	3.9847	S. 40 51 29.33	12.319
α Coronæ	2.3	15 30 47.537	2.5392	N. 27 1 25.92	12.247
α Serpentis	2.8	15 39 44.126	+ 2.9526	N. 6 42 52.62	- 11.473
μ Serpentis	3.6	15 44 49.052	3.1278	S. 3 8 56.93	11.176
ε Serpentis	3.8	15 46 13.731	2.9879	N. 4 45 15.51	10.976
β Trianguli Australis	3.1	15 47 1.711	5.2514	S. 63 8 50.61	11.394
π Scorpil	3.1	15 53 17.032	3.6226	S. 25 50 59.10	10.574
δ Scorpil	2.5	15 54 53.454	+ 3.5413	S. 22 21 37.39	- 10.440
β <sup>1</sup> Scorpil	2.7	16 0 5.092	3.4826	S. 19 33 14.78	10.042
δ Ophiuchi	3.0	16 9 31.385	3.1409	S. 3 27 28.44	9.436
ε Ophiuchi	3.3	16 13 27.126	3.1713	S. 4 28 7.45	8.948
σ Scorpil	3.1	16 15 35.650	3.6406	S. 25 22 21.29	8.856
γ Herculis	3.8	16 17 51.668	+ 2.6452	N. 19 22 7.17	- 8.602
η Draconis	2.9	16 22 44.624	0.8067	N. 61 43 20.18	8.195
α Scorpil ( <i>Antares</i> )	1.3	16 23 45.859	3.6732	S. 26 13 42.15	8.198
β Herculis	2.8	16 26 15.835	2.5772	N. 21 41 22.33	7.996
λ Ophiuchi	3.8	16 26 16.341	3.0235	N. 2 11 5.23	8.049
τ Scorpil	2.9	16 30 9.179	+ 3.7286	S. 28 1 32.61	- 7.691
ζ Ophiuchi	2.7	16 32 5.489	3.3003	S. 10 22 52.53	7.478
ζ Herculis	3.0	16 37 49.066	2.2612	N. 31 46 8.57	6.644
α Trianguli Australis	1.9	16 38 54.864	6.3178	S. 68 51 34.87	6.990
ε Scorpil	2.3	16 44 12.114	+ 3.8787	S. 34 7 36.97	- 6.770

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Star's Name.	Mag.	Right Ascension.	Annual Variation.	Declination.	Annual Variation.
		h m s	s	° ' "	"
ζ Aræ	3.0	16 50 59.867	+ 4.9523	S. 55 50 44.22	- 5.990
κ Ophiuchi	3.4	16 53 18.772	2.8380	N. 9 31 3.10	5.760
ε Herculis	3.9	16 56 46.154	2.2944	N. 31 3 41.12	5.436
η Ophiuchi	2.6	17 5 6.015	3.4370	S. 15 36 41.46	4.663
ζ Draconis	3.2	17 8 31.127	0.1678	N. 65 49 40.29	4.447
α <sup>1</sup> Herculis	var. 3.1-3.9	17 10 27.121	+ 2.7342	N. 14 29 40.74	- 4.268
δ Herculis	3.2	17 11 15.128	2.4629	N. 24 56 49.98	4.388
π Herculis	3.3	17 11 50.521	2.0882	N. 36 54 44.66	4.180
θ Ophiuchi	3.4	17 16 21.486	5.6813	S. 24 54 29.88	3.827
β Aræ	2.7	17 17 39.001	4.9795	S. 55 26 36.68	3.707
ν Scorpil	2.8	17 24 30.352	+ 4.0732	S. 37 13 22.77	- 3.124
α Aræ	2.9	17 24 43.680	4.6319	S. 49 48 14.08	3.152
λ Scorpil	1.8	17 27 21.596	4.0704	S. 37 2 13.99	2.870
β Draconis	3.0	17 28 21.206	1.3539	N. 52 22 9.14	2.750
α Ophiuchi	2.1	17 30 39.804	2.7835	N. 12 37 35.12	2.792
θ Scorpil	2.0	17 30 42.343	+ 4.3052	S. 42 56 23.54	- 2.561
κ Scorpil	2.6	17 36 7.397	4.1487	S. 38 58 58.51	2.097
η Pavonis	3.5	17 36 41.992	5.8799	S. 64 40 50.38	2.110
β Ophiuchi	2.9	17 38 55.648	2.9627	N. 4 36 18.78	1.681
ι <sup>1</sup> Scorpil	3.1	17 41 9.001	4.1943	S. 40 5 31.08	1.651
μ Herculis	3.5	17 42 51.450	+ 2.3468	N. 27 46 26.51	- 2.245
ν Ophiuchi	3.7	17 53 57.678	3.3017	S. 9 45 46.30	0.646
γ Draconis	2.4	17 54 28.185	1.3923	N. 51 29 57.84	0.506
γ <sup>2</sup> Sagittarii	3.0	17 59 53.815	3.8518	S. 30 25 32.93	- 0.204
72 Ophiuchi	3.7	18 2 59.259	2.8432	N. 9 33 1.11	+ 0.350
η Sagittarii	3.1	18 11 24.158	+ 4.0598	S. 36 47 22.98	+ 0.847
δ Sagittarii	2.8	18 15 6.257	3.8407	S. 29 52 4.14	1.290
η Serpentis	3.4	18 16 32.923	3.1027	S. 2 55 23.42	0.757
ε Sagittarii	1.9	18 18 3.921	3.9816	S. 34 25 42.90	1.459
α Telescopil	3.7	18 20 9.114	4.4503	S. 46 1 11.17	1.695
λ Sagittarii	2.9	18 22 17.587	+ 3.7028	S. 25 28 23.59	+ 1.751
α Lyræ ( <i>Vega</i> )	0.1	18 33 49.412	2.0313	N. 38 41 51.44	3.230
φ Sagittarii	3.3	18 39 54.525	3.7490	S. 27 5 9.22	3.469
β <sup>1</sup> Lyræ	var. 3.4-4.5	18 46 40.987	2.2146	N. 33 15 19.53	4.052
σ Sagittarii	2.1	18 49 33.632	3.7204	S. 26 24 41.91	4.229
ε <sup>2</sup> Sagittarii	3.5	18 52 14.500	+ 3.5804	S. 21 13 41.23	+ 4.510
γ Lyræ	3.3	18 55 30.107	2.2434	N. 32 33 46.39	4.804
ζ Sagittarii	2.7	18 56 45.520	3.8185	S. 30 0 44.53	4.897
ζ Aquilæ	3.0	19 1 10.886	2.7568	N. 13 43 34.27	5.191
τ Sagittarii	3.5	19 1 11.845	3.7477	S. 27 48 19.68	5.038
λ Aquilæ	3.5	19 1 21.998	+ 3.1837	S. 5 1 15.37	+ 5.223
π Sagittarii	3.0	19 4 17.591	3.5692	S. 21 10 13.45	5.517
δ Draconis	3.2	19 12 32.208	0.0239	N. 67 29 58.90	6.327
δ Aquilæ	3.4	19 20 51.594	3.0251	N. 2 55 50.97	7.010
β Cygni	3.1	19 27 0.656	+ 2.4188	N. 27 45 57.50	+ 7.421



\* \* These Mean Places cannot be used for accurate determinations of Longitude or Latitude, but serve for ordinary sea observations. The Apparent Places of 133 stars are given on pages 105-139.

FOR JANUARY <sup>d</sup> 1'251

Star's Name.	Mag.	Right Ascension.			Declination.	Annual Variation.	
		h	m	s			
γ Aquilæ.....	2.8	19	41	53.150	+ 2.8520	N. 10 23 18.77	+ 8.620
δ Cygni.....	3.0	19	42	6.013	1.8760	N. 44 54 21.00	8.683
α Aquilæ ( <i>Altair</i> ).....	0.9	19	46	17.680	2.9272	N. 8 37 29.32	0.348
β Aquilæ.....	3.9	19	50	47.654	2.9469	N. 6 10 35.40	8.839
δ Pavonis.....	3.6	19	59	42.318	5.9173	S. 66 25 1.30	8.873
θ Aquilæ.....	3.4	20	6	33.507	+ 3.0963	S. 1 5 41.32	+ 10.523
α <sup>2</sup> Capricorni.....	3.8	20	12	57.070	3.3310	S. 12 49 49.67	10.998
β Capricorni.....	3.2	20	15	50.637	3.3740	S. 15 4 20.50	11.207
α Pavonis.....	2.0	20	18	22.446	4.7682	S. 57 1 49.70	11.292
γ Cygni.....	2.3	20	18	55.574	2.1525	N. 39 57 42.57	11.423
α Indi.....	3.2	20	31	5.883	+ 4.2324	S. 47 36 46.42	+ 12.335
α Delphini.....	3.9	20	35	21.907	2.7868	N. 15 35 14.18	12.590
β Pavonis.....	3.5	20	36	40.666	5.4508	S. 66 32 4.07	12.661
α Cygni ( <i>Deneb</i> ).....	1.3	20	38	17.717	2.0446	N. 44 57 4.39	12.769
ε Cygni.....	2.6	20	42	29.322	2.4273	N. 33 37 30.97	13.379
ε Aquarii.....	3.9	20	42	41.808	+ 3.2498	S. 9 49 58.62	+ 13.036
ζ Cygni.....	3.5	21	9	1.208	2.5518	N. 29 50 56.98	14.662
α Cephei.....	2.6	21	16	23.107	1.4354	N. 62 11 44.07	15.201
ζ Capricorni.....	3.8	21	21	25.016	3.4314	S. 22 48 36.63	15.457
β Aquarii.....	3.3	21	26	43.002	3.1604	S. 5 58 34.68	15.719
β <sup>2</sup> Cephei.....	3.4	21	27	28.650	+ 0.7883	N. 70 9 24.23	+ 15.774
ε Pegasi.....	2.5	21	39	40.038	2.9462	N. 9 27 10.25	16.405
δ Capricorni.....	3.0	21	41	57.868	3.3149	S. 16 32 42.37	16.223
γ Gruis.....	3.2	21	48	21.637	3.6432	S. 37 47 52.57	16.810
α Aquarii.....	3.2	22	1	3.556	3.0823	S. 0 46 1.34	17.406
α Gruis.....	1.9	22	2	26.323	+ 3.7966	S. 47 24 25.16	+ 17.293
ι Pegasi.....	3.9	22	2	43.655	2.7911	N. 24 53 43.63	17.500
ζ Cephei.....	3.6	22	7	39.665	2.0773	N. 57 44 51.34	17.697
α Toucani.....	2.9	22	12	12.263	4.1403	S. 60 43 5.67	17.836
γ Aquarii.....	3.9	22	16	54.292	3.0994	S. 1 51 3.90	18.068
ζ Pegasi.....	3.6	22	36	52.403	+ 2.9913	N. 10 21 3.06	+ 18.729
β Gruis.....	2.1	22	37	10.666	3.5988	S. 47 21 57.57	18.726
η Pegasi.....	3.1	22	38	41.286	2.8085	N. 29 44 23.16	18.761
ε Gruis.....	3.7	22	43	0.080	3.6415	S. 51 48 2.64	18.867
μ Pegasi.....	3.7	22	45	33.712	2.8926	N. 24 6 56.17	18.957
λ Aquarii.....	3.9	22	47	48.933	+ 3.1313	S. 8 4 9.61	+ 19.096
δ Aquarii.....	3.5	22	49	46.128	3.1870	S. 16 18 36.94	19.087
α Piscis Aust. ( <i>Pomathaut</i> ).....	1.3	22	52	34.156	3.3223	S. 30 6 36.16	19.014
β Pegasi..... var	2.2-2.7	22	59	18.764	2.9044	N. 27 35 0.85	19.483
α Pegasi ( <i>Markab</i> ).....	2.6	23	0	10.627	2.9860	N. 14 42 36.42	19.328
ε <sup>2</sup> Aquarii.....	3.8	23	4	32.555	+ 3.2028	S. 21 40 19.22	+ 19.503
γ Piscium.....	3.8	23	12	23.747	3.1093	N. 2 46 46.19	19.636
γ Cephei.....	3.4	23	35	33.927	+ 2.4339	N. 77 7 8.01	+ 20.090

AT UPPER TRANSIT AT GREENWICH.

α Urse Minoris (*Polaris*). Mag. 2.1

Day.	January.		February.		March.		April.		May.		June.	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	o /	h m	o /	h m	o /	h m	o /	h m	o /	h m	o /
	I 25	88 49	I 25	88 49	I 25	88 48	I 25	88 48	I 25	88 48	I 25	88 48
	s	''	s	''	s	''	s	''	s	''	s	''
1	75.36	9.05	42.70	10.13	16.10	65.64	1.56	56.02	6.20	47.61	26.91	41.07
2	74.46	9.20	41.56	10.09	15.25	65.41	1.44	56.57	6.75	47.34	27.73	40.96
3	73.50	9.37	40.39	10.02	14.43	65.15	1.40	56.23	7.28	47.09	28.53	40.84
4	72.47	9.54	39.24	9.93	13.68	64.88	1.41	55.91	7.79	46.86	29.31	40.72
5	71.37	9.70	38.14	9.81	13.01	64.60	1.43	55.61	8.27	46.63	30.08	40.59
6	70.21	9.83	37.09	9.67	12.41	64.33	1.45	55.32	8.72	46.39	30.86	40.45
7	69.03	9.92	36.11	9.53	11.87	64.06	1.46	55.04	9.15	46.15	31.68	40.30
8	67.86	10.00	35.19	9.39	11.37	63.80	1.44	54.76	9.57	45.90	32.55	40.16
9	66.74	10.05	34.31	9.26	10.87	63.54	1.40	54.47	10.00	45.65	33.48	40.02
10	65.67	10.09	33.44	9.13	10.36	63.29	1.34	54.18	10.47	45.39	34.48	39.88
11	64.66	10.13	32.56	9.01	9.82	63.04	1.26	53.89	10.98	45.13	35.54	39.76
12	63.69	10.17	31.66	8.90	9.26	62.80	(1.19) (1.14)	(53.59) (53.27)	11.55	44.86	36.63	39.67
13	62.73	10.21	30.74	8.78	8.68	62.56	1.13	52.93	12.19	44.59	37.72	39.60
14	61.77	10.26	29.78	8.66	8.08	62.30	1.18	52.58	12.91	44.34	38.78	39.56
15	60.78	10.31	28.79	8.53	7.47	62.03	1.30	52.24	13.69	44.11	39.77	39.53
16	59.76	10.37	27.78	8.38	6.87	61.74	1.50	51.91	14.49	43.89	40.70	39.51
17	58.70	10.42	26.75	8.21	6.29	61.43	1.78	51.58	15.28	43.70	41.58	39.48
18	57.59	10.47	25.72	8.03	5.76	61.11	2.10	51.27	16.04	43.54	42.43	39.44
19	56.44	10.51	24.73	7.84	5.30	60.78	2.44	50.99	16.74	43.38	43.28	39.38
20	55.26	10.54	23.79	7.63	4.91	60.45	2.77	50.74	17.38	43.21	44.17	39.30
21	54.07	10.54	22.91	7.40	4.60	60.12	3.05	50.49	17.98	43.03	45.13	39.22
22	52.88	10.52	22.10	7.17	4.36	59.81	3.27	50.24	18.58	42.84	46.16	39.15
23	51.72	10.48	21.36	6.95	4.15	59.52	3.45	49.98	19.20	42.64	47.25	39.09
24	50.60	10.43	20.68	6.74	3.95	59.25	3.61	49.71	19.88	42.43	48.38	39.05
25	49.54	10.37	20.01	6.55	3.72	58.99	3.78	49.43	20.64	42.21	49.52	39.03
26	48.55	10.31	19.32	6.37	3.44	58.73	4.01	49.13	21.47	42.00	50.64	39.02
27	47.61	10.25	18.59	6.20	3.10	58.47	4.31	48.81	22.37	41.81	51.73	39.03
28	46.69	10.20	17.81	6.03	2.73	58.20	4.69	48.49	23.30	41.64	52.78	39.05
29	45.77	10.17	16.97	5.85	2.36	57.91	5.14	48.18	24.24	41.48	53.79	39.07
30	44.81	10.16	16.10	5.64	2.02	57.59	5.66	47.89	25.17	41.33	54.76	39.10
31	43.79	10.15		1.75	57.26		6.20	47.61	26.06	41.19	55.70	39.12
32	42.70	10.13		1.56	56.92			47.32	26.91	41.07		

Mean R. A. 1<sup>h</sup> 26<sup>m</sup> 1<sup>s</sup>.592 Mean Dec. +88° 48' 56".29 Sec δ 48.380 Tan δ +48.370



AT UPPER TRANSIT AT GREENWICH.

$\alpha$  Ursæ Minoris (*Polaris*). Mag. 2.1

Day.	July.		August.		September.		October.		November.		December.	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	o /	h m	o /	h m	o /	h m	o /	h m	o /	h m	o /
	I 25	88 48	I 26	88 48	I 26	88 48	I 27	88 48	I 26	88 49	I 26	88 49
	s	//	s	//	s	//	s	//	s	//	s	//
1	55.70	39.12	27.07	42.09	53.89	49.54	10.04	59.96	72.18	11.98	58.79	22.22
2	56.61	39.14	28.01	42.23	54.73	49.84	10.42	60.38	71.85	12.37	58.04	22.48
3	57.53	39.15	29.00	42.38	55.57	50.18	10.72	60.80	71.50	12.74	57.34	22.74
4	58.47	39.16	30.04	42.54	56.37	50.54	10.93	61.23	71.16	13.09	56.70	23.00
5	59.45	39.16	31.12	42.72	57.09	50.90	11.07	61.65	70.87	13.43	56.09	23.27
6	60.48	39.16	32.21	42.92	57.72	51.27	11.18	62.04	70.64	13.77	55.49	23.54
7	61.56	39.17	33.28	43.15	58.28	51.63	11.28	62.40	70.45	14.11	54.87	23.82
8	62.70	39.19	34.31	43.40	58.79	51.98	11.41	62.75	70.28	14.45	54.20	24.11
9	63.88	39.24	35.25	43.66	59.28	52.30	11.60	63.10	70.10	14.80	53.46	24.40
10	65.07	39.32	36.13	43.92	59.79	52.61	11.85	63.45	69.89	15.18	52.66	24.68
11	66.23	39.42	36.94	44.17	60.34	52.92	12.13	63.81	69.62	15.57	51.80	24.95
12	67.33	39.53	37.71	44.40	60.94	53.23	12.41	64.19	69.28	15.95	50.88	25.21
13	68.36	39.64	38.48	44.62	61.59	53.54	12.68	64.58	68.87	16.33	49.94	25.45
14	69.32	39.76	39.28	44.83	62.27	53.86	12.90	64.98	68.41	16.71	48.98	25.68
15	70.23	39.88	40.13	45.04	62.95	54.20	13.06	65.40	67.88	17.08	48.02	25.90
16	71.12	39.98	41.05	45.26	63.61	54.56	13.15	65.82	67.34	17.42	47.08	26.09
17	72.03	40.07	42.01	45.49	64.22	54.94	13.18	66.23	66.78	17.75	46.17	26.27
18	73.00	40.15	42.99	45.73	64.76	55.32	13.15	66.63	66.22	18.07	45.30	26.45
19	74.03	40.22	43.97	45.98	65.24	55.70	13.08	67.03	65.68	18.37	44.48	26.63
20	75.12	40.30	44.92	46.24	65.66	56.08	12.99	67.41	65.18	18.67	43.70	26.81
21	76.25	40.40	45.81	46.52	66.03	56.45	12.89	67.77	64.72	18.97	42.92	27.00
22	77.40	40.51	46.64	46.82	66.37	56.81	12.79	68.13	64.29	19.27	42.12	27.21
23	78.53	40.64	47.42	47.12	66.70	57.16	12.72	68.48	63.88	19.58	41.26	27.43
24	79.63	40.79	48.15	47.41	67.03	57.50	12.69	68.83	63.46	19.92	40.33	27.66
25	80.68	40.96	48.84	47.69	67.37	57.83	12.70	69.18	63.00	20.27	39.33	27.88
26	81.68	41.13	49.50	47.96	67.74	58.16	12.74	69.55	62.47	20.63	38.24	28.09
27	82.63	41.30	50.16	48.23	68.16	58.50	12.79	69.93	61.86	20.99	37.11	28.27
28	83.54	41.47	50.83	48.49	68.62	58.84	12.82	70.32	61.16	21.34	35.99	28.42
29	84.43	41.63	51.53	48.75	69.11	59.19	12.79	70.73	60.39	21.66	34.90	28.54
30	85.30	41.79	52.27	49.01	69.59	59.56	12.67	71.15	59.59	21.95	33.86	28.64
31	86.17	41.94	53.06	49.27	70.04	59.96	12.47	71.57	58.79	22.22	32.89	28.74
32	87.07	42.09	53.89	49.54			12.18	71.98			31.97	28.85

Mean R. A.  $1^h 26^m 1^s 592$  Mean Dec.  $+ 88^\circ 48' 56'' 29$  Sec  $\delta 48.380$  Tan  $\delta + 48.370$

AT UPPER TRANSIT AT GREENWICH.

Date.	$\alpha$ Andromedæ. Mag. 2.1		$\beta$ Cassiopeiæ. Mag. 2.4		$\gamma$ Pegasi. ( <i>Algenib</i> ) Mag. 2.9		$\beta$ Hydri. Mag. 2.9	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.
	h m	o /	h m	o /	h m	o /	h m	o /
	0 3	28 34	0 4	58 38	0 8	14 40	0 20	77 45
	s	//	s	//	s	//	s	//
Jan. 1	36.66	58.97	14.70	42.51	28.69	16.84	53.71	107.54
11	36.51	58.02	14.37	41.73	28.57	15.98	52.84	106.49
21	36.38	56.79	14.06	40.45	28.46	15.02	52.02	104.85
31	36.25	55.39	13.78	38.68	28.35	14.00	51.29	102.67
Feb. 10	36.14	53.82	13.53	36.55	28.27	12.93	50.66	100.01
20	36.06	52.19	13.33	34.10	28.20	11.90	50.15	96.98
Mar. 1	36.01	50.54	13.19	31.45	28.16	10.95	49.78	93.59
11	36.00	48.97	13.12	28.72	28.15	10.14	49.54	89.97
21	<sup>(36.03)</sup> <sub>(36.04)</sub>	<sup>(47.54)</sup> <sub>(47.42)</sub>	<sup>(13.12)</sup> <sub>(13.13)</sub>	<sup>(26.01)</sup> <sub>(25.75)</sub>	28.17	9.51	49.46	86.20
31	36.11	46.25	13.22	23.21	28.25	9.10	49.55	81.98
Apr. 10	36.24	45.36	13.39	20.91	28.37	9.00	49.80	78.13
20	36.41	44.82	13.64	18.96	28.52	9.22	50.20	74.39
30	36.63	44.66	13.96	17.44	28.72	9.76	50.76	70.85
May 10	36.88	44.85	14.34	16.37	28.95	10.60	51.45	67.55
20	37.17	45.47	14.77	15.83	29.22	11.74	52.27	64.59
30	37.48	46.46	15.23	15.81	29.51	13.18	53.20	62.00
June 9	37.81	47.83	15.72	16.31	29.82	14.86	54.21	59.89
19	38.15	49.50	16.22	17.34	30.14	16.72	55.29	58.26
29	38.49	51.44	16.72	18.83	30.46	18.74	56.41	57.16
July 9	38.83	53.61	17.20	20.80	30.77	20.87	57.54	56.65
19	39.14	55.95	17.65	23.15	31.07	23.04	58.65	56.70
29	39.43	58.41	18.07	25.85	31.35	25.19	59.70	57.32
Aug. 8	39.69	60.91	18.43	28.81	31.59	27.29	60.67	58.50
18	39.91	63.44	18.74	32.01	31.81	29.29	61.53	60.19
28	40.09	65.89	19.00	35.34	31.99	31.15	62.25	62.33
Sept. 7	40.23	68.26	19.19	38.74	32.13	32.83	62.81	64.85
17	40.33	70.48	19.31	42.15	32.23	34.31	63.20	67.67
27	40.39	72.53	19.37	45.52	32.30	35.57	63.40	70.66
Oct. 7	40.42	74.36	19.37	48.74	32.34	36.62	63.41	73.73
17	40.41	75.98	19.32	51.77	32.34	37.46	63.23	76.76
27	40.36	77.33	19.20	54.53	32.31	38.04	62.88	79.58
Nov. 6	40.29	78.38	19.04	56.97	32.25	38.42	62.36	82.13
16	40.20	79.17	18.83	59.03	32.18	38.57	61.71	84.27
26	40.09	79.62	18.59	60.66	32.09	38.51	60.95	85.95
Dec. 6	39.97	79.78	18.31	61.79	31.99	38.27	60.11	87.05
16	39.83	79.60	18.00	62.41	31.88	37.82	59.22	87.54
26	39.69	79.12	17.69	62.47	31.76	37.21	58.32	87.43
36	39.55	78.34	17.36	62.00	31.65	36.45	57.43	86.67
Mean R. A.	$0^h 3^m 37^s \cdot 782$		$0^h 4^m 15^s \cdot 775$		$0^h 8^m 29^s \cdot 818$		$0^h 20^m 55^s \cdot 801$	
Mean Dec.	$+28^\circ 34' 57'' \cdot 06$		$+58^\circ 38' 32'' \cdot 52$		$+14^\circ 40' 19'' \cdot 66$		$-77^\circ 46' 20'' \cdot 60$	
Sec $\delta$ , Tan $\delta$	1.139, + 0.545		1.922, + 1.641		1.034, + 0.262		4.722, - 4.615	



AT UPPER TRANSIT AT GREENWICH.

Date.	α Phœnicis. Mag. 2.4		α Cassiopeiæ. Mag. 2.2-2.8		β Ceti. Mag. 2.2		γ Cassiopeiæ. Mag. 2.3	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	0 21	42 47	0 35	56 1	0 38	18 29	0 51	60 12
	s	"	s	"	s	"	s	"
Jan. 1	43.11	101.77	15.93	67.75	57.31	43.68	8.19	77.43
11	42.93	101.67	15.66	67.34	57.19	44.16	7.84	77.28
21	42.75	101.12	15.37	66.41	57.06	44.39	7.49	76.61
31	42.60	100.12	15.09	65.03	56.95	44.37	7.15	75.41
Feb. 10	42.46	98.73	14.83	63.22	56.84	44.07	6.83	73.76
20	42.35	96.95	14.61	61.09	56.75	43.48	6.56	71.74
Mar. 1	42.28	94.83	14.44	58.70	56.69	42.65	6.34	69.41
11	42.24	92.42	14.33	56.18	56.65	41.55	6.18	66.89
21	42.25	89.75	14.28	53.64	56.65	40.16	6.09	64.27
31	42.32	86.62	14.32	50.94	<sup>56.69</sup> <sub>(56.70)</sub>	<sup>38.54</sup> <sub>(38.38)</sub>	6.09	61.68
Apr. 10	42.43	83.61	14.43	48.68	56.78	36.54	6.18	58.99
20	42.59	80.56	14.62	46.70	56.90	34.48	6.36	56.78
30	42.80	77.48	14.88	45.07	57.07	32.28	6.61	54.90
May 10	43.05	74.46	15.20	43.87	57.27	29.97	6.95	53.42
20	43.35	71.59	15.58	43.12	57.51	27.58	7.34	52.38
30	43.69	68.89	16.00	42.89	57.79	25.18	7.79	51.81
June 9	44.05	66.46	16.45	43.14	58.09	22.82	8.28	51.76
19	44.43	64.34	16.92	43.88	58.40	20.57	8.79	52.21
29	44.82	62.58	17.40	45.09	58.73	18.48	9.32	53.15
July 9	45.22	61.23	17.87	46.75	59.05	16.60	9.84	54.55
19	45.60	60.35	18.32	48.83	59.37	14.97	10.35	56.40
29	45.96	59.93	18.75	51.23	59.67	13.67	10.83	58.63
Aug. 8	46.29	59.97	19.13	53.94	59.95	12.68	11.27	61.17
18	46.58	60.51	19.47	56.88	60.20	12.04	11.67	64.03
28	46.83	61.46	19.76	59.99	60.42	11.77	12.02	67.09
Sept. 7	47.03	62.83	20.00	63.24	60.60	11.85	12.31	70.30
17	47.18	64.53	20.18	66.51	60.74	12.24	12.53	73.63
27	47.27	66.51	20.30	69.73	60.84	12.94	12.70	76.96
Oct. 7	47.31	68.67	20.37	72.88	60.90	13.88	12.80	80.25
17	47.30	70.93	20.38	75.89	60.93	15.00	12.84	83.44
27	47.25	73.20	20.33	78.70	60.92	16.27	12.81	86.45
Nov. 6	47.16	75.36	20.24	81.21	60.89	17.59	12.73	89.23
16	47.03	77.34	20.10	83.41	60.83	18.92	12.59	91.71
26	46.89	79.04	19.91	85.23	60.75	20.19	12.40	93.82
Dec. 6	46.72	80.42	19.69	86.61	60.66	21.36	12.16	95.50
16	46.54	81.41	19.44	87.49	60.55	22.36	11.88	96.69
26	46.35	81.95	19.17	87.87	60.43	23.16	11.57	97.37
36	46.17	82.06	18.88	87.74	60.31	23.77	11.24	97.52
Mean R. A.	0 <sup>h</sup> 21 <sup>m</sup> 44 <sup>s</sup> .360		0 <sup>h</sup> 35 <sup>m</sup> 16 <sup>s</sup> .803		0 <sup>h</sup> 38 <sup>m</sup> 58 <sup>s</sup> .330		0 <sup>h</sup> 51 <sup>m</sup> 8 <sup>s</sup> .866	
Mean Dec.	-42° 48' 20".16		+56° 1' 58".45		-18° 29' 29".00		+60° 13' 7".39	
Sec δ, Tan δ	1.363, - 0.926		1.790, + 1.484		1.054, - 0.334		2.013, + 1.747	

AT UPPER TRANSIT AT GREENWICH.

Date.	β Andromedæ. Mag. 2.4		δ Cassiopeiæ. Mag. 2.8		α Eridani. (Achernar) Mag. 0.5		β Arietis. Mag. 2.7	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	1 4	35 7	1 19	59 45	1 34	57 41	1 49	20 21
	s	"	s	"	s	"	s	"
Jan. 1	33.86	62.18	46.90	36.65	16.97	99.14	32.73	29.33
11	33.69	61.76	46.58	36.86	16.65	99.52	32.61	28.95
21	33.52	61.00	46.24	36.53	16.32	99.35	32.47	28.42
31	33.35	59.96	45.89	35.70	16.00	98.61	32.32	27.76
Feb. 10	33.18	58.69	45.56	34.39	15.69	97.33	32.17	27.00
20	33.04	57.19	45.26	32.66	15.41	95.56	32.03	26.16
Mar. 1	32.92	55.61	45.00	30.59	15.16	93.33	31.91	25.30
11	32.83	53.96	44.80	28.25	14.96	90.68	31.80	24.45
21	32.79	52.33	44.67	25.80	14.81	87.71	31.73	23.68
31	32.79	50.83	44.62	23.29	14.71	84.46	31.69	23.00
Apr. 10	32.86	49.37	44.65	20.83	14.68	81.01	31.70	22.52
20	32.97	48.31	44.78	18.36	14.73	77.06	31.76	22.21
30	33.14	47.55	44.99	16.36	14.85	73.43	31.87	22.18
May 10	33.36	47.14	45.27	14.68	15.04	69.81	32.02	22.42
20	33.62	47.11	45.63	13.44	15.29	66.33	32.22	22.94
30	33.91	47.45	46.05	12.62	15.61	63.01	32.46	23.72
June 9	34.24	48.16	46.51	12.26	15.98	59.98	32.73	24.78
19	34.59	49.24	47.01	12.40	16.39	57.27	33.03	26.07
29	34.95	50.65	47.53	13.01	16.85	54.97	33.34	27.55
July 9	35.31	52.37	48.06	14.08	17.33	53.12	33.67	29.22
19	35.66	54.31	48.58	15.59	17.82	51.80	34.00	31.00
29	36.00	56.47	49.08	17.51	18.30	51.03	34.32	32.86
Aug. 8	36.32	58.78	49.55	19.76	18.77	50.81	34.63	34.75
18	36.61	61.19	49.99	22.34	19.21	51.20	34.92	36.62
28	36.86	63.64	50.38	25.15	19.61	52.12	35.18	38.44
Sept. 7	37.08	66.09	50.72	28.16	19.96	53.57	35.42	40.15
17	37.26	68.50	51.00	31.29	20.25	55.47	35.62	41.75
27	37.40	70.81	51.22	34.51	20.48	57.78	35.80	43.21
Oct. 7	37.50	72.99	51.39	37.73	20.63	60.40	35.94	44.49
17	37.56	75.01	51.49	40.88	20.72	63.22	36.05	45.61
27	37.59	76.82	51.53	43.94	20.74	66.13	36.13	46.55
Nov. 6	37.58	78.42	51.51	46.79	20.69	69.02	36.18	47.32
16	37.54	79.78	51.44	49.39	20.58	71.76	36.20	47.89
26	37.47	80.82	51.30	51.69	20.41	74.24	36.19	48.28
Dec. 6	37.38	81.58	51.11	53.61	20.19	76.37	36.15	48.51
16	37.26	82.01	50.88	55.08	19.93	78.07	36.09	48.56
26	37.12	82.11	50.60	56.07	19.64	79.27	36.00	48.45
36	36.96	81.88	50.29	56.56	19.34	79.93	35.89	48.17
Mean R. A.	1 <sup>h</sup> 4 <sup>m</sup> 34 <sup>s</sup> .612		1 <sup>h</sup> 19 <sup>m</sup> 47 <sup>s</sup> .355		1 <sup>h</sup> 34 <sup>m</sup> 17 <sup>s</sup> .321		1 <sup>h</sup> 49 <sup>m</sup> 33 <sup>s</sup> .287	
Mean Dec.	+35° 7' 58".67		+59° 45' 27".09		-57° 42' 14".60		+20° 21' 30".94	
Sec δ, Tan δ	1.223, + 0.704		1.986, + 1.715		1.872, - 1.582		1.067, + 0.371	



AT UPPER TRANSIT AT GREENWICH.								
Date.	γ <sup>1</sup> Andromedæ. Mag. 2.2		α Arietis. Mag. 2.2		γ <sup>2</sup> Ceti. Mag. 3.0		α Ceti. Mag. 2.8	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	1 58	41 53	2 1	23 1	2 38	2 50	2 57	3 43
	s	//	s	//	s	//	s	//
Jan. 1	14.42	23.83	58.56	39.09	31.61	47.19	27.90	38.27
11	14.25	23.99	58.44	38.82	31.51	46.52	27.81	37.61
21	14.05	23.81	58.30	38.37	31.39	45.90	27.70	37.00
31	13.84	23.27	58.15	37.78	31.26	45.34	27.56	36.47
Feb. 10	13.63	22.38	57.99	37.04	31.11	44.92	27.42	36.04
20	13.43	21.22	57.84	36.21	30.96	44.60	27.26	35.70
Mar. 1	13.25	19.82	57.70	35.31	30.82	44.40	27.11	35.48
11	13.09	18.23	57.59	34.41	30.69	44.35	26.97	35.40
21	12.98	16.55	57.50	33.54	30.58	44.47	26.85	35.48
31	12.91	14.85	57.45	32.75	30.50	44.76	26.76	35.74
Apr. 10	12.90	13.22	57.45	32.10	30.46	45.26	26.70	36.18
20	12.95	11.71	57.49	31.66	30.47	45.97	26.69	36.82
30	13.07	10.31	57.59	31.42	30.52	46.90	26.72	37.66
May 10	13.25	9.32	57.74	31.46	30.62	48.16	26.80	38.83
20	13.47	8.64	57.93	31.78	30.76	49.52	26.93	40.11
30	13.75	8.30	58.16	32.39	30.94	51.06	27.10	41.56
June 9	14.07	8.34	58.43	33.25	31.16	52.75	27.30	43.16
19	14.42	8.73	58.72	34.36	31.42	54.55	27.54	44.88
29	14.79	9.47	59.04	35.70	31.69	56.40	27.81	46.66
July 9	15.17	10.57	59.37	37.23	31.99	58.26	28.09	48.48
19	15.57	11.96	59.70	38.91	32.29	60.11	28.39	50.26
29	15.95	13.63	60.03	40.71	32.59	61.86	28.70	51.96
Aug. 8	16.32	15.55	60.34	42.55	32.90	63.48	29.00	53.55
18	16.67	17.64	60.64	44.41	33.19	64.94	29.30	54.98
28	16.99	19.89	60.92	46.24	33.46	66.17	29.58	56.21
Sept. 7	17.28	22.21	61.17	48.00	33.72	67.16	29.85	57.20
17	17.54	24.57	61.39	49.66	33.96	67.91	30.09	57.96
27	17.76	26.98	61.58	51.20	34.16	68.38	30.31	58.45
Oct. 7	17.94	29.34	61.74	52.59	34.34	68.60	30.51	58.70
17	18.08	31.63	61.87	53.84	34.49	68.60	30.68	58.71
27	18.19	33.82	61.96	54.92	34.62	68.39	30.82	58.51
Nov. 6	18.25	35.83	62.03	55.83	34.71	67.99	30.94	58.14
16	18.27	37.66	62.06	56.57	34.77	67.46	31.02	57.63
26	18.25	39.27	62.06	57.13	34.80	66.82	31.07	57.01
Dec. 6	18.20	40.61	62.03	57.51	34.81	66.14	31.09	56.33
16	18.11	41.66	61.97	57.71	34.78	65.42	31.08	55.64
26	17.98	42.37	61.80	57.72	34.72	64.70	31.04	54.94
36	17.82	42.75	61.78	57.56	34.64	64.03	30.96	54.26
Mean R. A.	1 <sup>h</sup> 58 <sup>m</sup> 14 <sup>s</sup> .831		2 <sup>h</sup> 1 <sup>m</sup> 59 <sup>s</sup> .049		2 <sup>h</sup> 38 <sup>m</sup> 31 <sup>s</sup> .925		2 <sup>h</sup> 57 <sup>m</sup> 28 <sup>s</sup> .126	
Mean Dec.	+41° 53' 19".10		+23° 1' 39".94		+2° 50' 54".49		+3° 43' 45".16	
Sec δ, Tan δ	1.343, +0.897		1.087, +0.425		1.001, +0.050		1.002, +0.065	

AT UPPER TRANSIT AT GREENWICH.								
Date.	β Persei. (Algol) Mag. 2.2-3.7		α Persei. Mag. 1.9		α Tauri. (Aldebaran) Mag. 1.1		ι Aurigæ. Mag. 2.9	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	3 2	40 35	3 17	49 31	4 30	16 19	4 50	33 1
	s	//	s	//	s	//	s	//
Jan. 1	10.60	69.37	45.03	68.21	38.51	26.25	60.25	15.05
11	10.47	69.99	44.89	69.29	38.49	26.07	60.23	15.78
21	10.31	70.33	44.69	70.02	38.42	25.91	60.17	16.42
31	10.11	70.36	44.46	70.39	38.31	25.73	60.06	16.94
Feb. 10	9.90	70.07	44.21	70.35	38.18	25.55	59.91	17.30
20	9.69	69.49	43.94	69.95	38.02	25.35	59.73	17.51
Mar. 1	9.47	68.63	43.67	69.19	37.84	25.16	59.53	17.54
11	9.27	67.57	43.42	68.10	37.66	24.97	59.32	17.39
21	9.10	66.33	43.20	66.74	37.49	24.81	59.12	17.07
31	8.97	64.98	43.02	65.18	37.34	24.66	58.93	16.61
Apr. 10	8.89	63.59	42.90	63.50	37.21	24.56	58.77	16.03
20	8.86	62.24	42.84	61.77	37.12	24.54	58.65	15.37
30	8.89	60.97	42.85	60.07	37.07	24.62	58.57	14.68
May 10	8.99	59.74	42.92	58.47	37.06	24.80	58.54	14.00
20	9.15	58.86	43.09	56.91	37.10	25.12	58.56	13.37
30	9.36	58.22	43.30	55.72	(37.19) (37.20)	(25.58) (25.64)	58.64	12.81
June 9	9.62	57.86	43.57	54.81	37.34	26.26	58.78	12.34
19	9.92	57.81	43.90	54.21	37.51	27.01	58.97	12.04
29	10.25	58.04	44.26	53.92	37.73	27.88	59.19	11.89
July 9	10.61	58.56	44.66	53.95	37.97	28.84	59.45	11.91
19	10.99	59.38	45.08	54.32	38.24	29.88	59.74	12.07
29	11.37	60.44	45.52	55.00	38.53	30.93	60.05	12.35
Aug. 8	11.75	61.73	45.96	55.98	38.83	31.99	60.38	12.77
18	12.13	63.20	46.39	57.24	39.14	33.00	60.73	13.29
28	12.49	64.84	46.81	58.74	39.45	33.95	61.08	13.91
Sept. 7	12.83	66.62	47.21	60.46	39.75	34.80	61.43	14.58
17	13.15	68.48	47.59	62.33	40.05	35.54	61.77	15.28
27	13.44	70.39	47.94	64.36	40.34	36.13	62.11	16.03
Oct. 7	13.70	72.33	48.25	66.49	40.61	36.57	62.43	16.81
17	13.92	74.25	48.53	68.70	40.87	36.88	62.74	17.60
27	14.11	76.13	48.77	70.95	41.11	37.06	63.03	18.41
Nov. 6	14.26	77.96	48.96	73.19	41.32	37.12	63.29	19.23
16	14.37	79.70	49.11	75.39	41.51	37.11	63.53	20.07
26	14.44	81.31	49.21	77.48	41.66	37.02	63.73	20.93
Dec. 6	14.47	82.77	49.25	79.44	41.78	36.89	63.89	21.79
16	14.45	84.04	49.23	81.22	41.86	36.74	64.00	22.64
26	14.39	85.08	49.17	82.76	41.90	36.58	64.07	23.47
36	14.29	85.86	49.05	84.03	41.90	36.41	64.08	24.24
Mean R. A.	3 <sup>h</sup> 2 <sup>m</sup> 10 <sup>s</sup> .691		3 <sup>h</sup> 17 <sup>m</sup> 44 <sup>s</sup> .925		4 <sup>h</sup> 30 <sup>m</sup> 38 <sup>s</sup> .401		4 <sup>h</sup> 51 <sup>m</sup> 0 <sup>s</sup> .025	
Mean Dec.	+40° 36' 6".25		+49° 32' 3".57		+16° 19' 29".62		+33° 1' 15".81	
Sec δ, Tan δ	1.317, +0.857		1.541, +1.172		1.042, +0.293		1.193, +0.650	



AT UPPER TRANSIT AT GREENWICH.								
Date.	β Eridani. Mag. 2.9		α Aurigæ. (Capella) Mag. 0.2		β Orionis. (Rigel) Mag. 0.3		γ Orionis. (Bellatrix) Mag. 1.7	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	o /	h m	o /	h m	o /	h m	o /
	5 3	5 12	5 9	45 54	5 10	8 18	5 20	6 15
	s	"	s	"	s	"	s	"
Jan. 1	19.90	23.77	53.88	19.02	7.29	33.24	12.01	56.22
11	19.89	25.07	53.87	20.48	7.28	34.71	12.02	55.46
21	19.83	26.20	53.80	21.80	7.23	35.99	11.99	54.81
31	19.74	27.15	53.68	22.92	7.14	37.07	11.92	54.27
Feb. 10	19.61	27.91	53.50	23.83	7.01	37.92	11.80	53.83
20	19.46	28.42	53.29	24.47	6.86	38.53	11.66	53.52
Mar. 1	19.29	28.73	53.05	24.80	6.69	38.89	11.50	53.33
11	19.11	28.80	52.79	24.81	6.50	38.97	11.32	53.24
21	18.93	28.66	52.53	24.53	6.32	38.82	11.15	53.27
31	18.76	28.29	52.29	23.97	6.15	38.41	10.98	53.42
Apr. 10	18.61	27.70	52.08	23.17	5.99	37.74	10.83	53.67
20	18.49	26.87	51.91	22.15	5.87	36.84	10.70	54.07
30	18.41	25.83	51.79	21.00	5.78	35.69	10.61	54.60
May 10	18.37	24.59	51.73	19.73	5.72	34.34	10.57	55.27
20	18.37	23.16	51.73	18.42	5.71	32.77	10.56	56.08
30	18.41	21.57	51.79	17.13	5.75	31.04	10.59	57.00
June 9	18.50	19.65	(51.90) (51.92)	(15.91) (15.79)	(5.83) (5.83)	(28.16) (28.96)	10.67	58.06
19	18.63	17.81	52.10	14.69	5.96	26.98	10.81	59.33
29	18.80	15.93	52.34	13.73	6.12	24.97	10.97	60.56
July 9	19.00	14.04	52.62	12.93	6.31	22.95	11.16	61.84
19	19.23	12.20	52.95	12.32	6.53	20.99	11.38	63.13
29	19.48	10.47	53.30	11.91	6.77	19.16	11.63	64.37
Aug. 8	19.75	8.92	53.68	11.70	7.04	17.52	11.90	65.51
18	20.03	7.58	54.07	11.67	7.31	16.12	12.18	66.55
28	20.31	6.52	54.48	11.84	7.60	15.00	12.46	67.42
Sept. 7	20.60	5.74	54.90	12.19	7.89	14.21	12.75	68.09
17	20.89	5.31	55.31	12.72	8.18	13.79	13.05	68.54
27	21.17	5.20	55.72	13.42	8.46	13.72	13.34	68.76
Oct. 7	21.44	5.45	56.12	14.26	8.73	14.04	13.62	68.74
17	21.70	6.01	56.50	15.24	9.00	14.70	13.90	68.49
27	21.94	6.87	56.86	16.36	9.24	15.68	14.16	68.04
Nov. 6	22.17	7.98	57.19	17.62	9.47	16.94	14.40	67.41
16	22.36	9.30	57.49	18.99	9.67	18.41	14.62	66.64
26	22.53	10.74	57.74	20.46	9.84	20.05	14.81	65.78
Dec. 6	22.66	12.25	57.95	22.00	9.98	21.74	14.97	64.87
16	22.76	13.77	58.10	23.57	10.08	23.45	15.09	63.96
26	22.82	15.23	58.20	25.13	10.14	25.10	15.17	63.10
36	22.83	16.61	58.23	26.64	10.16	26.64	15.21	62.32
Mean R. A.	5 <sup>h</sup> 3 <sup>m</sup> 19 <sup>s</sup> .606		5 <sup>h</sup> 9 <sup>m</sup> 53 <sup>s</sup> .451		5 <sup>h</sup> 10 <sup>m</sup> 6 <sup>s</sup> .952		5 <sup>h</sup> 20 <sup>m</sup> 11 <sup>s</sup> .759	
Mean Dec.	- 5° 12' 17".35		+ 45° 54' 18".65		- 8° 18' 26".64		+ 6° 16' 0".73	
Sec δ, Tan δ	1.004, - 0.091		1.437, + 1.032		1.011, - 0.146		1.006, + 0.110	

AT UPPER TRANSIT AT GREENWICH.								
Date.	β Tauri. Mag. 1.8		δ Orionis. Mag. 2.2-2.7		α Leporis. Mag. 2.7		ε Orionis. Mag. 1.7	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	o /	h m	o /	h m	o /	h m	o /
	5 20	28 31	5 27	0 21	5 28	17 53	5 31	1 15
	s	"	s	"	s	"	s	"
Jan. 1	28.77	47.51	18.67	65.24	40.85	22.50	33.00	41.46
11	28.79	48.01	18.68	66.38	40.84	24.47	33.02	42.66
21	28.75	48.49	18.65	67.37	40.79	26.25	32.99	43.70
31	28.67	48.92	18.57	68.20	40.70	27.75	32.92	44.58
Feb. 10	28.55	49.29	18.46	68.87	40.57	28.94	32.81	45.29
20	28.39	49.55	18.32	69.35	40.41	29.84	32.67	45.80
Mar. 1	28.21	49.69	18.16	69.66	40.23	30.37	32.51	46.13
11	28.01	49.72	17.98	69.77	40.03	30.57	32.33	46.26
21	27.81	49.61	17.80	69.71	39.83	30.44	32.15	46.20
31	27.62	49.40	17.63	69.48	39.64	29.98	31.98	45.96
Apr. 10	27.46	49.09	17.48	69.05	39.47	29.18	31.82	45.53
20	27.32	48.73	17.35	68.45	39.32	28.09	31.69	44.91
30	27.22	48.32	17.25	67.67	39.20	26.67	31.59	44.09
May 10	27.17	47.91	17.10	66.71	39.12	25.02	31.53	43.11
20	27.17	47.52	17.18	65.58	39.09	23.09	31.51	41.95
30	27.21	47.20	17.20	64.31	39.09	20.98	31.53	40.65
June 9	27.31	46.95	17.27	62.91	39.14	18.72	31.59	39.22
19	27.46	46.79	17.39	61.25	39.25	16.08	31.71	37.51
29	27.65	46.74	17.54	59.67	39.38	13.67	31.85	35.90
July 9	27.88	46.80	17.72	58.08	39.56	11.26	32.03	34.27
19	28.13	46.97	17.93	56.52	39.76	8.96	32.24	32.67
29	28.41	47.23	18.17	55.03	39.99	6.82	32.47	31.16
Aug. 8	28.72	47.56	18.43	53.65	40.24	4.88	32.72	29.77
18	29.03	47.93	18.70	52.46	40.52	3.26	32.99	28.55
28	29.36	48.34	18.98	51.49	40.80	1.98	33.27	27.58
Sept. 7	29.70	48.78	19.27	50.78	41.09	1.11	33.56	26.86
17	30.03	49.22	19.55	50.33	41.38	0.66	33.85	26.41
27	30.36	49.64	19.84	50.19	41.67	0.65	34.14	26.27
Oct. 7	30.68	50.06	20.12	50.34	41.96	1.10	34.42	26.46
17	31.00	50.46	20.40	50.80	42.23	2.00	34.69	26.93
27	31.30	50.85	20.66	51.52	42.50	3.29	34.95	27.70
Nov. 6	31.57	51.24	20.90	52.45	42.74	4.92	35.20	28.70
16	31.83	51.64	21.12	53.58	42.96	6.82	35.42	29.88
26	32.05	52.07	21.31	54.83	43.14	8.93	35.62	31.18
Dec. 6	32.24	52.52	21.47	56.13	43.29	11.16	35.78	32.54
16	32.38	53.01	21.60	57.45	43.40	13.42	35.91	33.93
26	32.48	53.52	21.68	58.72	43.46	15.61	36.00	35.28
36	32.53	54.04	21.72	59.91	43.49	17.69	36.04	36.51
Mean R. A.	5 <sup>h</sup> 20 <sup>m</sup> 28 <sup>s</sup> .516		5 <sup>h</sup> 27 <sup>m</sup> 18 <sup>s</sup> .360		5 <sup>h</sup> 28 <sup>m</sup> 40 <sup>s</sup> .346		5 <sup>h</sup> 31 <sup>m</sup> 32 <sup>s</sup> .684	
Mean Dec.	+ 28° 31' 49".37		- 0° 22' 0".14		- 17° 53' 15".68		- 1° 15' 36".38	
Sec δ, Tan δ	1.138, + 0.544		1.000, - 0.006		1.051, - 0.323		1.000, - 0.022	



AT UPPER TRANSIT AT GREENWICH.								
Date.	ζ Orionis. Mag. 2.0		α Columbae. Mag. 2.7		κ Orionis. Mag. 2.2		α Orionis. (Betelgeuse) Mag. 1.0-1.4	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	5 36	1 59	5 36	34 7	5 43	9 41	5 50	7 23
	s	"	s	"	s	"	s	"
Jan. 1	7.32	31.96	19.93	29.73	24.00	71.95	11.74	21.80
11	7.34	33.20	19.90	32.37	24.02	73.61	11.78	21.04
21	7.31	34.30	19.82	34.73	23.99	75.09	11.78	20.41
31	7.24	35.23	19.70	36.75	23.92	76.37	11.73	19.88
Feb. 10	7.14	35.96	19.53	38.39	23.81	77.40	11.63	19.46
20	7.00	36.51	19.33	39.60	23.67	78.16	11.51	19.15
Mar. 1	6.84	36.85	19.10	40.38	23.51	78.67	11.35	18.99
11	6.66	37.00	18.86	40.70	23.32	78.90	11.18	18.92
	6.48	36.95	18.62	40.57	23.13	78.86	11.00	18.95
	6.30	36.71	18.38	40.00	22.95	78.54	10.82	19.10
Apr. 10	6.15	36.27	18.16	39.00	22.79	77.98	10.66	19.33
20	6.01	35.64	17.97	37.58	22.64	77.16	10.53	19.68
	5.91	34.82	17.81	35.79	22.53	76.11	10.42	20.14
May 10	5.84	33.82	17.68	33.64	22.45	74.82	10.35	20.73
20	5.82	32.66	17.61	31.21	22.41	73.32	10.32	21.43
30	5.83	31.33	17.58	28.54	22.41	71.64	10.33	22.24
June 9	5.89	29.85	17.60	25.69	22.46	69.79	10.38	23.15
19	6.00	28.13	17.68	22.40	22.55	67.65	10.48	24.27
29	6.14	26.50	17.80	19.40	22.68	65.65	10.62	25.35
July 9	6.32	24.84	17.96	16.42	22.85	63.64	10.79	26.46
	6.52	23.20	18.16	13.56	23.04	61.68	10.99	27.57
	6.75	21.67	18.39	10.95	23.26	59.83	11.22	28.65
Aug. 8	7.00	20.27	18.65	8.61	23.50	58.17	11.47	29.66
18	7.27	19.05	18.94	6.65	23.76	56.73	11.73	30.55
	7.54	18.05	19.24	5.12	24.04	55.57	12.01	31.29
Sept. 7	7.83	17.31	19.55	4.09	24.32	54.75	12.30	31.83
17	8.12	16.90	19.87	3.61	24.61	54.29	12.59	32.19
27	8.41	16.78	20.19	3.67	24.90	54.21	12.89	32.32
	8.69	16.98	20.51	4.30	25.18	54.53	13.18	32.22
Oct. 17	8.97	17.48	20.81	5.48	25.46	55.22	13.47	31.90
27	9.23	18.26	21.10	7.15	25.73	56.25	13.75	31.37
Nov. 6	9.48	19.30	21.36	9.25	25.98	57.58	14.01	30.67
	9.70	20.53	21.59	11.73	26.21	59.16	14.25	29.85
	9.90	21.88	21.78	14.45	26.41	60.91	14.47	28.94
Dec. 6	10.07	23.29	21.93	17.35	26.58	62.76	14.66	28.01
16	10.20	24.73	22.03	20.29	26.71	64.65	14.82	27.08
	10.29	26.14	22.09	23.18	26.80	66.50	14.93	26.19
36	10.34	27.43	22.09	25.92	26.84	68.23	14.99	25.38
Mean R. A.	5 <sup>h</sup> 36 <sup>m</sup> 6 <sup>s</sup> .985		5 <sup>h</sup> 36 <sup>m</sup> 19 <sup>s</sup> .057		5 <sup>h</sup> 43 <sup>m</sup> 23 <sup>s</sup> .583		5 <sup>h</sup> 50 <sup>m</sup> 11 <sup>s</sup> .453	
Mean Dec.	- 1° 59' 26".94		- 34° 7' 22".13		- 9° 42' 6".52		+ 7° 23' 25".71	
Sec δ, Tan δ	1.001, - 0.035		1.208, - 0.678		1.015, - 0.171		1.008, + 0.130	

AT UPPER TRANSIT AT GREENWICH.								
Date.	β Aurigae. Mag. 2.1		θ Aurigae. Mag. 2.7		β Canis Majoris. Mag. 2.0		α Argus. (Canopus) Mag. -1.0	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	° /	h m	° /	h m	° /	h m	° /
	5 52	44 56	5 53	37 12	6 18	17 54	6 21	52 38
	s	"	s	"	s	"	s	"
Jan. 1	47.31	18.68	27.22	22.75	39.46	38.99	56.41	46.91
11	47.37	20.13	27.27	23.77	39.50	41.19	56.38	50.25
21	47.35	21.56	27.27	24.75	39.49	43.20	56.28	53.36
31	47.28	22.89	27.21	25.71	39.44	44.97	56.12	56.16
Feb. 10	47.15	24.04	27.10	26.56	39.34	46.47	55.89	58.56
20	46.97	24.99	26.94	27.26	39.21	47.63	55.62	60.51
Mar. 1	46.75	25.70	26.75	27.79	39.04	48.50	55.30	61.99
11	46.50	26.14	26.54	28.11	38.86	49.01	54.96	62.97
	46.25	26.27	26.31	28.23	38.66	49.20	54.60	63.42
	46.00	26.12	26.10	28.15	38.46	49.04	54.23	63.32
Apr. 10	45.77	25.71	25.90	27.88	38.27	48.56	53.88	62.74
20	45.57	25.05	25.72	27.41	38.10	47.75	53.55	61.63
	45.42	24.18	25.59	26.79	37.96	46.64	53.26	60.06
May 10	45.31	23.15	25.50	26.10	37.84	45.23	53.00	58.06
20	45.26	22.02	25.46	25.34	37.77	43.59	52.79	55.65
30	45.27	20.82	25.47	24.53	37.73	41.72	52.64	52.91
June 9	45.33	19.63	25.53	23.75	37.73	39.65	52.55	49.90
19	<sup>(45.46)</sup> 45.47	<sup>(18.45)</sup> 18.33	<sup>(25.65)</sup> 25.66	<sup>(23.01)</sup> 22.93	37.78	37.44	52.52	46.72
29	45.65	17.22	25.83	22.24	37.87	34.93	52.56	43.04
July 9	45.88	16.22	26.04	21.65	38.00	32.62	52.65	39.69
	46.16	15.34	26.29	21.17	38.16	30.36	52.80	36.39
	46.47	14.58	26.57	20.78	38.35	28.20	53.01	33.28
Aug. 8	46.81	13.98	26.88	20.48	38.57	26.25	53.27	30.43
18	47.18	13.52	27.21	20.29	38.81	24.54	53.57	27.94
	47.56	13.24	27.55	20.20	39.07	23.15	53.91	25.90
Sept. 7	47.96	13.10	27.91	20.19	39.34	22.16	54.28	24.36
17	48.37	13.11	28.27	20.26	39.63	21.57	54.67	23.41
27	48.78	13.27	28.64	20.40	39.92	21.41	55.08	23.10
	49.19	13.60	29.01	20.64	40.22	21.72	55.49	23.42
Oct. 17	49.59	14.08	29.37	20.95	40.51	22.48	55.89	24.37
27	49.98	14.72	29.72	21.36	40.79	23.68	56.28	25.95
Nov. 6	50.34	15.51	30.05	21.84	41.07	25.24	56.64	28.09
	50.68	16.47	30.36	22.43	41.32	27.13	56.96	30.71
	50.99	17.57	30.64	23.13	41.55	29.27	57.23	33.70
Dec. 6	51.25	18.82	30.88	23.93	41.75	31.56	57.45	36.97
16	51.47	20.17	31.08	24.81	41.91	33.95	57.60	40.42
	51.62	21.61	31.22	25.78	42.03	36.31	57.69	43.92
36	51.71	23.08	31.31	26.79	42.10	38.60	57.70	47.34
Mean R. A.	5 <sup>h</sup> 52 <sup>m</sup> 46 <sup>s</sup> .848		5 <sup>h</sup> 53 <sup>m</sup> 26 <sup>s</sup> .861		6 <sup>h</sup> 18 <sup>m</sup> 38 <sup>s</sup> .881		6 <sup>h</sup> 21 <sup>m</sup> 54 <sup>s</sup> .578	
Mean Dec.	+ 44° 56' 19".85		+ 37° 12' 24".46		- 17° 54' 34".89		- 52° 38' 42".83	
Sec δ, Tan δ	1.413, + 0.998		1.256, + 0.759		1.051, - 0.323		1.648, - 1.310	



AT UPPER TRANSIT AT GREENWICH.

Date.	γ Geminorum. Mag. 1'9		α Canis Majoris. (Sirius) Mag. - 1'4		τ Argūs. Mag. 2'8		ε Canis Majoris. Mag. 1'6	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	° /	h m	° /	h m	° /	h m	° /
	6 32	16 28	6 41	16 35	6 47	50 29	6 54	28 50
	s	"	s	"	s	"	s	"
Jan. 1	24 15	39 05	6 01	25 06	40 89	79 59	61 41	48 73
11	24 24	38 76	6 07	27 32	40 91	83 02	61 48	51 54
21	24 27	38 55	6 08	29 39	40 86	86 27	61 49	54 21
31	24 26	38 45	6 05	31 23	40 74	89 26	61 45	56 61
Feb. 10	24 20	38 43	5 96	32 81	40 56	91 88	61 36	58 73
20	24 09	38 50	5 84	34 08	40 33	94 10	61 23	60 49
Mar. 1	23 96	38 62	5 69	35 03	40 05	95 87	61 06	61 88
11	23 79	38 76	5 51	35 66	39 74	97 15	60 86	62 88
21	23 61	38 93	5 32	35 96	39 41	97 94	60 65	63 46
31	23 43	39 11	5 12	35 93	39 07	98 21	60 43	63 64
Apr. 10	23 26	39 30	4 93	35 59	38 73	97 94	60 21	63 41
20	23 11	39 48	4 76	34 95	38 41	97 19	60 00	62 77
30	22 98	39 66	4 60	33 99	38 12	95 96	59 82	61 76
May 10	22 88	39 89	4 48	32 77	37 86	94 27	59 66	60 37
20	22 82	40 15	4 39	31 27	37 65	92 17	59 54	58 65
30	22 80	40 45	4 34	29 58	37 48	89 69	59 45	56 64
June 9	22 82	40 78	4 33	27 69	37 37	86 91	59 40	54 38
19	22 88	41 16	4 36	25 66	37 31	83 87	59 40	51 93
29	(22 98) (22 99)	(41 58) (41 62)	4 43	23 56	37 31	80 69	59 43	49 34
July 9	23 13	42 06	4 55	21 20	37 37	77 12	59 52	46 41
19	23 31	42 52	4 69	19 08	37 49	73 86	59 64	43 77
29	23 51	42 97	4 86	17 07	37 65	70 73	59 79	41 23
Aug. 8	23 74	43 38	5 07	15 22	37 87	67 83	59 98	38 85
18	23 99	43 72	5 29	13 62	38 14	65 22	60 20	36 75
28	24 26	43 96	5 54	12 31	38 44	63 02	60 45	34 98
Sept. 7	24 55	44 12	5 80	11 36	38 78	61 31	60 71	33 60
17	24 84	44 17	6 08	10 79	39 14	60 14	61 00	32 70
27	25 15	44 06	6 37	10 68	39 53	59 58	61 30	32 30
Oct. 7	25 46	43 80	6 66	11 00	39 92	59 63	61 61	32 43
17	25 77	43 42	6 96	11 77	40 32	60 33	61 93	33 10
27	26 08	42 94	7 25	12 96	40 70	61 68	62 24	34 29
Nov. 6	26 38	42 37	7 53	14 53	41 07	63 59	62 54	35 95
16	26 67	41 75	7 79	16 42	41 41	66 00	62 83	38 04
26	26 93	41 12	8 03	18 56	41 71	68 86	63 09	40 48
Dec. 6	27 17	40 53	8 25	20 88	41 96	72 05	63 32	43 18
16	27 37	39 96	8 43	23 29	42 15	75 44	63 52	46 02
26	27 53	39 48	8 56	25 68	42 28	78 95	63 66	48 95
36	27 65	39 11	8 65	28 03	42 34	82 43	63 76	51 82
Mean R. A.	6h 32m 23s . 860	6h 41m 5s . 452	6h 47m 39s . 189	6h 55m 0s . 600				
Mean Dec.	+16° 28' 42" . 12	-16° 35' 22" . 00	-50° 30' 18" . 03	-28° 50' 47" . 10				
Sec δ, Tan δ	1'043, +0' 296	1'043, - 0'297	1'572, - 1'213	1' 142, - 0'551				

AT UPPER TRANSIT AT GREENWICH.

Date.	δ Canis Majoris. Mag. 2'0		π Argūs. Mag. 2'7		η Canis Majoris. Mag. 2'4		α² Geminorum. (Castor) Mag. 2'0	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	7 4	26 14	7 13	36 55	7 20	29 7	7 28	32 5
	s	"	s	"	s	"	s	"
Jan. 1	39 73	49 10	54 65	55 33	28 20	23 27	44 18	24 41
11	39 81	51 87	54 73	58 52	28 30	26 17	44 34	24 92
21	39 84	54 45	54 75	61 54	28 34	28 95	44 44	25 57
31	39 81	56 81	54 71	64 35	28 33	31 50	44 49	26 36
Feb. 10	39 74	58 88	54 62	66 86	28 26	33 79	44 48	27 21
20	39 62	60 63	54 48	69 03	28 15	35 75	44 41	28 10
Mar. 1	39 47	62 02	54 30	70 79	28 00	37 35	44 30	28 97
11	39 28	63 04	54 09	72 13	27 82	38 57	44 14	29 77
21	39 08	63 66	53 85	73 05	27 61	39 37	43 96	30 47
31	38 86	63 90	53 60	73 49	27 39	39 78	43 77	31 04
Apr. 10	38 65	63 73	53 36	73 47	27 18	39 77	43 57	31 45
20	38 45	63 18	53 12	73 03	26 97	39 36	43 38	31 68
30	38 27	62 26	52 90	72 13	26 77	38 55	43 21	31 74
May 10	38 12	61 01	52 70	70 81	26 61	37 38	43 07	31 67
20	37 99	59 42	52 54	69 12	26 47	35 86	42 96	31 45
30	37 91	57 55	52 42	67 07	26 36	34 03	42 89	31 10
June 9	37 86	55 42	52 33	64 74	26 29	31 93	42 86	30 65
19	37 85	53 10	52 29	62 17	26 26	29 60	42 87	30 13
29	37 88	50 65	52 29	59 40	26 27	27 12	42 93	29 55
July 9	37 96	47 88	(52 34) (52 35)	(56 55) (56 27)	26 32	24 54	43 02	28 92
19	38 07	45 35	52 44	53 38	26 42	21 70	43 17	28 17
29	38 21	42 90	52 57	50 58	26 55	19 16	43 34	27 47
Aug. 8	38 39	40 63	52 74	47 94	26 72	16 76	43 55	26 77
18	38 60	38 58	52 95	45 54	26 91	14 60	43 78	26 04
28	38 84	36 86	53 19	43 46	27 14	12 74	44 05	25 30
Sept. 7	39 10	35 53	53 46	41 81	27 39	11 27	44 33	24 53
17	39 37	34 63	53 75	40 65	27 66	10 24	44 64	23 77
27	39 67	34 20	54 07	40 03	27 95	9 68	44 97	23 01
Oct. 7	39 97	34 31	54 40	39 97	28 26	9 68	45 31	22 26
17	40 28	34 93	54 73	40 48	28 58	10 19	45 66	21 52
27	40 59	36 05	55 07	41 58	28 90	11 23	46 02	20 85
Nov. 6	40 90	37 64	55 40	43 23	29 21	12 79	46 39	20 26
16	41 19	39 65	55 71	45 36	29 52	14 79	46 74	19 78
26	41 46	42 01	56 00	47 89	29 80	17 17	47 08	19 45
Dec. 6	41 69	44 61	56 26	50 75	30 05	19 83	47 40	19 27
16	41 90	47 37	56 47	53 85	30 27	22 69	47 68	19 28
26	42 06	50 21	56 64	57 04	30 45	25 64	47 92	19 50
36	42 17	53 00	56 75	60 25	30 57	28 60	48 12	19 89
Mean R.A.	7h 4m 38s . 988	7h 13m 53s . 610	7h 20m 27s . 407	7h 28m 43s . 900				
Mean Dec.	-26° 14' 48" . 05	-36° 55' 55" . 58	-29° 7' 23" . 50	+32° 5' 28" . 13				
Sec δ, Tan δ	1'115, - 0'493	1'251, - 0'752	1'145, - 0'557	1' 180, + 0'627				



AT UPPER TRANSIT AT GREENWICH.

Date.	α Canis Minoris. (Procyon) Mag. 0.5		β Geminorum. (Pollux) Mag. 1.2		ζ Argūs. Mag. 2.3		15 Argūs. Mag. 2.9	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	o /	h m	o /	h m	o /	h m	o /
	7 34	5 27	7 39	28 14	8 0	39 44	8 3	24 2
	s	//	s	//	s	//	s	//
Jan. 1	29.45	37.35	41.53	52.72	22.06	33.20	38.14	16.16
11	29.59	36.15	41.69	52.94	22.20	36.54	38.29	18.95
21	29.68	35.11	41.80	53.33	22.27	39.83	38.38	21.64
31	29.72	34.24	41.86	53.89	22.29	42.96	38.42	24.17
Feb. 10	29.70	33.56	41.86	54.52	22.24	45.86	38.41	26.49
20	29.65	33.06	41.81	55.23	22.14	48.47	38.35	28.50
Mar. 1	29.55	32.74	41.71	55.97	21.99	50.72	38.25	30.18
11	29.42	32.57	41.57	56.69	21.80	52.57	38.11	31.53
21	29.26	32.55	41.40	57.36	21.58	53.99	37.94	32.56
31	29.10	32.66	41.22	57.93	21.34	54.97	37.76	33.20
Apr. 10	28.93	32.89	41.03	58.38	21.10	55.50	37.56	33.48
20	28.76	33.24	40.85	58.70	20.85	55.56	37.37	33.37
30	28.62	33.67	40.68	58.90	20.61	55.19	37.19	32.95
May 10	28.49	34.20	40.54	58.96	20.39	54.34	37.02	32.15
20	28.39	34.81	40.43	58.91	20.19	53.09	36.88	31.03
30	28.32	35.50	40.35	58.76	20.02	51.43	36.76	29.62
June 9	28.29	36.25	40.31	58.51	19.89	49.44	36.67	27.95
19	28.29	37.08	40.31	58.19	19.80	47.13	36.62	26.04
29	28.33	37.94	40.36	57.82	19.75	44.57	36.60	23.94
July 9	28.40	38.82	40.44	57.39	19.74	41.86	36.61	21.74
19	28.51	39.74	40.57	56.88	19.77	39.05	36.66	19.47
29	28.65	40.54	40.72	56.36	19.85	35.91	36.76	17.01
Aug. 8	28.81	41.25	40.91	55.79	19.97	33.16	36.88	14.86
18	29.00	41.83	41.12	55.19	20.13	30.60	37.03	12.86
28	29.21	42.26	41.37	54.54	20.33	28.30	37.22	11.11
Sept. 7	29.45	42.49	41.63	53.85	20.56	26.35	37.43	9.68
17	29.70	42.51	41.92	53.12	20.83	24.85	37.67	8.64
27	29.98	42.27	42.23	52.33	21.13	23.84	37.94	8.02
Oct. 7	30.26	41.78	42.56	51.52	21.45	23.37	38.22	7.87
17	30.56	41.06	42.90	50.70	21.79	23.51	38.52	8.23
27	30.86	40.09	43.24	49.88	22.15	24.24	38.83	9.09
Nov. 6	31.17	38.95	43.59	49.11	22.50	25.56	39.15	10.41
16	31.47	37.66	43.94	48.43	22.85	27.41	39.47	12.18
26	31.76	36.24	44.27	47.84	23.18	29.74	39.78	14.32
Dec. 6	32.03	34.77	44.58	47.41	23.48	32.48	40.06	16.77
16	32.27	33.32	44.87	47.14	23.75	35.51	40.32	19.41
26	32.48	31.94	45.11	47.05	23.97	38.75	40.54	22.21
36	32.64	30.66	45.31	47.16	24.14	42.10	40.71	25.02
Mean R. A.	7 <sup>h</sup> 34 <sup>m</sup> 29 <sup>s</sup> .169		7 <sup>h</sup> 39 <sup>m</sup> 41 <sup>s</sup> .284		8 <sup>h</sup> 0 <sup>m</sup> 21 <sup>s</sup> .013		8 <sup>h</sup> 3 <sup>m</sup> 37 <sup>s</sup> .545	
Mean Dec.	+5° 27' 39".19		+28° 14' 56".34		-39° 44' 37".57		-24° 2' 18".86	
Sec δ, Tan δ	1.005, + 0.096		1.135, + 0.537		1.301, - 0.832		1.095, - 0.446	

AT UPPER TRANSIT AT GREENWICH.

Date.	γ Argūs. Mag. 1.9		ε Argūs. Mag. 1.7		δ Argūs. Mag. 2.0		λ Argūs. Mag. 2.3	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	o /	h m	o /	h m	o /	h m	o /
	8 6	47 3	8 20	59 12	8 42	54 22	9 4	43 3
	s	//	s	//	s	//	s	//
Jan. 1	43.25	49.11	39.78	39.33	11.27	6.40	37.60	29.50
11	43.39	52.63	39.95	43.02	11.47	10.00	37.82	32.88
21	43.47	56.13	40.03	46.75	11.59	13.69	37.98	36.33
31	43.48	59.50	40.03	50.40	11.64	17.34	38.07	39.74
Feb. 10	43.42	62.64	39.94	53.90	11.62	20.85	38.11	43.03
20	43.30	65.52	39.78	57.15	11.52	24.14	38.08	46.11
Mar. 1	43.13	68.03	39.54	60.05	11.36	27.14	38.00	48.93
11	42.91	70.14	39.24	62.57	11.14	29.75	37.87	51.42
21	42.66	71.81	38.90	64.65	10.87	31.98	37.69	53.52
31	42.38	73.02	38.52	66.25	10.57	33.76	37.49	55.23
Apr. 10	42.09	73.75	38.12	67.37	10.24	35.07	37.27	56.49
20	41.80	73.98	37.72	67.96	9.91	35.87	37.03	57.30
30	41.52	73.72	37.31	68.03	9.57	36.15	36.78	57.67
May 10	41.26	72.98	36.92	67.54	9.24	35.93	36.55	57.57
20	41.02	71.79	36.56	66.60	8.93	35.21	36.32	57.01
30	40.81	70.16	36.24	65.15	8.65	34.00	36.11	56.03
June 9	40.63	68.14	35.95	63.25	8.40	32.35	35.93	54.62
19	40.50	65.78	35.71	60.95	8.19	30.30	35.78	52.84
29	40.42	63.12	35.53	58.32	8.02	27.89	35.65	50.74
July 9	40.38	60.27	35.41	55.43	7.90	25.19	35.56	48.37
19	40.39	57.32	35.36	52.32	7.84	22.28	35.52	45.80
29	40.45	53.99	35.37	48.83	7.83	19.24	35.51	43.09
Aug. 8	40.56	51.04	35.45	45.66	7.88	15.87	35.55	40.08
18	40.72	48.27	35.60	42.58	7.99	12.87	35.63	37.39
28	40.92	45.75	35.82	39.74	8.16	10.08	35.75	34.86
Sept. 7	41.17	43.57	36.10	37.23	8.39	7.55	35.93	32.58
17	41.45	41.83	36.44	35.14	8.67	5.43	36.15	30.68
27	41.78	40.61	36.83	33.56	9.00	3.75	36.41	29.17
Oct. 7	42.13	39.96	37.26	32.55	9.37	2.64	36.70	28.16
17	42.50	39.92	37.72	32.18	9.78	2.13	37.03	27.71
27	42.89	40.52	38.20	32.46	10.21	2.26	37.39	27.84
Nov. 6	43.27	41.72	38.69	33.39	10.65	3.04	37.76	28.56
16	43.65	43.52	39.17	34.96	11.09	4.44	38.14	29.89
26	44.01	45.85	39.62	37.15	11.52	6.43	38.52	31.77
Dec. 6	44.34	48.61	40.03	39.83	11.92	8.95	38.88	34.15
16	44.63	51.73	40.39	42.94	12.28	11.92	39.21	36.93
26	44.87	55.09	40.68	46.35	12.58	15.25	39.51	40.02
36	45.05	58.61	40.90	50.00	12.82	18.79	39.76	43.33
Mean R. A.	8 <sup>h</sup> 6 <sup>m</sup> 41 <sup>s</sup> .898		8 <sup>h</sup> 20 <sup>m</sup> 37 <sup>s</sup> .608		8 <sup>h</sup> 42 <sup>m</sup> 9 <sup>s</sup> .636		9 <sup>h</sup> 4 <sup>m</sup> 36 <sup>s</sup> .696	
Mean Dec.	-47° 3' 54".85		-59° 12' 47".69		-54° 22' 16".24		-43° 3' 39".54	
Sec δ, Tan δ	1.468, - 1.075		1.954, - 1.678		1.717, - 1.395		1.369, - 0.935	



AT UPPER TRANSIT AT GREENWICH.

Date.	β Argūs. Mag. 1.7		ι Argūs. Mag. 2.2		κ Argūs. Mag. 2.6		α Hydræ. Mag. 2.2	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	° /	h m	° /	h m	° /	h m	° /
	9 12	69 20	9 14	58 53	9 19	54 36	9 23	8 15
	s	"	s	"	s	"	s	"
Jan. 1	14.77	3.08	39.30	6.76	17.21	50.70	4.11	30.10
11	15.10	6.66	39.57	10.33	17.47	54.21	4.34	32.30
21	15.32	10.39	39.76	14.02	17.66	57.85	4.52	34.40
31	15.41	14.22	39.87	17.78	17.77	61.55	4.66	36.32
Feb. 10	15.39	18.02	39.89	21.49	17.81	65.17	4.75	38.05
20	15.26	21.71	39.83	25.04	17.78	68.65	4.78	39.54
Mar. 1	15.02	25.18	39.69	28.36	17.68	71.90	4.77	40.76
11	14.68	28.36	39.49	31.39	17.52	74.85	4.72	41.75
21	14.26	31.20	39.24	34.02	17.30	77.44	4.64	42.48
31	13.78	33.63	38.93	36.26	17.04	79.62	4.53	42.95
Apr. 10	13.25	35.59	38.59	38.05	16.75	81.36	4.39	43.21
20	12.68	37.08	38.23	39.37	16.44	82.64	4.25	43.21
30	12.10	38.05	37.86	40.16	16.12	83.40	4.11	43.01
May 10	11.51	38.47	37.49	40.43	15.80	83.66	3.97	42.58
20	10.92	38.36	37.12	40.19	15.49	83.42	3.84	41.98
30	10.37	37.72	36.78	39.44	15.19	82.69	3.72	41.21
June 9	9.85	36.56	36.46	38.21	14.92	81.48	3.62	40.29
19	9.38	34.93	36.18	36.52	14.68	79.82	3.54	39.24
29	8.97	32.84	35.94	34.42	14.47	77.76	3.49	38.08
July 9	8.64	30.37	35.74	31.97	14.31	75.39	3.46	36.84
19	8.39	27.59	35.61	29.23	14.20	72.73	3.46	35.57
29	8.22	24.58	35.53	26.29	14.13	69.86	3.48	34.30
Aug. 8	<sup>(8.15)</sup> 8.15	<sup>(21.41)</sup> (21.09)	<sup>(35.51)</sup> (35.51)	<sup>(23.24)</sup> (22.04)	14.12	66.89	3.53	33.10
18	8.20	17.90	35.57	19.88	14.18	63.62	3.62	31.88
28	8.34	14.79	35.69	16.92	14.29	60.76	3.74	30.95
Sept. 7	8.59	11.88	35.88	14.17	14.46	58.10	3.88	30.24
17	8.94	9.26	36.14	11.74	14.69	55.75	4.05	29.78
27	9.38	7.05	36.46	9.73	14.98	53.81	4.25	29.62
Oct. 7	9.90	5.35	36.83	8.20	15.32	52.36	4.49	29.80
17	10.49	4.22	37.26	7.26	15.70	51.47	4.75	30.34
27	11.14	3.72	37.72	6.94	16.12	51.21	5.03	31.24
Nov. 6	11.81	3.88	38.21	7.28	16.56	51.58	5.33	32.50
16	12.49	4.71	38.70	8.26	17.02	52.58	5.65	34.05
26	13.15	6.18	39.19	9.86	17.47	54.22	5.97	35.88
Dec. 6	13.77	8.25	39.66	12.07	17.90	56.41	6.29	37.92
16	14.33	10.89	40.09	14.77	18.30	59.10	6.60	40.11
26	14.82	13.97	40.46	17.90	18.66	62.19	6.88	42.36
36	15.20	17.40	40.77	21.32	18.96	65.58	7.13	44.61
Mean R. A.	9 <sup>h</sup> 12 <sup>m</sup> 11 <sup>s</sup> . 626		9 <sup>h</sup> 14 <sup>m</sup> 37 <sup>s</sup> . 553		9 <sup>h</sup> 19 <sup>m</sup> 15 <sup>s</sup> . 820		9 <sup>h</sup> 23 <sup>m</sup> 4 <sup>s</sup> . 012	
Mean Dec.	-69° 20' 17". 47		-58° 53' 20". 11		-54° 37' 3". 81		-8° 15' 33". 88	
Sec δ, Tan δ	2.834, - 2.652		1.935, - 1.657		1.727, - 1.408		1.010, - 0.145	

AT UPPER TRANSIT AT GREENWICH.

Date.	α Leonis. (Regulus) Mag. 1.3		γ <sup>1</sup> Leonis. Mag. 2.5		η Argūs. Mag. 1 - 7 <sup>1</sup> / <sub>2</sub>		α Argūs. Mag. 2.8	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	° /	h m	° /	h m	° /	h m	° /
	10 3	12 24	10 14	20 18	10 41	59 11	10 42	48 55
	s	"	s	"	s	"	s	"
Jan. 1	28.23	61.17	53.85	23.42	30.18	42.78	48.97	45.16
11	28.50	59.79	54.15	22.35	30.60	45.80	49.32	48.16
21	28.74	58.67	54.40	21.58	30.95	49.13	49.62	51.41
31	28.93	57.83	54.61	21.14	31.22	52.68	49.86	54.84
Feb. 10	29.07	57.24	54.77	21.00	31.42	56.36	50.04	58.31
20	29.16	56.92	54.88	21.15	31.55	60.06	50.16	61.78
Mar. 1	29.20	56.85	54.94	21.55	31.60	63.73	50.22	65.15
11	29.19	57.01	54.95	22.15	31.57	67.22	50.22	68.33
21	29.15	57.34	54.91	22.91	31.47	70.51	50.16	71.28
31	29.07	57.80	54.84	23.76	31.32	73.50	50.05	73.93
Apr. 10	28.97	58.35	54.75	24.67	31.11	76.15	49.91	76.24
20	28.85	58.97	54.63	25.58	30.86	78.41	49.73	78.18
30	28.72	59.62	54.50	26.45	30.58	80.25	49.53	79.69
May 10	28.59	60.28	54.37	27.25	30.27	81.66	49.31	80.77
20	28.47	60.91	54.24	27.94	29.94	82.53	49.08	81.41
30	28.35	61.49	54.12	28.52	29.61	82.92	48.85	81.59
June 9	28.25	62.04	54.01	28.96	29.28	82.79	48.62	81.33
19	28.16	62.52	53.91	29.27	28.96	82.17	48.39	80.61
29	28.10	62.93	53.84	29.41	28.66	81.08	48.18	79.44
July 9	28.05	63.24	53.78	29.41	28.38	79.54	47.99	77.90
19	28.03	63.46	53.75	29.26	28.13	77.59	47.82	76.02
29	28.03	63.56	53.74	28.95	27.93	75.31	47.69	73.84
Aug. 8	28.05	63.53	53.76	28.46	27.77	72.73	47.59	71.43
18	28.10	63.36	53.80	27.80	27.67	69.97	47.53	68.87
28	28.19	62.99	53.89	26.89	27.63	67.11	47.52	66.27
Sept. 7	28.31	62.45	53.99	25.86	27.67	63.97	47.57	63.47
17	28.45	61.72	54.13	24.63	27.79	61.24	47.67	61.07
27	28.63	60.77	54.31	23.25	27.97	58.75	47.83	58.92
Oct. 7	28.84	59.63	54.52	21.70	28.23	56.60	48.05	57.10
17	29.08	58.26	54.76	19.99	28.56	54.89	48.32	55.72
27	29.35	56.74	55.03	18.16	28.96	53.67	48.64	54.87
Nov. 6	29.65	55.05	55.34	16.26	29.41	53.03	49.01	54.55
16	29.97	53.25	55.66	14.34	29.89	53.02	49.41	54.85
26	30.30	51.38	56.01	12.42	30.41	53.65	49.83	55.68
Dec. 6	30.64	49.54	56.36	10.60	30.93	54.88	50.26	57.14
16	30.97	47.74	56.71	8.92	31.44	56.71	50.69	59.12
26	31.29	46.08	57.04	7.44	31.92	59.08	51.10	61.56
36	31.58	44.58	57.36	6.22	32.36	61.90	51.47	64.42
Mean R. A.	10 <sup>h</sup> 3 <sup>m</sup> 28 <sup>s</sup> . 435		10 <sup>h</sup> 14 <sup>m</sup> 54 <sup>s</sup> . 131		10 <sup>h</sup> 41 <sup>m</sup> 29 <sup>s</sup> . 352		10 <sup>h</sup> 42 <sup>m</sup> 48 <sup>s</sup> . 601	
Mean Dec.	+12° 25' 1". 69		+20° 18' 25". 93		-59° 12' 2". 52		-48° 56' 2". 88	
Sec δ, Tan δ	1.024, + 0.220		1.066, + 0.370		1.953, - 1.678		1.522, - 1.148	



AT UPPER TRANSIT AT GREENWICH.								
Date.	β Ursæ Majoris. Mag. 2.4		α Ursæ Majoris. (Dubhe) Mag. 2.0		δ Leonis. Mag. 2.6		β Leonis. (Denebola) Mag. 2.2	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	o /	h m	o /	h m	o /	h m	o /
	10 56	56 52	10 58	62 14	11 9	21 1	11 44	15 4
	s	//	s	//	s	//	s	//
Jan. 1	17.44	21.91	3.25	40.71	12.52	37.89	21.37	70.68
11	17.93	22.04	3.80	41.02	12.84	36.52	21.69	68.95
21	18.37	22.71	4.31	41.89	13.14	35.50	22.00	67.51
31	18.75	23.89	4.74	43.27	13.39	34.84	22.27	66.40
Feb. 10	19.06	25.53	5.10	45.13	13.60	34.53	22.50	65.63
20	19.29	27.53	5.36	47.34	13.77	34.56	22.69	65.21
Mar. 1	19.43	29.81	5.52	49.83	13.88	34.92	22.84	65.11
11	19.50	32.28	5.59	52.48	13.95	35.53	22.93	65.33
21	19.48	34.79	5.57	55.17	13.97	36.36	22.99	65.79
31	19.40	37.28	5.46	57.79	13.95	37.34	23.01	66.47
Apr. 10	19.25	39.62	5.28	60.25	13.90	38.40	22.99	67.29
20	19.06	41.72	5.05	62.47	13.82	39.52	22.95	68.23
30	18.83	43.52	4.77	64.32	13.73	40.61	22.88	69.20
May 10	18.57	44.97	4.45	65.77	13.62	41.64	22.79	70.20
20	18.31	45.99	4.12	66.79	13.50	42.57	22.70	71.13
30	18.04	46.58	3.79	67.34	13.38	43.37	22.60	72.00
June 9	17.77	46.72	3.46	67.40	13.26	44.04	22.49	72.78
19	17.53	46.42	3.16	66.97	13.15	44.51	22.38	73.42
29	17.31	45.67	2.88	66.07	13.05	44.78	22.27	73.95
July 9	17.11	44.50	2.63	64.73	12.96	44.89	22.17	74.31
19	16.96	42.94	2.43	62.99	12.89	44.82	22.09	74.50
29	16.84	41.03	2.27	60.87	12.84	44.53	22.01	74.51
Aug. 8	16.76	38.79	2.17	58.42	12.80	44.03	21.95	74.33
18	16.73	36.26	2.12	55.68	12.79	43.31	21.90	73.97
28	16.75	33.52	2.13	52.72	12.81	42.39	21.88	73.38
Sept. 7	16.84	30.26	2.21	49.26	12.85	41.24	21.89	72.59
17	16.97	27.18	2.36	45.98	12.94	39.76	21.92	71.56
27	17.17	24.05	2.57	42.67	13.05	38.18	22.01	70.16
Oct. 7	17.42	20.88	2.85	39.38	13.21	36.42	22.12	68.66
17	17.73	17.80	3.20	36.18	13.40	34.48	22.27	66.93
27	18.10	14.83	3.62	33.13	13.63	32.39	22.47	65.01
Nov. 6	18.52	12.07	4.09	30.32	13.90	30.22	22.70	62.93
16	18.99	9.58	4.62	27.83	14.21	28.00	22.97	60.74
26	19.49	7.46	5.20	25.73	14.53	25.78	23.27	58.46
Dec. 6	20.02	5.74	5.80	24.08	14.88	23.65	23.60	56.19
16	20.56	4.51	6.41	22.94	15.24	21.63	23.94	53.99
26	21.09	3.81	7.02	22.35	15.59	19.84	24.28	51.91
36	21.60	3.62	7.60	22.36	15.93	18.32	24.62	50.05
Mean R. A.	10 <sup>h</sup> 56 <sup>m</sup> 17 <sup>s</sup> . 815		10 <sup>h</sup> 58 <sup>m</sup> 3 <sup>s</sup> . 557		11 <sup>h</sup> 9 <sup>m</sup> 13 <sup>s</sup> . 064		11 <sup>h</sup> 44 <sup>m</sup> 22 <sup>s</sup> . 090	
Mean Dec.	+56° 52' 32" . 67		+62° 14' 52" . 26		+21° 1' 40" . 32		+15° 5' 10" . 99	
Sec δ, Tan δ	1.830, + 1.533		2.148, + 1.901		1.071, + 0.384		1.036, + 0.270	

AT UPPER TRANSIT AT GREENWICH.								
Date.	γ Ursæ Majoris. Mag. 2.5		δ Centauri. Mag. 2.8		γ Corvi. Mag. 2.7		α <sup>1</sup> Crucis. Mag. 1.0	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	o /	h m	o /	h m	o /	h m	o /
	11 48	54 11	12 3	50 12	12 11	17 1	12 21	62 34
	s	//	s	//	s	//	s	//
Jan. 1	59.03	71.94	34.68	15.47	3.60	40.67	27.89	57.38
11	59.52	71.34	35.10	17.77	3.93	42.95	28.45	59.32
21	59.98	71.32	35.50	20.42	4.24	45.27	28.98	61.72
31	60.39	71.87	35.85	23.35	4.52	47.58	29.46	64.54
Feb. 10	60.75	72.97	36.16	26.51	4.76	49.80	29.88	67.65
20	61.05	74.51	36.41	29.76	4.97	51.90	30.23	71.00
Mar. 1	61.27	76.47	36.60	33.06	5.13	53.83	30.51	74.49
11	61.41	78.72	36.73	36.30	5.25	55.54	30.71	78.03
21	61.49	81.17	36.81	39.45	5.33	57.02	30.84	81.57
31	61.49	83.72	36.83	42.44	5.38	58.29	30.89	84.99
Apr. 10	61.44	86.24	36.81	45.17	5.39	59.32	30.88	88.26
20	61.33	88.65	36.74	47.65	5.37	60.10	30.80	91.29
30	61.17	90.86	36.64	49.82	5.33	60.68	30.67	94.05
May 10	60.98	92.78	36.50	51.62	5.27	61.03	30.48	96.47
20	60.76	94.34	36.33	53.07	5.19	61.17	30.24	98.52
30	60.53	95.51	36.15	54.11	5.10	61.10	29.97	100.13
June 9	60.29	96.24	35.94	54.71	5.00	60.85	29.66	101.29
19	60.05	96.55	35.72	54.89	4.89	60.43	29.33	101.98
29	59.82	96.39	35.50	54.62	4.77	59.83	28.98	102.18
July 9	59.60	95.78	35.27	53.96	4.66	59.09	28.63	101.88
19	59.39	94.74	35.05	52.89	4.55	58.23	28.27	101.09
29	59.22	93.29	34.84	51.43	4.45	57.26	27.93	99.85
Aug. 8	59.08	91.44	34.66	49.65	4.36	56.24	27.62	98.20
18	58.97	89.25	34.50	47.62	4.28	55.18	27.35	96.16
28	58.90	86.73	34.39	45.38	4.23	54.16	27.12	93.85
Sept. 7	58.88	83.95	34.32	43.03	4.20	53.20	26.96	91.29
17	58.90	80.93	34.30	40.64	4.20	52.37	26.88	88.60
27	58.99	77.42	34.34	38.11	4.25	51.63	26.87	85.90
Oct. 7	59.14	74.12	34.45	35.98	4.34	51.24	26.97	83.04
17	59.34	70.78	34.63	34.14	4.47	51.12	27.16	80.64
27	59.61	67.46	34.87	32.66	4.64	51.34	27.44	78.56
Nov. 6	59.93	64.27	35.17	31.64	4.86	51.88	27.80	76.89
16	60.31	61.26	35.53	31.09	5.12	52.78	28.24	75.69
26	60.74	58.53	35.93	31.09	5.41	54.01	28.74	75.07
Dec. 6	61.21	56.15	36.36	31.76	5.73	55.59	29.29	75.04
16	61.70	54.20	36.81	32.77	6.07	57.44	29.87	75.57
26	62.20	52.75	37.27	34.39	6.41	59.52	30.47	76.69
36	62.71	51.84	37.71	36.52	6.75	61.76	31.05	78.40
Mean R. A.	11 <sup>h</sup> 48 <sup>m</sup> 59 <sup>s</sup> . 814		12 <sup>h</sup> 3 <sup>m</sup> 35 <sup>s</sup> . 138		12 <sup>h</sup> 11 <sup>m</sup> 4 <sup>s</sup> . 372		12 <sup>h</sup> 21 <sup>m</sup> 28 <sup>s</sup> . 388	
Mean Dec.	+54° 12' 22" . 64		-50° 12' 36" . 54		-17° 1' 51" . 79		-62° 35' 21" . 47	
Sec δ, Tan δ	1.710, + 1.387		1.563, - 1.201		1.046, - 0.306		2.172, - 1.928	



AT UPPER TRANSIT AT GREENWICH.								
Date.	γ Crucis. Mag. 1·9		α Muscae. Mag. 2·9		γ Centauri. Mag. 2·4		β Crucis. Mag. 1·5	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	o /	h m	o /	h m	o /	h m	o /
	12 26	56 35	12 31	68 37	12 36	48 26	12 42	59 10
	s	//	s	//	s	//	s	//
Jan. 1	2·65	29·73	40·65	17·99	25·46	55·68	19·45	45·91
11	3·14	31·72	41·34	19·69	25·89	57·66	19·98	47·65
21	3·61	34·13	42·00	21·91	26·31	60·01	20·49	49·85
31	4·03	36·92	42·60	24·58	26·69	62·67	20·96	52·46
Feb. 10	4·41	39·96	43·13	27·62	27·02	65·54	21·38	55·38
20	4·72	43·21	43·58	30·92	27·31	68·56	21·74	58·52
Mar. 1	4·97	46·57	43·94	34·42	27·55	71·65	22·03	61·83
11	5·16	49·95	44·20	38·05	27·73	74·75	22·26	65·21
21	5·28	53·29	44·38	41·69	27·86	77·78	22·43	68·59
31	5·35	56·52	44·47	45·29	27·94	80·67	22·53	71·89
Apr. 10	5·36	59·59	44·47	48·76	27·97	83·40	22·57	75·05
20	5·31	62·41	44·38	52·03	27·96	85·92	22·55	78·02
30	5·22	64·98	44·22	55·04	27·91	88·15	22·47	80·75
May 10	5·08	67·21	43·99	57·74	27·82	90·10	22·35	83·19
20	4·91	69·08	43·70	60·06	27·70	91·69	22·18	85·26
30	4·70	70·53	43·34	61·98	27·55	92·93	21·97	86·95
June 9	4·46	71·56	42·94	63·44	27·38	93·80	21·73	88·23
19	4·21	72·15	42·51	64·42	27·20	94·27	21·46	89·06
29	3·93	72·27	42·05	64·87	26·99	94·34	21·17	89·43
July 9	3·65	71·97	41·57	64·84	26·78	93·98	20·86	89·32
19	3·37	71·17	41·09	64·27	26·56	93·25	20·55	88·74
29	3·10	69·95	40·63	63·19	26·35	92·12	20·25	87·73
Aug. 8	2·85	68·36	40·20	61·65	26·15	90·66	19·96	86·30
18	2·63	66·42	39·82	59·70	25·98	88·92	19·70	84·50
28	2·45	64·23	39·50	57·39	25·83	86·96	19·48	82·37
Sept. 7	2·33	61·83	39·26	54·80	25·72	84·81	19·31	80·01
17	2·26	59·33	39·11	52·06	25·66	82·60	19·21	77·52
27	2·26	56·81	39·06	49·22	25·65	80·40	19·17	74·95
Oct. 7 <sup>30</sup>	2·34	54·18	39·14	46·16	25·72	78·13	19·23	72·21
17	2·50	52·00	39·33	43·54	25·85	76·26	19·36	69·88
27	2·74	50·14	39·64	41·19	26·04	74·70	19·59	67·83
Nov. 6	3·05	48·68	40·06	39·23	26·30	73·54	19·89	66·13
16	3·42	47·70	40·58	37·74	26·61	72·79	20·27	64·89
26	3·85	47·23	41·18	36·78	26·98	72·56	20·71	64·16
Dec. 6	4·33	47·34	41·84	36·41	27·39	72·86	21·20	63·99
16	4·83	48·02	42·54	36·64	27·82	73·67	21·73	64·39
26	5·34	49·25	43·26	37·50	28·26	74·97	22·28	65·34
36	5·85	51·01	43·97	38·93	28·71	76·75	22·82	66·84
Mean R. A.	12 <sup>h</sup> 26 <sup>m</sup> 3 <sup>s</sup> ·309		12 <sup>h</sup> 31 <sup>m</sup> 41 <sup>s</sup> ·222		12 <sup>h</sup> 36 <sup>m</sup> 26 <sup>s</sup> ·310		12 <sup>h</sup> 42 <sup>m</sup> 20 <sup>s</sup> ·320	
Mean Dec.	-56° 35' 52"·67		-68° 37' 43"·25		-48° 27' 16"·80		-59° 11' 9"·54	
Sec δ, Tan δ	1·817, -1·517		2·744, -2·555		1·508, -1·129		1·952, -1·677	

AT UPPER TRANSIT AT GREENWICH.								
Date.	ε Ursæ Majoris. Mag. 1·8		α Canum Venat. Mag. 2·8		ζ Ursæ Majoris. Mag. 2·1		α Virginis (Spica) Mag. 1·2	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.
	h m	o /	h m	o /	h m	o /	h m	o /
	12 49	56 27	12 51	38 48	13 20	55 23	13 20	10 40
	s	//	s	//	s	//	s	//
Jan. 1	57·85	21·77	42·40	47·33	11·99	70·01	19·44	43·25
11	58·36	20·49	42·79	45·68	12·48	68·34	19·77	45·30
21	58·87	19·83	43·18	44·52	12·97	67·28	20·10	47·34
31	59·34	19·77	43·54	43·88	13·45	66·84	20·41	49·36
Feb. 10	59·78	20·34	43·87	43·79	13·90	67·05	20·70	51·23
20	60·16	21·47	44·16	44·21	14·30	67·83	20·96	52·96
Mar. 1	60·48	23·12	44·40	45·10	14·65	69·19	21·18	54·48
11	60·73	25·20	44·60	46·44	14·94	71·03	21·37	55·79
21	60·91	27·58	44·74	48·10	15·16	73·25	21·52	56·88
31	61·02	30·20	44·83	50·03	15·31	75·77	21·64	57·72
Apr. 10	61·05	32·94	44·88	52·14	15·40	78·49	21·73	58·35
20	61·02	35·66	44·88	54·31	15·42	81·25	21·78	58·79
30	60·94	38·27	44·85	56·46	15·38	83·98	21·81	59·04
May 10	60·80	40·70	44·78	58·52	15·29	86·59	21·81	59·12
20	60·62	42·82	44·68	60·40	15·15	88·95	21·78	59·05
30	60·40	44·60	44·56	62·05	14·97	91·02	21·74	58·87
June 9	60·16	45·98	44·42	63·42	14·76	92·70	21·68	58·59
19	59·91	46·92	44·27	64·45	14·52	93·97	21·60	58·21
29	59·64	47·39	44·11	65·14	14·27	94·81	21·50	57·74
July 9	59·37	47·38	43·95	65·46	14·00	95·15	21·40	57·22
19	59·10	46·89	43·79	65·39	13·73	95·00	21·29	56·63
29	58·84	45·92	43·63	64·92	13·46	94·38	21·17	56·01
Aug. 8	58·61	44·48	43·48	64·08	13·20	93·29	21·05	55·39
18	58·40	42·62	43·35	62·88	12·96	91·74	20·94	54·77
28	58·22	40·37	43·24	61·32	12·74	89·77	20·84	54·19
Sept. 7	58·08	37·76	43·15	59·43	12·56	87·39	20·76	53·69
17	57·99	34·83	43·10	57·21	12·42	84·64	20·70	53·31
27	57·95	31·62	43·09	54·74	12·32	81·59	20·67	53·06
Oct. 7 <sup>6</sup>	57·98	27·86	(43 <sup>12</sup> ) 43 <sup>12</sup>	(51 <sup>99</sup> ) 51 <sup>73</sup>	12·29	78·29	20·68	53·01
17	58·07	24·32	43·21	48·76	12·32	74·43	20·75	53·22
27	58·23	20·69	43·34	45·66	12·43	70·78	20·85	53·68
Nov. 6	58·46	17·09	43·53	42·51	12·60	67·10	21·00	54·40
16	58·76	13·59	43·77	39·35	12·84	63·46	21·20	55·43
26	59·13	10·30	44·06	36·28	13·15	59·97	21·44	56·73
Dec. 6	59·55	7·32	44·39	33·36	13·53	56·72	21·72	58·27
16	60·02	4·71	44·76	30·69	13·95	53·80	22·03	60·06
26	60·52	2·56	45·14	28·36	14·42	51·33	22·36	61·98
36	61·03	0·98	45·54	26·43	14·91	49·36	22·70	64·02
Mean R. A.	12 <sup>h</sup> 49 <sup>m</sup> 59 <sup>s</sup> ·096		12 <sup>h</sup> 51 <sup>m</sup> 43 <sup>s</sup> ·558		13 <sup>h</sup> 20 <sup>m</sup> 13 <sup>s</sup> ·446		13 <sup>h</sup> 20 <sup>m</sup> 20 <sup>s</sup> ·679	
Mean Dec.	+56° 27' 32"·68		+38° 48' 54"·35		+55° 24' 20"·37		-10° 40' 52"·53	
Sec δ, Tan δ	1·810, +1·509		1·283, +0·804		1·761, +1·450		1·018, -0·189	



AT UPPER TRANSIT AT GREENWICH.								
Date.	ε Centauri. Mag. 2.6		η Ursæ Majoris. Mag. 1.9		ζ Centauri. Mag. 2.8		η Boötis. Mag. 2.8	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	o /	h m	o /	h m	o /	h m	o /
	13 34	52 59	13 43	49 45	13 49	46 49	13 50	18 51
	s	//	s	//	s	//	s	//
Jan. I	1.58	34.26	53.47	71.01	46.06	48.67	16.84	30.41
II	2.06	35.50	53.91	68.99	46.50	49.86	17.17	28.16
21	2.54	37.17	54.35	67.54	46.94	51.45	17.51	26.24
31	3.00	39.21	54.78	66.69	47.36	53.39	17.83	24.67
Feb. 10	3.42	41.59	55.20	66.44	47.76	55.58	18.14	23.52
20	3.81	44.22	55.58	66.82	48.12	57.98	18.43	22.78
Mar. I	4.15	47.01	55.92	67.78	48.45	60.51	18.68	22.49
II	4.44	49.92	56.20	69.25	48.73	63.15	18.90	22.62
21	4.68	52.88	56.43	71.15	48.97	65.80	19.08	23.12
31	4.87	55.81	56.61	73.40	49.16	68.43	19.23	23.96
Apr. 10	5.00	58.68	56.72	75.90	49.31	71.01	19.34	25.06
20	5.09	61.43	56.78	78.55	49.42	73.43	19.42	26.38
30	5.12	64.00	56.79	81.22	49.48	75.71	19.46	27.83
May 10	5.11	66.37	56.75	83.81	49.50	77.81	19.47	29.32
20	5.06	68.49	56.67	86.28	49.48	79.68	19.46	30.83
30	4.96	70.31	56.54	88.49	49.43	81.31	19.43	32.29
June 9	4.83	71.79	56.38	90.37	49.34	82.63	19.37	33.63
19	4.66	72.91	56.20	91.89	49.21	83.66	19.29	34.83
29	4.46	73.66	56.00	93.02	49.06	84.34	19.19	35.86
July 9	4.23	73.99	55.77	93.71	48.88	84.67	19.08	36.67
19	3.99	73.92	55.54	93.94	48.68	84.65	18.95	37.23
29	3.73	73.43	55.30	93.71	48.47	84.27	18.82	37.54
Aug. 8	3.48	72.56	55.07	93.00	48.25	83.53	18.68	37.60
18	3.23	71.30	54.84	91.86	48.04	82.47	18.55	37.39
28	3.01	69.74	54.63	90.25	47.84	81.12	18.42	36.89
Sept. 7	2.82	67.91	54.45	88.24	47.66	79.54	18.31	36.11
17	2.67	65.86	54.29	85.86	47.52	77.77	18.22	35.04
27	2.57	63.67	54.18	83.12	47.42	75.89	18.16	33.68
Oct. 7	2.54	61.47	54.12	80.07	47.38	73.99	18.14	32.04
17	2.58	59.34	54.11	76.80	47.40	72.15	18.15	30.14
27	2.71	57.18	54.17	72.96	47.50	70.28	18.22	27.76
Nov. 6	2.91	55.48	54.30	69.38	47.66	68.83	18.33	25.39
16	3.18	54.13	54.49	65.76	47.89	67.72	18.49	22.85
26	3.52	53.23	54.74	62.22	48.18	66.97	18.70	20.19
Dec. 6	3.91	52.77	55.05	58.84	48.52	66.65	18.96	17.49
16	4.35	52.79	55.42	55.73	48.91	66.77	19.25	14.81
26	4.82	53.31	55.82	53.00	49.33	67.34	19.56	12.24
36	5.31	54.32	56.25	50.71	49.77	68.35	19.89	9.86
Mean R. A.	13 <sup>h</sup> 34 <sup>m</sup> 3 <sup>s</sup> . 120		13 <sup>h</sup> 43 <sup>m</sup> 55 <sup>s</sup> . 027		13 <sup>h</sup> 49 <sup>m</sup> 47 <sup>s</sup> . 703		13 <sup>h</sup> 50 <sup>m</sup> 18 <sup>s</sup> . 257	
Mean Dec.	-52° 59' 56". 21		+49° 46' 19". 90		-46° 50' 8". 82		+18° 51' 31". 08	
Sec δ, Tan δ	1.662, - 1.327		1.548, + 1.182		1.462, - 1.066		1.057, + 0.342	

AT UPPER TRANSIT AT GREENWICH.								
Date.	β Centauri. Mag. 0.8		θ Centauri. Mag. 2.1		α Boötis. (Arcturus) Mag. 0.3		η Centauri. Mag. 2.7	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m	o /	h m	o /	h m	o /	h m	o /
	13 57	59 55	14 I	35 54	14 II	19 39	14 29	41 44
	s	//	s	//	s	//	s	//
Jan. I	17.40	23.20	14.22	46.52	26.35	39.08	37.72	56.76
II	17.96	23.98	14.60	47.89	26.67	36.72	38.12	57.69
21	18.53	25.23	14.99	49.55	27.01	34.66	38.53	58.95
31	19.08	26.92	15.36	51.45	27.34	32.97	38.94	60.49
Feb. 10	19.60	29.01	15.71	53.50	27.65	31.68	39.33	62.27
20	20.08	31.42	16.04	55.65	27.95	30.84	39.70	64.24
Mar. I	20.51	34.10	16.33	57.90	28.21	30.45	40.04	66.33
II	20.89	36.96	16.59	60.11	28.45	30.51	40.34	68.51
21	21.21	39.95	16.81	62.30	28.65	30.95	40.62	70.72
31	21.47	43.01	17.00	64.42	28.81	31.75	40.85	72.90
Apr. 10	21.67	46.06	17.14	66.41	28.94	32.84	41.05	75.06
20	21.81	49.06	17.25	68.28	29.04	34.16	41.20	77.14
30	21.89	51.94	17.33	70.00	29.10	35.64	41.32	79.11
May 10	21.92	54.66	17.37	71.54	29.13	37.20	41.40	80.95
20	21.88	57.16	17.38	72.88	29.13	38.77	41.44	82.62
30	21.79	59.40	17.35	74.01	29.11	40.29	41.44	84.11
June 9	21.65	61.32	17.30	74.91	29.06	41.70	41.41	85.39
19	21.46	62.89	17.22	75.58	28.99	42.99	41.34	86.42
29	21.22	64.08	17.11	76.01	28.89	44.08	41.24	87.22
July 9	20.94	64.83	16.97	76.15	28.78	44.95	41.11	87.71
19	20.64	65.14	16.82	76.05	28.66	45.59	40.95	87.93
29	20.32	65.02	16.66	75.66	28.52	45.97	40.76	87.83
Aug. 8	19.99	64.43	16.48	75.03	28.37	46.07	40.57	87.45
18	19.67	63.43	16.31	74.18	28.23	45.88	40.37	86.79
28	19.36	62.01	16.14	73.10	28.09	45.38	40.17	85.85
Sept. 7	19.09	60.26	15.99	71.88	27.96	44.59	39.99	84.68
17	18.87	58.22	15.87	70.55	27.85	43.54	39.83	83.32
27	18.70	55.98	15.79	69.16	27.76	42.16	39.70	81.83
Oct. 7	18.61	53.62	15.74	67.80	27.71	40.50	39.62	80.28
17	18.61	51.24	15.75	66.52	27.70	38.55	39.59	78.75
27	18.71	48.69	15.83	65.30	27.73	36.35	39.62	77.30
Nov. 6	18.89	46.61	15.96	64.43	27.83	33.67	39.74	75.88
16	19.16	44.81	16.15	63.88	27.97	31.03	39.90	74.87
26	19.52	43.38	16.39	63.63	28.15	28.29	40.13	74.13
Dec. 6	19.95	42.39	16.69	63.77	28.38	25.49	40.42	73.77
16	20.44	41.88	17.02	64.29	28.66	22.69	40.76	73.75
26	20.97	41.88	17.38	65.17	28.96	20.02	41.13	74.13
36	21.53	42.40	17.77	66.42	29.28	17.51	41.53	74.88
Mean R. A.	13 <sup>h</sup> 57 <sup>m</sup> 19 <sup>s</sup> . 400		14 <sup>h</sup> 1 <sup>m</sup> 15 <sup>s</sup> . 849		14 <sup>h</sup> 11 <sup>m</sup> 27 <sup>s</sup> . 882		14 <sup>h</sup> 29 <sup>m</sup> 39 <sup>s</sup> . 661	
Mean Dec.	-59° 55' 46". 06		-35° 55' 3". 48		+19° 39' 39". 87		-41° 45' 14". 48	
Sec δ, Tan δ	1.996, - 1.727		1.235, - 0.724		1.062, + 0.357		1.340, - 0.893	



AT UPPER TRANSIT AT GREENWICH.

Date.	α Centauri. Mag. 1		α Lupi. Mag. 2.5		ε <sup>2</sup> Boötis. Mag. 2.6		α Librae. Mag. 2.9	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m	o /	h m	o /	h m	o /	h m	o /
	14 33	60 26	14 35	46 59	14 40	27 27	14 45	15 39
	s	"	s	"	s	"	s	"
Jan. 1	18.85	51.88	46.19	18.64	56.45	39.38	45.41	25.50
11	19.41	52.24	46.62	19.33	56.78	36.88	45.73	27.11
21	19.98	53.08	47.06	20.38	57.12	34.75	46.07	28.80
31	20.54	54.37	47.50	21.79	57.46	33.02	46.40	30.51
Feb. 10	21.08	56.07	47.93	23.48	57.80	31.77	46.72	32.17
20	21.59	58.10	48.33	25.42	58.12	31.03	47.03	33.74
Mar. 1	22.06	60.43	48.70	27.53	58.41	30.81	47.31	35.17
11	22.48	62.99	49.04	29.78	58.68	31.11	47.57	36.46
21	22.84	65.71	49.34	32.11	58.91	31.84	47.80	37.59
31	23.16	68.54	49.60	34.48	59.11	33.00	48.00	38.52
Apr. 10	23.41	71.41	49.82	36.82	59.28	34.50	48.18	39.28
20	23.60	74.30	49.99	39.12	59.40	36.25	48.32	39.86
30	23.73	77.11	50.13	41.35	59.49	38.19	48.44	40.30
May 10	23.80	79.80	50.22	43.44	59.55	40.23	48.52	40.60
20	23.80	82.35	50.27	45.40	59.58	42.28	48.58	40.78
30	23.75	84.67	50.27	47.17	59.57	44.27	48.61	40.84
June 9	23.64	86.72	50.24	48.74	59.53	46.14	48.61	40.82
19	23.47	88.48	50.16	50.05	59.47	47.84	48.58	40.74
29	23.25	89.89	50.05	51.07	59.37	49.31	48.52	40.54
July 9	22.98	90.91	49.90	51.78	59.26	50.51	48.44	40.27
19	22.67	91.51	49.72	52.18	59.12	51.39	48.34	39.96
29	22.35	91.69	49.51	52.24	58.97	51.97	48.22	39.59
Aug. 8	22.00	91.46	49.29	51.95	58.80	52.20	48.08	39.18
18	21.65	90.75	49.06	51.34	58.64	52.08	47.94	38.73
28	21.31	89.65	48.84	50.42	58.47	51.60	47.79	38.25
Sept. 7	20.99	88.17	48.63	49.20	58.31	50.75	47.65	37.78
17	20.71	86.38	48.44	47.76	58.16	49.57	47.53	37.33
27	20.49	84.29	48.29	46.12	58.04	48.03	47.43	36.96
Oct. 7	20.34	82.06	48.19	44.39	57.95	46.16	47.36	36.69
17	20.27	79.71	48.15	42.64	57.90	43.97	47.33	36.55
27	20.29	77.40	48.18	40.92	57.90	41.52	47.34	36.58
Nov. 6	20.42	74.97	48.28	39.18	57.96	38.52	(47.41) (47.42)	(36.82) (36.85)
16	20.64	72.99	48.45	37.85	58.06	35.62	47.54	37.38
26	20.94	71.36	48.69	36.79	58.22	32.61	47.71	38.13
Dec. 6	21.33	70.07	48.99	36.10	58.43	29.55	47.94	39.12
16	21.79	69.21	49.35	35.79	58.68	26.52	48.20	40.35
26	22.30	68.83	49.74	35.88	58.97	23.62	48.49	41.75
36	22.85	68.98	50.16	36.39	59.29	20.95	48.81	43.32
Mean R. A.	14 <sup>h</sup> 33 <sup>m</sup> 21 <sup>s</sup> . 308		14 <sup>h</sup> 35 <sup>m</sup> 48 <sup>s</sup> . 298		14 <sup>h</sup> 40 <sup>m</sup> 58 <sup>s</sup> . 152		14 <sup>h</sup> 45 <sup>m</sup> 47 <sup>s</sup> . 188	
Mean Dec.	-60° 27' 13" . 62		-46° 59' 37" . 39		+27° 27' 42" . 10		-15° 39' 35" . 41	
Sec δ, Tan δ	2.028, - 1.764		1.466, - 1.072		1.127, + 0.520		1.039, - 0.280	

AT UPPER TRANSIT AT GREENWICH.

Date.	β Ursæ Minoris. Mag. 2.2		β Lupi. Mag. 2.7		β Librae. Mag. 2.8		α Coronæ. Mag. 2.3	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	o /	h m	o /	h m	o /	h m	o /
	14 50	74 31	14 52	42 45	15 12	9 2	15 30	27 1
	s	"	s	"	s	"	s	"
Jan. 1	54.72	43.01	27.81	32.92	1.39	30.56	45.62	23.89
11	55.50	40.61	28.21	33.57	1.70	32.27	45.92	21.20
21	56.35	38.77	28.62	34.56	2.02	34.00	46.23	18.79
31	57.25	37.58	29.03	35.84	2.34	35.65	46.56	16.79
Feb. 10	58.15	37.07	29.44	37.38	2.66	37.21	46.90	15.24
20	59.04	37.24	29.83	39.12	2.96	38.62	47.22	14.20
Mar. 1	59.87	38.07	30.19	40.99	3.25	39.81	47.53	13.68
11	60.63	39.53	30.52	43.00	3.52	40.79	47.83	13.67
21	61.28	41.52	30.82	45.05	3.77	41.57	48.10	14.18
31	61.82	43.95	31.09	47.13	3.99	42.11	48.34	15.13
Apr. 10	62.22	46.73	31.32	49.22	4.18	42.43	48.55	16.48
20	62.48	49.74	31.51	51.24	4.34	42.58	48.72	18.18
30	62.60	52.86	31.66	53.20	4.48	42.57	48.87	20.10
May 10	62.58	55.99	31.77	55.07	4.59	42.42	48.98	22.19
20	62.42	58.99	31.84	56.78	4.67	42.15	49.05	24.38
30	62.14	61.77	31.87	58.37	4.72	41.80	49.09	26.55
June 9	61.74	64.28	31.87	59.78	4.74	41.42	49.10	28.65
19	61.24	66.39	31.82	60.96	4.73	41.00	49.07	30.59
29	60.65	68.07	31.73	61.90	4.69	40.56	49.01	32.37
July 9	59.99	69.28	31.61	62.59	4.63	40.11	48.92	33.90
19	59.28	70.00	31.46	63.01	4.54	39.68	48.80	35.15
29	58.53	70.17	31.28	63.14	4.42	39.24	48.65	36.08
Aug. 8	57.76	69.82	31.08	62.98	4.29	38.84	48.49	36.68
18	56.98	68.94	30.87	62.51	4.15	38.48	48.31	36.92
28	56.23	67.54	30.66	61.76	4.00	38.17	48.13	36.80
Sept. 7	55.51	65.65	30.46	60.75	3.85	37.92	47.94	36.32
17	54.85	63.29	30.28	59.54	3.72	37.75	47.76	35.44
27	54.26	60.54	30.13	58.16	3.60	37.68	47.60	34.22
Oct. 7	53.77	57.40	30.02	56.66	3.51	37.75	47.47	32.65
17	53.38	53.96	29.97	55.14	3.46	37.98	47.37	30.72
27	53.12	50.26	29.97	53.64	3.45	38.39	47.31	28.47
Nov. 6	53.00	46.42	30.04	52.27	3.48	39.01	47.30	25.94
16	53.04	42.08	30.19	51.00	3.58	39.93	47.35	23.17
26	53.23	38.21	30.40	50.10	3.72	41.00	47.46	19.93
Dec. 6	53.58	34.45	30.66	49.51	3.92	42.28	47.61	16.87
16	54.07	30.94	30.98	49.27	4.15	43.73	47.81	13.79
26	54.69	27.78	31.35	49.40	4.42	45.33	48.06	10.79
36	55.42	25.07	31.74	49.89	4.72	47.01	48.34	7.95
Mean R. A.	14 <sup>h</sup> 50 <sup>m</sup> 57 <sup>s</sup> . 924		14 <sup>h</sup> 52 <sup>m</sup> 29 <sup>s</sup> . 970		15 <sup>h</sup> 12 <sup>m</sup> 3 <sup>s</sup> . 272		15 <sup>h</sup> 30 <sup>m</sup> 47 <sup>s</sup> . 537	
Mean Dec.	+74° 31' 53" . 30		-42° 45' 49" . 97		-9° 2' 37" . 97		+27° 1' 25" . 92	
Sec δ, Tan δ	3.750, + 3.614		1.362, - 0.925		1.013, - 0.159		1.123, + 0.510	



AT UPPER TRANSIT AT GREENWICH.

Date.	$\alpha$ Serpentis. Mag. 2.8		$\delta$ Scorpii. Mag. 2.5		$\beta^1$ Scorpii. Mag. 2.7		$\eta$ Draconis. Mag. 2.9	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	o /	h m	o /	h m	o /	h m	o /
	15 39	6 42	15 54	22 21	16 0	19 33	16 22	61 43
	s	//	s	//	s	//	s	//
Jan. I	42.19	55.42	51.24	27.97	2.89	6.22	41.84	14.56
II	42.47	53.23	51.54	28.93	3.18	7.28	42.19	11.22
21	42.77	51.21	51.86	30.02	3.49	8.43	42.61	8.29
31	43.08	49.36	52.19	31.18	3.82	9.65	43.07	5.86
Feb. 10	43.39	47.77	52.53	32.39	4.15	10.86	43.57	4.03
20	43.70	46.54	52.86	33.59	4.48	12.03	44.09	2.84
Mar. I	43.99	45.64	53.18	34.75	4.80	13.15	44.62	2.31
11	44.27	45.11	53.49	35.85	5.10	14.17	45.13	2.46
21	44.52	44.92	53.78	36.85	5.38	15.06	45.62	3.27
31	44.76	45.09	54.05	37.74	5.65	15.82	46.06	4.70
Apr. 10	44.97	45.58	54.29	38.54	5.89	16.47	46.46	6.68
20	45.15	46.32	54.51	39.20	6.11	16.99	46.80	9.08
May 30	45.30	47.27	54.70	39.80	6.30	17.40	47.06	11.84
10	45.43	48.39	54.86	40.31	6.47	17.74	47.26	14.85
20	45.53	49.62	54.99	40.74	6.60	17.97	47.39	18.01
30	45.59	50.86	55.09	41.11	6.71	18.16	47.44	21.16
June 9	45.63	52.13	55.16	41.42	6.78	18.30	47.41	24.29
19	45.63	53.35	55.19	41.66	6.81	18.38	47.31	27.20
29	45.61	54.49	55.19	41.84	6.81	18.42	47.14	29.90
July 9	45.55	55.52	55.15	41.97	6.77	18.42	46.91	32.27
19	45.47	56.42	55.07	42.01	6.71	18.37	46.62	34.25
29	45.36	57.14	54.97	41.98	6.61	18.28	46.27	35.82
Aug. 8	45.23	57.70	54.84	41.87	6.48	18.14	45.88	36.92
18	45.08	58.07	54.68	41.69	6.33	17.94	45.46	37.53
28	44.93	58.25	54.52	41.43	6.17	17.69	45.02	37.62
Sept. 7	44.77	58.19	54.35	41.10	6.00	17.41	44.57	37.20
17	44.62	57.93	54.18	40.72	5.84	17.11	44.12	36.25
27	44.48	57.42	54.03	40.30	5.69	16.76	43.69	34.79
Oct. 7	44.36	56.68	53.90	39.87	5.56	16.46	43.29	32.84
17	44.28	55.70	53.81	39.47	5.47	16.20	42.94	30.45
27	44.24	54.47	53.76	39.15	5.41	16.03	42.65	27.62
Nov. 6	44.24	52.99	53.76	38.94	5.40	15.98	42.43	24.44
16	44.29	51.29	53.81	38.86	5.45	16.07	42.29	20.96
26	44.41	49.18	53.93	38.99	5.56	16.37	42.23	17.24
Dec. 6	44.56	47.09	54.09	39.31	5.72	16.85	42.28	13.05
16	44.76	44.90	54.31	39.83	5.92	17.53	42.42	9.21
26	45.00	42.65	54.56	40.54	6.17	18.37	42.65	5.46
36	45.27	40.43	54.85	41.44	6.45	19.39	42.96	1.95
Mean R. A.	15 <sup>h</sup> 39 <sup>m</sup> 44 <sup>s</sup> . 126		15 <sup>h</sup> 54 <sup>m</sup> 53 <sup>s</sup> . 454		16 <sup>h</sup> 0 <sup>m</sup> 5 <sup>s</sup> . 092		16 <sup>h</sup> 22 <sup>m</sup> 44 <sup>s</sup> . 624	
Mean Dec.	+ 6° 42' 52". 62		- 22° 21' 37". 39		- 19° 33' 14". 78		+ 61° 43' 20". 18	
Sec $\delta$ , Tan $\delta$	1.007, + 0.118		1.081, - 0.411		1.061, - 0.355		2.111, + 1.859	

AT UPPER TRANSIT AT GREENWICH.

Date.	$\alpha$ Scorpii. (Antares) Mag. 1.3		$\beta$ Herculis. Mag. 2.8		$\tau$ Scorpii. Mag. 2.9		$\zeta$ Ophiuchi. Mag. 2.7	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	o /	h m	o /	h m	o /	h m	o /
	16 23	26 13	16 26	21 41	16 30	28 1	16 32	10 22
	s	//	s	//	s	//	s	//
Jan. I	43.45	33.34	13.75	21.89	6.71	23.83	3.26	47.11
11	43.74	33.92	13.99	19.21	7.00	24.28	3.52	48.46
21	44.05	34.64	14.27	16.75	7.31	24.88	3.80	49.79
31	44.38	35.49	14.57	14.57	7.64	25.61	4.10	51.11
Feb. 10	44.72	36.40	14.87	12.78	7.99	26.42	4.40	52.34
20	45.06	37.34	15.18	11.44	8.33	27.29	4.71	53.43
Mar. I	45.40	38.29	15.50	10.56	8.67	28.17	5.02	54.37
11	45.73	39.23	15.80	10.18	9.01	29.05	5.32	55.10
21	46.04	40.12	16.08	10.29	9.33	29.91	5.61	55.63
31	46.33	40.94	16.35	10.87	9.63	30.73	5.88	55.95
Apr. 10	46.61	41.70	16.60	11.87	9.91	31.52	6.14	56.09
20	46.86	42.40	16.82	13.26	10.17	32.25	6.37	56.04
May 30	47.08	43.04	17.01	14.92	10.41	32.95	6.58	55.84
10	47.28	43.64	17.18	16.82	10.61	33.62	6.76	55.54
20	47.45	44.20	17.31	18.85	10.79	34.26	6.92	55.15
30	47.58	44.72	17.41	20.97	10.93	34.85	7.05	54.71
June 9	47.68	45.21	17.47	23.08	11.03	35.43	7.14	54.23
19	47.74	45.64	17.50	25.10	11.10	35.96	7.20	53.74
29	47.76	46.04	17.49	27.02	11.13	36.46	7.23	53.29
July 9	47.74	46.38	17.44	28.74	11.11	36.90	7.22	52.88
19	47.68	46.65	17.36	30.25	11.06	37.26	7.17	52.47
29	47.59	46.85	17.25	31.49	10.97	37.53	7.09	52.12
Aug. 8	47.46	46.95	17.11	32.45	10.84	37.71	6.98	51.81
18	47.31	46.94	16.95	33.10	10.69	37.78	6.84	51.55
28	47.14	46.84	16.77	33.43	10.52	37.74	6.69	51.31
Sept. 7	46.96	46.62	16.58	33.39	10.34	37.58	6.53	51.17
17	46.78	46.31	16.39	33.04	10.15	37.28	6.36	51.07
27	46.61	45.92	16.21	32.33	9.98	36.88	6.20	51.04
Oct. 7	46.47	45.47	16.05	31.28	9.82	36.40	6.06	51.11
17	46.35	45.00	15.91	29.87	9.70	35.88	5.95	51.28
27	46.27	44.52	15.81	28.14	9.61	35.36	5.87	51.58
Nov. 6	46.24	44.10	15.75	26.10	9.58	34.85	5.83	52.01
16	46.26	43.79	15.74	23.80	9.59	34.42	5.84	52.61
26	46.34	43.60	15.78	21.25	9.66	34.11	5.90	53.38
Dec. 6	46.49	43.57	15.88	18.24	9.81	33.94	6.03	54.40
16	46.68	43.74	16.03	15.41	10.00	33.95	6.19	55.52
26	46.91	44.08	16.22	12.58	10.23	34.15	6.40	56.74
36	47.19	44.58	16.45	9.81	10.50	34.52	6.64	58.05
Mean R. A.	16 <sup>h</sup> 23 <sup>m</sup> 45 <sup>s</sup> . 859		16 <sup>h</sup> 26 <sup>m</sup> 15 <sup>s</sup> . 835		16 <sup>h</sup> 30 <sup>m</sup> 9 <sup>s</sup> . 179		16 <sup>h</sup> 32 <sup>m</sup> 5 <sup>s</sup> . 489	
Mean Dec.	- 26° 13' 42". 15		+ 21° 41' 22". 33		- 28° 1' 32". 61		- 10° 22' 52". 53	
Sec $\delta$ , Tan $\delta$	1.115, - 0.493		1.076, + 0.398		1.133, - 0.532		1.017, - 0.183	



AT UPPER TRANSIT AT GREENWICH.								
Date.	α Trianguli Aust. Mag. 1.9		ε Scorpii. Mag. 2.3		η Ophiuchi. Mag. 2.6		β Aræ. Mag. 2.7	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	° /	h m	° /	h m	° /	h m	° /
	16 38	68 51	16 44	34 7	17 5	15 36	17 17	55 26
	s	"	s	"	s	"	s	"
Jan. 1	49.72	21.08	9.44	28.03	3.62	36.52	35.19	27.81
11	50.31	19.51	9.74	28.06	3.86	37.43	35.55	26.47
21	50.97	18.32	10.06	28.27	4.13	38.38	35.95	25.38
31	51.68	17.54	10.40	28.67	4.41	39.35	36.40	24.55
Feb. 10	52.43	17.20	10.76	29.20	4.72	40.28	36.88	24.05
20	53.19	17.24	11.12	29.84	5.03	41.12	37.37	23.82
Mar. 1	53.96	17.72	11.48	30.57	5.34	41.86	37.88	23.84
11	54.73	18.57	11.84	31.36	5.65	42.44	38.39	24.18
21	55.46	19.79	12.18	32.19	5.95	42.89	38.89	24.78
31	56.16	21.34	12.51	33.05	6.25	43.18	39.38	25.61
Apr. 10	56.81	23.18	12.82	33.94	6.52	43.34	39.85	26.66
20	57.41	25.26	13.10	34.84	6.79	43.35	40.29	27.94
30	57.93	27.59	13.36	35.73	7.03	43.26	40.69	29.41
May 10	58.39	30.09	13.60	36.64	7.25	43.11	41.06	31.03
20	58.76	32.70	13.80	37.57	7.44	42.89	41.38	32.81
30	59.04	35.36	13.96	38.49	7.61	42.63	41.65	34.67
June 9	59.22	38.05	14.08	39.41	7.74	42.38	41.87	36.64
19	59.31	40.69	14.17	40.28	7.83	42.13	42.02	38.61
29	59.20	43.21	14.21	41.11	7.89	41.89	42.10	40.57
July 9	59.18	45.56	14.20	41.89	7.90	41.69	42.12	42.47
19	58.97	47.65	14.15	42.57	7.88	41.51	42.07	44.22
29	58.67	49.42	14.06	43.13	7.82	41.36	41.95	45.81
Aug. 8	58.29	50.84	13.94	43.58	7.73	41.24	41.77	47.17
18	57.84	51.86	13.78	43.86	7.60	41.13	41.55	48.25
28	57.35	52.38	13.59	43.95	7.45	41.03	41.28	48.99
Sept. 7	56.84	52.45	13.39	43.88	7.29	40.93	40.98	49.39
17	56.33	52.03	13.19	43.65	7.11	40.87	40.67	49.43
27	55.84	51.17	13.00	43.23	6.94	40.82	40.36	49.07
Oct. 7	55.39	49.85	12.82	42.66	6.78	40.79	40.06	48.35
17	55.01	48.13	12.67	41.99	6.65	40.80	39.80	47.31
27	54.72	46.09	12.57	41.23	6.55	40.89	39.59	45.95
Nov. 6	54.54	43.81	12.51	40.44	6.48	41.04	39.45	44.38
16	54.48	41.37	12.51	39.68	6.46	41.30	39.37	42.62
26	54.55	38.89	12.57	39.00	6.50	41.70	39.38	40.79
Dec. 6	54.76	36.20	12.70	38.38	6.58	42.22	39.47	38.94
16	55.09	33.93	12.88	37.97	6.73	42.95	39.67	36.98
26	55.54	31.86	13.11	37.73	6.91	43.72	39.92	35.33
36	56.08	30.14	13.39	37.68	7.13	44.59	40.25	33.87
Mean R. A.	16 <sup>h</sup> 38 <sup>m</sup> 54 <sup>s</sup> .864	16 <sup>h</sup> 44 <sup>m</sup> 12 <sup>s</sup> .114	17 <sup>h</sup> 5 <sup>m</sup> 6 <sup>s</sup> .015	17 <sup>h</sup> 17 <sup>m</sup> 39 <sup>s</sup> .001				
Mean Dec.	-68° 51' 34".87	-34° 7' 36".97	-15° 36' 41".46	-55° 26' 36".68				
Sec δ, Tan δ	2.773, - 2.586	1.208, - 0.678	1.038, - 0.279	1.763, - 1.452				

AT UPPER TRANSIT AT GREENWICH.								
Date.	υ Scorpii. Mag. 2.8		α Aræ. Mag. 2.9		λ Scorpii. Mag. 1.8		α Ophiuchi. Mag. 2.1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	17 24	37 13	17 24	49 48	17 27	37 2	17 30	12 37
	s	"	s	"	s	"	s	"
Jan. 1	27.44	16.32	40.22	6.39	18.68	7.78	37.57	35.88
11	27.70	15.89	40.53	5.26	18.94	7.34	37.76	33.57
21	28.00	15.62	40.89	4.37	19.24	7.06	37.99	31.37
31	28.33	15.52	41.28	3.72	19.56	6.94	38.24	29.34
Feb. 10	28.68	15.53	41.70	3.30	19.91	6.93	38.51	27.60
20	29.05	15.68	42.14	3.11	20.28	7.05	38.79	26.20
Mar. 1	29.42	15.94	42.59	3.15	20.65	7.28	39.08	25.16
11	29.79	16.30	43.04	3.42	21.02	7.63	39.38	24.53
21	30.16	16.74	43.49	3.89	21.38	8.04	39.67	24.34
31	30.52	17.26	43.93	4.58	21.74	8.51	39.96	24.56
Apr. 10	30.87	17.84	44.35	5.44	22.09	9.07	40.23	25.17
20	31.20	18.48	44.75	6.47	22.42	9.67	40.49	26.17
30	31.50	19.20	45.12	7.66	22.73	10.35	40.73	27.44
May 10	31.79	19.98	45.45	8.99	23.02	11.10	40.95	28.97
20	32.04	20.80	45.75	10.44	23.27	11.91	41.15	30.66
30	32.25	21.70	46.01	12.00	23.49	12.78	41.31	32.49
June 9	32.43	22.65	46.21	13.64	23.67	13.70	41.44	34.35
19	32.56	23.63	46.36	15.31	23.81	14.64	41.54	36.19
29	32.65	24.62	46.46	16.98	23.90	15.61	41.60	37.98
July 9	32.69	25.57	46.49	18.61	23.94	16.57	41.62	39.66
19	32.68	26.49	46.46	20.14	23.93	17.49	41.60	41.17
29	32.62	27.33	46.38	21.53	23.87	18.34	41.54	42.50
Aug. 8	32.51	28.07	46.24	22.73	23.77	19.08	41.44	43.61
18	32.37	28.67	46.05	23.72	23.63	19.68	41.32	44.47
28	32.19	29.09	45.82	24.41	23.45	20.10	41.16	45.09
Sept. 7	31.99	29.34	45.57	24.82	23.25	20.36	40.99	45.45
17	31.78	29.37	45.30	24.90	23.04	20.42	40.81	45.51
27	31.57	29.19	45.03	24.65	22.83	20.28	40.63	45.30
Oct. 7	31.37	28.83	44.77	24.10	22.63	19.94	40.45	44.79
17	31.19	28.29	44.54	23.24	22.45	19.41	40.29	44.00
27	31.05	27.61	44.36	22.12	22.31	18.74	40.16	42.92
Nov. 6	30.95	26.82	44.23	20.80	22.21	17.97	40.06	41.56
16	30.91	25.95	44.16	19.35	22.16	17.12	40.00	39.95
26	30.92	25.09	44.17	17.82	22.17	16.26	39.99	38.08
Dec. 6	30.99	24.26	44.25	16.26	22.24	15.43	40.02	36.01
16	31.14	23.41	44.42	14.61	22.39	14.62	40.12	33.57
26	31.34	22.78	44.64	13.23	22.58	13.99	40.25	31.25
36	31.58	22.29	44.92	12.02	22.82	13.47	40.43	28.92
Mean R. A.	17 <sup>h</sup> 24 <sup>m</sup> 30 <sup>s</sup> .352	17 <sup>h</sup> 24 <sup>m</sup> 43 <sup>s</sup> .680	17 <sup>h</sup> 27 <sup>m</sup> 21 <sup>s</sup> .596	17 <sup>h</sup> 30 <sup>m</sup> 39 <sup>s</sup> .804				
Mean Dec.	-37° 13' 22".77	-49° 48' 14".08	-37° 2' 13".99	+12° 37' 35".12				
Sec δ, Tan δ	1.256, - 0.760	1.549, - 1.184	1.253, - 0.755	1.025, + 0.224				



AT UPPER TRANSIT AT GREENWICH.

Date.	θ Scorpil. Mag. 2.0		λ Scorpil. Mag. 2.6		β Ophiuchi. Mag. 2.9		γ Draconis. Mag. 2.4	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	o /	h m	o /	h m	o /	h m	o /
	17 30	42 56	17 36	38 58	17 38	4 36	17 54	51 29
	s	"	s	"	s	"	s	"
Jan. I	39.20	17.00	4.39	52.80	53.37	20.16	25.58	56.70
II	39.47	16.22	4.65	52.20	53.56	18.30	25.75	53.15
21	39.79	15.61	4.94	51.75	53.78	16.48	25.97	49.76
31	40.14	15.18	5.27	51.45	54.03	14.81	26.25	46.70
Feb. 10	40.51	14.93	5.62	51.31	54.29	13.31	26.57	44.03
20	40.90	14.86	5.99	51.27	54.57	12.09	26.93	41.89
Mar. I	41.30	14.95	6.36	51.38	54.86	11.18	27.31	40.33
II	41.70	15.19	6.74	51.58	55.15	10.61	27.71	39.42
21	42.10	15.58	7.12	51.90	55.44	10.39	28.11	39.13
31	42.49	16.09	7.49	52.31	55.73	10.51	28.51	39.50
Apr. 10	42.87	16.74	7.85	52.80	56.01	10.98	28.90	40.49
20	43.23	17.49	8.20	53.39	56.27	11.75	29.26	42.08
30	43.57	18.37	8.52	54.06	56.52	12.76	29.59	44.16
May 10	43.88	19.36	8.82	54.84	56.74	13.99	29.88	46.65
20	44.16	20.44	9.09	55.69	56.94	15.36	30.13	49.46
30	44.40	21.59	9.32	56.61	57.12	16.81	30.32	52.50
June 9	44.59	22.83	9.52	57.60	57.27	18.31	30.46	55.68
19	44.74	24.11	9.67	58.64	57.38	19.79	30.54	58.86
29	44.84	25.41	9.77	59.70	57.45	21.23	30.57	62.02
July 9	44.88	26.68	9.82	60.76	57.48	22.55	30.53	65.03
19	44.87	27.90	9.82	61.79	57.48	23.76	30.43	67.81
29	44.81	29.02	9.77	62.74	57.43	24.81	30.28	70.32
Aug. 8	44.70	30.00	9.67	63.59	57.35	25.70	30.07	72.47
18	44.54	30.82	9.53	64.32	57.24	26.39	29.82	74.24
28	44.35	31.41	9.35	64.85	57.10	26.88	29.52	75.58
Sept. 7	44.13	31.77	9.15	65.20	56.94	27.18	29.20	76.45
17	43.90	31.89	8.93	65.32	56.76	27.28	28.87	76.83
27	43.66	31.74	8.71	65.25	56.59	27.15	28.52	76.71
Oct. 7	43.44	31.33	8.50	64.93	56.42	26.81	28.18	76.07
17	43.24	30.67	8.31	64.41	56.26	26.26	27.85	74.93
27	43.08	29.82	8.16	63.73	56.13	25.48	27.55	73.29
Nov. 6	42.96	28.82	8.05	62.91	56.04	24.47	27.30	71.18
16	42.90	27.69	7.99	61.99	55.98	23.24	27.09	68.62
26	42.91	26.50	7.99	61.04	55.97	21.80	26.94	65.68
Dec. 6	42.97	25.34	8.05	60.10	56.00	20.19	26.86	62.42
16	43.12	24.13	(8.18) (8.19)	(59.20) (59.12)	(56.09) (56.10)	(18.44) (18.26)	26.85	58.95
26	43.32	23.11	8.37	58.33	56.23	16.40	26.91	54.99
36	43.58	22.23	8.61	57.66	56.40	14.52	27.04	51.38
Mean R. A.	17 <sup>h</sup> 30 <sup>m</sup> 42 <sup>s</sup> . 343	17 <sup>h</sup> 36 <sup>m</sup> 7 <sup>s</sup> . 397	17 <sup>h</sup> 38 <sup>m</sup> 55 <sup>s</sup> . 648	17 <sup>h</sup> 54 <sup>m</sup> 28 <sup>s</sup> . 185				
Mean Dec.	-42° 56' 23" . 54	-38° 58' 58" . 51	+ 4° 36' 18" . 78	+ 51° 29' 57" . 84				
Sec δ, Tan δ	1.366, - 0.931	1.286, - 0.809	1.003, + 0.081	1.606, + 1.257				

AT UPPER TRANSIT AT GREENWICH.

Date.	δ Sagittarii. Mag. 2.8		ε Sagittarii. Mag. 1.9		λ Sagittarii. Mag. 2.9		α Lyrae. (Vega) Mag. 0.1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	o /	h m	o /	h m	o /	h m	o /
	18 15	29 52	18 18	34 25	18 22	25 28	18 33	38 41
	s	"	s	"	s	"	s	"
Jan. I	3.45	2.08	0.98	40.86	14.88	22.20	47.04	51.71
II	3.65	1.81	1.18	40.28	15.06	22.18	47.15	48.49
21	3.88	1.60	1.42	39.80	15.27	22.18	47.31	45.36
31	4.14	1.43	1.69	39.38	15.52	22.21	47.52	42.40
Feb. 10	4.43	1.30	2.00	39.04	15.80	22.25	47.76	39.79
20	4.74	1.22	2.32	38.76	16.09	22.28	48.04	37.58
Mar. I	5.07	1.15	2.66	38.54	16.40	22.27	48.34	35.87
II	5.40	1.09	3.01	38.36	16.72	22.25	48.66	34.70
21	5.75	1.03	3.37	38.22	17.05	22.19	48.99	34.13
31	6.09	0.98	3.72	38.18	17.37	22.06	49.32	34.16
Apr. 10	6.42	0.93	4.08	38.16	17.70	21.89	49.66	34.78
20	6.75	0.91	4.43	38.21	18.02	21.72	49.99	35.95
30	7.07	0.91	4.76	38.34	18.33	21.54	50.30	37.63
May 10	7.37	0.97	5.08	38.55	18.62	21.37	50.59	39.73
20	7.65	1.09	5.37	38.86	18.90	21.23	50.85	42.21
30	7.90	1.28	5.63	39.27	19.14	21.17	51.07	44.93
June 9	8.12	1.57	5.86	39.79	19.36	21.18	51.26	47.83
19	8.30	1.94	6.05	40.41	19.54	21.25	51.40	50.82
29	8.43	2.38	6.20	41.12	19.68	21.40	51.49	53.82
July 9	8.52	2.88	6.29	41.89	19.77	21.64	51.54	56.74
19	8.56	3.44	6.34	42.69	19.82	21.97	51.53	59.52
29	8.56	4.04	6.33	43.52	19.82	22.33	51.47	62.08
Aug. 8	8.50	4.62	6.28	44.33	19.78	22.73	51.37	64.36
18	8.41	5.16	6.18	45.08	19.69	23.13	51.22	66.34
28	8.28	5.67	6.04	45.74	19.57	23.50	51.03	67.94
Sept. 7	8.12	6.08	5.87	46.28	19.42	23.85	50.81	69.14
17	7.93	6.39	5.68	46.69	19.24	24.13	50.57	69.92
27	7.74	6.57	5.47	46.90	19.05	24.34	50.31	70.26
Oct. 7	7.54	6.63	5.27	46.95	18.87	24.44	50.05	70.12
17	7.36	6.55	5.07	46.83	18.69	24.47	49.80	69.52
27	7.20	6.36	4.90	46.53	18.54	24.43	49.56	68.47
Nov. 6	7.08	6.05	4.77	46.08	18.41	24.32	49.36	66.95
16	7.00	5.69	4.68	45.53	18.33	24.16	49.19	65.00
26	6.96	5.28	4.64	44.91	18.29	24.00	49.06	62.64
Dec. 6	6.98	4.86	4.65	44.22	18.30	23.84	48.99	59.95
16	7.05	4.45	4.72	43.54	18.36	23.69	48.96	57.01
26	7.19	4.06	4.86	42.82	(18.47) (18.49)	(23.59) (23.59)	48.99	53.88
36	7.36	3.74	5.04	42.21	18.65	23.53	49.08	50.31
Mean R. A.	18 <sup>h</sup> 15 <sup>m</sup> 6 <sup>s</sup> . 257	18 <sup>h</sup> 18 <sup>m</sup> 3 <sup>s</sup> . 921	18 <sup>h</sup> 22 <sup>m</sup> 17 <sup>s</sup> . 587	18 <sup>h</sup> 33 <sup>m</sup> 49 <sup>s</sup> . 412				
Mean Dec.	-29° 52' 4" . 14	-34° 25' 42" . 90	-25° 28' 23" . 59	+ 38° 41' 51" . 44				
Sec δ, Tan δ	1.153, - 0.574	1.212, - 0.685	1.108, - 0.476	1.281, + 0.801				



AT UPPER TRANSIT AT GREENWICH.

Date.	σ Sagittarii. Mag. 2.1		ζ Sagittarii. Mag. 2.7		γ Aquilæ. Mag. 2.8		α Aquilæ. (Altaïr) Mag. 0.9	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	18 49	26 24	18 56	30 0	19 41	10 23	19 46	8 37
	s	"	s	"	s	"	s	"
Jan. 1	30.88	42.40	42.68	45.59	50.91	18.14	15.44	28.43
11	31.05	42.17	42.84	45.09	50.97	16.30	15.50	26.71
21	31.24	41.98	43.03	44.64	51.08	14.31	15.60	24.84
31	31.46	41.80	43.26	44.20	51.22	12.57	15.74	23.22
Feb. 10	31.71	41.61	43.51	43.77	51.38	10.99	15.90	21.76
20	31.99	41.39	43.79	43.35	51.58	9.66	16.10	20.52
Mar. 1	32.29	41.15	44.09	42.92	51.80	8.61	16.32	19.56
11	32.60	40.87	44.41	42.48	52.04	7.90	16.56	18.92
21	32.92	40.56	44.74	42.04	52.30	7.55	16.81	18.65
31	33.25	40.20	45.08	41.60	52.58	7.61	17.09	18.75
Apr. 10	33.58	39.82	45.42	41.17	52.87	8.06	17.38	19.22
20	33.91	39.44	45.76	40.77	53.16	8.89	17.67	20.06
30	34.24	39.06	46.10	40.42	53.46	10.05	17.97	21.21
May 10	34.55	38.71	46.43	40.15	53.75	11.50	18.26	22.65
20	34.84	38.44	46.73	39.96	54.03	13.20	18.55	24.33
30	35.11	38.23	47.02	39.87	54.29	15.08	18.81	26.18
June 9	35.35	38.13	47.28	39.91	54.53	17.06	19.06	28.11
19	35.56	38.15	47.50	40.08	54.74	19.11	19.28	30.11
29	35.73	38.26	47.67	40.37	54.92	21.17	19.46	32.11
July 9	35.85	38.48	47.81	40.78	55.06	23.17	19.61	34.03
19	35.93	38.81	47.89	41.31	55.16	25.06	19.71	35.85
29	35.95	39.21	47.93	41.91	55.21	26.80	19.77	37.53
Aug. 8	35.93	39.67	47.92	42.56	55.22	28.37	19.79	39.03
18	35.87	40.17	47.85	43.23	55.19	29.72	19.76	40.33
28	35.76	40.66	47.75	43.88	55.12	30.85	19.69	41.40
Sept. 7	35.62	41.13	47.61	44.49	55.01	31.74	19.59	42.24
17	35.46	41.55	47.44	45.02	54.87	32.37	19.46	42.85
27	35.28	41.90	47.25	45.44	54.71	32.74	19.30	43.20
Oct. 7	35.09	42.14	47.06	45.73	54.54	32.85	19.14	43.30
17	34.91	42.29	46.87	45.91	54.36	32.69	18.97	43.16
27	34.74	42.34	46.69	45.93	54.19	32.28	18.80	42.77
Nov. 6	34.60	42.29	46.55	45.81	54.04	31.61	18.64	42.14
16	34.50	42.18	46.43	45.59	53.91	30.68	18.51	41.28
26	34.44	42.00	46.36	45.26	53.80	29.51	18.41	40.17
Dec. 6	34.42	41.79	46.34	44.87	53.73	28.13	18.34	38.87
16	34.46	41.57	46.37	44.44	53.70	26.56	18.31	37.42
26	34.54	41.34	46.45	43.97	53.71	24.85	18.31	35.81
36	34.68	41.13	46.58	43.47	53.75	23.04	18.36	34.13
Mean R. A.	18h 49m 33s.632		18h 56m 45s.520		19h 41m 53s.150		19h 46m 17s.680	
Mean Dec.	-26° 24' 41" 91		-30° 0' 44" 53		+10° 23' 18" 77		+ 8° 37' 29" 32	
Sec δ, Tan δ	1.116, - 0.497		1.155, - 0.578		1.017, + 0.183		1.011, + 0.152	

AT UPPER TRANSIT AT GREENWICH.

Date.	α Pavonis. Mag. 2.0		γ Cygni. Mag. 2.3		α Cygni. (Deneb) Mag. 1.3		ε Cygni. Mag. 2.6	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	20 18	57 1	20 18	39 57	20 38	44 56	20 42	33 37
	s	"	s	"	s	"	s	"
Jan. 1	18.48	59.31	53.36	45.75	15.51	68.71	27.23	33.60
11	18.52	57.17	53.34	42.90	15.45	65.87	27.20	31.07
21	18.64	54.89	53.36	39.93	15.44	62.85	27.21	28.42
31	18.84	52.30	53.44	36.65	15.48	59.47	27.26	25.48
Feb. 10	19.09	49.95	53.56	33.81	15.58	56.47	27.36	22.90
20	19.39	47.65	53.73	31.20	15.72	53.68	27.49	20.51
Mar. 1	19.74	45.44	53.93	28.93	15.91	51.18	27.67	18.41
11	20.14	43.37	54.18	27.08	16.15	49.09	27.88	16.69
21	20.57	41.48	54.46	25.72	16.43	47.46	28.13	15.42
31	21.04	39.80	54.76	24.94	16.74	46.40	28.40	14.67
Apr. 10	21.53	38.37	55.09	24.71	17.08	45.90	28.70	14.42
20	22.04	37.20	55.43	25.05	17.43	46.02	29.02	14.72
30	22.57	36.35	55.78	25.96	17.80	46.69	29.35	15.55
May 10	23.09	35.83	56.12	27.40	18.17	47.93	29.68	16.87
20	23.60	35.66	56.46	29.30	18.53	49.68	30.01	18.62
30	24.10	35.84	56.77	31.60	18.88	51.88	30.32	20.76
June 9	24.56	36.37	57.06	34.23	19.19	54.46	30.61	23.23
19	24.98	37.23	57.32	37.11	19.48	57.32	30.88	25.93
29	25.35	38.44	57.53	40.17	19.72	60.43	31.12	28.83
July 9	25.66	39.93	57.69	43.32	19.91	63.65	31.31	31.80
19	25.90	41.65	57.81	46.47	20.05	66.93	31.45	34.79
29	26.07	43.57	57.87	49.55	20.13	70.19	31.55	37.72
Aug. 8	26.15	45.61	57.88	52.49	20.15	73.36	31.60	40.55
18	26.16	47.71	57.83	55.23	20.12	76.35	31.59	43.20
28	26.09	49.77	57.74	57.73	20.03	79.13	31.54	45.60
Sept. 7	25.95	51.73	57.60	59.91	19.90	81.62	31.44	47.73
17	25.74	53.54	57.42	61.75	19.72	83.77	31.31	49.56
27	25.49	55.07	57.21	63.20	19.50	85.55	31.14	51.04
Oct. 7	25.20	56.27	56.98	64.22	19.26	86.89	30.95	52.12
17	24.89	57.12	56.73	64.80	18.99	87.78	30.75	52.81
27	24.57	57.57	56.49	64.91	18.72	88.20	30.53	53.07
Nov. 6	24.26	57.59	56.25	64.54	18.45	88.10	30.32	52.89
16	23.99	57.15	56.02	63.69	18.20	87.51	30.13	52.27
26	23.75	56.31	55.82	62.38	17.97	86.42	29.95	51.21
Dec. 6	23.57	55.10	55.65	60.62	17.76	84.83	29.79	49.74
16	23.45	53.54	55.52	58.46	17.59	82.81	29.67	47.91
26	23.39	51.71	55.43	55.97	17.46	80.40	29.58	45.76
36	23.41	49.63	55.38	53.22	17.37	77.70	29.53	43.36
Mean R. A.	20h 18m 22s.446		20h 18m 55s.574		20h 38m 17s.717		20h 42m 29s.322	
Mean Dec.	-57° 1' 49" 70		+39° 57' 42" 57		+44° 57' 4" 39		+33° 37' 30" 97	
Sec δ, Tan δ	1.838, - 1.542		1.305, + 0.838		1.413, + 0.998		1.201, + 0.665	



AT UPPER TRANSIT AT GREENWICH.								
Date.	α Cephei. Mag. 2.6		ε Pegasi. Mag. 2.5		α Gruis. Mag. 1.9		α Toucani. Mag. 2.9	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	° /	h m	° /	h m	° /	h m	° /
	21 16	62 11	21 39	9 26	22 2	47 24	22 12	60 42
	s	//	s	//	s	//	s	//
Jan. 1	20.68	51.94	38.15	67.54	23.67	42.20	8.99	85.32
11	20.45	49.21	38.10	66.20	23.58	40.88	8.82	83.46
21	20.29	46.16	38.09	64.81	23.54	39.25	8.71	81.24
31	20.21	42.94	38.11	63.45	23.53	37.34	8.66	78.72
Feb. 10	20.21	39.31	38.15	62.18	23.58	35.20	8.67	75.94
20	20.31	36.06	38.24	60.94	23.68	32.65	(8.76) (8.77)	(72.99) (72.69)
Mar. 1	20.48	33.01	38.36	60.04	23.82	30.20	8.92	69.63
11	20.73	30.29	38.50	59.39	24.00	27.69	9.14	66.54
21	21.05	27.98	38.68	59.03	24.23	25.15	9.42	63.48
31	21.44	26.17	38.89	59.03	24.51	22.63	9.76	60.52
Apr. 10	21.89	24.92	39.13	59.38	24.82	20.19	10.15	57.71
20	22.37	24.29	39.39	60.08	25.17	17.88	10.60	55.12
30	22.87	24.28	39.68	61.11	25.55	15.74	11.09	52.79
May 10	23.39	24.89	39.98	62.46	25.95	13.82	11.61	50.81
20	23.90	26.08	40.28	64.08	26.38	12.18	12.16	49.19
30	24.40	27.83	40.59	65.91	26.81	10.85	12.72	47.96
June 9	24.86	30.08	40.89	67.91	27.24	9.86	13.28	47.18
19	25.27	32.73	41.18	70.02	27.66	9.25	13.83	46.86
29	25.63	35.76	41.45	72.19	28.05	9.03	14.35	47.01
July 9	25.92	39.06	41.68	74.33	28.42	9.20	14.83	47.60
19	26.14	42.52	41.89	76.41	28.74	9.77	15.26	48.64
29	26.28	46.08	42.05	78.40	29.01	10.68	15.63	50.08
Aug. 8	26.34	49.65	42.17	80.24	29.23	11.94	15.92	51.88
18	26.32	53.20	42.25	81.91	29.38	13.47	16.13	53.98
28	26.22	56.59	42.29	83.36	29.47	15.21	16.25	56.29
Sept. 7	26.04	59.78	42.28	84.57	29.50	17.11	16.29	58.73
17	25.80	62.71	42.24	85.55	29.47	19.07	16.24	61.20
27	25.49	65.30	42.16	86.29	29.38	21.04	16.12	63.64
Oct. 7	25.14	67.48	42.05	86.79	29.24	22.90	15.92	65.90
17	24.75	69.21	41.92	87.05	29.07	24.59	15.67	67.90
27	24.33	70.46	41.78	87.06	28.86	26.03	15.37	69.57
Nov. 6	23.89	71.16	41.64	86.85	28.64	27.16	15.05	70.84
16	23.46	71.30	41.50	86.40	28.42	27.95	14.71	71.65
26	23.03	70.89	41.37	85.75	28.21	28.35	14.38	71.96
Dec. 6	22.63	69.89	41.25	84.91	28.01	28.34	14.06	71.76
16	22.26	68.32	41.15	83.88	27.83	27.92	13.78	71.04
26	21.95	66.26	41.07	82.71	27.69	27.12	13.53	69.83
36	21.69	63.76	41.02	81.43	27.59	25.96	13.34	68.18
Mean R. A.	21 <sup>h</sup> 16 <sup>m</sup> 23 <sup>s</sup> .107		21 <sup>h</sup> 39 <sup>m</sup> 40 <sup>s</sup> .038		22 <sup>h</sup> 2 <sup>m</sup> 26 <sup>s</sup> .323		22 <sup>h</sup> 12 <sup>m</sup> 12 <sup>s</sup> .263	
Mean Dec.	+62° 11' 44".07		+ 9° 27' 10".25		-47° 24' 25".16		-60° 43' 5".67	
Sec δ, Tan δ	2.144, + 1.896		1.014, + 0.167		1.478, - 1.088		2.045, - 1.783	

AT UPPER TRANSIT AT GREENWICH.								
Date.	β Gruis. Mag. 2.1		α Piscis Australis. (Fomalhaut) Mag. 1.3		β Pegasi. Mag. 2.2-2.7		α Pegasi. (Markab) Mag. 2.6	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	22 37	47 21	22 52	30 6	22 59	27 34	23 0	14 42
	s	//	s	//	s	//	s	//
Jan. 1	8.32	76.67	32.29	52.01	17.28	62.68	9.13	34.23
11	8.19	75.55	32.20	51.70	17.16	61.26	9.03	33.06
21	8.10	74.07	32.13	51.10	17.06	59.62	8.95	31.79
31	8.05	72.26	32.08	50.22	16.99	57.83	8.89	30.48
Feb. 10	8.04	70.16	32.07	49.09	16.94	55.95	8.86	29.17
20	8.07	67.82	32.09	47.72	16.92	54.08	8.86	27.94
Mar. 1	8.16	65.07	32.14	46.12	16.94	52.29	8.88	26.82
11	8.29	62.43	32.24	44.16	17.01	50.53	8.95	25.81
21	8.47	59.70	32.37	42.21	17.11	49.17	9.05	25.18
31	8.70	56.94	32.53	40.12	17.26	48.13	9.19	24.85
Apr. 10	8.97	54.22	32.74	37.92	17.45	47.47	9.37	24.84
20	9.28	51.59	32.98	35.67	17.67	47.22	9.59	25.18
30	9.62	49.11	33.26	33.42	17.94	47.39	9.83	25.89
May 10	10.00	46.84	33.56	31.18	18.23	47.99	10.11	26.93
20	10.41	44.81	33.89	29.06	18.54	49.01	10.41	28.28
30	10.83	43.09	34.24	27.09	18.87	50.44	10.72	29.93
June 9	11.26	41.71	34.59	25.30	19.21	52.21	11.03	31.81
19	11.69	40.70	34.95	23.76	19.54	54.27	11.35	33.89
29	12.11	40.11	35.29	22.50	19.86	56.57	11.66	36.08
July 9	12.49	39.95	35.62	21.56	20.16	59.06	11.94	38.36
19	12.84	40.21	35.92	20.95	20.43	61.66	12.21	40.65
29	13.15	40.87	36.18	20.70	20.66	64.33	12.44	42.90
Aug. 8	13.41	41.91	36.41	20.78	20.86	66.99	12.63	45.05
18	13.60	43.29	36.59	21.19	21.02	69.60	12.79	47.10
28	13.74	44.94	36.72	21.91	21.13	72.10	12.90	48.95
Sept. 7	13.82	46.83	36.80	22.89	21.20	74.45	12.98	50.61
17	13.83	48.85	36.84	24.08	21.22	76.61	13.01	52.06
27	13.79	50.93	36.83	25.42	21.21	78.53	13.00	53.26
Oct. 7	13.69	52.97	36.78	26.84	21.16	80.17	12.96	54.23
17	13.55	54.90	36.69	28.27	21.08	81.53	12.89	54.93
27	13.37	56.63	36.58	29.67	20.97	82.59	12.80	55.40
Nov. 6	13.17	58.08	36.45	30.96	20.85	83.32	12.70	55.61
16	12.96	59.19	36.31	32.07	20.71	83.71	12.58	55.57
26	12.74	59.93	36.16	32.97	20.56	83.74	12.46	55.29
Dec. 6	12.54	60.24	36.02	33.61	20.41	83.44	12.33	54.79
16	12.35	60.13	35.88	34.00	20.27	82.80	12.21	54.07
26	12.18	59.61	35.76	34.10	20.13	81.83	12.10	53.16
36	12.04	58.66	35.66	33.90	20.01	80.57	12.00	52.09
Mean R. A.	22 <sup>h</sup> 37 <sup>m</sup> 10 <sup>s</sup> .666		22 <sup>h</sup> 52 <sup>m</sup> 34 <sup>s</sup> .156		22 <sup>h</sup> 59 <sup>m</sup> 18 <sup>s</sup> .764		23 <sup>h</sup> 0 <sup>m</sup> 10 <sup>s</sup> .627	
Mean Dec.	-47° 21' 57".57		-30° 6' 36".16		+27° 35' 0".85		+14° 42' 36".42	
Sec δ, Tan δ	1.476, - 1.086		1.156, - 0.580		1.128, + 0.523		1.034, + 0.263	



USED IN DETERMINING THE LATITUDE BY OBSERVATIONS OF THE POLE STAR OUT OF THE MERIDIAN.

TABLE I.

Containing the *First* Correction.

Argument:—Local Sidereal Time of Observation.

Local Sidereal Time.	Correction.	Local Sidereal Time.	Local Sidereal Time.	Correction.	Local Sidereal Time.
h m	° / "	h m	h m	° / "	h m
0 0	- 1 6 4 +	12 0	6 0	- 0 26 1 +	18 0
10	1 7 8	10	10	0 23 7	10
20	1 8 5	20	20	0 20 10	20
30	1 8 53	30	30	0 17 11	30
40	1 9 34	40	40	0 14 9	40
50	1 10 8	50	50	0 11 6	50
1 0	1 10 33	13 0	7 0	0 8 2	19 0
10	1 10 50	10	10	0 4 57	10
20	1 10 58	20	20	- 0 1 52 +	20
30	1 10 59	30	30	+ 0 1 14 -	30
40	1 10 52	40	40	0 4 20	40
50	1 10 37	50	50	0 7 25	50
2 0	1 10 13	14 0	8 0	0 10 30	20 0
10	1 9 42	10	10	0 13 33	10
20	1 9 2	20	20	0 16 34	20
30	1 8 15	30	30	0 19 34	30
40	1 7 20	40	40	0 22 32	40
50	1 6 17	50	50	0 25 27	50
3 0	1 5 7	15 0	9 0	0 28 19	21 0
10	1 3 49	10	10	0 31 7	10
20	1 2 24	20	20	0 33 53	20
30	1 0 52	30	30	0 36 34	30
40	0 59 12	40	40	0 39 11	40
50	0 57 26	50	50	0 41 44	50
4 0	0 55 34	16 0	10 0	0 44 12	22 0
10	0 53 35	10	10	0 46 35	10
20	0 51 30	20	20	0 48 52	20
30	0 49 19	30	30	0 51 4	30
40	0 47 3	40	40	0 53 11	40
50	0 44 41	50	50	0 55 11	50
5 0	0 42 14	17 0	11 0	0 57 5	23 0
10	0 39 42	10	10	0 58 52	10
20	0 37 6	20	20	1 0 32	20
30	0 34 25	30	30	1 2 6	30
40	0 31 41	40	40	1 3 33	40
50	0 28 53	50	50	1 4 52	50
6 0	- 0 26 1 +	18 0	12 0	+ 1 6 4 -	24 0

TABLE II.

Containing the *Second* Correction. (always to be added.)

Arguments:—Local Sidereal Time and Altitude.

Local Sidereal Time.	Altitude.								Local Sidereal Time.
	0°	5°	10°	15°	20°	25°	30°	35°	
h m	' "	' "	' "	' "	' "	' "	' "	' "	h m
0 0	0 0	0 1	0 1	0 2	0 2	0 3	0 3	0 4	12 0
30	0 0	0 0	0 0	0 1	0 1	0 1	0 1	0 2	30
1 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	13 0
30	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	30
2 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	14 0
30	0 0	0 0	0 1	0 1	0 1	0 2	0 2	0 2	30
3 0	0 0	0 1	0 1	0 2	0 3	0 3	0 4	0 5	15 0
30	0 0	0 1	0 2	0 3	0 4	0 5	0 7	0 8	30
4 0	0 0	0 1	0 3	0 5	0 6	0 8	0 10	0 12	16 0
30	0 0	0 2	0 4	0 6	0 8	0 11	0 13	0 16	30
5 0	0 0	0 2	0 5	0 8	0 10	0 13	0 16	0 20	17 0
30	0 0	0 3	0 6	0 9	0 12	0 16	0 19	0 24	30
6 0	0 0	0 3	0 7	0 10	0 14	0 18	0 22	0 27	18 0
30	0 0	0 4	0 7	0 11	0 15	0 19	0 24	0 29	30
7 0	0 0	0 4	0 8	0 12	0 16	0 20	0 25	0 30	19 0
30	0 0	0 4	0 8	0 12	0 16	0 21	0 25	0 31	30
8 0	0 0	0 4	0 8	0 12	0 16	0 20	0 25	0 30	20 0
30	0 0	0 4	0 7	0 11	0 15	0 19	0 23	0 28	30
9 0	0 0	0 3	0 7	0 10	0 14	0 17	0 21	0 26	21 0
30	0 0	0 3	0 6	0 9	0 12	0 15	0 19	0 23	30
10 0	0 0	0 2	0 5	0 7	0 10	0 13	0 16	0 19	22 0
30	0 0	0 2	0 4	0 6	0 8	0 10	0 12	0 15	30
11 0	0 0	0 1	0 3	0 4	0 6	0 7	0 9	0 11	23 0
30	0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 7	30
12 0	0 0	0 0	0 1	0 2	0 2	0 3	0 3	0 4	24 0

TABLE III. (for 1908.)

Containing the *Third* Correction. (always to be added.)

Arguments:—Local Sidereal Time and Date.

Local Sidereal Time.	Jan. 1.	Feb. 1.	March 1.	April 1.	May 1.	June 1.	July 1.
h	' "	' "	' "	' "	' "	' "	' "
0	1 10	1 7	1 0	0 50	0 42	0 39	0 40
2	1 8	1 11	1 8	1 0	0 50	0 43	0 40
4	1 4	1 11	1 13	1 9	1 1	0 52	0 45
6	0 59	1 9	1 15	1 16	1 11	1 3	0 54
8	0 54	1 4	1 13	1 18	1 18	1 13	1 5
10	0 51	0 58	1 7	1 16	1 21	1 20	1 14
12	0 50	0 53	1 0	1 10	1 18	1 21	1 20
14	0 52	0 49	0 52	1 0	1 10	1 17	1 20
16	0 56	0 49	0 47	0 51	0 59	1 8	1 15
18	1 1	0 51	0 45	0 44	0 49	0 57	1 6
20	1 6	0 56	0 47	0 42	0 42	0 47	0 55
22	1 9	1 2	0 53	0 44	0 39	0 40	0 46
24	1 10	1 7	1 0	0 50	0 42	0 39	0 40



TABLE II.

Containing the *Second* Correction. (always to be added.)

Arguments:—Local Sidereal Time and Altitude.

Local Sidereal time.	Altitude.									Local Sidereal Time.
	35°	40°	45°	50°	55°	60°	65°	70°		
h m	/ //	/ //	/ //	/ //	/ //	/ //	/ //	/ //	h m	
0 0	0 4	0 5	0 6	0 7	0 8	0 10	0 13	0 16	12 0	
30	0 2	0 2	0 3	0 3	0 4	0 4	0 5	0 7	30	
1 0	0 0	0 0	0 1	0 1	0 1	0 1	0 1	0 1	13 0	
30	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	30	
2 0	0 1	0 1	0 1	0 1	0 1	0 2	0 2	0 3	14 0	
30	0 2	0 3	0 3	0 4	0 5	0 6	0 7	0 9	30	
3 0	0 5	0 6	0 7	0 8	0 10	0 12	0 15	0 19	15 0	
30	0 8	0 10	0 12	0 14	0 17	0 20	0 25	0 32	30	
4 0	0 12	0 14	0 17	0 20	0 24	0 29	0 36	0 47	16 0	
30	0 16	0 19	0 23	0 27	0 33	0 39	0 49	1 3	30	
5 0	0 20	0 24	0 28	0 34	0 41	0 49	1 1	1 18	17 0	
30	0 24	0 28	0 34	0 40	0 48	0 58	1 12	1 33	30	
6 0	0 27	0 32	0 38	0 45	0 54	1 6	1 22	1 45	18 0	
30	0 29	0 35	0 41	0 49	0 59	1 12	1 29	1 54	30	
7 0	0 30	0 36	0 43	0 52	1 2	1 15	1 33	1 59	19 0	
30	0 31	0 37	0 44	0 53	1 3	1 16	1 34	2 1	30	
8 0	0 30	0 36	0 43	0 51	1 1	1 14	1 32	1 58	20 0	
30	0 28	0 34	0 41	0 48	0 58	1 10	1 27	1 52	30	
9 0	0 26	0 31	0 37	0 44	0 53	1 4	1 20	1 42	21 0	
30	0 23	0 27	0 32	0 38	0 46	0 56	1 9	1 29	30	
10 0	0 19	0 23	0 27	0 32	0 38	0 47	0 58	1 14	22 0	
30	0 15	0 18	0 21	0 25	0 30	0 37	0 45	0 58	30	
11 0	0 11	0 13	0 16	0 19	0 22	0 27	0 33	0 43	23 0	
30	0 7	0 9	0 10	0 12	0 15	0 18	0 22	0 28	30	
12 0	0 4	0 5	0 6	0 7	0 8	0 10	0 13	0 16	24 0	

TABLE III. (for 1908.)

Containing the *Third* Correction. (always to be added.)

Arguments:—Local Sidereal Time and Date.

Local Sidereal Time.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Dec. 31.
h	/ //	/ //	/ //	/ //	/ //	/ //	/ //
0	0 40	0 46	0 56	1 8	1 19	1 27	1 30
2	0 40	0 41	0 47	0 57	1 8	1 19	1 27
4	0 45	0 41	0 41	0 47	0 55	1 6	1 16
6	0 54	0 46	0 41	0 40	0 44	0 51	1 1
8	1 5	0 55	0 45	0 39	0 36	0 39	0 46
10	1 14	1 5	0 53	0 43	0 35	0 32	0 34
12	1 20	1 14	1 4	0 52	0 41	0 33	0 30
14	1 20	1 19	1 13	1 3	0 52	0 41	0 33
16	1 15	1 19	1 19	1 13	1 5	0 54	0 44
18	1 6	1 14	1 19	1 20	1 16	1 9	0 59
20	0 55	1 5	1 15	1 21	1 24	1 21	1 14
22	0 46	0 55	1 7	1 17	1 25	1 28	1 26
24	0 40	0 46	0 56	1 8	1 19	1 27	1 30

For converting INTERVALS of MEAN SOLAR Time into Equivalent INTERVALS of SIDEREAL Time.

Hours of Mean Time.	HOURS.	MINUTES.		SECONDS.	
	Equivalents in Sidereal Time.	Minutes of Mean Time.	Equivalents in Sidereal Time.	Minutes of Mean Time.	Equivalents in Sidereal Time.
	h m s	m s	m s	s	s
1	1 0 9'8565	1	1 0'1643	31	31 5'0925
2	2 0 19'7130	2	2 0'3286	32	32 5'2568
3	3 0 29'5694	3	3 0'4928	33	33 5'4211
4	4 0 39'4259	4	4 0'6571	34	34 5'5853
5	5 0 49'2824	5	5 0'8214	35	35 5'7496
6	6 0 59'1388	6	6 0'9857	36	36 5'9139
7	7 1 8'9953	7	7 1'1499	37	37 6'0782
8	8 1 18'8518	8	8 1'3142	38	38 6'2424
9	9 1 28'7083	9	9 1'4785	39	39 6'4067
10	10 1 38'5647	10	10 1'6428	40	40 6'5710
11	11 1 48'4212	11	11 1'8070	41	41 6'7353
12	12 1 58'2777	12	12 1'9713	42	42 6'8995
13	13 2 8'1342	13	13 2'1356	43	43 7'0638
14	14 2 17'9906	14	14 2'2998	44	44 7'2281
15	15 2 27'8471	15	15 2'4641	45	45 7'3924
16	16 2 37'7036	16	16 2'6284	46	46 7'5566
17	17 2 47'5600	17	17 2'7927	47	47 7'7209
18	18 2 57'4165	18	18 2'9569	48	48 7'8852
19	19 3 7'2730	19	19 3'1212	49	49 8'0495
20	20 3 17'1295	20	20 3'2855	50	50 8'2137
21	21 3 26'9859	21	21 3'4498	51	51 8'3780
22	22 3 36'8424	22	22 3'6140	52	52 8'5423
23	23 3 46'6989	23	23 3'7783	53	53 8'7066
24	24 3 56'5554	24	24 3'9426	54	54 8'8708
		25	25 4'1069	55	55 9'0351
		26	26 4'2711	56	56 9'1994
		27	27 4'4354	57	57 9'3637
		28	28 4'5997	58	58 9'5279
		29	29 4'7640	59	59 9'6922
		30	30 4'9282	60	60 9'8565
				25	25'0685
				26	26'0712
				27	27'0739
				28	28'0767
				29	29'0794
				30	30'0821
				31	31'0849
				32	32'0876
				33	33'0904
				34	34'0931
				35	35'0958
				36	36'0986
				37	37'1013
				38	38'1040
				39	39'1068
				40	40'1095
				41	41'1123
				42	42'1150
				43	43'1177
				44	44'1205
				45	45'1232
				46	46'1259
				47	47'1287
				48	48'1314
				49	49'1342
				50	50'1369
				51	51'1396
				52	52'1424
				53	53'1451
				54	54'1479
				55	55'1506
				56	56'1533
				57	57'1561
				58	58'1588
				59	59'1615
				60	60'1643







For converting INTERVALS of SIDEREAL Time into Equivalent INTERVALS of MEAN SOLAR Time.

FRACTIONS OF A SECOND.

Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.
s	s	s	s	s	s	s	s	s	s
0.01	0.0097	0.21	0.20943	0.41	0.40888	0.61	0.60833	0.81	0.80779
0.02	0.0195	0.22	0.21940	0.42	0.41885	0.62	0.61831	0.82	0.81776
0.03	0.0292	0.23	0.22937	0.43	0.42883	0.63	0.62828	0.83	0.82773
0.04	0.03989	0.24	0.23934	0.44	0.43880	0.64	0.63825	0.84	0.83771
0.05	0.04986	0.25	0.24932	0.45	0.44877	0.65	0.64823	0.85	0.84768
0.06	0.05984	0.26	0.25929	0.46	0.45874	0.66	0.65820	0.86	0.85765
0.07	0.06981	0.27	0.26926	0.47	0.46872	0.67	0.66817	0.87	0.86762
0.08	0.07978	0.28	0.27924	0.48	0.47869	0.68	0.67814	0.88	0.87760
0.09	0.08975	0.29	0.28921	0.49	0.48866	0.69	0.68812	0.89	0.88757
0.10	0.09973	0.30	0.29918	0.50	0.49864	0.70	0.69809	0.90	0.89754
0.11	0.10970	0.31	0.30915	0.51	0.50861	0.71	0.70806	0.91	0.90752
0.12	0.11967	0.32	0.31913	0.52	0.51858	0.72	0.71803	0.92	0.91749
0.13	0.12965	0.33	0.32910	0.53	0.52855	0.73	0.72801	0.93	0.92746
0.14	0.13962	0.34	0.33907	0.54	0.53853	0.74	0.73798	0.94	0.93743
0.15	0.14959	0.35	0.34904	0.55	0.54850	0.75	0.74795	0.95	0.94741
0.16	0.15956	0.36	0.35902	0.56	0.55847	0.76	0.75793	0.96	0.95738
0.17	0.16954	0.37	0.36899	0.57	0.56844	0.77	0.76790	0.97	0.96735
0.18	0.17951	0.38	0.37896	0.58	0.57842	0.78	0.77787	0.98	0.97732
0.19	0.18948	0.39	0.38894	0.59	0.58839	0.79	0.78784	0.99	0.98730
0.20	0.19945	0.40	0.39891	0.60	0.59836	0.80	0.79782	1.00	0.99727

EXAMPLE.—To convert 22<sup>h</sup> 21<sup>m</sup> 39<sup>s</sup> · 23 Sidereal Time at Greenwich, Jan. 21, 1908, into Mean Time.

Mean Time at the preceding Sidereal Noon, viz., January 20.....	h	m	s	
	4	5	25.49	
For Sidereal Intervals { 22 <sup>h</sup> 0 <sup>m</sup> 0 <sup>s</sup> } the Table gives the Equivalent Mean Intervals { 21 56 23.750				
{ 21 0 } { 20 56.560				
{ 39 } { 38.894				
{ 0.23 } { 0.229				

The Sum is the Mean Time required, Jan. 21..... 2 23 24.92

凡例

表中ノ時刻ハ帝國中央標準時ヲ用フ (但シ臺灣、澎湖島及關東州ハ西部標準時ヲ用フ)

表中ノ高潮時ハ日潮不等ヲ平均シタルモノニ基キ推算シタルヲ以テ朝鮮西岸北部ニ於テハ殊ニ表示ノモノヨリ遲速アルヲ免レサルヘシ

表中ノ\*印ハ其日ニ於テ只一回ノ高潮時アルヲ示ス

太陰盈虛欄内ニ記セシ●ハ朔、)ハ上弦、○ハ望、(ハ下弦、又太陰位置欄内ニ記セシPハ近地點、Aハ遠地點、Nハ最北、Sハ最南、

Eハ赤道上ナルヲ示ス



明治四十一年一月

地名	横須賀		下田		清水		鳥羽		(紀伊) 串本		(淡路) 由良		神戸	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	2 26	3 0	2 40	3 14	3 5	3 39	3 18	3 52	3 23	3 57	4 11	4 45	4 44	5 18
2	3 31	4 0	3 45	4 14	4 10	4 39	4 23	4 52	4 28	4 57	5 16	5 45	5 49	6 18
3	4 27	4 50	4 41	5 4	5 6	5 29	5 19	5 42	5 24	5 47	6 12	6 35	6 45	7 8
4	5 14	5 36	5 28	5 50	5 53	6 15	6 6	6 27	6 11	6 32	6 59	7 20	7 32	7 53
5	5 57	6 17	6 11	6 31	6 36	6 56	6 49	7 9	6 54	7 14	7 42	8 2	8 15	8 35
6	6 38	6 57	6 52	7 11	7 17	7 36	7 30	7 49	7 35	7 54	8 23	8 42	8 56	9 15
7	7 18	7 39	7 32	7 53	7 57	8 18	8 10	8 31	8 15	8 36	9 3	9 24	9 36	9 57
8	8 0	8 22	8 14	8 36	8 39	9 1	8 52	9 14	8 57	9 19	9 45	10 7	10 18	10 40
9	8 46	9 10	9 0	9 24	9 25	9 49	9 38	10 2	9 43	10 7	10 31	10 55	11 4	11 28
10	9 34	10 2	9 48	10 16	10 13	10 41	10 26	10 54	10 31	10 59	11 19	11 47	11 52	*
11	10 33	11 5	10 47	11 19	11 12	11 44	11 25	11 57	11 30	*	*	0 18	0 20	0 51
12	11 41	*	11 55	*	*	0 20	*	0 33	0 2	0 38	0 50	1 26	1 23	1 59
13	0 17	0 53	0 31	1 7	0 56	1 32	1 9	1 45	1 14	1 50	2 2	2 38	2 35	3 11
14	1 29	1 59	1 43	2 13	2 8	2 38	2 20	2 51	2 25	2 56	3 13	3 44	3 46	4 17
15	2 29	2 56	2 43	3 10	3 8	3 35	3 21	3 48	3 26	3 53	4 14	4 41	4 47	5 14
16	3 21	3 44	3 35	3 58	4 0	4 23	4 13	4 36	4 18	4 41	5 6	5 29	5 39	6 2
17	4 6	4 26	4 20	4 40	4 45	5 5	4 58	5 18	5 3	5 23	5 51	6 11	6 24	6 44
18	4 46	5 6	5 0	5 20	5 25	5 45	5 38	5 58	5 43	6 3	6 31	6 51	7 4	7 24
19	5 26	5 44	5 40	5 58	6 5	6 23	6 18	6 36	6 23	6 41	7 11	7 29	7 44	8 2
20	6 3	6 20	6 17	6 34	6 42	6 59	6 54	7 12	6 59	7 17	7 47	8 5	8 20	8 38
21	6 37	6 55	6 51	7 9	7 16	7 34	7 29	7 46	7 34	7 51	8 22	8 39	8 55	9 12
22	7 11	7 28	7 25	7 42	7 50	8 7	8 2	8 20	8 7	8 25	8 55	9 13	9 28	9 46
23	7 44	8 0	7 58	8 14	8 23	8 39	8 36	8 52	8 41	8 57	9 29	9 45	10 2	10 18
24	8 17	8 35	8 31	8 49	8 56	9 14	9 9	9 26	9 14	9 31	10 2	10 19	10 35	10 52
25	8 54	9 13	9 8	9 27	9 33	9 52	9 46	10 5	9 51	10 10	10 39	10 58	11 12	11 31
26	9 33	9 55	9 47	10 9	10 12	10 34	10 25	10 47	10 30	10 52	11 18	11 40	11 51	*
27	10 23	10 55	10 37	11 9	11 2	11 34	11 15	11 47	11 20	11 52	*	0 8	0 13	0 41
28	11 32	*	11 46	*	*	0 11	*	0 24	*	0 29	0 40	1 17	1 13	1 50
29	0 16	1 1	0 30	1 15	0 55	1 40	1 8	1 54	1 13	1 50	2 1	2 47	2 34	3 20
30	1 49	2 33	2 3	2 47	2 28	3 12	2 41	3 26	2 46	3 31	3 34	4 19	4 7	4 52
31	3 12	3 46	3 26	4 0	3 51	4 25	4 4	4 38	4 9	4 43	4 57	5 31	5 30	6 4

明治四十一年一月

地名	明石		粟島		(三原瀬戸) 瀬戸田		來島		三津ヶ濱		佐賀ノ關		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	5 44	6 18	8 55	9 29	8 12	8 46	7 37	8 11	6 57	7 31	5 19	5 53	28		
2	6 49	7 18	10 0	10 29	9 17	9 46	8 42	9 11	8 2	8 31	6 24	6 53	29		
3	7 45	8 8	10 56	11 19	10 13	10 36	9 38	10 1	8 58	9 21	7 20	7 43	30		
4	8 32	8 53	11 43	*	11 0	11 21	10 25	10 46	9 45	10 6	8 7	8 28	1	●	P.S.
5	9 15	9 35	0 4	0 26	11 43	*	11 8	11 28	10 28	10 48	8 50	9 10	2		
6	9 56	10 15	0 40	1 7	0 3	0 24	11 49	*	11 9	11 28	9 31	9 50	3		
7	10 36	10 57	1 26	1 47	0 43	1 4	0 8	0 29	11 49	*	10 11	10 32	4		
8	11 18	11 40	2 8	2 29	1 25	1 46	0 50	1 11	0 10	0 31	10 53	11 15	5		
9	*	0 4	2 51	3 15	2 8	2 32	1 33	1 57	0 53	1 17	11 39	*	6		
10	0 28	0 52	3 39	4 3	2 56	3 20	2 21	2 45	1 41	2 5	0 3	0 27	7	∩	E.
11	1 20	1 51	4 31	5 2	3 48	4 19	3 13	3 44	2 33	3 4	0 55	1 26	8		
12	2 23	2 59	5 34	6 10	4 51	5 27	4 16	4 52	3 36	4 12	1 58	2 34	9		
13	3 35	4 11	6 46	7 22	6 3	6 39	5 28	6 4	4 48	5 24	3 10	3 46	10		
14	4 46	5 17	7 57	8 28	7 14	7 45	6 39	7 10	5 59	6 30	4 21	4 52	11		
15	5 47	6 14	8 58	9 25	8 15	8 42	7 40	8 7	7 0	7 27	5 22	5 49	12		
16	6 39	7 2	9 50	10 13	9 7	9 30	8 32	8 55	7 52	8 15	6 14	6 37	13		
17	7 24	7 44	10 35	10 55	9 52	10 12	9 17	9 37	8 37	8 57	6 59	7 19	14		N.
18	8 4	8 24	11 15	11 35	10 32	10 52	9 57	10 17	9 17	9 37	7 39	7 59	15	○	
19	8 44	9 2	11 55	*	11 12	11 30	10 37	10 55	9 57	10 15	8 19	8 37	16		A.
20	9 20	9 38	0 13	0 31	11 48	*	11 13	11 31	10 33	10 51	8 55	9 13	17		
21	9 55	10 12	0 49	1 6	0 6	0 23	11 48	*	11 8	11 25	9 30	9 47	18		
22	10 28	10 46	1 23	1 39	0 40	0 56	0 5	0 21	11 41	11 59	10 3	10 21	19		
23	11 2	11 18	1 57	2 13	1 14	1 30	0 39	0 55	*	0 15	10 37	10 53	20		
24	11 35	11 52	2 29	2 46	1 46	2 3	1 11	1 28	0 31	0 48	11 10	11 27	21		
25	*	0 12	3 3	3 23	2 20	2 40	1 45	2 5	1 5	1 25	11 47	*	22		E.
26	0 31	0 51	3 42	4 2	2 59	3 19	2 24	2 44	1 44	2 4	0 6	0 26	23		
27	1 13	1 41	4 24	4 52	3 41	4 9	3 6	3 34	2 26	2 54	0 48	1 16	24	∩	
28	2 13	2 50	5 24	6 1	4 41	5 18	4 6	4 43	3 26	4 3	1 48	2 25	25		
29	3 34	4 20	6 45	7 31	6 2	6 48	5 27	6 13	4 47	5 33	3 9	3 55	26		
30	5 7	5 52	8 18	9 3	7 35	8 20	7 0	7 45	6 20	7 5	4 42	5 27	27		
31	6 30	7 4	9 41	10 15	8 58	9 32	8 23	8 57	7 43	8 17	6 5	6 39	28		S.



明治四十一年一月

地名	吳		門		司竹		敷平		戶佐		世保		長崎		三角	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	7 13	7 47	6 44	7 18	6 51	7 25	6 25	6 59	6 15	6 49	5 43	6 17	6 40	7 14		
2	8 18	8 46	7 49	8 18	7 56	8 25	7 30	7 59	7 19	7 48	6 48	7 17	7 45	8 14		
3	9 13	9 36	8 45	9 8	8 52	9 15	8 26	8 49	8 15	8 38	7 44	8 7	8 41	9 4		
4	10 0	10 22	9 32	9 53	9 39	10 0	9 13	9 34	9 2	9 24	8 31	8 52	9 28	9 49		
5	10 44	11 3	10 15	10 35	10 22	10 42	9 56	10 16	9 45	10 5	9 14	9 34	10 11	10 31		
6	11 24	11 44	10 56	11 15	11 3	11 22	10 37	10 56	10 26	10 45	9 55	10 14	10 52	11 11		
7	*	0 4	11 36	11 57	11 43	*	11 17	11 38	11 6	11 27	10 35	10 56	11 32	11 53		
8	0 25	0 46	*	0 18	0 4	0 25	11 59	*	11 48	*	11 17	11 39	*	0 14		
9	1 9	1 32	0 40	1 4	0 47	1 11	0 21	0 45	0 10	0 34	*	0 3	0 36	1 0		
10	1 56	2 21	1 28	1 52	1 35	1 59	1 9	1 33	0 58	1 22	0 27	0 51	1 24	1 48		
11	2 48	3 20	2 20	2 51	2 27	2 58	2 1	2 32	1 51	2 22	1 19	1 50	2 16	2 47		
12	3 52	4 28	3 23	3 59	3 30	4 6	3 4	3 40	2 54	3 30	2 22	2 58	3 19	3 55		
13	5 4	5 40	4 35	5 11	4 42	5 18	4 16	4 52	4 5	4 42	3 34	4 10	4 31	5 7		
14	6 15	6 45	5 46	6 17	5 53	6 24	5 27	5 58	5 17	5 47	4 45	5 16	5 42	6 13		
15	7 16	7 43	6 47	7 14	6 54	7 21	6 28	6 55	6 18	6 45	5 46	6 13	6 43	7 10		
16	8 7	8 30	7 39	8 2	7 46	8 9	7 20	7 43	7 9	7 32	6 38	7 1	7 35	7 58		
17	8 52	9 12	8 24	8 44	8 31	8 51	8 5	8 25	7 54	8 14	7 23	7 43	8 20	8 40		
18	9 33	9 52	9 4	9 24	9 11	9 31	8 45	9 5	8 34	8 54	8 3	8 23	9 0	9 20		
19	10 12	10 31	9 44	10 2	9 51	10 9	9 25	9 43	9 14	9 32	8 43	9 1	9 40	9 58		
20	10 49	11 6	10 20	10 38	10 27	10 45	10 1	10 19	9 50	10 8	9 19	9 37	10 16	10 34		
21	11 23	11 41	10 55	11 12	11 2	11 19	10 36	10 53	10 25	10 42	9 54	10 11	10 51	11 8		
22	11 57	*	11 28	11 46	11 35	11 53	11 9	11 27	10 58	11 16	10 27	10 45	11 24	11 42		
23	0 14	0 30	*	0 2	*	0 9	11 43	11 59	11 32	11 48	11 1	11 17	11 58	*		
24	0 47	1 3	0 18	0 35	0 25	0 42	*	0 16	*	0 5	11 34	11 51	0 14	0 31		
25	1 22	1 41	0 52	1 12	0 59	1 19	0 33	0 53	0 23	0 42	*	0 11	0 48	1 8		
26	2 0	2 20	1 31	1 51	1 38	1 58	1 12	1 32	1 1	1 21	0 30	0 50	1 27	1 47		
27	2 42	3 10	2 13	2 41	2 20	2 48	1 54	2 22	1 44	2 11	1 12	1 40	2 9	2 37		
28	3 42	4 20	3 13	3 50	3 20	3 57	2 54	3 31	2 44	3 21	2 12	2 49	3 9	3 46		
29	5 3	5 49	4 34	5 20	4 41	5 27	4 15	5 1	4 5	4 51	3 33	4 19	4 30	5 16		
30	6 36	7 21	6 7	6 52	6 14	6 59	5 48	6 33	5 38	6 23	5 6	5 51	6 3	6 48		
31	7 59	8 32	7 30	8 4	7 37	8 11	7 11	7 45	7 1	7 34	6 29	7 3	7 26	8 0		

明治四十一年一月

地名	(五島)		鹿兒島		油津		那霸		基隆		馬公		太陰曆日附	太陰盈虛	太陰位置
	福	江	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	6 5	6 39	4 51	5 25	3 40	4 14	4 44	5 18	6 52	7 26	8 55	9 30	28		
2	7 10	7 39	5 56	6 25	4 45	5 14	5 49	6 18	7 57	8 26	10 0	10 29	29		
3	8 6	8 29	6 52	7 15	5 41	6 4	6 45	7 8	8 53	9 16	10 55	11 18	30		
4	8 53	9 14	7 39	8 0	6 28	6 49	7 32	7 53	9 40	10 1	11 42	*	1	●	P.S.
5	9 36	9 56	8 22	8 42	7 11	7 31	8 15	8 35	10 23	10 43	0 4	0 25	2		
6	10 17	10 36	9 3	9 22	7 52	8 11	8 56	9 15	11 4	11 23	0 45	1 6	3		
7	10 57	11 18	9 43	10 4	8 32	8 53	9 36	9 57	11 44	*	1 25	1 46	4		
8	11 39	*	10 25	10 47	9 14	9 36	10 18	10 40	0 5	0 26	2 6	2 27	5		
9	0 1	0 25	11 11	11 35	10 0	10 24	11 4	11 28	0 48	1 12	2 50	3 14	6		
10	0 49	1 13	11 59	*	10 48	11 16	11 52	*	1 36	2 0	3 38	4 2	7	●	E.
11	1 41	2 12	0 27	0 58	11 47	*	0 20	0 51	2 28	2 59	4 31	5 2	8		
12	2 44	3 20	1 30	2 6	0 19	0 55	1 23	1 59	3 31	4 7	5 34	6 10	9		
13	3 56	4 32	2 42	3 18	1 31	2 7	2 35	3 11	4 43	5 19	6 46	7 23	10		
14	5 7	5 38	3 53	4 24	2 42	3 13	3 46	4 17	5 54	6 25	7 57	8 28	11		
15	6 8	6 35	4 54	5 21	3 43	4 10	4 47	5 14	6 55	7 22	8 58	9 25	12		
16	7 0	7 23	5 46	6 9	4 35	4 58	5 39	6 2	7 47	8 10	9 49	10 12	13		
17	7 45	8 5	6 31	6 51	5 20	5 40	6 24	6 44	8 32	8 52	10 34	10 54	14		N.
18	8 25	8 45	7 11	7 31	6 0	6 20	7 4	7 24	9 12	9 32	11 14	11 34	15	○	
19	9 5	9 23	7 51	8 9	6 40	6 58	7 44	8 2	9 52	10 10	11 54	*	16		A.
20	9 41	9 59	8 27	8 45	7 16	7 34	8 20	8 38	10 28	10 46	0 12	0 30	17		
21	10 16	10 33	9 2	9 19	7 51	8 8	8 55	9 12	11 3	11 20	0 47	1 5	18		
22	10 49	11 7	9 35	9 53	8 24	8 42	9 28	9 46	11 36	11 54	1 22	1 38	19		
23	11 23	11 39	10 9	10 25	8 58	9 14	10 2	10 18	*	0 10	1 55	2 11	20		
24	11 56	*	10 42	10 59	9 31	9 48	10 35	10 52	0 26	0 43	2 28	2 45	21		
25	0 13	0 33	11 19	11 38	10 8	10 27	11 12	11 31	1 0	1 20	3 3	3 22	22		E.
26	0 52	1 12	11 58	*	10 47	11 9	11 51	*	1 39	1 59	3 41	4 1	23		
27	1 34	2 2	0 20	0 48	11 37	*	0 13	0 41	2 21	2 49	4 24	4 52	24	○	
28	2 34	3 11	1 20	1 57	0 9	0 46	1 13	1 50	3 21	3 58	5 24	6 2	25		
29	3 55	4 41	2 41	3 27	1 30	2 16	2 34	3 20	4 42	5 28	6 46	7 33	26		
30	5 28	6 13	4 14	4 59	3 3	3 48	4 7	4 52	6 15	7 0	8 19	9 4	27		
31	6 51	7 25	5 37	6 11	4 26	5 0	5 30	6 4	7 38	8 12	9 42	10 15	28		S.



明治四十一年一月

地名	打狗		(隱岐) 西郷		境		舞鶴		敦賀		七尾		函館	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	5 42	6 16	11 57	*	*	0 10	*	0 17	*	0 10	0 15	0 50	0 58	1 32
2	6 47	7 16	0 27	0 56	0 40	1 9	0 47	1 16	0 40	1 9	1 20	1 49	2 3	2 32
3	7 43	8 6	1 23	1 45	1 36	1 58	1 43	2 5	1 36	1 58	2 16	2 38	2 59	3 22
4	8 30	8 51	2 10	2 31	2 23	2 44	2 30	2 51	2 23	2 44	3 3	3 24	3 46	4 8
5	9 13	9 33	2 53	3 13	3 6	3 26	3 13	3 33	3 6	3 26	3 46	4 6	4 29	4 49
6	9 54	10 13	3 34	3 53	3 47	4 6	3 54	4 13	3 47	4 6	4 27	4 46	5 10	5 29
7	10 34	10 55	4 14	4 34	4 27	4 47	4 34	4 54	4 27	4 47	5 7	5 27	5 50	6 11
8	11 16	11 38	4 55	5 18	5 8	5 31	5 15	5 38	5 8	5 31	5 48	6 11	6 32	6 54
9	*	0 2	5 42	6 6	5 55	6 19	6 2	6 26	5 55	6 19	6 35	6 59	7 18	7 42
10	0 26	0 50	6 30	6 58	6 43	7 11	6 50	7 18	6 43	7 11	7 23	7 51	8 6	8 34
11	1 18	1 49	7 29	8 1	7 42	8 14	7 49	8 21	7 42	8 14	8 22	8 54	9 5	9 37
12	2 21	2 57	8 37	9 13	8 50	9 26	8 57	9 33	8 50	9 26	9 30	10 6	10 13	10 49
13	3 33	4 9	9 49	10 24	10 2	10 37	10 9	10 44	10 2	10 37	10 42	11 17	11 25	*
14	4 44	5 15	10 55	11 25	11 8	11 38	11 15	11 45	11 8	11 38	11 48	*	0 0	0 31
15	5 45	6 12	11 52	*	*	0 5	*	0 12	*	0 5	0 18	0 45	1 1	1 28
16	6 37	7 0	0 17	0 40	0 30	0 53	0 37	1 0	0 30	0 53	1 10	1 33	1 53	2 16
17	7 22	7 42	1 2	1 22	1 15	1 35	1 22	1 42	1 15	1 35	1 55	2 15	2 38	2 58
18	8 2	8 22	1 42	2 2	1 55	2 15	2 2	2 22	1 55	2 15	2 35	2 55	3 18	3 38
19	8 42	9 0	2 22	2 40	2 35	2 53	2 42	3 0	2 35	2 53	3 15	3 33	3 58	4 16
20	9 18	9 36	2 58	3 16	3 11	3 29	3 18	3 36	3 11	3 29	3 51	4 9	4 35	4 52
21	9 53	10 10	3 33	3 50	3 46	4 3	3 53	4 10	3 46	4 3	4 26	4 43	5 9	5 26
22	10 26	10 44	4 6	4 24	4 19	4 37	4 26	4 44	4 19	4 37	4 59	5 17	5 43	6 0
23	11 0	11 16	4 40	4 56	4 53	5 9	5 0	5 16	4 53	5 9	5 33	5 49	6 16	6 33
24	11 33	11 50	5 13	5 31	5 26	5 44	6 33	5 51	5 26	5 44	6 6	6 24	6 49	7 7
25	*	0 10	5 50	6 9	6 3	6 22	6 10	6 29	6 3	6 22	6 43	7 2	7 26	7 45
26	0 29	0 49	6 29	6 51	6 42	7 4	6 49	7 11	6 42	7 4	7 22	7 44	8 5	8 27
27	1 11	1 39	7 19	7 51	7 32	8 4	7 39	8 11	7 32	8 4	8 12	8 44	8 55	9 27
28	2 11	2 48	8 28	9 12	8 41	9 25	8 48	9 32	8 41	9 25	9 21	10 5	10 4	10 47
29	3 32	4 18	9 58	10 45	10 11	10 58	10 18	11 5	10 11	10 58	10 51	11 38	11 33	*
30	5 5	5 50	11 30	*	11 43	*	11 50	*	11 43	*	0 23	0 21	1 5	5
31	6 28	7 2	0 8	0 42	0 21	0 55	0 28	1 2	0 21	0 55	1 1	1 35	1 44	2 18

明治四十一年一月

地名	大湊		(陸中) 山田		根室		小樽		九春古丹		元山		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	0 49	1 23	0 57	1 31	0 36	1 11	0 57	1 32	11 12	11 42	1 1	1 35	28		
2	1 54	2 23	2 2	2 31	1 42	2 11	2 3	2 32	*	0 11	2 5	2 34	29		
3	2 50	3 13	2 58	3 21	2 37	3 1	2 58	3 22	0 38	1 0	3 1	3 24	30		
4	3 37	3 59	3 45	4 7	3 25	3 46	3 46	4 7	1 25	1 46	3 48	4 9	1	●	P.S.
5	4 20	4 40	4 28	4 48	4 8	4 28	4 29	4 49	2 8	2 28	4 31	4 51	2		
6	5 1	5 20	5 9	5 28	4 48	5 8	5 9	5 29	2 49	3 8	5 12	5 31	3		
7	5 41	6 2	5 49	6 10	5 29	5 50	5 50	6 11	3 29	3 49	5 52	6 12	4		
8	6 23	6 45	6 31	6 53	6 10	6 33	6 31	6 54	4 10	4 33	6 33	6 56	5		
9	7 9	7 33	7 17	7 41	6 57	7 21	7 18	7 42	4 57	5 21	7 20	7 44	6		
10	7 57	8 25	8 5	8 33	7 45	8 13	8 6	8 34	5 45	6 13	8 8	8 37	7	∩	E.
11	8 56	9 28	9 4	9 36	8 43	9 15	9 4	9 36	6 44	7 16	9 8	9 40	8		
12	10 4	10 40	10 12	10 48	9 51	10 27	10 12	10 48	7 52	8 28	10 16	10 52	9		
13	11 16	11 51	11 24	11 59	11 3	11 39	11 24	*	9 4	9 39	11 28	*	10		
14	*	0 22	*	0 30	*	0 9	0 0	0 30	10 10	10 40	0 3	0 33	11		
15	0 52	1 19	1 0	1 27	0 40	1 7	1 1	1 28	11 7	11 32	1 4	1 31	12		
16	1 44	2 7	1 52	2 15	1 32	1 55	1 53	2 16	11 55	*	1 55	2 18	13		
17	2 29	2 49	2 37	2 57	2 17	2 37	2 38	2 58	0 17	0 37	2 40	3 0	14		N.
18	3 9	3 29	3 17	3 37	2 57	3 17	3 18	3 38	0 57	1 17	3 20	3 40	15	○	
19	3 49	4 7	3 57	4 15	3 37	3 55	3 58	4 16	1 37	1 55	4 0	4 18	16		A.
20	4 26	4 43	4 34	4 51	4 14	4 31	4 35	4 52	2 13	2 31	4 36	4 53	17		
21	5 0	5 17	5 8	5 25	4 48	5 5	5 9	5 26	2 48	3 5	5 11	5 28	18		
22	5 34	5 51	5 42	5 59	5 21	5 39	5 42	6 0	3 21	3 39	5 44	6 1	19		
23	6 7	6 24	6 15	6 32	5 55	6 11	6 16	6 32	3 55	4 11	6 17	6 34	20		
24	6 40	6 58	6 48	7 6	6 28	6 46	6 49	7 7	4 28	4 46	6 51	7 9	21		
25	7 17	7 36	7 25	7 44	7 5	7 24	7 26	7 45	5 5	5 24	7 28	7 47	22		E.
26	7 56	8 18	8 4	8 26	7 44	8 6	8 5	8 27	5 44	6 6	8 7	8 30	23		
27	8 46	9 18	8 54	9 26	8 33	9 6	8 54	9 27	6 34	7 6	8 57	9 30	24	∩	
28	9 55	10 38	10 3	10 46	9 42	10 26	10 3	10 47	7 43	8 27	10 7	10 51	25		
29	11 24	*	11 32	*	11 11	11 59	11 32	*	9 13	10 0	11 38	*	26		
30	0 12	0 56	0 20	1 4	*	0 43	0 20	1 4	10 45	11 23	0 24	1 9	27		
31	1 35	2 9	1 43	2 17	1 22	1 56	1 43	2 17	11 57	*	1 47	2 20	28		S.



明治四十一年一月

地名	釜山		蛇梁海峽		長直路		長竹水道		木浦		八口浦		古群山群島	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	5 53	6 27	6 49	7 23	7 43	8 17	9 59	10 33	*	0 34	11 3	11 33	0 42	1 18
2	6 57	7 26	7 53	8 22	8 47	9 16	11 3	11 32	1 4	1 33	*	0 2	1 48	2 17
3	7 53	8 16	8 49	9 12	9 43	10 6	11 59	*	2 0	2 23	0 29	0 52	2 44	3 7
4	8 40	9 2	9 44	9 58	10 38	10 52	0 22	0 54	2 47	3 8	1 16	1 37	3 31	3 52
5	9 23	9 43	10 19	10 39	11 13	11 33	1 8	1 29	3 30	3 50	1 59	2 19	4 14	4 34
6	10 4	10 23	11 0	11 19	11 54	*	1 49	2 10	4 11	4 30	2 40	2 59	4 55	5 14
7	10 44	11 5	11 40	*	0 13	0 34	2 29	2 50	4 51	5 11	3 20	3 40	5 35	5 55
8	11 26	11 48	0 1	0 22	0 55	1 16	3 11	3 32	5 32	5 55	4 1	4 24	6 16	6 39
9	*	0 12	0 44	1 8	1 38	2 2	3 54	4 18	6 19	6 43	4 48	5 12	7 3	7 27
10	0 36	1 0	1 32	1 56	2 26	2 50	4 42	5 6	7 7	7 36	5 36	6 5	7 51	8 20
11	1 29	2 0	2 25	2 56	3 19	3 50	5 35	6 6	8 7	8 39	6 36	7 8	8 51	9 23
12	2 32	3 8	3 28	4 4	4 22	4 58	6 38	7 14	9 15	9 51	7 44	8 20	9 59	10 35
13	3 43	4 20	4 39	5 16	5 33	6 10	7 49	8 26	10 27	11 2	8 56	9 31	11 11	11 46
14	4 55	5 25	5 51	6 21	6 45	7 15	9 1	9 31	11 32	*	10 1	10 32	*	0 16
15	5 56	6 23	6 52	7 19	7 46	8 13	10 2	10 29	0 3	0 30	10 59	11 23	0 47	1 14
16	6 47	7 10	7 43	8 6	8 37	9 0	10 53	11 16	0 54	1 17	11 46	*	1 38	2 1
17	7 32	7 52	8 28	8 48	9 22	9 42	11 38	11 58	1 39	1 59	0 8	0 28	2 23	2 43
18	8 12	8 32	9 8	9 28	10 2	10 22	*	0 18	2 19	2 39	0 48	1 8	3 3	3 23
19	8 52	9 10	9 48	10 6	10 42	11 0	0 38	0 58	2 59	3 17	1 28	1 46	3 43	4 1
20	9 28	9 46	10 24	10 42	11 18	11 36	1 16	1 34	3 35	3 52	2 4	2 21	4 19	4 36
21	10 3	10 20	10 59	11 16	11 53	*	1 52	2 9	4 10	4 27	2 39	2 56	4 54	5 11
22	10 36	10 54	11 32	11 50	0 10	0 26	2 26	2 42	4 43	5 0	3 12	3 29	5 27	5 44
23	11 10	11 26	*	0 6	0 44	1 0	3 0	3 16	5 16	5 33	3 45	4 2	6 0	6 17
24	11 43	*	0 22	0 39	1 16	1 33	3 32	3 49	5 50	6 8	4 19	4 37	6 34	6 52
25	0 1	0 20	0 57	1 16	1 51	2 10	4 7	4 26	6 27	6 46	4 56	5 15	7 11	7 30
26	0 39	0 59	1 34	1 55	2 28	2 49	4 44	5 5	7 6	7 29	5 35	5 58	7 50	8 13
27	1 22	1 49	2 18	2 45	3 12	3 39	5 28	5 55	7 56	8 29	6 25	6 58	8 40	9 13
28	2 22	2 59	3 18	3 55	4 12	4 49	6 28	7 5	9 6	9 50	7 35	8 19	9 50	10 34
29	3 44	4 29	4 40	5 25	5 34	6 19	7 50	8 35	10 37	11 23	9 6	9 52	11 21	*
30	5 16	6 1	6 12	6 57	7 6	7 51	9 22	10 7	*	0 8	10 37	11 15	0 7	0 52
31	6 39	7 12	7 35	8 8	8 29	9 2	10 45	11 18	0 46	1 19	11 48	*	1 30	2 3

明治四十一年一月

地名	濟物浦		(大同江) 漁隱洞		(鴨綠江口) 圓島		大連		旅順		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	2 50	3 24	6 33	7 7	7 6	7 40	7 45	8 20	8 16	8 51	28		
2	3 54	4 23	7 37	8 6	8 10	8 39	8 50	9 19	9 21	9 50	29		
3	4 50	5 13	8 33	8 56	9 6	9 29	9 45	10 8	10 16	10 39	30		
4	5 37	5 58	9 28	9 42	9 53	10 14	10 32	10 53	11 3	11 24	1	●	P.S.
5	6 20	6 40	10 3	10 23	10 36	10 56	11 15	11 35	11 46	*	2		
6	7 1	7 20	10 44	11 3	11 16	11 36	11 56	*	0 6	0 27	3		
7	7 41	8 1	11 24	11 45	11 57	*	0 15	0 36	0 46	1 7	4		
8	8 22	8 45	*	0 6	0 17	0 38	0 57	1 18	1 28	1 49	5		
9	9 9	9 33	0 28	0 52	1 1	1 24	1 40	2 4	2 11	2 35	6		
10	9 57	10 26	1 16	1 40	1 49	2 13	2 28	2 52	2 59	3 23	7	⌋	E.
11	10 57	11 29	2 9	2 40	2 42	3 13	3 21	3 52	3 52	4 23	8		
12	*	0 5	3 12	3 48	3 45	4 21	4 24	5 0	4 55	5 31	9		
13	0 41	1 17	4 23	5 0	4 57	5 33	5 36	6 12	6 7	6 43	10		
14	1 52	2 22	5 35	6 5	6 8	6 38	6 47	7 18	7 18	7 49	11		
15	2 53	3 20	6 36	7 3	7 8	7 36	7 48	8 15	8 19	8 46	12		
16	3 44	4 7	7 27	7 50	8 0	8 23	8 39	9 2	9 10	9 33	13		
17	4 29	4 49	8 12	8 32	8 45	9 5	9 24	9 44	9 55	10 15	14		N.
18	5 9	5 29	8 52	9 12	9 24	9 45	10 3	10 24	10 34	10 55	15	○	
19	5 49	6 7	9 32	9 50	10 4	10 23	10 44	11 2	11 15	11 33	16		A.
20	6 25	6 42	10 8	10 26	10 41	10 58	11 20	11 38	11 51	*	17		
21	7 0	7 17	10 43	11 0	11 16	11 33	11 55	*	0 9	0 26	18		
22	7 33	7 50	11 16	11 34	11 49	*	0 12	0 28	0 43	0 59	19		
23	8 6	8 23	11 50	*	0 6	0 22	0 45	1 1	1 16	1 32	20		
24	8 40	8 58	0 6	0 23	0 39	0 55	1 18	1 35	1 49	2 6	21		
25	9 17	9 36	0 41	1 0	1 14	1 33	1 53	2 12	2 24	2 43	22		E.
26	9 56	10 19	1 18	1 39	1 52	2 12	2 31	2 51	3 2	3 22	23		
27	10 46	11 19	2 2	2 29	2 34	3 2	3 14	3 42	3 45	4 13	24	⌋	
28	11 56	*	3 2	3 39	3 35	4 13	4 14	4 52	4 45	5 23	25		
29	0 40	1 27	4 24	5 9	4 56	5 43	5 36	6 22	6 7	6 53	26		
30	2 13	2 58	5 56	6 41	6 30	7 14	7 9	7 54	7 40	8 25	27		
31	3 36	4 9	7 19	7 52	7 52	8 25	8 32	9 5	9 3	9 36	28		S.



明治四十一年二月

地名	横須賀		下田		清水		鳥羽		(紀伊) 串本		(淡路) 由良		神戸	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	4 16	4 44	4 30	4 58	4 55	5 23	5 8	5 36	5 13	5 41	6 1	6 29	6 34	7 2
2	5 6	5 29	5 20	5 43	5 45	6 8	5 57	6 20	6 2	6 25	6 50	7 13	7 23	7 46
3	5 49	6 9	6 3	6 23	6 28	6 48	6 41	7 1	6 46	7 6	7 34	7 54	8 7	8 27
4	6 27	6 45	6 41	6 59	7 6	7 24	7 18	7 37	7 23	7 42	8 11	8 30	8 44	9 3
5	7 4	7 23	7 18	7 37	7 43	8 2	7 56	8 14	8 1	8 19	8 49	9 7	9 22	9 40
6	7 42	8 2	7 56	8 16	8 21	8 41	8 34	8 53	8 39	8 58	9 27	9 46	10 0	10 19
7	8 20	8 44	8 34	8 58	8 59	9 23	9 12	9 35	9 17	9 40	10 5	10 28	10 38	11 1
8	9 5	9 29	9 19	9 43	9 44	10 8	9 57	10 21	10 2	10 26	10 50	11 14	11 23	11 47
9	9 54	10 22	10 8	10 36	10 33	11 1	10 45	11 14	10 50	11 19	11 38	*	*	0 11
10	10 54	11 26	11 8	11 40	11 33	*	11 46	*	11 51	*	0 7	0 39	0 40	1 12
11	*	0 4	*	0 18	0 5	0 43	0 18	0 56	0 23	1 1	1 11	1 49	1 44	2 22
12	0 42	1 20	0 56	1 34	1 21	1 59	1 34	2 12	1 39	2 17	2 27	3 5	3 0	3 38
13	1 53	2 25	2 7	2 39	2 32	3 4	2 45	3 17	2 50	3 22	3 38	4 10	4 11	4 43
14	2 53	3 20	3 7	3 34	3 32	3 59	3 45	4 11	3 50	4 16	4 38	5 4	5 11	5 37
15	3 43	4 5	3 57	4 19	4 22	4 44	4 35	4 57	4 40	5 2	5 28	5 50	6 1	6 23
16	4 25	4 44	4 39	4 58	5 4	5 23	5 17	5 36	5 22	5 41	6 10	6 29	6 43	7 2
17	5 4	5 22	5 18	5 36	5 43	6 1	5 56	6 14	6 1	6 19	6 49	7 7	7 22	7 40
18	5 40	5 57	5 54	6 11	6 19	6 36	6 32	6 49	6 37	6 54	7 25	7 42	7 58	8 15
19	6 13	6 29	6 27	6 43	6 52	7 8	7 5	7 21	7 10	7 26	7 58	8 14	8 31	8 47
20	6 45	7 1	6 59	7 15	7 24	7 40	7 37	7 53	7 42	7 58	8 30	8 46	9 3	9 19
21	7 17	7 33	7 31	7 47	7 56	8 12	8 9	8 25	8 14	8 30	9 2	9 18	9 35	9 51
22	7 49	8 6	8 3	8 20	8 28	8 45	8 41	8 58	8 46	9 3	9 34	9 51	10 7	10 24
23	8 23	8 43	8 37	8 57	9 2	9 22	9 15	9 34	9 20	9 39	10 8	10 27	10 41	11 0
24	9 3	9 25	9 17	9 39	9 42	10 4	9 54	10 17	9 59	10 22	10 47	11 10	11 20	11 43
25	9 49	10 21	10 3	10 35	10 28	11 0	10 41	11 13	10 46	11 18	11 34	*	*	0 7
26	10 59	11 44	11 13	11 58	11 38	*	11 51	*	11 56	*	0 6	0 44	0 39	1 17
27	*	0 35	*	0 49	0 23	1 14	0 37	1 27	0 42	1 32	1 30	2 20	2 3	2 53
28	1 28	2 15	1 42	2 29	2 7	2 54	2 20	3 7	2 25	3 12	3 13	4 0	3 46	4 33
29	2 58	3 34	3 12	3 48	3 37	4 13	3 50	4 26	3 55	4 31	4 43	5 19	5 16	5 52

明治四十一年二月

地名	明石		粟島		(三原瀬戸) 瀬戸田		來島		三津ヶ濱		佐賀ノ關		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	7 34	8 2	10 47	11 14	10 4	10 31	9 29	9 56	8 49	9 16	7 11	7 38	29		P.
2	8 23	8 46	11 36	11 59	10 53	11 16	10 18	10 41	9 38	10 1	8 0	8 23	1	●	
3	9 7	9 27	*	0 19	11 36	11 56	11 1	11 21	10 21	10 41	8 43	9 3	2		
4	9 44	10 3	0 39	0 57	*	0 14	11 39	11 58	10 59	11 18	9 21	9 40	3		
5	10 22	10 40	1 16	1 34	0 33	0 51	*	0 16	11 36	11 55	9 58	10 17	4		E.
6	11 0	11 19	1 53	2 12	1 10	1 29	0 35	0 54	*	0 14	10 36	10 55	5		
7	11 38	*	2 31	2 51	1 48	2 8	1 13	1 33	0 33	0 53	11 15	11 38	6		
8	0 1	0 23	3 14	3 36	2 31	2 53	1 56	2 18	1 16	1 38	*	0 0	7		
9	0 47	1 11	3 59	4 24	3 16	3 41	2 41	3 6	2 1	2 26	0 23	0 48	8	⊙	
10	1 40	2 12	4 52	5 25	4 9	4 42	3 34	4 7	2 54	3 27	1 16	1 49	9		
11	2 44	3 22	5 57	6 35	5 14	5 52	4 39	5 17	3 59	4 37	2 21	2 59	10		
12	4 0	4 38	7 13	7 50	6 30	7 7	5 55	6 32	5 15	5 52	3 37	4 14	11		
13	5 11	5 43	8 23	8 56	7 40	8 13	7 5	7 38	6 25	6 58	4 47	5 20	12		N.
14	6 11	6 37	9 24	9 50	8 41	9 7	8 6	8 32	7 26	7 52	5 48	6 14	13		A.
15	7 1	7 23	10 14	10 36	9 31	9 53	8 56	9 18	8 16	8 38	6 38	7 0	14		
16	7 43	8 2	10 56	11 15	10 13	10 32	9 38	9 57	8 58	9 17	7 20	7 39	15		
17	8 22	8 40	11 34	11 53	10 51	11 10	10 16	10 35	9 36	9 55	7 58	8 17	16	○	
18	8 58	9 15	*	0 10	11 27	11 44	10 52	11 9	10 12	10 29	8 34	8 51	17		
19	9 31	9 47	0 27	0 43	*	0 0	11 25	11 41	10 45	11 1	9 7	9 23	18		
20	10 3	10 19	0 59	1 15	0 16	0 32	11 57	*	11 17	11 33	9 39	9 55	19		E.
21	10 35	10 51	1 31	1 48	0 48	1 5	0 13	0 30	11 50	*	10 12	10 28	20		
22	11 7	11 24	2 4	2 19	1 21	1 36	0 46	1 1	0 6	0 21	10 43	11 0	21		
23	11 41	*	2 36	2 53	1 53	2 10	1 18	1 35	0 38	0 55	11 17	11 37	22		
24	0 0	0 20	3 13	3 33	2 30	2 50	1 55	2 15	1 15	1 35	11 57	*	23		
25	0 43	1 7	3 56	4 20	3 13	3 37	2 38	3 2	1 58	2 22	0 20	0 44	24	⊙	
26	1 39	2 17	4 52	5 30	4 9	4 47	3 34	4 12	2 54	3 32	1 16	1 54	25		
27	3 3	3 53	6 16	7 7	5 33	6 24	4 58	5 49	4 18	5 9	2 40	3 31	26		
28	4 46	5 33	8 0	8 47	7 17	8 4	6 42	7 29	6 2	6 49	4 24	5 11	27		S.
29	6 16	6 52	9 29	10 5	8 46	9 22	8 11	8 47	7 31	8 7	5 53	6 29	28		



明治四十一年 二月

地名	吳		門		司		竹		敷		平		戶		佐世保		長		崎		三		角		
	日	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
		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	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
1		9 3	9 30	8 35	9 2	8 42	9 9	8 16	8 43	8 4	8 32	7 33	8 1	8 31	8 59										
2		9 52	10 15	9 24	9 47	9 31	9 54	9 5	9 28	8 54	9 17	8 23	8 46	9 21	9 44										
3		10 35	10 55	10 7	10 27	10 14	10 34	9 48	10 8	9 37	9 57	9 6	9 26	10 4	10 24										
4		11 13	11 32	10 45	11 4	10 52	11 11	10 26	10 45	10 15	10 33	9 44	10 2	10 42	11 0										
5		11 50	*	11 22	11 41	11 29	11 48	11 3	11 22	10 52	11 10	10 21	10 39	11 19	11 37										
6		0 9	0 28	*	0 0	*	0 7	11 41	*	11 30	11 49	10 59	11 18	11 57	*										
7		0 47	1 7	0 19	0 39	0 26	0 46	0 0	0 20	*	0 8	11 37	*	0 16	0 35										
8		1 30	1 52	1 2	1 24	1 9	1 31	0 43	1 5	0 31	0 53	0 0	0 22	0 58	1 20										
9		2 15	2 40	1 47	2 12	1 54	2 19	1 28	1 53	1 17	1 42	0 46	1 11	1 44	2 9										
10		3 8	3 41	2 40	3 13	2 47	3 20	2 21	2 54	2 10	2 43	1 39	2 12	2 37	3 10										
11		4 13	4 51	3 45	4 23	3 52	4 30	3 26	4 4	3 15	3 53	2 44	3 22	3 42	4 20										
12		5 29	6 6	5 1	5 38	5 8	5 45	4 42	5 19	4 31	5 8	4 0	4 37	4 58	5 35										
13		6 39	7 12	6 11	6 44	6 18	6 51	5 52	6 25	5 41	6 14	5 10	5 43	6 8	6 41										
14		7 40	8 6	7 12	7 38	7 19	7 45	6 53	7 19	6 42	7 8	6 11	6 37	7 9	7 35										
15		8 30	8 52	8 2	8 24	8 9	8 31	7 43	8 5	7 31	7 53	7 0	7 22	7 58	8 20										
16		9 12	9 31	8 44	9 3	8 51	9 10	8 25	8 44	8 13	8 32	7 42	8 1	8 40	8 59										
17		9 50	10 9	9 22	9 41	9 29	9 48	9 3	9 22	8 52	9 10	8 21	8 39	9 19	9 37										
18		10 26	10 43	9 58	10 15	10 5	10 22	9 39	9 56	9 28	9 45	8 57	9 14	9 55	10 12										
19		10 59	11 15	10 31	10 47	10 38	10 54	10 12	10 28	10 1	10 17	9 30	9 46	10 28	10 44										
20		11 31	11 47	11 3	11 19	11 10	11 26	10 44	11 0	10 33	10 49	10 2	10 18	11 0	11 16										
21		*	0 4	11 36	11 52	11 43	11 59	11 17	11 33	11 5	11 21	10 34	10 50	11 32	11 48										
22		0 20	0 35	*	0 7	*	0 14	11 48	*	11 37	11 54	11 6	11 23	*	0 4										
23		0 52	1 9	0 24	0 41	0 31	0 48	0 5	0 22	*	0 11	11 40	*	0 21	0 38										
24		1 29	1 49	1 1	1 21	1 8	1 28	0 42	1 2	0 31	0 51	0 0	0 20	0 58	1 18										
25		2 12	2 36	1 44	2 8	1 51	2 15	1 25	1 49	1 13	1 38	0 42	1 7	1 40	2 5										
26		3 8	3 46	2 40	3 18	2 47	3 25	2 21	2 59	2 10	2 48	1 39	2 17	2 37	3 15										
27		4 32	5 23	4 4	4 55	4 11	5 2	3 45	4 36	3 34	4 25	3 3	3 54	4 1	4 52										
28		6 16	7 3	5 48	6 35	5 55	6 42	5 29	6 16	5 18	6 5	4 47	5 34	5 45	6 32										
29		7 45	8 21	7 17	7 53	7 24	8 0	6 58	7 34	6 47	7 22	6 16	6 51	7 14	7 49										

明治四十一年 二月

地名	(五島)		鹿兒島		油		津		那		霸		基		隆		馬		公		太陰曆日附	太陰盈虛	太陰位置
	日	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後				
		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	h m	h m	h m	h m	h m	h m	d		
1		7 55	8 23	6 41	7 9	5 30	5 58	6 36	7 4	8 43	9 10	10 45	11 12	29									P.
2		8 45	9 8	7 31	7 54	6 20	6 43	7 25	7 48	9 31	9 54	11 33	11 56	1									
3		9 28	9 48	8 14	8 34	7 3	7 23	8 9	8 29	10 15	10 34	*	0 17	2									
4		10 6	10 24	8 52	9 10	7 41	7 59	8 46	9 5	10 52	11 11	0 36	0 54	3									
5		10 43	11 1	9 29	9 47	8 18	8 36	9 23	9 42	11 29	11 48	1 13	1 31	4									
6		11 21	11 40	10 7	10 26	8 56	9 15	10 1	10 21	*	0 7	1 50	2 9	5									
7		11 59	*	10 45	11 8	9 34	9 57	10 40	11 3	0 27	0 45	2 29	2 48	6									
8		0 22	0 44	11 30	11 54	10 19	10 43	11 25	11 49	1 9	1 31	3 11	3 33	7									
9		1 8	1 33	*	0 19	11 8	11 36	*	0 14	1 55	2 20	3 57	4 22	8									
10		2 1	2 34	0 47	1 20	*	0 9	0 42	1 15	2 48	3 21	4 51	5 23	9									
11		3 6	3 44	1 52	2 30	0 41	1 19	1 47	2 25	3 54	4 32	5 56	6 34	10									
12		4 22	4 59	3 8	3 45	1 57	2 34	3 3	3 41	5 10	5 47	7 12	7 49	11									
13		5 32	6 5	4 18	4 51	3 7	3 40	4 13	4 46	6 20	6 52	8 22	8 54	12									
14		6 33	6 59	5 19	5 45	4 8	4 34	5 14	5 40	7 20	7 46	9 22	9 48	13									
15		7 22	7 44	6 8	6 30	4 57	5 19	6 3	6 25	8 9	8 31	10 11	10 33	14									
16		8 4	8 23	6 50	7 9	5 39	5 58	6 45	7 4	8 51	9 10	10 53	11 12	15									
17		8 43	9 1	7 29	7 47	6 18	6 36	7 23	7 42	9 29	9 48	11 31	11 50	16									
18		9 19	9 36	8 5	8 22	6 54	7 11	7 59	8 17	10 5	10 23	*	0 9	17									
19		9 52	10 8	8 38	8 54	7 27	7 43	8 32	8 49	10 38	10 55	0 25	0 40	18									
20		10 24	10 40	9 10	9 26	7 59	8 15	9 5	9 21	11 11	11 27	0 56	1 13	19									
21		10 56	11 12	9 42	9 58	8 31	8 47	9 37	9 53	11 43	11 59	1 29	1 45	20									
22		11 28	11 45	10 14	10 31	9 3	9 20	10 9	10 26	*	0 15	2 1	2 17	21									
23		*	0 2	10 48	11 8	9 37	9 57	10 43	11 2	0 32	0 49	2 33	2 51	22									
24		0 22	0 42	11 28	11 50	10 17	10 39	11 23	11 43	1 9	1 29	3 11	3 31	23									
25		1 4	1 29	*	0 15	11 4	11 36	*	0 10	1 51	2 16	3 54	4 18	24									
26		2 1	2 39	0 47	1 25	*	0 14	0 42	1 20	2 49	3 27	4 51	5 29	25									
27		3 25	4 16																				



明治四十一年 二月

地名	打狗		(隱岐) 西郷		境		舞鶴		敦賀		七尾		函館	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	7 33	8 0	1 12	1 40	1 25	1 53	1 32	2 0	1 25	1 53	2 4	2 32	2 48	3 16
2	8 21	8 44	2 1	2 24	2 14	2 37	2 21	2 44	2 14	2 37	2 53	3 16	3 37	4 1
3	9 5	9 24	2 45	3 5	2 58	3 18	3 5	3 25	2 58	3 18	3 37	3 57	4 21	4 41
4	9 42	10 1	3 22	3 41	3 35	3 54	3 42	4 1	3 35	3 54	4 14	4 33	4 59	5 17
5	10 19	10 38	4 0	4 18	4 13	4 31	4 20	4 38	4 13	4 31	4 52	5 10	5 36	5 54
6	10 57	11 17	4 37	4 57	4 50	5 10	4 57	5 17	4 50	5 10	5 29	5 49	6 13	6 33
7	11 35	11 59	5 16	5 39	5 29	5 52	5 36	5 59	5 29	5 52	6 8	6 31	6 52	7 15
8	*	0 21	6 1	6 25	6 14	6 38	6 21	6 45	6 14	6 38	6 53	7 17	7 37	8 1
9	0 45	1 10	6 49	7 18	7 2	7 31	7 9	7 38	7 2	7 31	7 41	8 10	8 26	8 54
10	1 38	2 11	7 50	8 22	8 3	8 35	8 10	8 42	8 3	8 35	8 42	9 14	9 26	9 54
11	2 44	3 22	9 0	9 38	9 13	9 51	9 20	9 58	9 13	9 51	9 52	10 30	10 36	11 14
12	4 0	4 37	10 16	10 49	10 29	11 2	10 36	11 9	10 29	11 2	11 8	11 41	11 52	*
13	5 10	5 42	11 21	11 49	11 34	*	11 41	*	11 34	*	*	0 13	0 25	0 57
14	6 10	6 36	*	0 15	0 2	0 28	0 9	0 35	0 2	0 28	0 41	1 7	1 25	1 52
15	6 59	7 21	0 39	1 1	0 52	1 14	0 59	1 21	0 52	1 14	1 31	1 53	2 15	2 37
16	7 41	8 0	1 21	1 40	1 34	1 53	1 41	2 0	1 34	1 53	2 13	2 32	2 57	3 16
17	8 19	8 38	2 0	2 18	2 13	2 31	2 20	2 38	2 13	2 31	2 52	3 10	3 36	3 55
18	8 55	9 13	2 36	2 53	2 49	3 6	2 56	3 13	2 49	3 6	3 28	3 45	4 12	4 29
19	9 28	9 45	3 8	3 25	3 21	3 38	3 28	3 45	3 21	3 38	4 0	4 17	4 45	5 1
20	10 1	10 17	3 41	3 57	3 54	4 10	4 1	4 17	3 54	4 10	4 33	4 49	5 17	5 33
21	10 33	10 49	4 13	4 29	4 26	4 42	4 33	4 49	4 26	4 42	5 5	5 21	5 49	6 5
22	11 5	11 22	4 45	5 2	4 58	5 15	5 5	5 22	4 58	5 15	5 37	5 54	6 21	6 38
23	11 39	11 59	5 19	5 38	5 32	5 51	5 39	5 58	5 32	5 51	6 11	6 30	6 55	7 15
24	*	0 19	5 58	6 21	6 11	6 34	6 18	6 41	6 11	6 34	6 50	7 13	7 34	7 57
25	0 41	1 6	6 45	7 17	6 58	7 30	7 5	7 37	6 58	7 30	7 37	8 9	8 21	8 53
26	1 39	2 17	7 55	8 41	8 8	8 54	8 15	9 1	8 8	8 54	8 47	9 33	9 31	10 16
27	3 4	3 54	9 31	10 25	9 44	10 38	9 51	10 45	9 44	10 38	10 23	11 17	11 6	*
28	4 47	5 34	11 12	11 54	11 25	*	11 32	*	11 25	*	*	0 4	0 0	0 47
29	6 15	6 50	*	0 30	0 7	0 43	0 14	0 50	0 7	0 43	0 46	1 22	1 29	2 6

明治四十一年 二月

地名	大湊		(陸中) 山田		根室		小樽		九春古丹		元山		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	2 39	3 7	2 47	3 15	2 27	2 54	2 49	3 17	0 26	0 53	2 50	3 18	29		P.
2	3 28	3 52	3 36	4 0	3 16	3 39	3 38	4 2	1 15	1 38	3 39	4 2	1	●	
3	4 12	4 32	4 20	4 40	4 0	4 20	4 22	4 42	1 59	2 19	4 23	4 43	2		
4	4 50	5 8	4 58	5 16	4 38	4 56	5 0	5 18	2 37	2 55	5 0	5 19	3		
5	5 27	5 45	5 35	5 53	5 15	5 33	5 37	5 55	3 14	3 32	5 37	5 56	4		E.
6	6 4	6 24	6 12	6 32	5 52	6 12	6 14	6 34	3 51	4 11	6 15	6 35	5		
7	6 43	7 6	6 51	7 14	6 31	6 54	6 53	7 16	4 30	4 53	6 54	7 17	6		
8	7 28	7 52	7 36	8 0	7 16	7 39	7 38	8 2	5 15	5 38	7 39	8 3	7		
9	8 17	8 45	8 25	8 53	8 4	8 32	8 27	8 55	6 3	6 31	8 28	8 56	8		D
10	9 17	9 49	9 25	9 57	9 4	9 36	9 27	9 59	7 3	7 35	9 29	10 1	9		
11	10 27	11 5	10 35	11 13	10 15	10 52	10 37	11 15	8 14	8 51	10 39	11 17	10		
12	11 43	*	11 51	*	11 30	*	11 53	*	9 29	10 2	11 55	*	11		
13	0 16	0 48	0 24	0 56	0 3	0 36	0 26	0 58	10 35	11 3	0 27	1 0	12		N.
14	1 16	1 43	1 24	1 51	1 4	1 30	1 26	1 53	11 29	11 53	1 28	1 54	13		A.
15	2 6	2 28	2 14	2 36	1 54	2 16	2 16	2 38	*	0 15	2 17	2 39	14		
16	2 48	3 7	2 56	3 15	2 36	2 55	2 58	3 17	0 35	0 54	2 59	3 18	15		
17	3 27	3 46	3 35	3 54	3 15	3 33	3 37	3 56	1 14	1 32	3 37	3 56	16	○	
18	4 3	4 20	4 11	4 28	3 51	4 8	4 13	4 30	1 50	2 7	4 13	4 31	17		
19	4 36	4 52	4 44	5 0	4 24	4 40	4 46	5 2	2 23	2 39	4 46	5 3	18		
20	5 8	5 24	5 16	5 32	4 56	5 12	5 18	5 34	2 55	3 11	5 19	5 35	19		E.
21	5 40	5 56	5 48	6 4	5 28	5 44	5 50	6 6	3 27	3 43	5 51	6 7	20		
22	6 12	6 29	6 20	6 37	6 0	6 17	6 22	6 39	3 59	4 16	6 23	6 40	21		
23	6 46	7 6	6 54	7 14	6 34	6 53	6 56	7 16	4 33	4 52	6 57	7 16	22		
24	7 25	7 48	7 33	7 56	7 13	7 36	7 35	7 58	5 12	5 35	7 37	7 57	23		
25	8 12	8 44	8 20	8 52	7 59	8 31	8 22	8 54	5 58	6 30	8 24	8 56	24	○	
26	9 22	10 7	9 30	10 15	9 9	9 54	9 32	10 17	7 8	7 53	9 34	10 21	25		
27	10 57	11 51	11 5	11 59	10 44	11 38	11 7	*	8 43	9 37	11 11	*	26		
28	*	0 38	*	0 46	*	0 25	0 1	0 48	10 24	11 7	0 4	0 51	27		S.
29	1 20	1 57	1 28	2 5	1 8	1 44	1 30	2 7	11 43	*	1 33	2 8	28		



高潮時表

明治四十一年 二月

地名	釜山		蛇梁海峡		長直路		長竹水道		木浦		八口浦		古群山群島	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	7 43	8 11	8 39	9 7	9 33	10 1	11 49	*	1 49	2 17	0 18	0 46	2 33	3 1
2	8 33	8 56	9 29	9 52	10 23	10 46	0 17	0 39	2 38	3 1	1 7	1 30	3 22	3 45
3	9 16	9 36	10 12	10 32	11 6	11 26	1 2	1 22	3 22	3 42	1 51	2 11	4 6	4 26
4	9 54	10 12	10 50	11 8	11 44	*	1 42	2 0	3 59	4 18	2 28	2 47	4 43	5 2
5	10 31	10 49	11 27	11 45	0 2	0 21	2 18	2 37	4 36	4 55	3 5	3 24	5 20	5 39
6	11 9	11 28	*	0 5	0 39	0 59	2 55	3 15	5 14	5 34	3 43	4 3	5 58	6 28
7	11 47	*	0 24	0 43	1 18	1 37	3 34	3 53	5 53	6 16	4 22	4 45	6 37	7 0
8	0 10	0 32	1 6	1 28	2 0	2 22	4 16	4 38	6 38	7 2	5 7	5 31	7 22	7 46
9	0 56	1 21	1 52	2 17	2 46	3 11	5 2	5 27	7 27	7 55	5 56	6 24	8 11	8 39
10	1 49	2 22	2 45	3 18	3 39	4 12	5 55	6 28	8 28	9 0	6 57	7 29	9 12	9 44
11	2 54	3 32	3 50	4 28	4 44	5 22	7 0	7 38	9 38	10 16	8 7	8 45	10 22	11 0
12	4 10	4 47	5 6	5 43	6 0	6 37	8 16	8 53	10 54	11 26	9 23	9 55	11 38	*
13	5 20	5 53	6 16	6 49	7 10	7 43	9 26	9 59	11 59	*	10 28	10 56	0 10	0 43
14	6 21	6 47	7 17	7 43	8 11	8 37	10 27	10 53	0 27	0 53	11 22	11 45	1 11	1 37
15	7 10	7 32	8 6	8 28	9 0	9 22	11 16	11 38	1 16	1 38	*	0 7	2 0	2 22
16	7 52	8 11	8 48	9 7	9 42	10 1	11 58	*	1 58	2 17	0 27	0 46	2 42	3 1
17	8 31	8 49	9 27	9 45	10 21	10 39	0 17	0 37	2 36	2 55	1 5	1 24	3 20	3 39
18	9 7	9 24	10 3	10 20	10 57	11 14	0 55	1 13	3 12	3 30	1 41	1 59	3 56	4 14
19	9 40	9 56	10 36	10 52	11 30	11 46	1 30	1 46	3 45	4 2	2 14	2 31	4 29	4 46
20	10 12	10 28	11 8	11 24	*	0 2	2 2	2 18	4 18	4 34	2 47	3 3	5 2	5 18
21	10 44	11 0	11 40	11 56	0 18	0 34	2 34	2 50	4 50	5 6	3 19	3 35	5 34	5 50
22	11 16	11 33	*	0 12	0 50	1 6	3 6	3 22	5 22	5 39	3 51	4 8	6 6	6 23
23	11 50	*	0 29	0 46	1 23	1 40	3 39	3 56	5 56	6 15	4 25	4 44	6 40	6 59
24	0 10	0 30	1 6	1 26	2 0	2 20	4 16	4 36	6 36	6 56	5 5	5 25	7 20	7 40
25	0 52	1 17	1 48	2 13	2 42	3 7	4 58	5 23	7 23	7 55	5 52	6 24	8 7	8 39
26	1 49	2 27	2 45	3 23	3 39	4 17	5 55	6 33	8 33	9 20	7 2	7 49	9 17	10 4
27	3 13	4 4	4 9	5 0	5 3	5 54	7 19	8 10	10 10	11 3	8 39	9 32	10 54	11 47
28	4 57	5 44	5 53	6 40	6 47	7 34	9 3	9 50	11 50	*	10 19	11 1	*	0 34
29	6 26	7 1	7 22	7 57	8 16	8 51	10 32	11 7	0 32	1 7	11 36	*	1 16	1 51

高潮時表

明治四十一年 二月

地名	濟物浦		(大同江) 漁隱洞		(鴨綠江口) 圓島		大連		旅順		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	4 39	5 7	8 23	8 51	8 55	9 23	9 35	10 2	10 6	10 33	29		P.
2	5 28	5 51	9 12	9 35	9 44	10 7	10 23	10 46	10 54	11 17	1	●	
3	6 12	6 32	9 56	10 15	10 28	10 47	11 7	11 26	11 38	11 57	2		
4	6 49	7 8	10 33	10 52	11 5	11 24	11 44	*	*	0 15	3		
5	7 26	7 45	11 10	11 29	11 42	*	0 3	0 21	0 34	0 52	4		E.
6	8 4	8 24	11 48	*	0 1	0 20	0 40	0 59	1 11	1 30	5		
7	8 43	9 6	0 8	0 27	0 40	0 59	1 19	1 38	1 50	2 9	6		
8	9 28	9 52	0 50	1 12	1 22	1 44	2 1	2 23	2 32	2 54	7		
9	10 17	10 45	1 36	2 1	2 8	2 33	2 47	3 12	3 18	3 43	8	⌋	
10	11 18	11 50	2 29	3 2	3 1	3 34	3 40	4 13	4 11	4 44	9		
11	*	0 28	3 34	4 13	4 6	4 45	4 46	5 24	5 17	5 55	10		
12	1 6	1 44	4 50	5 28	5 22	6 0	6 2	6 39	6 33	7 10	11		
13	2 16	2 49	6 0	6 33	6 32	7 5	7 12	7 44	7 43	8 15	12		N.
14	3 17	3 43	7 1	7 27	7 33	7 59	8 12	8 38	8 43	9 9	13		A.
15	4 6	4 28	7 50	8 12	8 22	8 44	9 1	9 23	9 32	9 54	14		
16	4 48	5 7	8 32	8 51	9 4	9 23	9 43	10 2	10 14	10 33	15		
17	5 26	5 45	9 10	9 29	9 42	10 1	10 21	10 40	10 52	11 11	16	○	
18	6 2	6 20	9 46	10 4	10 18	10 36	10 57	11 15	11 28	11 46	17		
19	6 35	6 52	10 19	10 35	10 51	11 7	11 30	11 47	*	0 1	18		
20	7 8	7 24	10 52	11 8	11 24	11 40	*	0 3	0 18	0 34	19		E.
21	7 40	7 56	11 24	11 40	11 56	*	0 19	0 35	0 50	1 6	20		
22	8 12	8 29	11 56	*	0 12	0 28	0 51	1 7	1 22	1 38	21		
23	8 46	9 5	0 12	0 29	0 44	1 1	1 24	1 41	1 55	2 12	22		
24	9 26	9 46	0 49	1 10	1 21	1 42	2 1	2 21	2 32	2 52	23		
25	10 13	10 45	1 32	1 57	2 4	2 29	2 43	3 8	3 14	3 39	24	⌋	
26	11 23	*	2 29	3 7	3 1	3 39	3 41	4 19	4 12	4 50	25		
27	0 10	1 0	3 54	4 44	4 26	5 16	5 6	5 56	5 37	6 27	26		
28	1 53	2 40	5 37	6 24	6 9	6 56	6 49	7 36	7 20	8 7	27		S.
29	3 22	3 57	7 6	7 41	7 38	8 13	8 17	8 52	8 48	9 23	28		



明治四十一年三月

地名	横須賀		下田		清水		鳥羽		(紀伊) 本		(淡路) 良		神戶	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	4 3	4 30	4 17	4 44	4 42	5 9	4 55	5 22	5 0	5 27	5 48	6 15	6 21	6 48
2	4 53	5 12	5 7	5 26	5 32	5 51	5 44	6 4	5 49	6 9	6 37	6 57	7 10	7 30
3	5 32	5 51	5 46	6 5	6 11	6 30	6 23	6 42	6 28	6 47	7 16	7 35	7 49	8 8
4	6 8	6 25	6 22	6 39	6 47	7 4	7 0	7 16	7 5	7 21	7 53	8 9	8 26	8 42
5	6 42	7 0	6 56	7 14	7 21	7 39	7 34	7 52	7 39	7 57	8 27	8 45	9 0	9 18
6	7 18	7 36	7 32	7 50	7 57	8 15	8 9	8 27	8 14	8 32	9 2	9 20	9 35	9 55
7	7 56	8 15	8 10	8 29	8 35	8 54	8 48	9 7	8 53	9 12	9 41	10 0	10 14	10 33
8	8 37	8 59	8 51	9 13	9 16	9 38	9 29	9 51	9 34	9 56	10 22	10 44	10 55	11 17
9	9 23	9 48	9 37	10 2	10 2	10 27	10 15	10 40	10 20	10 45	11 8	11 33	11 41	*
10	10 18	10 50	10 32	11 4	10 57	11 29	11 9	11 42	11 14	11 47	*	0 2	0 6	0 35
11	11 23	*	11 37	*	*	0 2	*	0 15	*	0 20	0 35	1 8	1 8	1 41
12	0 2	0 41	0 16	0 55	0 41	1 20	0 54	1 33	0 59	1 38	1 47	2 28	2 20	3 1
13	1 19	1 51	1 33	2 5	1 58	2 30	2 11	2 43	2 16	2 48	3 4	3 36	3 37	4 9
14	2 23	2 50	2 37	3 4	3 2	3 29	3 15	3 42	3 20	3 47	4 8	4 35	4 41	5 8
15	3 15	3 38	3 29	3 52	3 54	4 17	4 7	4 30	4 12	4 35	5 0	5 23	5 33	5 56
16	3 59	4 18	4 13	4 32	4 38	4 57	4 51	5 10	4 56	5 15	5 44	6 3	6 17	6 36
17	4 36	4 54	4 50	5 8	5 15	5 33	5 28	5 46	5 33	5 51	6 21	6 39	6 54	7 12
18	5 11	5 29	5 25	5 43	5 50	6 8	6 3	6 21	6 8	6 26	6 56	7 14	7 29	7 47
19	5 46	6 1	6 0	6 15	6 25	6 40	6 37	6 53	6 42	6 58	7 30	7 46	8 3	8 19
20	6 17	6 32	6 31	6 46	6 56	7 11	7 9	7 24	7 14	7 29	8 2	8 17	8 35	8 50
21	6 49	7 5	7 3	7 19	7 28	7 44	7 41	7 57	7 46	8 2	8 34	8 50	9 7	9 23
22	7 23	7 41	7 37	7 55	8 2	8 20	8 15	8 33	8 20	8 38	9 8	9 26	9 41	9 59
23	8 0	8 18	8 14	8 32	8 39	8 57	8 51	9 10	8 56	9 15	9 44	10 3	10 17	10 36
24	8 42	9 6	8 56	9 20	9 21	9 45	9 34	9 58	9 39	10 3	10 27	10 51	11 0	11 24
25	9 32	10 6	9 46	10 20	10 11	10 45	10 24	10 58	10 29	11 3	11 17	11 51	11 50	*
26	10 47	11 35	11 1	11 49	11 26	*	11 39	*	11 44	*	*	0 32	0 24	1 5
27	*	0 26	*	0 40	0 14	1 5	0 27	1 18	10 32	1 23	1 20	2 11	1 53	2 44
28	1 19	2 4	1 33	2 18	1 58	2 43	2 11	2 56	2 16	3 1	3 4	3 49	3 37	4 22
29	2 44	3 18	2 58	3 32	3 23	3 57	3 36	4 10	3 41	4 15	4 29	5 3	5 2	5 36
30	3 44	4 8	3 58	4 22	4 23	4 47	4 36	5 0	4 41	5 5	5 29	5 53	6 2	6 26
31	4 31	4 50	4 45	5 4	5 10	5 29	5 22	5 42	5 27	5 47	6 15	6 35	6 48	7 8

明治四十一年三月

地名	明石		粟島		(三原瀬戸) 瀬戸田		來島		三津ヶ濱		佐賀ノ關		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	7 21	7 48	10 33	11 1	9 50	10 18	9 15	9 43	8 35	9 3	6 57	7 25	29		P.
2	8 10	8 30	11 21	11 42	10 38	10 59	10 3	10 24	9 23	9 44	7 45	8 6	30		
3	8 49	9 8	*	0 2	11 19	11 38	10 44	11 3	10 4	10 23	8 26	8 45	1	●	
4	9 26	9 42	0 21	0 38	11 55	*	11 20	11 37	10 40	10 57	9 2	9 19	2		
5	10 0	10 18	0 55	1 12	0 12	0 29	11 54	*	11 14	11 32	9 36	9 54	3		E.
6	10 35	10 55	1 30	1 48	0 47	1 5	0 12	0 30	11 50	*	10 12	10 30	4		
7	11 14	11 33	2 6	2 26	1 23	1 43	0 48	1 8	0 8	0 28	10 50	11 9	5		
8	11 55	*	2 45	3 7	2 2	2 24	1 27	1 49	0 47	1 9	11 31	11 54	6		
9	0 17	0 41	3 30	3 53	2 47	3 10	2 12	2 35	1 32	1 55	*	0 17	7		
10	1 6	1 35	4 19	4 48	3 36	4 5	3 1	3 30	2 21	2 50	0 43	1 12	8	∩	
11	2 8	2 41	5 24	5 54	4 41	5 11	4 6	4 36	3 26	3 56	1 48	2 18	9		N.
12	3 20	4 1	6 36	7 12	5 53	6 29	5 18	5 54	4 38	5 14	3 0	3 36	10		
13	4 37	5 9	7 50	8 22	7 7	7 39	6 32	7 4	5 52	6 24	4 14	4 46	11		A.
14	5 41	6 8	8 53	9 21	8 10	8 38	7 35	8 3	6 55	7 23	5 17	5 45	12		
15	6 33	6 56	9 46	10 8	9 3	9 25	8 28	8 50	7 48	8 10	6 10	6 32	13		
16	7 17	7 36	10 29	10 48	9 46	10 5	9 11	9 30	8 31	8 50	6 53	7 12	14		
17	7 54	8 12	11 6	11 25	10 23	10 42	9 48	10 7	9 8	9 27	7 30	7 49	15		
18	8 29	8 47	11 42	11 59	10 59	11 16	10 24	10 41	9 44	10 1	8 6	8 23	16	○	
19	9 3	9 19	*	0 16	11 33	11 48	10 58	11 13	10 18	10 33	8 40	8 55	17		E.
20	9 35	9 50	0 31	0 47	*	0 4	11 29	11 45	10 49	11 5	9 11	9 27	18		
21	10 7	10 23	1 3	1 19	0 20	0 36	*	0 1	11 21	11 37	9 43	9 59	19		
22	10 41	10 59	1 35	1 52	0 52	1 9	0 17	0 34	11 54	*	10 16	10 35	20		
23	11 17	11 36	2 11	2 30	1 28	1 47	0 53	1 12	0 13	0 32	10 54	11 13	21		
24	*	0 0	2 49	3 12	2 6	2 29	1 31	1 54	0 51	1 14	11 36	*	22		
25	0 24	0 50	3 36	4 3	2 53	3 20	2 18	2 45	1 38	2 5	0 0	0 27	23	∩	
26	1 24	2 5	4 37	5 19	3 54	4 36	3 19	4 1	2 39	3 21	1 1	1 43	24		S.
27	2 53	3 44	6 6	6 58	5 23	6 15	4 48	5 40	4 8	5 0	2 30	3 22	25		
28	4 37	5 22	7 51	8 34	7 8	7 51	6 33	7 16	5 53	6 36	4 15	4 58	26		
29	6 2	6 36	9 15	9 48	8 32	9 5	7 57	8 30	7 17	7 50	5 39	6 12	27		
30	7 2	7 26	10 14	10 39	9 31	9 56	8 56	9 21	8 16	8 41	6 38	7 3	28		P.
31	7 48	8 8	11 2	11 20	10 19	10 37	9 44	10 2	9 4	9 22	7 26	7 44	29		







明治四十一年 三月

地名	打		(隱岐) 西 鄉		境		舞 鶴		敦 賀		七 尾		函 館	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	7 20	7 46	0 59	1 26	1 12	1 39	1 19	1 46	1 12	1 39	1 51	2 18	2 35	3 2
2	8 8	8 28	1 48	2 8	2 1	2 21	2 8	2 28	2 1	2 21	2 40	2 59	3 25	3 44
3	8 47	9 6	2 27	2 46	2 40	2 59	2 47	3 6	2 40	2 59	3 19	3 38	4 4	4 23
4	9 23	9 40	3 4	3 20	3 17	3 33	3 24	3 40	3 17	3 33	3 56	4 12	4 40	4 57
5	9 58	10 15	3 38	3 55	3 51	4 8	3 58	4 15	3 51	4 8	4 30	4 47	5 14	5 32
6	10 33	10 51	4 13	4 31	4 26	4 44	4 33	4 51	4 26	4 44	5 5	5 23	5 50	6 8
7	11 12	11 31	4 51	5 11	5 4	5 24	5 11	5 31	5 4	5 24	5 43	6 3	6 28	6 47
8	11 53	*	5 33	5 55	5 46	6 8	5 53	6 15	5 46	6 8	6 25	6 47	7 9	7 31
9	0 15	0 39	6 19	6 44	6 32	6 57	6 39	7 4	6 32	6 57	7 11	7 36	7 55	8 20
10	1 5	1 34	7 13	7 46	7 26	7 59	7 33	8 6	7 26	7 59	8 5	8 38	8 49	9 22
11	2 7	2 41	8 19	8 59	8 32	9 12	8 39	9 19	8 32	9 12	9 11	9 51	9 55	10 34
12	3 20	3 59	9 37	10 15	9 50	10 28	9 57	10 35	9 50	10 28	10 29	11 7	11 13	11 51
13	4 36	5 8	10 47	11 18	11 0	11 31	11 7	11 38	11 0	11 31	11 39	*	*	0 23
14	5 39	6 7	11 46	*	11 59	*	*	0 6	11 59	*	0 10	0 38	0 55	1 22
15	6 31	6 54	0 11	0 33	0 24	0 46	0 31	0 53	0 24	0 46	1 3	1 25	1 47	2 10
16	7 15	7 34	0 55	1 14	1 8	1 27	1 15	1 34	1 8	1 27	1 47	2 6	2 31	2 50
17	7 52	8 9	1 32	1 50	1 45	2 3	1 52	2 10	1 45	2 3	2 24	2 42	3 8	3 26
18	8 27	8 45	2 7	2 25	2 20	2 38	2 27	2 45	2 20	2 38	2 59	3 17	3 43	4 1
19	9 1	9 16	2 41	2 57	2 54	3 10	3 1	3 17	2 54	3 10	3 33	3 49	4 18	4 33
20	9 32	9 48	3 13	3 28	3 26	3 41	3 33	3 48	3 26	3 41	4 5	4 20	4 49	5 5
21	10 5	10 21	3 45	4 1	3 58	4 14	4 5	4 21	3 58	4 14	4 37	4 53	5 21	5 37
22	10 39	10 57	4 19	4 36	4 32	4 49	4 39	4 56	4 32	4 49	5 11	5 28	5 55	6 13
23	11 15	11 35	4 55	5 14	5 8	5 27	5 15	5 34	5 8	5 27	5 47	6 6	6 32	6 50
24	11 58	*	5 38	6 1	5 51	6 14	5 58	6 21	5 51	6 14	6 30	6 53	7 14	7 37
25	0 22	0 49	6 28	7 3	6 41	7 16	6 48	7 23	6 41	7 16	7 20	7 55	8 4	8 38
26	1 24	2 5	7 43	8 31	7 56	8 44	8 3	8 51	7 56	8 44	8 35	9 23	9 19	10 6
27	2 54	3 45	9 23	10 15	9 36	10 28	9 43	10 35	9 36	10 28	10 15	11 7	10 58	11 51
28	4 38	5 22	11 0	11 40	11 13	11 53	11 20	*	11 13	11 53	11 52	*	*	0 36
29	6 1	6 34	*	0 14	*	0 27	0 0	0 34	*	0 27	0 32	1 6	1 16	1 50
30	7 0	7 25	0 40	1 4	0 53	1 17	1 0	1 24	0 53	1 17	1 32	1 56	2 16	2 40
31	7 47	8 6	1 26	1 46	1 39	1 59	1 46	2 6	1 39	1 59	2 18	2 38	3 3	3 22

明治四十一年 三月

地名	大 湊		(陸中) 山 田		根 室		小 樽		九 春 古 丹		元 山		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	2 26	2 53	2 34	3 1	2 14	2 40	2 36	3 3	0 14	0 41	2 38	3 4	29		P.
2	3 16	3 35	3 24	3 43	3 4	3 23	3 26	3 45	1 4	1 23	3 26	3 46	30	●	
3	3 55	4 14	4 3	4 22	3 43	4 1	4 5	4 24	1 43	2 2	4 5	4 24	1		
4	4 31	4 48	4 39	4 56	4 19	4 36	4 41	4 58	2 19	2 36	4 41	4 58	2		E.
5	5 5	5 23	5 13	5 31	4 53	5 11	5 15	5 33	2 53	3 11	5 16	5 33	3		
6	5 41	5 59	5 49	6 7	5 29	5 47	5 51	6 9	3 29	3 47	5 51	6 9	4		
7	6 19	6 38	6 27	6 46	6 7	6 26	6 29	6 48	4 7	4 26	6 30	6 49	5		
8	7 0	7 22	7 8	7 30	6 48	7 10	7 10	7 32	4 48	5 10	7 11	7 33	6		
9	7 46	8 11	7 54	8 19	7 33	7 59	7 56	8 21	5 34	5 59	7 57	8 22	7		
10	8 40	9 13	8 48	9 21	8 28	9 0	8 50	9 23	6 28	7 1	8 52	9 25	8	D	
11	9 46	10 25	9 54	10 33	9 33	10 12	9 56	10 35	7 34	8 13	9 58	10 38	9		N.
12	11 4	11 42	11 12	11 50	10 51	11 29	11 14	11 52	8 52	9 30	11 16	11 54	10		
13	*	0 14	*	0 22	*	0 2	*	0 24	10 2	10 34	*	0 26	11		A.
14	0 46	1 13	0 54	1 21	0 34	1 1	0 56	1 23	11 1	11 26	0 57	1 24	12		
15	1 38	2 1	1 46	2 9	1 26	1 48	1 48	2 11	11 49	*	1 49	2 12	13		
16	2 22	2 41	2 30	2 49	2 10	2 29	2 32	2 51	0 10	0 29	2 33	2 52	14		
17	2 59	3 17	3 7	3 25	2 47	3 5	3 9	3 27	0 47	1 5	3 10	3 28	15		
18	3 34	3 52	3 42	4 0	3 22	3 40	3 44	4 2	1 22	1 40	3 45	4 3	16	○	
19	4 9	4 24	4 17	4 32	3 57	4 12	4 19	4 34	1 57	2 12	4 19	4 35	17		E.
20	4 40	4 56	4 48	5 4	4 28	4 43	4 50	5 6	2 28	2 44	4 50	5 6	18		
21	5 12	5 28	5 20	5 36	5 0	5 16	5 22	5 38	3 0	3 16	5 23	5 39	19		
22	5 46	6 4	5 54	6 12	5 34	5 52	5 56	6 14	3 34	3 52	5 57	6 15	20		
23	6 23	6 41	6 31	6 49	6 10	6 29	6 33	6 51	4 11	4 29	6 33	6 52	21		
24	7 5	7 28	7 13	7 36	6 53	7 16	7 15	7 38	4 53	5 16	7 16	7 40	22		
25	7 55	8 29	8 3	8 37	7 43	8 16	8 5	8 39	5 43	6 17	8 7	8 41	23		
26	9 10	9 57	9 18	10 5	8 57	9 44	9 20	10 7	6 58	7 45	9 23	10 11	24		S.
27	10 49	11 42	10 57	11 50	10 36	11 29	10 59	11 52	8 37	9 30	11 2	11 55	25		
28	*	0 27	*	0 35	*	0 14	*	0 37	10 15	10 55	*	0 39	26		
29	1 7	1 41	1 15	1 49	0 54	1 28	1 17	1 51	11 29	11 55	1 19	1 52	27		
30	2 7	2 31	2 15	2 39	1 55	2 19	2 17	2 41	*	0 19	2 18	2 42	28		P.
31	2 54	3 13	3 2	3 21	2 41	3 1	3 4	3 23	0 42	1 1	3 4	3 24	29		



明治四十一年 三月

地名	釜山		蛇梁海峡		長直路		長竹水道		木浦		八口浦		古群山群島	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	7 30	7 56	8 26	8 52	9 20	9 46	11 36	*	1 37	2 3	0 6	0 32	2 21	2 47
2	8 18	8 38	9 14	9 34	10 8	10 28	0 2	0 24	2 25	2 45	0 54	1 14	3 9	3 29
3	8 57	9 16	9 53	10 12	10 47	11 6	0 44	1 3	3 4	3 23	1 33	1 52	3 48	4 7
4	9 34	9 50	10 30	10 46	11 24	11 40	1 22	1 40	3 40	3 57	2 9	2 26	4 24	4 41
5	10 8	10 26	11 4	11 22	11 58	*	1 56	2 14	4 15	4 32	2 44	3 1	4 59	5 16
6	10 43	11 1	11 39	11 57	0 16	0 33	2 32	2 49	4 50	5 8	3 19	3 37	5 34	5 52
7	11 22	11 41	*	0 18	0 51	1 12	3 7	3 28	5 29	5 48	3 58	4 17	6 13	6 32
8	*	0 3	0 37	0 59	1 31	1 53	3 47	4 9	6 10	6 32	4 39	5 1	6 54	7 16
9	0 25	0 49	1 21	1 45	2 15	2 39	4 31	4 55	6 56	7 21	5 25	5 50	7 40	8 5
10	1 15	1 44	2 11	2 40	3 5	3 34	5 21	5 50	7 51	8 24	6 20	6 53	8 35	9 8
11	2 17	2 50	3 13	3 46	4 7	4 40	6 23	6 56	8 57	9 37	7 26	8 6	9 41	10 21
12	3 29	4 8	4 25	5 4	5 19	5 58	7 35	8 14	10 15	10 53	8 44	9 22	10 59	11 37
13	4 46	5 18	5 42	6 14	6 36	7 8	8 52	9 24	11 25	11 56	9 54	10 25	*	0 9
14	5 49	6 17	6 45	7 13	7 39	8 7	9 55	10 23	*	0 23	10 52	11 17	0 40	1 7
15	6 41	7 4	7 37	8 0	8 31	8 54	10 47	11 10	0 48	1 11	11 40	*	1 32	1 55
16	7 25	7 44	8 21	8 40	9 15	9 34	11 31	11 50	1 32	1 51	0 1	0 20	2 16	2 35
17	8 2	8 20	8 58	9 16	9 52	10 10	*	0 8	2 9	2 27	0 38	0 56	2 53	3 11
18	8 37	8 55	9 33	9 51	10 27	10 45	0 26	0 43	2 44	3 2	1 13	1 31	3 28	3 46
19	9 12	9 27	10 8	10 23	11 2	11 17	1 1	1 18	3 18	3 34	1 47	2 3	4 2	4 18
20	9 43	9 58	10 39	10 54	11 33	11 48	1 33	1 49	3 49	4 5	2 18	2 34	4 33	4 49
21	10 15	10 31	11 11	11 27	*	0 5	2 4	2 21	4 22	4 38	2 51	3 7	5 6	5 22
22	10 49	11 7	11 45	*	0 21	0 39	2 37	2 55	4 56	5 14	3 25	3 43	5 40	5 58
23	11 25	11 44	0 3	0 21	0 57	1 15	3 13	3 31	5 32	5 51	4 1	4 20	6 16	6 35
24	*	0 8	0 40	1 4	1 34	1 58	3 50	4 14	6 15	6 39	4 44	5 8	6 59	7 23
25	0 32	0 59	1 28	1 55	2 22	2 49	4 38	5 5	7 6	7 40	5 35	6 9	7 50	8 24
26	1 33	2 14	2 29	3 10	3 23	4 4	5 39	6 20	8 22	9 10	6 51	7 39	9 6	9 54
27	3 3	3 54	3 59	4 50	4 53	5 44	7 9	8 0	10 1	10 54	8 30	9 23	10 45	11 38
28	4 47	5 31	5 43	6 27	6 37	7 21	8 53	9 37	11 38	*	10 7	10 47	*	0 2
29	6 11	6 44	7 7	7 40	8 1	8 34	10 17	10 50	0 18	0 51	11 20	11 46	1 2	1 35
30	7 10	7 35	8 6	8 31	9 0	9 25	11 16	11 41	1 17	1 41	*	0 10	2 1	2 25
31	7 57	8 16	8 53	9 12	9 47	10 6	*	0 3	2 3	2 23	0 32	0 52	2 47	3 7

明治四十一年 三月

地名	濟物浦		(大同江) 漁隱洞		(鴨綠江口) 圓島		大連		旅順		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	4 27	4 53	8 11	8 37	8 43	9 9	9 22	9 48	9 53	10 19	29		P.
2	5 15	5 35	8 59	9 19	9 31	9 51	10 10	10 30	10 41	11 1	30	●	
3	5 54	6 13	9 38	9 57	10 10	10 29	10 49	11 8	11 20	11 39	1		
4	6 30	6 47	10 14	10 31	10 46	11 3	11 25	11 42	11 56	*	2		E.
5	7 5	7 22	10 48	11 6	11 20	11 38	*	0 0	0 13	0 31	3		
6	7 40	7 58	11 24	11 42	11 56	*	0 17	0 35	0 48	1 6	4		
7	8 19	8 38	*	0 2	0 14	0 34	0 53	1 14	1 24	1 45	5		
8	9 0	9 22	0 22	0 44	0 54	1 16	1 33	1 55	2 4	2 26	6		
9	9 46	10 11	1 6	1 30	1 38	2 2	2 17	2 41	2 48	3 12	7		
10	10 41	11 14	1 55	2 25	2 27	2 57	3 7	3 36	3 38	4 7	8	D	
11	11 47	*	2 58	2 58	3 30	4 4	4 9	4 43	4 40	5 14	9		N.
12	0 27	1 5	4 11	4 49	4 43	5 21	5 22	6 1	5 53	6 32	10		
13	1 43	2 15	5 27	5 59	5 59	6 31	6 38	7 10	7 9	7 41	11		A.
14	2 46	3 13	6 30	6 57	7 2	7 29	7 41	8 9	8 12	8 40	12		
15	3 38	4 1	7 22	7 45	7 54	8 17	8 33	8 56	9 4	9 27	13		
16	4 22	4 41	8 6	8 25	8 38	8 57	9 17	9 36	9 48	10 7	14		
17	4 59	5 17	8 42	9 0	9 14	9 32	9 54	10 11	10 25	10 42	15		
18	5 34	5 52	9 18	9 36	9 50	10 8	10 29	10 47	11 0	11 18	16	○	
19	6 8	6 24	9 52	10 7	10 24	10 39	11 3	11 18	11 34	11 49	17		E.
20	6 39	6 55	10 23	10 39	10 55	11 11	11 34	11 50	*	0 5	18		
21	7 12	7 28	10 56	11 12	11 28	11 44	*	0 7	0 21	0 38	19		
22	7 46	8 4	11 30	11 47	*	0 2	0 23	0 41	0 54	1 12	20		
23	8 22	8 41	*	0 6	0 19	0 38	0 59	1 17	1 30	1 48	21		
24	9 5	9 29	0 25	0 49	0 57	1 21	1 37	2 0	2 8	2 31	22		
25	9 56	10 30	1 13	1 40	1 45	2 12	2 24	2 51	2 55	3 22	23		
26	11 12	*	2 15	2 56	2 47	3 28	3 26	4 7	3 57	4 38	24		S.
27	0 0	0 51	3 44	4 36	4 16	5 8	4 56	5 47	5 27	6 18	25		
28	1 44	2 28	5 28	6 12	6 0	6 44	6 40	7 24	7 11	7 55	26		
29	3 8	3 41	6 52	7 25	7 24	7 57	8 3	8 36	8 34	9 7	27		
30	4 7	4 31	7 51	8 15	8 23	8 47	9 2	9 27	9 33	9 58	28		P.
31	4 53	5 13	8 37	8 56	9 9	9 28	9 49	10 8	10 20	10 39	29		



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地名	横須賀		下田		清水		鳥羽		(紀伊) 串本		(淡路) 由良		神戸	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	5 8	5 25	5 22	5 39	5 47	6 4	6 0	6 17	6 5	6 22	6 53	7 10	7 26	7 43
2	5 43	6 0	5 57	6 14	6 22	6 39	6 35	6 51	6 40	6 56	7 28	7 44	8 1	8 17
3	6 16	6 33	6 30	6 47	6 55	7 12	7 8	7 25	7 13	7 30	8 1	8 18	8 34	8 51
4	6 52	7 10	7 6	7 24	7 31	7 49	7 43	8 2	7 48	8 7	8 30	8 55	9 3	9 28
5	7 29	7 50	7 43	8 4	8 8	8 29	8 21	8 41	8 26	8 46	9 14	9 34	9 47	10 7
6	8 9	8 33	8 23	8 47	8 48	9 12	9 1	9 24	9 6	9 29	9 54	10 17	10 27	10 50
7	8 55	9 20	9 9	9 34	9 34	9 59	9 47	10 12	9 52	10 17	10 40	11 5	11 13	11 38
8	9 47	10 16	10 1	10 30	10 26	10 55	10 39	11 8	10 44	11 13	11 32	*	*	0 5
9	10 49	11 24	11 3	11 38	11 28	*	11 41	*	11 46	*	0 1	0 34	0 34	1 7
10	*	0 1	*	0 15	0 3	0 40	0 16	0 53	0 21	0 58	1 9	1 42	1 42	2 15
11	0 38	1 14	0 52	1 28	1 17	1 53	1 30	2 6	1 35	2 11	2 23	2 59	2 56	3 32
12	1 44	2 14	1 58	2 28	2 23	2 53	2 36	3 6	2 41	3 11	3 29	3 59	4 2	4 32
13	2 41	3 4	2 55	3 18	3 20	3 43	3 32	3 56	3 37	4 1	4 25	4 49	4 58	5 22
14	3 25	3 47	3 39	4 1	4 4	4 26	4 17	4 39	4 22	4 44	5 10	5 32	5 43	6 5
15	4 7	4 24	4 21	4 38	4 46	5 3	4 58	5 16	5 3	5 21	5 51	6 9	6 24	6 42
16	4 42	5 0	4 56	5 14	5 21	5 39	5 33	5 51	5 38	5 56	6 26	6 44	6 59	7 17
17	5 17	5 35	5 31	5 49	5 56	6 14	6 9	6 26	6 14	6 31	7 2	7 19	7 35	7 52
18	5 51	6 8	6 5	6 22	6 30	6 47	6 43	7 0	6 48	7 5	7 36	7 53	8 9	8 26
19	6 25	6 44	6 39	6 58	7 4	7 23	7 17	7 35	7 22	7 40	8 10	8 28	8 43	9 1
20	7 3	7 22	7 17	7 36	7 42	8 1	7 55	8 14	8 0	8 19	8 48	9 7	9 21	9 40
21	7 43	8 4	7 57	8 18	8 22	8 43	8 35	8 56	8 40	9 1	9 28	9 49	10 1	10 22
22	8 29	8 56	8 43	9 10	9 8	9 35	9 21	9 48	9 26	9 53	10 14	10 41	10 47	11 14
23	9 24	10 0	9 38	10 14	10 3	10 39	10 16	10 52	10 21	10 57	11 9	11 45	11 42	*
24	10 42	11 28	10 56	11 42	11 21	*	11 34	*	11 39	*	*	0 27	0 18	1 0
25	*	0 17	*	0 31	0 7	0 56	0 20	1 9	0 25	1 14	1 13	2 2	1 46	2 35
26	1 4	1 46	1 18	2 0	1 43	2 25	1 57	2 38	2 2	2 43	2 50	3 31	3 23	4 4
27	2 23	2 53	2 37	3 7	3 2	3 32	3 14	3 45	3 19	3 50	4 7	4 38	4 40	5 11
28	3 19	3 41	3 33	3 55	3 58	4 20	4 11	4 33	4 16	4 38	5 4	5 26	5 37	5 59
29	4 3	4 22	4 17	4 36	4 42	5 1	4 55	5 14	5 0	5 19	5 48	6 7	6 21	6 40
30	4 41	4 59	4 55	5 13	5 20	5 38	5 33	5 50	5 38	5 55	6 26	6 43	6 59	7 16

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地名	明石		粟島		(三原瀬戸) 瀬戸田		來島		三津ヶ濱		佐賀ノ關		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	8 26	8 43	11 39	11 55	10 56	11 12	10 21	10 37	9 41	9 57	8 2	8 18	1	●	E.
2	9 1	9 17	*	0 13	11 30	11 47	10 54	11 12	10 14	10 32	8 35	8 53	2		
3	9 34	9 51	0 30	0 46	*	0 3	11 28	11 45	10 48	11 5	9 9	9 26	3		
4	10 3	10 28	1 3	1 22	0 20	0 39	*	0 4	11 24	11 42	9 45	10 3	4		
5	10 47	11 7	1 40	1 59	0 57	1 16	0 22	0 41	*	0 1	10 22	10 43	5		
6	11 27	11 50	2 20	2 40	1 37	1 57	1 2	1 22	0 22	0 42	11 3	11 26	6		
7	*	0 13	3 3	3 26	2 20	2 43	1 45	2 8	1 5	1 28	11 49	*	7		
8	0 38	1 5	3 51	4 17	3 8	3 34	2 33	2 59	1 53	2 19	0 14	0 40	8		N.
9	1 34	2 7	4 47	5 20	4 4	4 37	3 29	4 2	2 49	3 22	1 10	1 43	9	○	
10	2 42	3 15	5 55	6 32	5 12	5 49	4 37	5 14	3 57	4 34	2 18	2 55	10		A.
11	3 56	4 32	7 9	7 45	6 26	7 2	5 51	6 27	5 11	5 47	3 32	4 8	11		
12	5 2	5 32	8 15	8 45	7 32	8 2	6 57	7 27	6 17	6 47	4 38	5 8	12		
13	5 58	6 22	9 13	9 35	8 30	8 52	7 53	8 17	7 13	7 37	5 34	5 58	13		
14	6 43	7 5	9 56	10 17	9 13	9 34	8 38	8 59	7 58	8 19	6 19	6 40	14		E.
15	7 24	7 42	10 37	10 54	9 54	10 11	9 19	9 36	8 39	8 56	7 0	7 17	15		
16	7 59	8 17	11 12	11 30	10 29	10 47	9 54	10 12	9 14	9 32	7 35	7 53	16		
17	8 35	8 52	11 47	*	11 4	11 22	10 29	10 47	9 49	10 7	8 10	8 28	17	○	
18	9 9	9 26	0 5	0 22	11 39	11 56	11 4	11 21	10 24	10 41	8 45	9 2	18		
19	9 43	10 1	0 39	0 55	*	0 12	11 37	11 56	10 57	11 16	9 18	9 37	19		
20	10 21	10 40	1 14	1 33	0 31	0 50	*	0 15	11 35	11 54	9 56	10 15	20		
21	11 1	11 22	1 52	2 14	1 9	1 31	0 34	0 56	*	0 16	10 37	10 57	21		
22	11 47	*	2 34	3 0	1 51	2 17	1 16	1 42	0 36	1 2	11 23	11 49	22		S.
23	0 14	0 42	3 26	3 55	2 43	3 12	2 8	2 37	1 28	1 57	*	0 18	23		
24	1 18	2 0	4 31	5 13	3 48	4 30	3 13	3 55	2 33	3 15	0 54	1 36	24	○	
25	2 46	3 35	6 0	6 48	5 17	6 5	4 42	5 30	4 2	4 50	2 23	3 11	25		P.
26	4 23	5 4	7 36	8 17	6 53	7 34	6 18	6 59	5 38	6 19	3 59	4 40	26		
27	5 40	6 11	8 53	9 24	8 10	8 41	7 35	8 6	6 55	7 26	5 16	5 47	27		
28	6 37	6 59	9 50	10 12	9 7	9 29	8 32	8 54	7 52	8 14	6 13	6 35	28		E.
29	7 21	7 40	10 33	10 53	9 50	10 10	9 15	9 35	8 35	8 55	6 56	7 16	29		
30	7 59	8 16	11 13	11 29	10 30	10 46	9 53	10 11	9 13	9 31	7 34	7 52	30		



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地名	吳		門		司竹		敷平		戶佐世保		長崎		三角	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
日	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	h m
1	9 55	10 11	9 27	9 43	9 34	9 51	9 8	9 25	8 56	9 13	8 25	8 42	9 23	9 39
2	10 29	10 46	10 1	10 18	10 9	10 25	9 43	9 59	9 31	9 47	9 0	9 16	9 57	10 14
3	11 2	11 19	10 34	10 51	10 42	10 59	10 16	10 33	10 4	10 21	9 33	9 50	10 30	10 47
4	11 38	11 56	11 10	11 28	11 17	11 36	10 51	11 10	10 39	10 58	10 8	10 27	11 6	11 24
5	*	0 15	11 47	*	11 55	*	11 29	11 50	11 17	11 38	10 46	11 7	11 43	*
6	0 36	0 56	0 8	0 28	0 16	0 35	*	0 9	11 57	*	11 26	11 50	0 4	0 24
7	1 19	1 42	0 51	1 14	0 59	1 22	0 33	0 56	0 21	0 44	*	0 13	0 47	1 10
8	2 7	2 33	1 39	2 5	1 46	2 13	1 20	1 47	1 8	1 35	0 37	1 4	1 35	2 1
9	3 3	3 36	2 35	3 8	2 43	3 16	2 17	2 50	2 5	2 38	1 34	2 7	2 31	3 4
10	4 11	4 48	3 43	4 20	3 50	4 28	3 24	4 2	3 12	3 50	2 41	3 19	3 39	4 16
11	5 25	6 1	4 57	5 33	5 5	5 40	4 39	5 14	4 27	5 2	3 56	4 31	4 53	5 29
12	6 31	7 1	6 3	6 33	6 10	6 40	5 44	6 14	5 32	6 2	5 1	5 31	5 59	6 29
13	7 27	7 51	6 59	7 23	7 7	7 30	6 41	7 4	6 29	6 52	5 58	6 21	6 55	7 19
14	8 12	8 33	7 44	8 5	7 51	8 13	7 25	7 47	7 13	7 35	6 42	7 4	7 40	8 1
15	8 53	9 10	8 25	8 42	8 33	8 50	8 7	8 24	7 55	8 12	7 24	7 41	8 21	8 38
16	9 28	9 46	9 0	9 18	9 7	9 25	8 41	8 59	8 29	8 47	7 58	8 16	8 56	9 14
17	10 3	10 21	9 35	9 53	9 43	10 0	9 17	9 34	9 5	9 22	8 34	8 51	9 31	9 49
18	10 38	10 55	10 10	10 27	10 17	10 34	9 51	10 8	9 39	9 56	9 8	9 25	10 6	10 23
19	11 11	11 30	10 43	11 2	10 51	11 10	10 25	10 44	10 13	10 32	9 42	10 1	10 39	10 58
20	11 49	*	11 21	11 40	11 29	11 48	11 3	11 22	10 51	11 10	10 20	10 39	11 17	11 36
21	0 8	0 30	*	0 2	*	0 9	11 43	*	11 31	11 52	11 0	11 21	11 58	*
22	0 50	1 16	0 22	0 48	0 30	0 56	0 4	0 30	*	0 18	11 47	*	0 18	0 44
23	1 42	2 11	1 14	1 43	1 22	1 51	0 56	1 25	0 44	1 13	0 13	0 42	1 10	1 39
24	2 47	3 29	2 19	3 1	2 27	3 9	2 1	2 43	1 49	2 31	1 18	2 0	2 15	2 57
25	4 16	5 4	3 48	4 36	3 56	4 44	3 30	4 18	3 18	4 6	2 47	3 35	3 44	4 32
26	5 52	6 33	5 24	6 5	5 32	6 13	5 6	5 47	4 54	5 35	4 23	5 4	5 20	6 1
27	7 9	7 40	6 41	7 12	6 49	7 20	6 23	6 54	6 11	6 42	5 40	6 11	6 37	7 8
28	8 6	8 28	7 38	8 0	7 45	8 7	7 19	7 41	7 7	7 29	6 36	6 58	7 34	7 56
29	8 49	9 9	8 21	8 41	8 29	8 48	8 3	8 22	7 51	8 10	7 20	7 39	8 17	8 37
30	9 27	9 45	8 59	9 17	9 7	9 24	8 41	8 58	8 29	8 46	7 58	8 15	8 55	9 13

明治四十一年 四月

地名	(五島)		鹿兒島		油津		那霸		基隆		馬公		太陰曆日附	太陰盈虛	太陰位置
	福	江	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
日	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	d		
1	8 47	9 4	7 33	7 50	6 22	6 39	7 26	7 43	9 34	9 51	11 36	11 53	1	●	E.
2	9 22	9 38	8 8	8 24	6 57	7 13	8 1	8 17	10 8	10 25	*	0 10	2		
3	9 55	10 12	8 41	8 58	7 30	7 47	8 34	8 51	10 41	10 59	0 27	0 43	3		
4	10 30	10 49	9 16	9 35	8 5	8 24	9 9	9 28	11 17	11 35	1 1	1 19	4		
5	11 8	11 29	9 54	10 15	8 43	9 4	9 47	10 8	11 55	*	1 38	1 57	5		
6	11 48	*	10 34	10 58	9 23	9 47	10 27	10 51	0 15	0 35	2 17	2 37	6		
7	0 12	0 35	11 21	11 45	10 10	10 34	11 14	11 38	0 59	1 21	3 1	3 24	7		
8	0 59	1 26	*	0 12	11 1	11 31	*	0 5	1 46	2 13	3 48	4 15	8		N.
9	1 56	2 29	0 42	1 15	*	0 4	0 35	1 8	2 43	3 16	4 45	5 18	9	D	
10	3 3	3 41	1 49	2 27	0 38	1 16	1 42	2 20	3 51	4 28	5 53	6 30	10		A.
11	4 18	4 53	3 4	3 39	1 53	2 28	2 57	3 32	5 5	5 40	7 8	7 43	11		
12	5 23	5 53	4 9	4 39	2 58	3 28	4 2	4 32	6 10	6 40	8 13	8 43	12		
13	6 20	6 43	5 6	5 29	3 55	4 18	4 59	5 22	7 7	7 30	9 9	9 32	13		E.
14	7 4	7 26	5 50	6 12	4 39	5 1	5 43	6 5	7 51	8 12	9 53	10 14	14		
15	7 46	8 3	6 32	6 49	5 21	5 38	6 25	6 42	8 32	8 49	10 34	10 51	15		
16	8 20	8 38	7 6	7 24	5 55	6 13	6 59	7 17	9 7	9 25	11 9	11 27	16		
17	8 56	9 13	7 42	7 59	6 31	6 48	7 35	7 52	9 42	10 0	11 45	*	17	○	
18	9 30	9 47	8 16	8 33	7 5	7 22	8 9	8 26	10 17	10 34	0 2	0 19	18		
19	10 4	10 23	8 50	9 9	7 39	7 58	8 43	9 2	10 51	11 9	0 36	0 53	19		
20	10 42	11 1	9 28	9 47	8 17	8 36	9 21	9 40	11 29	11 48	1 11	1 31	20		
21	11 22	11 43	10 8	10 29	8 57	9 18	10 1	10 22	*	0 9	1 50	2 11	21		
22	*	0 9	10 55	11 21	9 44	10 10	10 48	11 14	0 30	0 56	2 32	2 58	22		S.
23	0 35	1 4	11 50	*	10 39	11 15	11 43	*	1 22	1 51	3 24	3 53	23		
24	1 40	2 22	0 26	1 8	11 57	*	0 19	1 1	2 27	3 9	4 30	5 12	24	(	
25	3 9	3 57	1 55	2 43	0 44	1 32	1 48	2 36	3 56	4 45	5 59	6 48	25		P.
26	4 45	5 26	3 31	4 12	2 20	3 1	3 24	4 5	5 32	6 13	7 35	8 16	26		
27	6 2	6 33	4 48	5 19	3 37	4 8	4 41	5 12	6 49	7 20	8 51	9 22	27		
28	6 58	7 20	5 44	6 6	4 33	4 55	5 37	5 59	7 45	8 7	9 47	10 9	28		E.
29	7 42	8 1	6 28	6 47	5 17	5 36	6 21	6 40	8 29	8 48	10 31	10 50	29		
30	8 20	8 37	7 6	7 23	5 55	6 12	6 59	7 16	9 6	9 24	11 9	11 26	30		



明治四十一年 四月

地名	打狗		(隱岐) 西郷		境		舞鶴		敦賀		七尾		函館	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	8 24	8 41	2 4	2 21	2 17	2 34	2 24	2 41	2 17	2 34	2 56	3 13	3 40	3 57
2	8 58	9 15	2 38	2 55	2 51	3 8	2 58	3 15	2 51	3 8	3 30	3 47	4 15	4 32
3	9 31	9 49	3 12	3 29	3 25	3 42	3 32	3 49	3 25	3 42	4 4	4 21	4 48	5 5
4	10 7	10 25	3 47	4 6	4 0	4 19	4 7	4 26	4 0	4 19	4 39	4 58	5 24	5 42
5	10 45	11 5	4 25	4 45	4 38	4 58	4 45	5 5	4 38	4 58	5 17	5 37	6 1	6 22
6	11 25	11 49	5 5	5 28	5 18	5 41	5 25	5 48	5 18	5 41	5 57	6 20	6 41	7 5
7	*	0 11	5 51	6 16	6 4	6 29	6 11	6 36	6 4	6 29	6 43	7 8	7 27	7 52
8	0 36	1 3	6 43	7 12	6 56	7 25	7 3	7 32	6 56	7 25	7 35	8 4	8 19	8 48
9	1 33	2 6	7 45	8 20	7 58	8 33	8 5	8 40	7 58	8 33	8 37	9 12	9 21	9 55
10	2 41	3 18	8 57	9 34	9 10	9 47	9 17	9 54	9 10	9 47	9 49	10 26	10 33	11 10
11	3 55	4 30	10 10	10 40	10 23	10 53	10 30	11 0	10 23	10 53	11 2	11 32	11 45	*
12	5 0	5 30	11 10	11 36	11 23	11 49	11 30	11 56	11 23	11 49	*	0 2	0 16	0 46
13	5 57	6 20	*	0 0	*	0 13	*	0 20	*	0 13	0 28	0 52	1 12	1 36
14	6 41	7 2	0 21	0 42	0 34	0 55	0 41	1 2	0 34	0 55	1 13	1 34	1 57	2 19
15	7 22	7 39	1 2	1 20	1 15	1 33	1 22	1 40	1 15	1 33	1 54	2 12	2 39	2 56
16	7 57	8 15	1 37	1 55	1 50	2 8	1 57	2 15	1 50	2 8	2 29	2 47	3 14	3 32
17	8 32	8 50	2 13	2 30	2 26	2 43	2 33	2 50	2 26	2 43	3 5	3 22	3 49	4 6
18	9 7	9 24	2 47	3 4	3 0	3 17	3 7	3 24	3 0	3 17	3 39	3 56	4 23	4 40
19	9 41	9 59	3 21	3 39	3 34	3 52	3 41	3 59	3 34	3 52	4 13	4 31	4 57	5 16
20	10 19	10 38	3 59	4 18	4 12	4 31	4 19	4 38	4 12	4 31	4 51	5 10	5 35	5 54
21	10 59	11 20	4 39	5 0	4 52	5 13	4 59	5 20	4 52	5 13	5 31	5 52	6 15	6 36
22	11 46	*	5 25	5 51	5 38	6 4	5 45	6 11	5 38	6 4	6 17	6 43	7 1	7 28
23	0 12	0 41	6 20	6 56	6 33	7 9	6 40	7 16	6 33	7 9	7 12	7 48	7 56	8 32
24	1 17	1 59	7 38	8 24	7 51	8 37	7 58	8 44	7 51	8 37	8 30	9 16	9 14	10 0
25	2 46	3 35	9 13	10 1	9 26	10 14	9 33	10 21	9 26	10 14	10 5	10 53	10 48	11 36
26	4 22	5 3	10 42	11 18	10 55	11 31	11 2	11 38	10 55	11 31	11 34	*	*	0 18
27	5 39	6 10	11 49	*	*	0 2	*	0 9	*	0 2	0 10	0 41	0 54	1 25
28	6 35	6 57	0 15	0 37	0 28	0 50	0 35	0 57	0 28	0 50	1 7	1 29	1 51	2 13
29	7 19	7 38	0 59	1 18	1 12	1 31	1 19	1 38	1 12	1 31	1 51	2 10	2 35	2 54
30	7 56	8 14	1 37	1 54	1 50	2 7	1 57	2 14	1 50	2 7	2 29	2 46	3 13	3 31

明治四十一年 四月

地名	大湊		(陸中) 山田		根室		小樽		九春古丹		元山		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	3 31	3 48	3 39	3 56	3 19	3 36	3 41	3 58	1 19	1 36	3 42	3 59	1	●	E.
2	4 6	4 23	4 14	4 31	3 54	4 11	4 16	4 33	1 54	2 11	4 16	4 33	2		
3	4 39	4 56	4 47	5 4	4 27	4 44	4 49	5 6	2 27	2 44	4 50	5 7	3		
4	5 15	5 33	5 23	5 41	5 3	5 21	5 25	5 43	3 3	3 21	5 25	5 44	4		
5	5 52	6 13	6 0	6 21	5 40	6 0	6 2	6 23	3 40	4 1	6 3	6 23	5		
6	6 32	6 56	6 40	7 4	6 20	6 43	6 42	7 6	4 20	4 44	6 43	7 7	6		
7	7 18	7 43	7 26	7 51	7 6	7 31	7 28	7 53	5 6	5 31	7 29	7 54	7		
8	8 10	8 39	8 18	8 47	7 57	8 27	8 20	8 49	5 58	6 27	8 21	8 51	8		N.
9	9 12	9 46	9 20	9 54	9 0	9 34	9 22	9 56	7 0	7 34	9 24	9 59	9	D	
10	10 24	11 1	10 32	11 9	10 11	10 48	10 34	11 11	8 12	8 49	10 36	11 13	10		A.
11	11 36	*	11 44	*	11 24	11 54	11 46	*	9 24	9 55	11 48	*	11		
12	0 7	0 37	0 15	0 45	*	0 25	0 17	0 47	10 25	10 51	0 18	0 48	12		
13	1 3	1 27	1 11	1 35	0 51	1 15	1 13	1 37	11 15	11 36	1 15	1 38	13		
14	1 48	2 10	1 56	2 18	1 36	1 58	1 58	2 20	11 58	*	1 59	2 20	14		E.
15	2 30	2 47	2 38	2 55	2 18	2 35	2 40	2 57	0 18	0 35	2 40	2 57	15		
16	3 5	3 23	3 13	3 31	2 53	3 10	3 15	3 33	0 53	1 11	3 15	3 33	16		
17	3 40	3 57	3 48	4 5	3 28	3 45	3 50	4 7	1 28	1 45	3 51	4 8	17	○	
18	4 14	4 31	4 22	4 39	4 2	4 19	4 24	4 41	2 2	2 19	4 25	4 42	18		
19	4 48	5 7	4 56	5 15	4 36	4 55	4 58	5 17	2 36	2 55	4 59	5 17	19		
20	5 26	5 45	5 34	5 53	5 14	5 33	5 36	5 55	3 14	3 33	5 37	5 56	20		
21	6 6	6 27	6 14	6 35	5 54	6 15	6 16	6 37	3 54	4 15	6 17	6 38	21		
22	6 52	7 19	7 0	7 27	6 40	7 6	7 2	7 29	4 40	5 7	7 4	7 30	22		S.
23	7 47	8 23	7 55	8 31	7 35	8 10	7 57	8 33	5 35	6 11	7 59	8 35	23		
24	9 5	9 51	9 13	9 59	8 52	9 38	9 15	10 1	6 53	7 39	9 17	10 4	24	○	
25	10 39	11 27	10 47	11 35	10 26	11 14	10 49	11 37	8 27	9 15	10 52	11 40	25		P.
26	*	0 9	*	0 17	11 56	*	*	0 19	9 57	10 33	*	0 21	26		
27	0 45	1 16	0 53	1 24	0 33	1 4	0 55	1 26	11 4	11 30	0 57	1 28	27		
28	1 42	2 4	1 50	2 12	1 30	1 52	1 52	2 14	11 52	*	1 53	2 15	28		E.
29	2 26	2 45	2 34	2 53	2 14	2 33	2 36	2 55	0 14	0 33	2 37	2 56	29		
30	3 4	3 22	3 12	3 30	2 52	3 9	3 14	3 32	0 52	1 10	3 15	3 32	30		



明治四十一年 四月

地名	釜山		蛇梁海峡		長直路		長竹水道		木浦		八口浦		古群山群島	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	8 34	8 51	9 30	9 47	10 24	10 41	0 22	0 40	2 41	2 58	1 10	1 27	3 25	3 42
2	9 9	9 25	10 5	10 21	10 59	11 15	0 57	1 15	3 15	3 32	1 44	2 1	3 59	4 16
3	9 42	9 59	10 38	10 55	11 32	11 49	1 31	1 48	3 49	4 6	2 18	2 35	4 33	4 50
4	10 17	10 36	11 13	11 32	*	0 7	2 5	2 23	4 24	4 43	2 53	3 12	5 8	5 27
5	10 55	11 16	11 51	*	0 26	0 45	2 42	3 1	5 2	5 22	3 31	3 51	5 46	6 6
6	11 35	11 59	0 12	0 31	1 6	1 25	3 22	3 41	5 42	6 6	4 11	4 35	6 26	6 50
7	*	0 22	0 55	1 18	1 49	2 12	4 5	4 28	6 28	6 53	4 57	5 22	7 12	7 37
8	0 46	1 13	1 42	2 9	2 36	3 3	4 52	5 19	7 20	7 50	5 49	6 19	8 4	8 34
9	1 43	2 16	2 39	3 12	3 33	4 6	5 49	6 22	8 23	8 58	6 52	7 27	9 7	9 42
10	2 50	3 28	3 46	4 24	4 40	5 18	6 56	7 34	9 35	10 12	8 4	8 41	10 19	10 56
11	4 5	4 40	5 1	5 36	5 55	6 30	8 11	8 46	10 47	11 17	9 16	9 46	11 31	*
12	5 10	5 40	6 6	6 36	7 0	7 30	9 16	9 46	11 47	*	10 16	10 43	0 1	0 31
13	6 7	6 30	7 3	7 26	7 57	8 20	10 13	10 36	0 14	0 37	11 6	11 27	0 58	1 21
14	6 51	7 13	7 47	8 9	8 41	9 3	10 57	11 19	0 58	1 19	11 48	*	1 42	2 3
15	7 33	7 50	8 29	8 46	9 23	9 40	11 39	11 56	1 39	1 56	0 8	0 25	2 23	2 40
16	8 7	8 25	9 3	9 21	9 57	10 15	*	0 13	2 14	2 32	0 43	1 1	2 58	3 16
17	8 43	9 0	9 39	9 56	10 33	10 50	0 31	0 49	2 50	3 7	1 19	1 36	3 34	3 51
18	9 17	9 34	10 13	10 30	11 7	11 24	1 6	1 23	3 24	3 41	1 53	2 10	4 8	4 25
19	9 51	10 10	10 47	11 6	11 41	*	1 40	1 57	3 58	4 16	2 27	2 45	4 42	5 0
20	10 29	10 48	11 25	11 44	0 0	0 19	2 16	2 35	4 36	4 55	3 5	3 24	5 20	5 39
21	11 9	11 30	*	0 5	0 38	0 59	2 54	3 15	5 16	5 37	3 45	4 6	6 0	6 21
22	11 56	*	0 26	0 52	1 20	1 46	3 36	4 2	6 3	6 29	4 32	4 58	6 47	7 13
23	0 22	0 51	1 18	1 47	2 12	2 41	4 28	4 57	6 58	7 34	5 27	6 3	7 42	8 18
24	1 27	2 9	2 23	3 5	3 17	3 59	5 33	6 15	8 16	9 3	6 45	7 32	9 0	9 47
25	2 56	3 44	3 52	4 40	4 46	5 34	7 2	7 50	9 51	10 39	8 20	9 8	10 35	11 23
26	4 32	5 13	5 28	6 9	6 22	7 3	8 38	9 19	11 20	11 56	9 49	10 25	*	0 4
27	5 49	6 20	6 45	7 16	7 39	8 10	9 55	10 26	*	0 27	10 56	11 21	0 40	1 11
28	6 45	7 7	7 41	8 3	8 35	8 57	10 51	11 13	0 52	1 14	11 43	*	1 36	1 58
29	7 29	7 48	8 25	8 44	9 19	9 38	11 35	11 54	1 36	1 55	0 5	0 24	2 20	2 39
30	8 7	8 24	9 3	9 20	9 57	10 14	*	0 13	2 14	2 31	0 43	1 0	2 58	3 15

明治四十一年 四月

地名	濟物浦		(大同江) 漁隱洞		(鴨綠江口) 圓島		大連		旅順		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	5 31	5 48	9 15	9 32	9 47	10 4	10 26	10 43	10 57	11 14	1	●	E.
2	6 5	6 22	9 49	10 6	10 21	10 38	11 0	11 17	11 31	11 48	2		
3	6 39	6 56	10 22	10 40	10 54	11 12	11 34	11 51	*	0 5	3		
4	7 14	7 33	10 58	11 16	11 30	11 48	*	0 9	0 22	0 40	4		
5	7 52	8 12	11 36	11 56	*	0 8	0 28	0 47	0 59	1 18	5		
6	8 32	8 56	*	0 16	0 28	0 48	1 7	1 27	1 38	1 58	6		
7	9 18	9 43	0 40	1 2	1 12	1 34	1 51	2 14	2 22	2 45	7		
8	10 10	10 40	1 27	1 54	1 59	2 26	2 38	3 5	3 9	3 36	8		N.
9	11 13	11 48	2 24	2 57	2 56	3 29	3 35	4 8	4 6	4 39	9	○	
10	*	0 25	3 32	4 9	4 4	4 41	4 43	5 20	5 14	5 51	10		A.
11	1 2	1 37	4 46	5 21	5 18	5 53	5 57	6 33	6 28	7 4	11		
12	2 7	2 37	5 51	6 21	6 23	6 53	7 3	7 33	7 34	8 4	12		
13	3 4	3 27	6 48	7 11	7 20	7 43	7 59	8 22	8 30	8 53	13		
14	3 48	4 9	7 32	7 53	8 4	8 25	8 43	9 5	9 14	9 36	14		E.
15	4 29	4 46	8 13	8 30	8 45	9 2	9 24	9 41	9 55	10 12	15		
16	5 4	5 22	8 48	9 6	9 20	9 38	9 59	10 17	10 30	10 48	16		
17	5 40	5 57	9 23	9 41	9 55	10 13	10 34	10 52	11 5	11 23	17	○	
18	6 14	6 31	9 58	10 15	10 30	10 47	11 9	11 26	11 40	11 57	18		
19	6 48	7 6	10 32	10 50	11 4	11 22	11 43	*	*	0 14	19		
20	7 26	7 45	11 10	11 29	11 42	*	0 1	0 21	0 32	0 52	20		
21	8 6	8 27	11 50	*	0 1	0 22	0 40	1 1	1 11	1 32	21		
22	8 53	9 19	0 11	0 37	0 43	1 9	1 22	1 48	1 53	2 19	22		S.
23	9 48	10 24	1 3	1 32	1 35	2 4	2 14	2 43	2 45	3 14	23		
24	11 6	11 53	2 8	2 50	2 40	3 22	3 20	4 2	3 51	4 33	24	○	
25	*	0 41	3 37	4 26	4 9	4 58	4 49	5 37	5 20	6 8	25		P.
26	1 29	2 10	5 13	5 54	5 45	6 26	6 25	7 6	6 56	7 37	26		
27	2 46	3 17	6 30	7 1	7 2	7 33	7 41	8 12	8 12	8 43	27		
28	3 42	4 4	7 26	7 48	7 58	8 20	8 37	8 59	9 8	9 30	28		E.
29	4 26	4 45	8 10	8 29	8 42	9 1	9 21	9 40	9 52	10 11	29		
30	5 4	5 21	8 47	9 5	9 19	9 37	9 59	10 16	10 30	10 47	30		



明治四十一年五月

地名	横須賀		下田		清水		鳥羽		(紀伊) 串本		(淡路) 良神		戸	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	5 16	5 34	5 30	5 48	5 55	6 13	6 8	6 26	6 13	6 31	7 1	7 19	7 34	7 52
2	5 52	6 9	6 6	6 23	6 31	6 48	6 43	7 1	6 48	7 6	7 36	7 54	8 9	8 27
3	6 28	6 47	6 42	7 1	7 7	7 26	7 19	7 39	7 24	7 44	8 12	8 32	8 45	9 5
4	7 7	7 26	7 21	7 40	7 46	8 5	7 59	8 18	8 4	8 23	8 52	9 11	9 25	9 44
5	7 47	8 8	8 1	8 22	8 26	8 47	8 39	8 59	8 44	9 4	9 32	9 52	10 5	10 25
6	8 31	8 54	8 45	9 8	9 10	9 33	9 23	9 46	9 28	9 51	10 16	10 39	10 49	11 12
7	9 18	9 43	9 32	9 57	9 57	10 22	10 10	10 35	10 15	10 40	11 3	11 28	11 36	*
8	10 11	10 42	10 25	10 56	10 50	11 21	11 3	11 33	11 8	11 38	11 56	*	0 1	0 29
9	11 12	11 47	11 26	*	11 51	*	*	0 4	*	0 9	0 36	0 57	1 9	1 30
10	*	0 21	0 1	0 35	0 26	1 0	0 39	1 13	0 44	1 18	1 32	2 6	2 5	2 39
11	0 55	1 27	1 9	1 41	1 34	2 6	1 47	2 18	1 52	2 23	2 40	3 11	3 13	3 44
12	1 55	2 23	2 9	2 37	2 34	3 2	2 47	3 15	2 52	3 20	3 40	4 8	4 13	4 41
13	2 48	3 11	3 2	3 25	3 27	3 50	3 39	4 3	3 44	4 8	4 32	4 56	5 5	5 29
14	3 33	3 55	3 47	4 9	4 12	4 34	4 25	4 46	4 30	4 51	5 18	5 39	5 51	6 12
15	4 15	4 35	4 29	4 49	4 54	5 14	5 7	5 27	5 12	5 32	6 0	6 20	6 33	6 53
16	4 54	5 12	5 8	5 26	5 33	5 51	5 45	6 4	5 50	6 9	6 38	6 57	7 11	7 30
17	5 32	5 51	5 46	6 5	6 11	6 30	6 24	6 43	6 29	6 48	7 17	7 30	7 50	8 3
18	6 10	6 31	6 24	6 45	6 49	7 10	7 2	7 22	7 7	7 27	7 55	8 15	8 28	8 48
19	6 51	7 12	7 5	7 26	7 30	7 51	7 42	8 4	7 47	8 9	8 35	8 57	9 8	9 30
20	7 33	7 56	7 47	8 10	8 12	8 35	8 25	8 48	8 30	8 53	9 18	9 41	9 51	10 14
21	8 22	8 49	8 36	9 3	9 1	9 28	9 13	9 40	9 18	9 45	10 6	10 33	10 39	11 6
22	9 16	9 49	9 30	10 3	9 55	10 28	10 8	10 41	10 13	10 46	11 1	11 34	11 34	*
23	10 27	11 7	10 41	11 21	11 6	11 46	11 19	11 59	11 24	*	*	0 12	0 7	0 45
24	11 51	*	*	0 5	*	0 30	*	0 43	0 4	0 48	0 52	1 36	1 25	2 9
25	0 34	1 14	0 48	1 28	1 13	1 53	1 26	2 6	1 31	2 11	2 19	2 59	2 52	3 32
26	1 49	2 20	2 3	2 34	2 28	2 59	2 41	3 12	2 46	3 17	3 34	4 5	4 7	4 38
27	2 48	3 13	3 2	3 27	3 27	3 52	3 40	4 4	3 45	4 9	4 33	4 57	5 6	5 30
28	3 35	3 56	3 49	4 10	4 14	4 35	4 26	4 47	4 31	4 52	5 19	5 40	5 52	6 13
29	4 15	4 34	4 29	4 48	4 54	5 13	5 7	5 26	5 12	5 31	6 0	6 19	6 33	6 52
30	4 53	5 12	5 7	5 26	5 32	5 51	5 45	6 3	5 50	6 8	6 38	6 56	7 11	7 29
31	5 31	5 50	5 45	6 4	6 10	6 29	6 23	6 41	6 28	6 46	7 16	7 34	7 49	8 7

明治四十一年五月

地名	明石		粟島		(三原瀬戸) 瀬戸田		來島		三津ヶ濱		佐賀ノ關		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	8 34	8 52	11 46	*	11 3	11 21	10 28	10 46	9 48	10 6	8 10	8 28	1	●	
2	9 9	9 27	0 4	0 23	11 40	11 57	11 5	11 22	10 25	10 42	8 47	9 4	2		
3	9 45	10 5	0 40	0 58	*	0 15	11 40	*	11 0	11 20	9 22	9 42	3		
4	10 25	10 44	1 18	1 37	0 35	0 54	0 0	0 19	11 39	11 59	10 1	10 21	4		N.
5	11 5	11 25	1 57	2 17	1 14	1 34	0 39	0 59	*	0 19	10 41	11 2	5		
6	11 49	*	2 38	3 1	1 55	2 18	1 20	1 43	0 40	1 3	11 25	11 48	6		
7	0 12	0 36	3 24	3 49	2 41	3 6	2 6	2 31	1 26	1 51	*	0 13	7		A.
8	1 1	1 29	4 13	4 41	3 30	3 58	2 55	3 23	2 15	2 43	0 37	1 5	8		
9	2 9	2 30	5 12	5 43	4 29	5 0	3 54	4 25	3 14	3 45	1 36	2 7	9		
10	3 5	3 39	6 18	6 52	5 35	6 9	5 0	5 34	4 20	4 54	2 42	3 16	10		
11	4 13	4 44	7 26	7 57	6 43	7 14	6 8	6 39	5 28	5 59	3 50	4 21	11		
12	5 13	5 41	8 26	8 53	7 43	8 10	7 8	7 35	6 28	6 55	4 50	5 17	12		
13	6 5	6 29	9 18	9 41	8 35	8 58	8 0	8 23	7 20	7 43	5 42	6 5	13		E.
14	6 51	7 12	10 3	10 25	9 20	9 42	8 45	9 7	8 5	8 27	6 27	6 49	14		
15	7 33	7 53	10 45	11 5	10 2	10 22	9 27	9 47	8 47	9 7	7 9	7 29	15		
16	8 11	8 30	11 24	11 42	10 41	10 59	10 6	10 24	9 26	9 44	7 48	8 6	16		O.
17	8 50	9 3	*	0 3	11 20	11 39	10 45	11 4	10 5	10 24	8 27	8 46	17		
18	9 28	9 48	0 22	0 41	11 58	*	11 23	11 43	10 43	11 3	9 5	9 25	18		
19	10 8	10 30	1 1	1 21	0 18	0 38	*	0 3	11 23	11 44	9 45	10 6	19		S.P.
20	10 51	11 14	1 42	2 4	0 59	1 21	0 24	0 46	*	0 6	10 28	10 50	20		
21	11 39	*	2 26	2 52	1 43	2 9	1 8	1 34	0 28	0 54	11 16	11 43	21		
22	0 6	0 34	3 19	3 47	2 36	3 4	2 1	2 29	1 21	1 49	*	0 11	22		
23	1 7	1 45	4 20	4 58	3 37	4 15	3 2	3 40	2 22	3 0	0 44	1 22	23		
24	2 25	3 9	5 38	6 22	4 55	5 39	4 20	5 4	3 40	4 24	2 2	2 46	24		
25	3 52	4 32	7 4	7 46	6 21	7 3	5 46	6 28	5 6	5 48	3 28	4 10	25		E.
26	5 7	5 38	8 20	8 51	7 37	8 8	7 2	7 33	6 22	6 53	4 44	5 15	26		
27	6 6	6 30	9 18	9 43	8 35	9 0	8 0	8 25	7 20	7 45	5 42	6 7	27		
28	6 52	7 13	10 5	10 26	9 22	9 43	8 47	9 8	8 7	8 28	6 29	6 50	28		
29	7 33	7 52	10 45	11 4	10 2	10 21	9 27	9 46	8 47	9 6	7 9	7 28	29		
30	8 11	8 29	11 23	11 42	10 40	10 59	10 5	10 24	9 25	9 44	7 47	8 6	30		
31	8 49	9 7	*	0 2	11 19	11 37	10 44	11 2	10 4	10 22	8 26	8 44	31		



明治四十一年 五月

地名	吳		門		司竹		敷平		戶佐		世保		長崎		三角	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	10 2	10 20	9 35	9 53	9 42	10 0	9 16	9 34	9 4	9 22	8 33	8 51	9 31	9 49		
2	10 39	10 56	10 10	10 28	10 17	10 35	9 51	10 9	9 39	9 57	9 8	9 26	10 6	10 24		
3	11 14	11 34	10 47	11 6	10 54	11 13	10 28	10 47	10 16	10 35	9 45	10 4	10 43	11 2		
4	11 53	*	11 26	11 45	11 33	11 52	11 7	11 26	10 55	11 14	10 24	10 43	11 22	11 41		
5	0 13	0 33	*	0 6	*	0 13	11 47	*	11 35	11 56	11 4	11 25	*	0 2		
6	0 54	1 17	0 27	0 50	0 34	0 57	0 8	0 31	*	0 19	11 48	*	0 23	0 46		
7	1 40	2 5	1 13	1 37	1 20	1 44	0 54	1 18	0 42	1 6	0 11	0 35	1 9	1 33		
8	2 29	2 57	2 2	2 30	2 9	2 37	1 43	2 11	1 31	1 59	1 0	1 28	1 58	2 26		
9	3 28	3 59	3 1	3 32	3 8	3 39	2 42	3 13	2 30	3 1	1 59	2 30	2 57	3 28		
10	4 34	5 8	4 6	4 41	4 13	4 48	3 47	4 22	3 35	4 10	3 4	3 39	4 2	4 37		
11	5 42	6 13	5 15	5 46	5 22	5 53	4 56	5 27	4 44	5 15	4 13	4 44	5 11	5 42		
12	6 42	7 9	6 14	6 42	6 21	6 49	5 55	6 23	5 43	6 11	5 12	5 40	6 10	6 38		
13	7 34	7 57	7 7	7 30	7 14	7 37	6 48	7 11	6 36	6 59	6 5	6 28	7 3	7 26		
14	8 19	8 41	7 52	8 14	7 59	8 21	7 33	7 55	7 21	7 43	6 50	7 12	7 48	8 10		
15	9 1	9 21	8 34	8 54	8 41	9 1	8 15	8 35	8 3	8 23	7 32	7 52	8 30	8 50		
16	9 40	9 58	9 13	9 31	9 20	9 38	8 54	9 12	8 42	9 0	8 11	8 29	9 9	9 27		
17	10 19	10 38	9 51	10 11	9 58	10 18	9 32	9 52	9 20	9 40	8 49	9 9	9 47	10 7		
18	10 57	11 17	10 29	10 50	10 36	10 57	10 10	10 31	9 58	10 19	9 27	9 48	10 25	10 46		
19	11 37	11 58	11 10	11 31	11 17	11 38	10 51	11 12	10 39	11 0	10 8	10 29	11 6	11 27		
20	*	0 20	11 52	*	11 59	*	11 33	11 56	11 21	11 44	10 50	11 13	11 48	*		
21	0 42	1 8	0 15	0 41	0 22	0 48	*	0 22	*	0 10	11 39	*	0 11	0 37		
22	1 35	2 3	1 8	1 35	1 15	1 42	0 49	1 16	0 37	1 4	0 6	0 33	1 4	1 31		
23	2 36	3 14	2 9	2 47	2 16	2 54	1 50	2 28	1 38	2 16	1 7	1 45	2 5	2 43		
24	3 54	4 38	3 27	4 11	3 34	4 18	3 8	3 52	2 56	3 40	2 25	3 9	3 23	4 7		
25	5 20	6 2	4 54	5 34	5 1	5 41	4 35	5 15	4 23	5 3	3 52	4 32	4 50	5 30		
26	6 36	7 7	6 9	6 39	6 16	6 46	5 50	6 20	5 38	6 8	5 7	5 37	6 5	6 35		
27	7 34	7 59	7 7	7 32	7 14	7 39	6 48	7 13	6 36	7 1	6 5	6 30	7 3	7 28		
28	8 21	8 42	7 54	8 15	8 1	8 22	7 35	7 56	7 23	7 44	6 52	7 13	7 50	8 11		
29	9 1	9 20	8 34	8 53	8 41	9 0	8 15	8 34	8 3	8 22	7 32	7 51	8 30	8 49		
30	9 39	9 58	9 12	9 31	9 19	9 38	8 53	9 12	8 41	9 0	8 10	8 29	9 8	9 27		
31	10 18	10 36	9 51	10 8	9 58	10 15	9 32	9 49	9 20	9 37	8 49	9 6	9 47	10 4		

明治四十一年 五月

地名	(五島)		鹿兒島		油津		那霸		基隆		馬公		太陰曆日附	太陰盈虛	太陰位置
	福	江	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	8 55	9 13	7 42	8 0	6 31	6 49	7 35	7 53	9 42	10 0	11 44	*	1	●	
2	9 30	9 48	8 17	8 35	7 6	7 24	8 10	8 28	10 17	10 35	0 2	0 19	2		
3	10 7	10 26	8 54	9 13	7 43	8 2	8 47	9 6	10 53	11 13	0 37	0 55	3		
4	10 46	11 5	9 33	9 52	8 22	8 41	9 26	9 45	11 33	11 52	1 15	1 34	4	N.	
5	11 26	11 47	10 13	10 34	9 2	9 23	10 6	10 27	*	0 13	1 54	2 15	5		
6	*	0 10	10 57	11 20	9 46	10 9	10 50	11 13	0 33	0 57	2 35	2 59	6		
7	0 33	0 57	11 44	*	10 33	10 58	11 37	*	1 20	1 44	3 22	3 46	7	A.	
8	1 22	1 50	0 9	0 37	11 26	11 57	0 2	0 30	2 9	2 37	4 11	4 39	8		
9	2 21	2 52	1 8	1 39	*	0 28	1 1	1 32	3 8	3 39	5 10	5 41	9		
10	3 26	4 1	2 13	2 48	1 2	1 37	2 6	2 41	4 14	4 48	6 17	6 51	10		
11	4 35	5 6	3 22	3 53	2 11	2 42	3 15	3 46	5 22	5 53	7 24	7 55	11		
12	5 34	6 2	4 21	4 49	3 10	3 38	4 14	4 42	6 22	6 49	8 24	8 51	12		
13	6 27	6 50	5 14	5 37	4 3	4 26	5 7	5 30	7 14	7 37	9 16	9 39	13	E.	
14	7 12	7 34	5 59	6 21	4 48	5 10	5 52	6 14	7 59	8 20	10 1	10 23	14		
15	7 54	8 14	6 41	7 1	5 30	5 50	6 34	6 54	8 41	9 1	10 43	11 3	15		
16	8 33	8 51	7 20	7 38	6 9	6 27	7 13	7 31	9 19	9 38	11 21	11 40	16	○	
17	9 11	9 31	7 58	8 18	6 47	7 7	7 51	8 11	9 58	10 17	*	0 0	17		
18	9 49	10 10	8 36	8 57	7 25	7 46	8 29	8 50	10 36	10 57	0 19	0 38	18		
19	10 30	10 51	9 17	9 38	8 6	8 27	9 10	9 31	11 17	11 38	0 59	1 18	19	S.P.	
20	11 12	11 35	9 59	10 22	8 48	9 11	9 52	10 15	*	0 0	1 40	2 2	20		
21	*	0 1	10 48	11 15	9 37	10 4	10 41	11 8	0 22	0 48	2 24	2 50	21		
22	0 28	0 55	11 42	*	10 31	11 5	11 35	*	1 15	1 43	3 17	3 45	22		
23	1 29	2 7	0 16	0 54	11 43	*	0 9	0 47	2 16	2 55	4 18	4 57	23	○	
24	2 47	3 31	1 34	2 18	0 23	1 7	1 27	2 11	3 35	4 19	5 37	6 21	24		
25	4 14	4 54	3 1	3 41	1 50	2 30	2 54	3 34	5 1	5 42	7 3	7 44	25		
26	5 29	5 59	4 16	4 46	3 5	3 35	4 9	4 39	6 16	6 47	8 18	8 49	26	E.	
27	6 27	6 52	5 14	5 39	4 3	4 28	5 7	5 32	7 14	7 39	9 16	9 41	27		
28	7 14	7 35	6 1	6 22	4 50	5 11	5 54	6 15	8 1	8 22	10 3	10 24	28		
29	7 54	8 13	6 41	7 0	5 30	5 49	6 34	6 53	8 41	9 0	10 43	11 2	29		
30	8 32	8 51	7 19	7 38	6 8	6 27	7 12	7 31	9 18	9 38	11 20	11 40	30	●	
31	9 11	9 28	7 58	8 15	6 47	7 4	7 51	8 8	9 57	10 15	11 59	*	31		



明治四十一年五月

地名	打		狗		(隱岐) 西 郷		境		舞 鶴		敦 賀		七 尾		函 館	
	日	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	
1		8 32	8 50	2 12	2 30	2 25	2 43	2 32	2 50	2 25	2 43	3 4	3 22	3 48	4 6	
2		9 7	9 25	2 47	3 5	3 0	3 18	3 7	3 25	3 0	3 18	3 39	3 57	4 24	4 41	
3		9 43	10 3	3 23	3 43	3 36	3 56	3 43	4 3	3 36	3 56	4 15	4 35	5 0	5 19	
4		10 23	10 42	4 3	4 22	4 16	4 35	4 23	4 42	4 16	4 35	4 55	5 14	5 39	5 58	
5		11 3	11 23	4 43	5 3	4 56	5 16	5 3	5 23	4 56	5 16	5 35	5 55	6 19	6 40	
6		11 47	*	5 27	5 50	5 40	6 3	5 47	6 10	5 40	6 3	6 19	6 42	7 3	7 26	
7		0 10	0 34	6 14	6 39	6 27	6 52	6 34	6 59	6 27	6 52	7 6	7 31	7 50	8 15	
8		0 59	1 27	7 7	7 37	7 20	7 50	7 27	7 57	7 20	7 50	7 59	8 29	8 43	9 14	
9		1 58	2 29	8 8	8 43	8 21	8 56	8 28	9 3	8 21	8 56	9 0	9 35	9 44	10 19	
10		3 4	3 38	9 17	9 51	9 30	10 4	9 37	10 11	9 30	10 4	10 9	10 43	10 53	11 27	
11		4 12	4 43	10 22	10 51	10 35	11 4	10 42	11 11	10 35	11 4	11 14	11 43	11 58	*	
12		5 12	5 39	11 19	11 43	11 32	11 56	11 39	*	11 32	11 56	*	0 11	0 27	0 55	
13		6 4	6 27	*	0 6	*	0 19	0 3	0 26	*	0 19	0 35	0 58	1 20	1 43	
14		6 49	7 10	0 29	0 50	0 42	1 3	0 49	1 10	0 42	1 3	1 21	1 42	2 5	2 27	
15		7 31	7 51	1 11	1 31	1 24	1 44	1 31	1 51	1 24	1 44	2 3	2 23	2 47	3 7	
16		8 9	8 28	1 49	2 8	2 2	2 21	2 9	2 28	2 2	2 21	2 41	3 0	3 26	3 44	
17		8 48	9 7	2 28	2 47	2 41	3 0	2 48	3 7	2 41	3 0	3 20	3 39	4 4	4 23	
18		9 26	9 47	3 6	3 27	3 19	3 40	3 26	3 47	3 19	3 40	3 58	4 19	4 42	5 3	
19		10 7	10 28	3 46	4 8	3 59	4 21	4 6	4 28	3 59	4 21	4 38	5 0	5 23	5 44	
20		10 50	11 12	4 29	4 51	4 42	5 4	4 49	5 11	4 42	5 4	5 21	5 43	6 5	6 28	
21		11 38	*	5 17	5 44	5 30	5 57	5 37	6 4	5 30	5 57	6 9	6 36	6 53	7 20	
22		0 5	0 33	6 12	6 45	6 25	6 58	6 32	7 5	6 25	6 58	7 4	7 37	7 48	8 21	
23		1 6	1 45	7 23	8 3	7 36	8 16	7 43	8 23	7 36	8 16	8 15	8 55	8 59	9 38	
24		2 25	3 9	8 47	9 30	9 0	9 43	9 7	9 50	9 0	9 43	9 39	10 22	10 23	11 5	
25		3 51	4 32	10 11	10 45	10 24	10 58	10 31	11 5	10 24	10 58	11 3	11 37	11 46	*	
26		5 6	5 37	11 16	11 44	11 29	11 57	11 36	*	11 29	11 57	*	0 8	0 21	0 52	
27		6 4	6 29	*	0 8	*	0 21	0 4	0 28	*	0 21	0 34	1 0	1 20	1 44	
28		6 51	7 12	0 30	0 51	0 43	1 4	0 50	1 11	0 43	1 4	1 22	1 43	2 6	2 28	
29		7 31	7 50	1 11	1 30	1 24	1 43	1 31	1 50	1 24	1 43	2 3	2 22	2 47	3 6	
30		8 8	8 28	1 48	2 7	2 1	2 20	2 8	2 27	2 1	2 20	2 40	2 59	3 25	3 44	
31		8 47	9 5	2 27	2 45	2 40	2 58	2 47	3 5	2 40	2 58	3 19	3 37	4 3	4 22	

明治四十一年五月

地名	大 湊		(陸中) 山 田		根 室		小 樽		九 春 古 丹		元 山		太陰曆日附	太陰盈虛	太陰位置
	日	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前			
1		3 39	3 57	3 47	4 5	3 27	3 45	3 49	4 7	1 27	1 45	3 50	4 8	1	●
2		4 15	4 32	4 23	4 40	4 2	4 20	4 25	4 42	2 3	2 20	4 25	4 43	2	
3		4 51	5 10	4 59	5 18	4 38	4 58	5 1	5 20	2 39	2 58	5 1	5 21	3	
4		5 30	5 49	5 38	5 57	5 18	5 37	5 40	5 59	3 18	3 37	5 41	6 0	4	N.
5		6 10	6 31	6 18	6 39	5 58	6 18	6 20	6 41	3 58	4 19	6 21	6 41	5	
6		6 54	7 17	7 2	7 25	6 42	7 5	7 4	7 27	4 42	5 5	7 5	7 28	6	
7		7 41	8 6	7 49	8 14	7 29	7 53	7 51	8 16	5 29	5 54	7 52	8 17	7	
8		8 34	9 5	8 42	9 13	8 21	8 52	8 44	9 15	6 22	6 53	8 45	9 16	8	D A.
9		9 35	10 10	9 43	10 18	9 22	9 57	9 45	10 20	7 23	7 58	9 47	10 22	9	
10		10 44	11 18	10 52	11 26	10 31	11 5	10 54	11 28	8 32	9 6	10 56	11 30	10	
11		11 49	*	11 57	*	11 37	*	11 59	*	9 37	10 6	*	0 1	11	
12		0 18	0 46	0 26	0 54	0 5	0 33	0 28	0 56	10 34	10 59	0 30	0 57	12	
13		1 11	1 34	1 19	1 42	0 58	1 21	1 21	1 44	11 22	11 44	1 22	1 45	13	E.
14		1 56	2 18	2 4	2 26	1 44	2 5	2 6	2 28	*	0 6	2 7	2 28	14	
15		2 38	2 58	2 46	3 6	2 26	2 46	2 48	3 8	0 26	0 46	2 49	3 9	15	
16		3 17	3 35	3 25	3 43	3 5	3 23	3 27	3 45	1 5	1 23	3 27	3 46	16	○
17		3 55	4 14	4 3	4 22	3 43	4 2	4 5	4 24	1 43	2 2	4 6	4 25	17	
18		4 33	4 54	4 41	5 2	4 21	4 41	4 43	5 4	2 21	2 42	4 44	5 5	18	
19		5 14	5 35	5 22	5 43	5 2	5 22	5 24	5 45	3 2	3 23	5 24	5 46	19	S. P.
20		5 56	6 19	6 4	6 27	5 44	6 7	6 6	6 29	3 44	4 7	6 8	6 30	20	
21		6 44	7 11	6 52	7 19	6 32	6 59	6 54	7 21	4 32	4 59	6 56	7 23	21	
22		7 39	8 12	7 47	8 20	7 26	8 0	7 49	8 22	5 27	6 0	7 51	8 24	22	
23		8 50	9 29	8 58	9 37	8 37	9 17	9 0	9 39	6 38	7 17	9 2	9 42	23	○
24		10 14	10 56	10 22	11 4	10 2	10 44	10 24	11 6	8 2	8 44	10 26	11 8	24	
25		11 37	*	11 45	*	11 24	*	11 47	*	9 25	10 0	11 50	*	25	
26		0 12	0 43	0 20	0 51	0 0	0 31	0 22	0 53	10 31	10 59	0 24	0 54	26	E.
27		1 11	1 35	1 19	1 43	0 58	1 23	1 21	1 45	11 23	11 45	1 22	1 47	27	
28		1 57	2 19	2 5	2 27	1 45	2 6	2 7	2 29	*	0 7	2 9	2 30	28	
29		2 38	2 57	2 46	3 5	2 26	2 45	2 48	3 7	0 26	0 45	2 49	3 8	29	
30		3 16	3 35	3 24	3 43	3 4	3 23	3 26	3 45	1 4	1 23	3 26	3 46	30	●
31		3 54	4 13	4 2	4 21	3 42	4 0	4 4	4 23	1 42	2 1	4 5	4 23	31	



明治四十一年五月

地名	釜山		蛇梁海峡		長直路		長竹水道		木浦		八口浦		古群山群島	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	8 42	9 0	9 38	9 56	10 32	10 50	0 30	0 48	2 49	3 7	1 18	1 36	3 33	3 51
2	9 17	9 35	10 13	10 31	11 7	11 25	1 6	1 23	3 24	3 42	1 53	2 11	4 8	4 26
3	9 54	10 13	10 50	11 9	11 44	*	1 41	2 0	4 0	4 20	2 29	2 49	4 44	5 4
4	10 33	10 52	11 29	11 48	0 3	0 23	2 19	2 39	4 40	4 59	3 9	3 28	5 24	5 43
5	11 13	11 34	*	0 9	0 42	1 3	2 58	3 19	5 20	5 40	3 49	4 9	6 4	6 24
6	11 57	*	0 30	0 53	1 24	1 47	3 40	4 3	6 4	6 27	4 33	4 56	6 48	7 11
7	0 20	0 44	1 16	1 40	2 10	2 34	4 26	4 50	6 51	7 16	5 20	5 45	7 35	8 0
8	1 9	1 37	2 5	2 33	2 59	3 27	5 15	5 43	7 44	8 15	6 13	6 44	8 28	8 59
9	2 8	2 39	3 4	3 35	3 58	4 29	6 14	6 45	8 46	9 21	7 15	7 50	9 30	10 5
10	3 13	3 48	4 9	4 44	5 3	5 38	7 19	7 54	9 55	10 29	8 24	8 58	10 39	11 13
11	4 22	4 53	5 18	5 49	6 12	6 43	8 28	8 59	11 0	11 29	9 29	9 58	11 44	*
12	5 21	5 49	6 17	6 45	7 11	7 39	9 27	9 55	11 56	*	10 25	10 50	0 13	0 40
13	6 14	6 37	7 10	7 33	8 4	8 27	10 20	10 43	0 21	0 44	11 13	11 35	1 5	1 28
14	6 59	7 21	7 55	8 17	8 49	9 11	11 5	11 27	1 6	1 27	11 56	*	1 50	2 11
15	7 41	8 1	8 37	8 57	9 31	9 51	11 47	*	1 48	2 8	0 17	0 37	2 32	2 52
16	8 20	8 38	9 16	9 34	10 10	10 28	0 7	0 26	2 26	2 45	0 55	1 14	3 10	3 29
17	8 58	9 18	9 54	10 14	10 48	11 8	0 44	1 4	3 5	3 24	1 34	1 53	3 49	4 8
18	9 36	9 57	10 32	10 53	11 26	11 47	1 24	1 42	3 43	4 4	2 12	2 33	4 27	4 48
19	10 17	10 38	11 13	11 34	*	0 7	2 3	2 23	4 23	4 45	2 52	3 14	5 7	5 29
20	10 59	11 22	11 55	*	0 28	0 49	2 44	3 5	5 7	5 29	3 36	3 58	5 51	6 13
21	11 48	*	0 18	0 44	1 12	1 38	3 28	3 54	5 55	6 22	4 24	4 51	6 39	7 6
22	0 15	0 42	1 11	1 38	2 5	2 32	4 21	4 48	6 50	7 23	5 19	5 52	7 34	8 7
23	1 16	1 54	2 12	2 50	3 6	3 44	5 22	6 0	8 1	8 41	6 30	7 10	8 45	9 25
24	2 34	3 18	3 30	4 14	4 24	5 8	6 40	7 24	9 25	10 7	7 54	8 36	10 9	10 51
25	4 1	4 41	4 57	5 37	5 51	6 31	8 7	8 47	10 49	11 23	9 18	9 52	11 33	*
26	5 16	5 46	6 12	6 42	7 6	7 36	9 22	9 52	11 53	*	10 22	10 50	0 7	0 37
27	6 14	6 39	7 10	7 35	8 4	8 29	10 20	10 45	0 21	0 46	11 15	11 37	1 5	1 30
28	7 1	7 22	7 57	8 18	8 51	9 12	11 7	11 28	1 8	1 29	11 58	*	1 52	2 13
29	7 41	8 0	8 37	8 56	9 31	9 50	11 47	*	1 48	2 7	0 17	0 36	2 32	2 51
30	8 19	8 38	9 15	9 34	10 9	10 28	0 6	0 25	2 25	2 45	0 54	1 14	3 9	3 29
31	8 58	9 15	9 54	10 11	10 48	11 5	0 44	1 4	3 4	3 22	1 33	1 51	3 48	4 6

明治四十一年五月

地名	濟物浦		(大同江) 漁隱洞		(鴨綠江口) 圓島		大連		旅順		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	5 39	5 57	9 23	9 41	9 55	10 13	10 34	10 52	11 5	11 23	1	●	
2	6 14	6 32	9 58	10 16	10 30	10 48	11 9	11 27	11 40	11 58	2		
3	6 50	7 10	10 34	10 54	11 6	11 26	11 45	*	*	0 16	3		
4	7 30	7 49	11 13	11 33	11 45	*	0 5	0 25	0 36	0 56	4		N.
5	8 10	8 30	11 53	*	0 5	0 25	0 44	1 5	1 15	1 36	5		
6	8 54	9 17	0 14	0 38	0 46	1 10	1 25	1 49	1 56	2 20	6		
7	9 41	10 6	1 1	1 25	1 33	1 57	2 12	2 36	2 43	3 7	7		A.
8	10 34	11 5	1 50	2 18	2 22	2 50	3 1	3 29	3 32	4 0	8	⌋	
9	11 36	*	2 49	3 20	3 21	3 52	4 0	4 31	4 31	5 2	9		
10	0 11	0 45	3 55	4 29	4 27	5 1	5 6	5 40	5 37	6 11	10		
11	1 19	1 50	5 3	5 33	5 35	6 5	6 14	6 45	6 45	7 16	11		
12	2 19	2 46	6 3	6 30	6 35	7 2	7 14	7 41	7 45	8 12	12		
13	3 11	3 34	6 55	7 18	7 27	7 50	8 6	8 29	8 37	9 0	13		E.
14	3 56	4 17	7 40	8 1	8 12	8 33	8 51	9 12	9 22	9 43	14		
15	4 38	4 58	8 22	8 41	8 54	9 13	9 33	9 53	10 4	10 24	15		
16	5 16	5 35	9 0	9 19	9 32	9 51	10 11	10 30	10 42	11 1	16	○	
17	5 55	6 14	9 39	9 58	10 11	10 30	10 50	11 9	11 21	11 40	17		
18	6 33	6 54	10 17	10 38	10 49	11 10	11 28	11 49	11 59	*	18		
19	7 13	7 35	10 57	11 19	11 29	11 51	*	0 9	0 20	0 40	19		S.P.
20	7 57	8 19	11 42	*	*	0 13	0 30	0 52	1 1	1 23	20		
21	8 45	9 12	0 3	0 29	0 35	1 1	1 14	1 40	1 45	2 11	21		
22	9 40	10 13	0 56	1 23	1 28	1 55	2 7	2 35	2 38	3 6	22		
23	10 51	11 31	1 57	2 35	2 29	3 7	3 8	3 47	3 39	4 18	23	⌋	
24	*	0 15	3 15	3 59	3 47	4 31	4 27	5 11	4 58	5 42	24		
25	0 57	1 39	4 42	5 23	5 14	5 55	5 53	6 34	6 24	7 5	25		
26	2 13	2 43	5 57	6 27	6 29	6 59	7 8	7 39	7 39	8 10	26		E.
27	3 11	3 36	6 55	7 19	7 27	7 51	8 6	8 31	8 37	9 2	27		
28	3 58	4 19	7 41	8 2	8 13	8 34	8 53	9 14	9 24	9 45	28		
29	4 38	4 57	8 22	8 41	8 54	9 13	9 33	9 52	10 4	10 23	29		
30	5 15	5 35	8 59	9 19	9 31	9 51	10 10	10 30	10 41	11 1	30	●	
31	5 54	6 12	9 38	9 56	10 10	10 28	10 49	11 7	11 20	11 38	31		



高潮時表

明治四十一年六月

地名	横須賀		下田		清水		鳥羽		(紀伊)串本		(淡路)由良		神戸	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	6 9	6 28	6 23	6 42	6 48	7 7	7 1	7 20	7 6	7 25	7 54	8 13	8 27	8 46
2	6 48	7 7	7 2	7 21	7 27	7 46	7 40	7 59	7 45	8 4	8 33	8 52	9 6	9 25
3	7 26	7 46	7 40	8 0	8 5	8 25	8 18	8 38	8 23	8 43	9 11	9 31	9 44	10 4
4	8 7	8 27	8 21	8 41	8 46	9 6	8 59	9 19	9 4	9 24	9 52	10 12	10 25	10 45
5	8 48	9 10	9 2	9 24	9 27	9 49	9 40	10 1	9 45	10 6	10 33	10 54	11 6	11 27
6	9 31	9 55	9 45	10 9	10 10	10 34	10 23	10 46	10 28	10 51	11 16	11 39	11 49	*
7	10 20	10 48	10 34	11 2	10 59	11 27	11 12	11 41	11 17	11 46	*	0 5	0 12	0 38
8	11 18	11 51	11 32	*	11 57	*	*	0 10	*	0 15	0 34	1 3	1 7	1 36
9	*	0 24	0 5	0 38	0 30	1 3	0 43	1 16	0 48	1 21	1 36	2 9	2 9	2 42
10	0 58	1 31	1 12	1 45	1 37	2 10	1 50	2 23	1 55	2 28	2 43	3 16	3 16	3 49
11	2 3	2 32	2 17	2 46	2 42	3 11	2 54	3 24	2 59	3 29	3 47	4 17	4 20	4 50
12	3 1	3 26	3 15	3 40	3 40	4 5	3 52	4 18	3 57	4 23	4 45	5 11	5 18	5 44
13	3 50	4 15	4 4	4 29	4 29	4 54	4 42	5 6	4 47	5 11	5 35	5 59	6 8	6 32
14	4 38	4 59	4 52	5 13	5 17	5 38	5 29	5 51	5 34	5 56	6 22	6 44	6 55	7 17
15	5 21	5 43	5 35	5 57	6 0	6 22	6 13	6 35	6 18	6 40	7 6	7 28	7 39	8 1
16	6 3	6 24	6 17	6 38	6 42	7 3	6 55	7 15	7 0	7 20	7 48	8 8	8 21	8 41
17	6 44	7 6	6 58	7 20	7 23	7 45	7 36	7 57	7 41	8 2	8 29	8 50	9 2	9 23
18	7 27	7 48	7 41	8 2	8 6	8 27	8 19	8 40	8 24	8 45	9 12	9 33	9 45	10 6
19	8 12	8 36	8 26	8 50	8 51	9 15	9 4	9 28	9 9	9 33	9 57	10 21	10 30	10 54
20	9 2	9 28	9 16	9 42	9 41	10 7	9 53	10 20	9 58	10 25	10 46	11 13	11 19	11 46
21	9 59	10 34	10 13	10 48	10 38	11 13	10 51	11 26	10 56	11 31	11 44	*	*	0 17
22	11 9	11 48	11 23	*	11 48	*	*	0 0	*	0 5	0 19	0 53	0 52	1 26
23	*	0 27	0 2	0 41	0 27	1 6	0 40	1 19	0 45	1 24	1 33	2 12	2 6	2 45
24	1 5	1 40	1 19	1 54	1 44	2 19	1 57	2 32	2 2	2 37	2 50	3 25	3 23	3 58
25	2 12	2 40	2 26	2 54	2 51	3 19	3 4	3 32	3 9	3 37	3 57	4 25	4 30	4 58
26	3 5	3 28	3 19	3 42	3 44	4 7	3 57	4 20	4 2	4 25	4 50	5 13	5 23	5 46
27	3 52	4 13	4 6	4 27	4 31	4 52	4 44	5 5	4 49	5 10	5 37	5 58	6 10	6 31
28	4 33	4 53	4 47	5 7	5 12	5 32	5 25	5 45	5 30	5 50	6 18	6 38	6 51	7 11
29	5 13	5 33	5 27	5 47	5 52	6 12	6 5	6 25	6 10	6 30	6 58	7 18	7 31	7 51
30	5 53	6 11	6 7	6 25	6 32	6 50	6 44	7 3	6 49	7 8	7 37	7 56	8 10	8 29

高潮時表

明治四十一年六月

地名	明石		粟島		(三原瀬戸)瀬戸田		來島		三津ヶ濱		佐賀ノ關		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	9 27	9 46	0 20	0 39	11 56	*	11 21	11 41	10 41	11 1	9 3	9 23	3		N.
2	10 6	10 25	0 59	1 18	0 16	0 35	*	0 0	11 20	11 40	9 42	10 2	4		
3	10 44	11 4	1 38	1 57	0 55	1 14	0 20	0 39	11 59	*	10 21	10 40	5		
4	11 25	11 45	2 16	2 37	1 33	1 54	0 58	1 19	0 18	0 39	11 1	11 22	6		A.
5	*	0 6	2 58	3 19	2 15	2 36	1 40	2 1	1 0	1 21	11 43	*	7		
6	0 27	0 49	3 40	4 2	2 57	3 19	2 22	2 44	1 42	2 4	0 4	0 26	8		
7	1 12	1 38	4 25	4 51	3 42	4 8	3 7	3 33	2 27	2 53	0 49	1 15	9		D.
8	2 7	2 36	5 19	5 49	4 36	5 6	4 1	4 31	3 21	3 51	1 43	2 13	10		E.
9	3 9	3 42	6 22	6 55	5 39	6 12	5 4	5 37	4 24	4 57	2 46	3 19	11		
10	4 16	4 49	7 29	8 2	6 46	7 19	6 11	6 44	5 31	6 4	3 53	4 26	12		
11	5 20	5 50	8 33	9 2	7 50	8 19	7 15	7 44	6 35	7 4	4 57	5 26	13		
12	6 18	6 44	9 31	9 56	8 48	9 13	8 13	8 38	7 33	7 58	5 55	6 20	14		
13	7 8	7 32	10 20	10 45	9 37	10 2	9 2	9 27	8 22	8 47	6 44	7 9	15		
14	7 55	8 17	11 8	11 30	10 25	10 47	9 50	10 12	9 10	9 32	7 32	7 54	16		O.
15	8 39	9 1	11 51	*	11 8	11 30	10 33	10 55	9 53	10 15	8 15	8 37	17		
16	9 21	9 41	0 13	0 34	11 51	*	11 16	11 36	10 36	10 56	8 58	9 18	18		S.P.
17	10 2	10 23	0 54	1 15	0 11	0 32	11 57	*	11 17	11 38	9 39	10 0	19		
18	10 45	11 6	1 36	1 57	0 53	1 14	0 18	0 39	11 59	*	10 21	10 43	20		
19	11 30	11 54	2 19	2 42	1 36	1 59	1 1	1 24	0 21	0 44	11 6	11 31	21		
20	*	0 19	3 7	3 32	2 24	2 49	1 49	2 14	1 9	1 34	11 56	*	22		
21	0 46	1 17	3 59	4 30	3 16	3 47	2 41	3 12	2 1	2 32	0 23	0 54	23		
22	1 52	2 26	5 5	5 40	4 22	4 57	3 47	4 22	3 7	3 42	1 29	2 4	24		E.
23	3 6	3 45	6 19	6 58	5 36	6 15	5 1	5 40	4 21	5 0	2 43	3 22	25		
24	4 23	4 58	7 36	8 11	6 53	7 28	6 18	6 53	5 38	6 13	4 0	4 35	26		
25	5 30	5 58	8 42	9 10	7 59	8 27	7 24	7 52	6 44	7 12	5 6	5 34	27		
26	6 23	6 46	9 36	9 59	8 53	9 16	8 18	8 41	7 38	8 1	6 0	6 23	28		
27	7 10	7 31	10 23	10 44	9 40	10 1	9 5	9 26	8 25	8 46	6 47	7 8	29		
28	7 51	8 11	11 3	11 23	10 20	10 40	9 45	10 5	9 5	9 25	7 27	7 47	30		
29	8 31	8 51	11 44	*	11 1	11 20	10 26	10 45	9 46	10 5	8 8	8 27	1		N.
30	9 10	9 29	0 3	0 23	11 40	11 58	11 5	11 23	10 25	10 43	8 47	9 5	2		



明治四十一年 六月

地名	吳		門		司竹		敷平		戶佐		世保		長崎		三角	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	10 55	11 15	10 28	10 47	10 35	10 54	10 09	10 28	9 57	10 16	9 26	9 45	9 24	9 43		
2	11 34	11 54	11 07	11 26	11 14	11 33	10 48	11 07	10 36	10 55	10 05	10 24	10 03	10 22		
3	*	0 13	11 45	*	11 52	*	11 26	11 46	11 14	11 34	10 43	11 03	10 41	11 01		
4	0 32	0 53	0 05	0 26	0 12	0 33	*	0 07	11 55	*	11 24	11 44	11 22	11 42		
5	1 14	1 35	0 46	1 07	0 53	1 14	0 27	0 48	0 15	0 36	*	0 05	*	0 03		
6	1 56	2 18	1 28	1 50	1 35	1 57	1 09	1 31	0 57	1 19	0 26	0 48	0 24	0 46		
7	2 41	3 07	2 14	2 40	2 21	2 47	1 55	2 21	1 43	2 09	1 12	1 38	1 10	1 36		
8	3 35	4 05	3 08	3 38	3 15	3 45	2 49	3 19	2 37	3 07	2 06	2 36	2 04	2 34		
9	4 38	5 11	4 11	4 44	4 18	4 51	3 52	4 25	3 40	4 13	3 09	3 42	3 07	3 40		
10	5 45	6 18	5 18	5 51	5 25	5 58	4 59	5 32	4 47	5 20	4 16	4 49	4 14	4 47		
11	6 49	7 18	6 22	6 51	6 29	6 58	6 03	6 32	5 51	6 20	5 20	5 49	5 18	5 47		
12	7 47	8 12	7 20	7 45	7 27	7 52	7 01	7 26	6 49	7 14	6 18	6 43	6 16	6 41		
13	8 36	9 01	8 09	8 34	8 16	8 41	7 50	8 15	7 38	8 03	7 07	7 32	7 05	7 30		
14	9 24	9 46	8 57	9 19	9 04	9 26	8 38	9 00	8 26	8 48	7 55	8 17	7 53	8 15		
15	10 07	10 29	9 40	10 02	9 47	10 09	9 21	9 43	9 09	9 31	8 38	9 00	8 36	8 58		
16	10 50	11 10	10 22	10 43	10 29	10 50	10 03	10 24	9 51	10 12	9 20	9 41	9 18	9 39		
17	11 31	11 52	11 04	11 25	11 11	11 32	10 45	11 06	10 33	10 54	10 02	10 23	10 00	10 21		
18	*	0 13	11 46	*	11 53	*	11 27	11 48	11 15	11 36	10 44	11 05	10 42	11 03		
19	0 35	0 58	0 07	0 31	0 14	0 38	*	0 12	*	0 00	11 29	11 53	11 27	11 51		
20	1 23	1 48	0 55	1 21	1 02	1 28	0 36	1 02	0 24	0 50	*	0 19	*	0 17		
21	2 15	2 46	1 48	2 19	1 55	2 26	1 29	2 00	1 17	1 48	0 46	1 17	0 44	1 15		
22	3 21	3 56	2 53	3 28	3 00	3 35	2 34	3 09	2 22	2 57	1 51	2 26	1 49	2 24		
23	4 35	5 14	4 08	4 47	4 15	4 54	3 49	4 28	3 37	4 16	3 06	3 45	3 04	3 43		
24	5 52	6 27	5 25	6 00	5 32	6 07	5 06	5 41	4 54	5 29	4 23	4 58	4 21	4 56		
25	6 58	7 26	6 32	6 59	6 39	7 06	6 13	6 40	6 01	6 28	5 30	5 57	5 28	5 55		
26	7 52	8 15	7 24	7 47	7 31	7 54	7 05	7 28	6 53	7 16	6 22	6 45	6 20	6 43		
27	8 39	9 00	8 11	8 32	8 18	8 39	7 52	8 13	7 40	8 01	7 09	7 30	7 07	7 28		
28	9 19	9 39	8 52	9 12	8 59	9 19	8 33	8 53	8 21	8 41	7 50	8 10	7 48	8 08		
29	10 00	10 19	9 32	9 52	9 39	9 59	9 13	9 33	9 01	9 21	8 30	8 50	8 28	8 48		
30	10 39	10 57	10 11	10 30	10 18	10 37	9 52	10 11	9 40	9 59	9 09	9 28	9 07	9 26		

明治四十一年 六月

地名	(五島)		鹿兒島		油津		那霸		基隆		馬公		太陰曆日附	太陰盈虛	太陰位置
	福	江	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	9 48	10 07	8 35	8 54	7 24	7 43	8 28	8 47	10 34	10 54	0 17	0 36	3		N.
2	10 27	10 46	9 14	9 33	8 03	8 22	9 07	9 26	11 13	11 33	0 56	1 16	4		
3	11 05	11 25	9 52	10 12	8 41	9 01	9 45	10 05	11 52	*	1 35	1 54	5		
4	11 46	*	10 33	10 53	9 22	9 42	10 26	10 46	0 12	0 32	2 14	2 35	6		A.
5	0 06	0 27	11 14	11 35	10 03	10 24	11 07	11 28	0 53	1 14	2 55	3 16	7		
6	0 48	1 10	11 57	*	10 46	11 10	11 50	*	1 35	1 57	3 37	3 59	8		
7	1 34	2 00	0 21	0 47	11 36	*	0 14	0 40	2 21	2 47	4 23	4 49	9		D
8	2 28	2 58	1 15	1 45	0 04	0 34	1 08	1 38	3 15	3 45	5 17	5 47	10		E.
9	3 31	4 04	2 18	2 51	1 07	1 40	2 11	2 44	4 18	4 51	6 21	6 53	11		
10	4 38	5 11	3 25	3 58	2 14	2 47	3 18	3 51	5 25	5 58	7 27	8 00	12		
11	5 42	6 11	4 29	4 58	3 18	3 47	4 22	4 51	6 29	6 58	8 32	9 01	13		
12	6 40	7 05	5 27	5 52	4 16	4 41	5 20	5 45	7 27	7 52	9 29	9 54	14		
13	7 29	7 54	6 16	6 41	5 05	5 30	6 09	6 34	8 16	8 40	10 18	10 42	15		
14	8 17	8 39	7 04	7 26	5 53	6 15	6 57	7 19	9 04	9 25	11 06	11 28	16		O
15	9 00	9 22	7 47	8 09	6 36	6 58	7 40	8 02	9 47	10 08	11 49	*	17		
16	9 42	10 03	8 29	8 50	7 18	7 39	8 22	8 43	10 29	10 49	0 11	0 31	18		S.P.
17	10 24	10 45	9 11	9 32	8 00	8 21	9 04	9 25	11 10	11 31	0 51	1 13	19		
18	11 06	11 27	9 53	10 14	8 42	9 03	9 46	10 07	11 53	*	1 33	1 55	20		
19	11 51	*	10 38	11 02	9 27	9 51	10 31	10 55	0 14	0 38	2 16	2 40	21		
20	0 15	0 41	11 28	11 55	10 17	10 44	11 21	11 48	1 02	1 28	3 04	3 30	22		
21	1 08	1 39	*	0 26	11 15	11 49	*	0 19	1 54	2 26	3 57	4 28	23		C
22	2 13	2 48	1 00	1 35	*	0 24	0 53	1 28	3 01	3 36	5 03	5 39	24		E.
23	3 28	4 07	2 15	2 54	1 04	1 53	2 08	2 47	4 16	4 55	6 18	6 57	25		
24	4 45	5 20	3 32	4 07	2 21	2 56	3 25	4 00	5 32	6 07	7 35	8 09	26		
25	5 52	6 19	4 39	5 06	3 28	3 55	4 32	4 59	6 39	7 06	8 41	9 08	27		
26	6 44	7 07	5 31	5 54	4 20	4 43	5 24	5 47	7 31	7 54	9 33	9 56	28		
27	7 31	7 52	6 18	6 39	5 07	5 28	6 11	6 32	8 18	8 39	10 20	10 41	29		
28	8 12	8 32	6 59	7 19	5 48	6 08	6 52	7 12	8 59	9 18	11 01	11 21	30		
29	8 52	9 12	7 39	7 59	6 28	6 48	7 32	7 52	9 39	9 58	11 41	*	1		N.
30	9 31	9 50	8 18	8 37	7 07	7 26	8 11	8 30	10 18	10 36	0 01	0 20	2		



明治四十一年六月

地名	打狗		(隱岐) 西郷		境		舞鶴		敦賀		七尾		函館	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	9 24	9 44	3 4	3 24	3 17	3 37	3 24	3 44	3 17	3 37	3 56	4 16	4 41	5 0
2	10 3	10 23	3 44	4 3	3 57	4 16	4 4	4 23	3 57	4 16	4 36	4 55	5 20	5 39
3	10 42	11 2	4 22	4 42	4 35	4 55	4 42	5 2	4 35	4 55	5 14	5 34	5 58	6 18
4	11 22	11 43	5 2	5 23	5 15	5 36	5 22	5 43	5 15	5 36	5 54	6 15	6 39	6 59
5	*	0 4	5 44	6 5	5 57	6 18	6 4	6 25	5 57	6 18	6 36	6 57	7 20	7 42
6	0 25	0 47	6 27	6 50	6 40	7 3	6 47	7 10	6 40	7 3	7 19	7 42	8 3	8 26
7	1 11	1 37	7 16	7 44	7 29	7 57	7 36	8 4	7 29	7 57	8 8	8 36	8 52	9 20
8	2 5	2 35	8 14	8 47	8 27	9 0	8 34	9 7	8 27	9 0	9 6	9 39	9 50	10 23
9	3 8	3 41	9 20	9 54	9 33	10 7	9 40	10 14	9 33	10 7	10 12	10 46	10 56	11 30
10	4 15	4 48	10 27	10 58	10 40	11 11	10 47	11 18	10 40	11 11	11 19	11 50	*	0 3
11	5 19	5 48	11 28	11 56	11 41	*	11 48	*	11 41	*	0 20	0 34	1 4	1 4
12	6 17	6 42	*	0 22	0 9	0 35	0 16	0 42	0 9	0 35	0 48	1 14	1 32	1 58
13	7 6	7 30	0 46	1 10	0 59	1 23	1 6	1 30	0 59	1 23	1 38	2 2	2 22	2 46
14	7 54	8 15	1 33	1 55	1 46	2 8	1 53	2 15	1 46	2 8	2 25	2 47	3 10	3 31
15	8 37	8 58	2 17	2 39	2 30	2 52	2 37	2 59	2 30	2 52	3 9	3 31	3 53	4 15
16	9 19	9 39	2 59	3 19	3 12	3 32	3 19	3 39	3 12	3 32	3 51	4 11	4 35	4 56
17	10 0	10 21	3 40	4 1	3 53	4 14	4 0	4 21	3 53	4 14	4 32	4 53	5 16	5 38
18	10 43	11 4	4 23	4 44	4 36	4 57	4 43	5 4	4 36	4 57	5 15	5 36	5 59	6 20
19	11 28	11 52	5 8	5 32	5 21	5 45	5 28	5 52	5 21	5 45	6 0	6 24	6 44	7 8
20	*	0 18	5 57	6 24	6 10	6 37	6 17	6 44	6 10	6 37	6 49	7 16	7 33	8 0
21	0 44	1 16	6 55	7 30	7 8	7 43	7 15	7 50	7 8	7 43	7 47	8 22	8 31	9 6
22	1 51	2 26	8 4	8 45	8 17	8 58	8 24	9 5	8 17	8 58	8 56	9 37	9 41	10 20
23	3 6	3 45	9 24	10 1	9 37	10 14	9 44	10 21	9 37	10 14	10 16	10 53	10 59	11 37
24	4 22	4 57	10 36	11 8	10 49	11 21	10 56	11 28	10 49	11 21	11 28	*	*	0 12
25	5 29	5 56	11 36	*	11 49	*	11 56	*	11 49	*	0 0	0 28	0 44	1 12
26	6 21	6 44	0 1	0 24	0 14	0 37	0 21	0 44	0 14	0 37	0 53	1 16	1 37	2 0
27	7 8	7 29	0 48	1 9	1 1	1 22	1 8	1 29	1 1	1 22	1 40	2 1	2 24	2 45
28	7 49	8 8	1 29	1 49	1 42	2 2	1 49	2 9	1 42	2 2	2 21	2 41	3 5	3 25
29	8 29	8 48	2 9	2 29	2 22	2 42	2 29	2 49	2 22	2 42	3 1	3 21	3 45	4 5
30	9 8	9 26	2 48	3 7	3 1	3 20	3 8	3 27	3 1	3 20	3 40	3 59	4 25	4 43

明治四十一年六月

地名	大湊		(陸中) 山田		根室		小樽		九春古丹		元山		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	4 32	4 51	4 40	4 59	4 20	4 39	4 42	5 1	2 19	2 38	4 42	5 2	3		N.
2	5 11	5 30	5 19	5 38	4 59	5 18	5 21	5 40	2 58	3 17	5 22	5 41	4		
3	5 49	6 9	5 57	6 17	5 37	5 57	5 59	6 19	3 36	3 56	6 0	6 20	5		
4	6 30	6 50	6 38	6 58	6 18	6 38	6 40	7 0	4 17	4 37	6 41	7 1	6		A.
5	7 11	7 33	7 19	7 41	6 59	7 20	7 21	7 43	4 58	5 19	7 22	7 43	7		
6	7 54	8 17	8 2	8 25	7 42	8 5	8 4	8 27	5 41	6 4	8 5	8 29	8		
7	8 43	9 11	8 51	9 19	8 31	8 59	8 53	9 21	6 30	6 58	8 55	9 23	9	D	
8	9 41	10 14	9 49	10 22	9 28	10 2	9 51	10 24	7 27	8 1	9 53	10 26	10		E.
9	10 47	11 21	10 55	11 29	10 34	11 8	10 57	11 31	8 33	9 7	10 59	11 33	11		
10	11 54	*	*	0 2	11 42	*	*	0 4	9 41	10 12	*	0 6	12		
11	0 25	0 55	0 33	1 3	0 13	0 42	0 35	1 5	10 41	11 10	0 37	1 6	13		
12	1 23	1 49	1 31	1 57	1 11	1 37	1 33	1 59	11 36	11 59	1 35	2 0	14		
13	2 13	2 37	2 21	2 45	2 0	2 25	2 23	2 47	*	0 24	2 24	2 49	15		
14	3 1	3 22	3 9	3 30	2 48	3 10	3 11	3 32	0 47	1 9	3 12	3 34	16	O	
15	3 44	4 6	3 52	4 14	3 31	3 54	3 54	4 16	1 30	1 53	3 55	4 16	17		
16	4 26	4 47	4 34	4 55	4 14	4 35	4 36	4 57	2 13	2 34	4 37	4 58	18		S.P.
17	5 7	5 29	5 15	5 37	4 55	5 16	5 17	5 39	2 54	3 15	5 18	5 39	19		
18	5 50	6 11	5 58	6 19	5 38	5 59	6 0	6 21	3 37	3 58	6 1	6 22	20		
19	6 35	6 59	6 43	7 7	6 23	6 47	6 45	7 9	4 22	4 46	6 46	7 10	21		
20	7 24	7 51	7 32	7 59	7 12	7 39	7 34	8 1	5 11	5 38	7 36	8 2	22		
21	8 22	8 57	8 30	9 5	8 10	8 44	8 32	9 7	6 9	6 43	8 34	9 9	23	C	
22	9 32	10 11	9 40	10 19	9 19	9 58	9 42	10 21	7 18	7 57	9 44	10 24	24		E.
23	10 50	11 28	10 58	11 36	10 37	11 15	11 0	11 38	8 36	9 14	11 3	11 40	25		
24	*	0 3	*	0 11	11 50	*	*	0 13	9 49	10 21	*	0 15	26		
25	0 35	1 3	0 43	1 11	0 22	0 50	0 45	1 13	10 49	11 15	0 47	1 14	27		
26	1 28	1 51	1 36	1 59	1 16	1 39	1 38	2 1	11 38	*	1 39	2 2	28		
27	2 15	2 36	2 23	2 44	2 3	2 24	2 25	2 46	0 2	0 23	2 26	2 47	29		
28	2 56	3 16	3 4	3 24	2 44	3 4	3 6	3 26	0 43	1 3	3 7	3 27	30		
29	3 36	3 56	3 44	4 4	3 24	3 44	3 46	4 6	1 23	1 43	3 47	4 7	31		N.
30	4 16	4 34	4 24	4 42	4 4	4 22	4 26	4 44	2 3	2 21	4 26	4 45	2		



明治四十一年 六月

地名	釜山		蛇梁海峡		長直路		長竹水道		木浦		八口浦		古群山群島	
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後
1	9 35	9 54	10 31	10 50	11 25	11 44	1 22	1 41	3 41	4 1	2 10	2 30	4 25	4 45
2	10 14	10 33	11 10	11 29	*	0 4	2 0	2 20	4 21	4 40	2 50	3 9	5 5	5 24
3	10 52	11 12	11 48	*	0 23	0 42	2 39	2 58	4 59	5 19	3 28	3 48	5 43	6 3
4	11 33	11 53	0 8	0 29	1 2	1 23	3 18	3 39	5 40	6 0	4 9	4 29	6 24	6 44
5	*	0 14	0 49	1 10	1 43	2 4	3 59	4 20	6 21	6 42	4 50	5 11	7 5	7 26
6	0 35	0 57	1 31	1 53	2 25	2 47	4 41	5 3	7 4	7 28	5 33	5 57	7 48	8 12
7	1 21	1 47	2 17	2 43	3 11	3 37	5 27	5 53	7 54	8 22	6 23	6 51	8 38	9 6
8	2 15	2 45	3 11	3 41	4 5	4 35	6 21	6 51	8 52	9 25	7 21	7 54	9 36	10 9
9	3 18	3 52	4 14	4 48	5 8	5 42	7 24	7 58	9 58	10 32	8 27	9 1	10 42	11 16
10	4 25	4 58	5 21	5 54	6 15	6 48	8 31	9 4	11 5	11 36	9 34	10 5	11 49	*
11	5 29	5 58	6 25	6 54	7 19	7 48	9 35	10 4	*	0 5	10 34	11 3	0 20	0 49
12	6 27	6 52	7 23	7 48	8 17	8 42	10 33	10 58	0 34	0 59	11 28	11 52	1 18	1 43
13	7 16	7 41	8 12	8 37	9 6	9 31	11 22	11 47	1 23	1 48	*	0 17	2 7	2 32
14	8 4	8 26	9 0	9 22	9 54	10 16	*	0 10	2 11	2 33	0 40	1 2	2 55	3 17
15	8 47	9 9	9 43	10 5	10 37	10 59	0 32	0 53	2 54	3 15	1 23	1 44	3 38	3 59
16	9 29	9 50	10 25	10 46	11 19	11 40	1 15	1 35	3 36	3 57	2 5	2 26	4 20	4 41
17	10 11	10 32	11 7	11 28	*	0 1	1 56	2 17	4 17	4 38	2 46	3 7	5 1	5 22
18	10 53	11 14	11 49	*	0 22	0 43	2 38	2 59	5 0	5 21	3 29	3 50	5 44	6 5
19	11 38	*	0 10	0 34	1 4	1 28	3 20	3 44	5 45	6 9	4 14	4 38	6 29	6 53
20	0 2	0 28	0 58	1 24	1 52	2 18	4 8	4 34	6 35	7 1	5 4	5 30	7 19	7 45
21	0 55	1 26	1 51	2 22	2 45	3 16	5 1	5 32	7 33	8 8	6 2	6 37	8 17	8 52
22	2 0	2 35	2 56	3 31	3 50	4 25	6 6	6 41	8 43	9 23	7 12	7 52	9 27	10 7
23	3 15	3 54	4 11	4 50	5 5	5 44	7 21	8 0	10 2	10 39	8 31	9 8	10 46	11 23
24	4 32	5 7	5 28	6 3	6 22	6 57	8 38	9 13	11 14	11 46	9 43	10 15	11 58	*
25	5 39	6 6	6 35	7 2	7 29	7 56	9 45	10 12	*	0 13	10 42	11 7	0 30	0 57
26	6 31	6 54	7 27	7 50	8 21	8 44	10 37	11 0	0 38	1 1	11 30	11 54	1 22	1 45
27	7 18	7 39	8 14	8 35	9 8	9 29	11 24	11 45	1 25	1 46	*	0 15	2 9	2 30
28	7 59	8 19	8 55	9 15	9 49	10 9	*	0 5	2 6	2 26	0 35	0 55	2 50	3 10
29	8 39	8 59	9 35	9 55	10 29	10 49	0 25	0 45	2 46	3 6	1 15	1 35	3 30	3 50
30	9 18	9 37	10 14	10 33	11 8	11 27	1 5	1 24	3 25	3 44	1 54	2 13	4 9	4 28

明治四十一年 六月

地名	濟物浦		(大同江) 漁隱洞		(鴨綠江口) 圓島		大連		旅順		太陰曆日附	太陰盈虛	太陰位置
	午前	午後	午前	午後	午前	午後	午前	午後	午前	午後			
1	6 31	6 51	10 15	10 35	10 47	11 7	11 26	11 46	11 57	*	3		N.
2	7 11	7 30	10 54	11 14	11 26	11 46	*	0 6	0 17	0 37	4		
3	7 49	8 9	11 33	11 53	*	0 5	0 25	0 44	0 56	1 15	5		
4	8 30	8 50	*	0 13	0 25	0 45	1 4	1 25	1 35	1 56	6		A.
5	9 11	9 32	0 34	0 55	1 6	1 27	1 45	2 6	2 16	2 37	7		
6	9 54	10 18	1 16	1 38	1 48	2 10	2 27	2 49	2 58	3 20	8		
7	10 44	11 12	2 2	2 28	2 34	3 0	3 13	3 39	3 44	4 10	9		D
8	11 42	*	2 56	3 26	3 28	3 58	4 7	4 37	4 38	5 8	10		E.
9	0 15	0 48	3 59	4 32	4 31	5 4	5 10	5 43	5 41	6 14	11		
10	1 22	1 55	5 6	5 39	5 38	6 11	6 17	6 50	6 48	7 21	12		
11	2 26	2 55	6 10	6 39	6 42	7 11	7 22	7 51	7 53	8 22	13		
12	3 24	3 49	7 8	7 33	7 40	8 5	8 19	8 44	8 50	9 15	14		
13	4 13	4 38	7 57	8 21	8 29	8 53	9 8	9 33	9 39	10 4	15		O
14	5 1	5 23	8 45	9 6	9 17	9 38	9 56	10 18	10 27	10 49	16		
15	5 44	6 5	9 28	9 49	10 0	10 21	10 39	11 0	11 10	11 31	17		
16	6 26	6 47	10 10	10 30	10 42	11 2	11 21	11 42	11 52	*	18		S.P.
17	7 7	7 28	10 51	11 12	11 23	11 44	*	0 2	0 13	0 33	19		
18	7 50	8 11	11 34	11 55	*	0 6	0 23	0 45	0 54	1 16	20		
19	8 35	8 59	*	0 19	0 27	0 51	1 6	1 30	1 37	2 1	21		
20	9 25	9 51	0 43	1 9	1 15	1 41	1 54	2 20	2 25	2 51	22		
21	10 23	10 58	1 35	2 7	2 7	2 39	2 47	3 18	3 18	3 49	23		C
22	11 33	*	2 42	3 17	3 14	3 49	3 53	4 28	4 24	4 59	24		E.
23	0 13	0 52	3 57	4 36	4 29	5 8	5 8	5 47	5 39	6 18	25		
24	1 29	2 4	5 13	5 48	5 45	6 20	6 25	6 59	6 56	7 30	26		
25	2 36	3 3	6 20	6 47	6 52	7 19	7 31	7 58	8 2	8 29	27		
26	3 28	3 51	7 12	7 35	7 44	8 7	8 23	8 46	8 54	9 17	28		
27	4 15	4 36	7 59	8 20	8 31	8 52	9 10	9 31	9 41	10 2	29		
28	4 56	5 16	8 40	8 59	9 12	9 31	9 51	10 11	10 22	10 42	30		N.
29	5 36	5 56	9 20	9 39	9 52	10 11	10 31	10 51	11 2	11 22	1		
30	6 15	6 34	9 59	10 17	10 31	10 49	11 10	11 28	11 41	11 59	2		