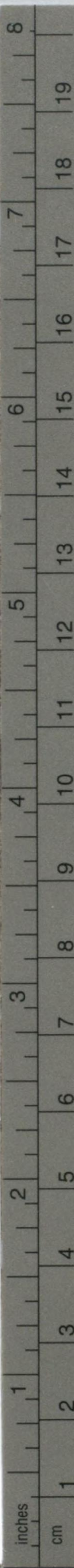


# Kodak Gray Scale

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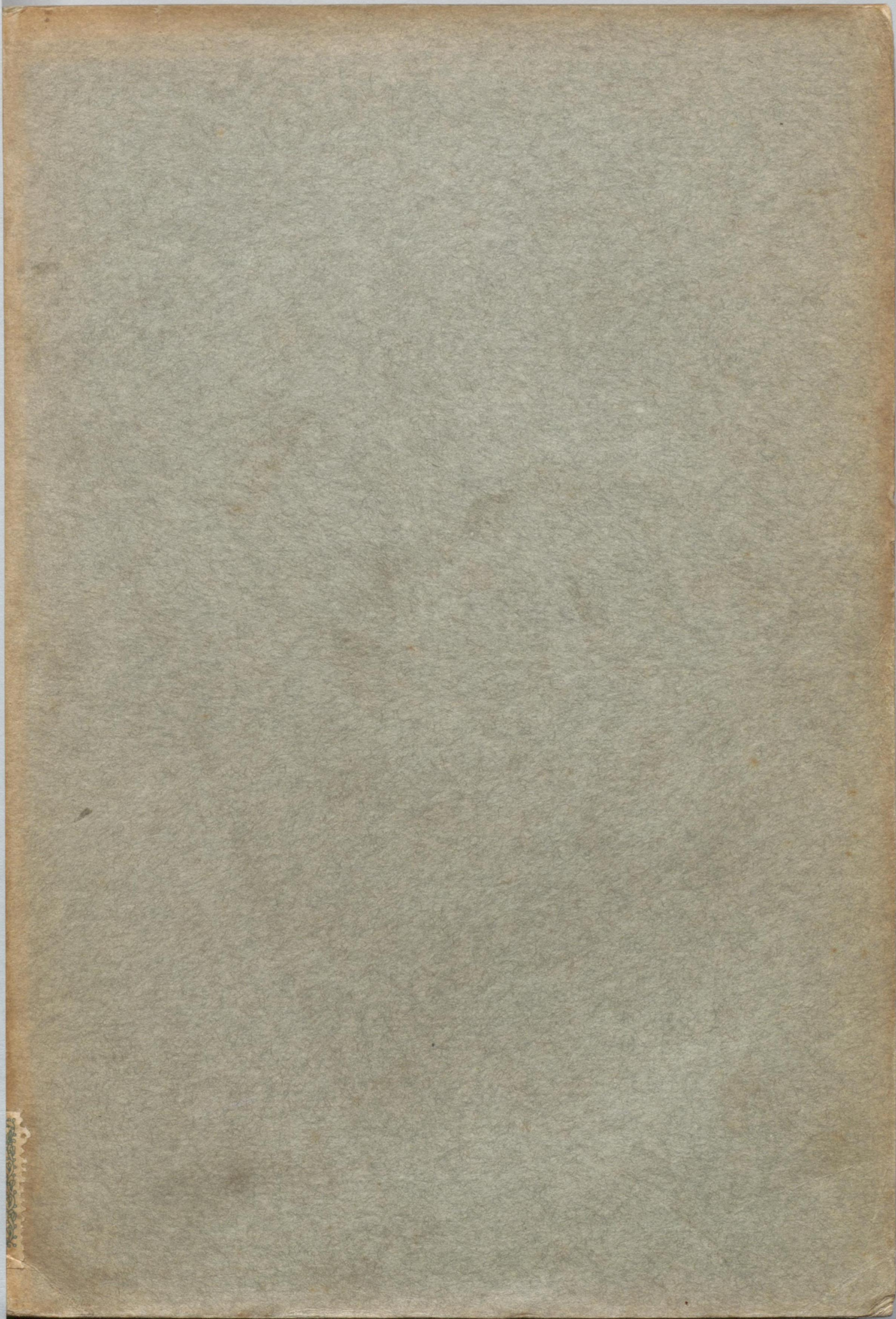
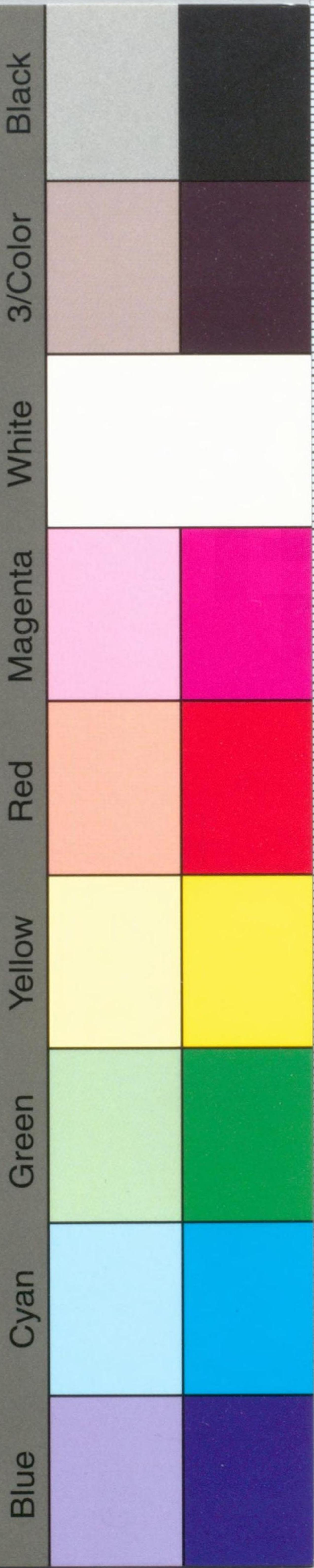


A 1 2 3 4 5 6 M 8 9 10 11 12 13 14 15 B 17 18 19



# Kodak Color Control Patches

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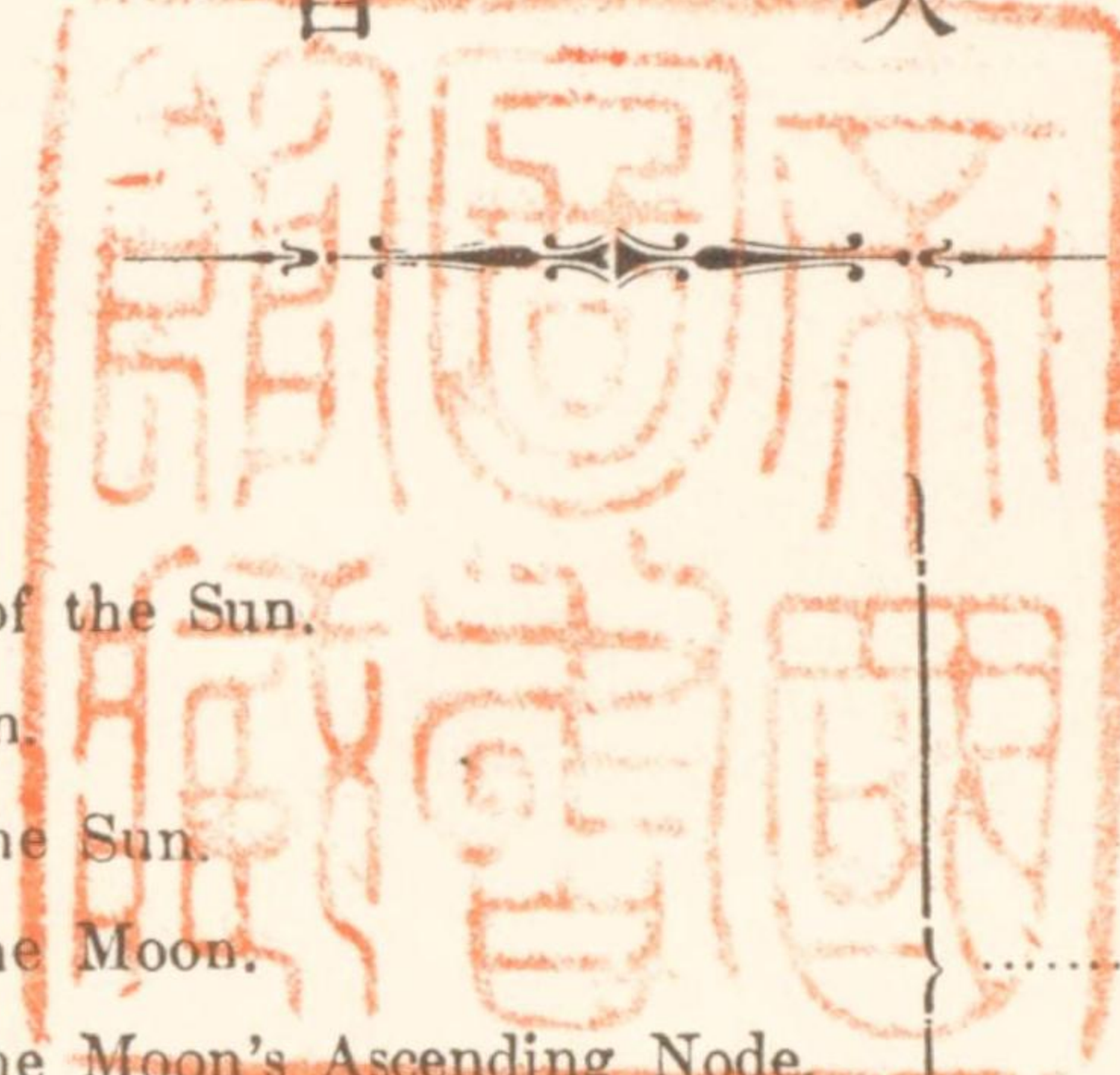




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Mean Noon.	Nutation in R. A. (in time).	The Sun's		The Moon's			
		Horizontal Parallax.	Aberration.	Mean Longitude.	Mean Longitude.	Mean Longitude Ascending Node.	Mean Longitude Perigee.
	s	"	"	°	°	°	°
Jan. 1	- 0'11	8'95	20'82	280'5302	205'1543	7'7021	143'3847
11	- 0'07	8'95	20'82	290'3866	336'9183	7'1726	144'4987
21	- 0'05	8'94	20'80	300'2431	108'6823	6'6430	145'6127
Feb. 31	- 0'03	8'93	20'77	310'0996	240'4462	6'1135	146'7268
10	- 0'02	8'92	20'74	319'9561	12'2102	5'5839	147'8408
20	- 0'02	8'90	20'70	329'8126	143'9742	5'0544	148'9549
Mar. 2	- 0'03	8'88	20'65	339'6690	275'7381	4'5249	150'0689
12	- 0'04	8'85	20'59	349'5255	47'5021	3'9953	151'1829
22	- 0'06	8'83	20'54	359'3820	179'2661	3'4658	152'2970
Apr. 1	- 0'07	8'80	20'48	9'2384	311'0301	2'9362	153'4110
11	- 0'08	8'78	20'42	19'0949	82'7940	2'4067	154'5251
21	- 0'09	8'75	20'36	28'9514	214'5580	1'8772	155'6391
May 1	- 0'09	8'73	20'31	38'8079	346'3220	1'3476	156'7531
11	- 0'08	8'71	20'26	48'6643	118'0859	0'8181	157'8672
21	- 0'07	8'69	20'22	58'5208	249'8499	0'2885	158'9812
June 31	- 0'04	8'68	20'18	68'3773	21'6139	359'7590	160'0953
10	- 0'01	8'67	20'16	78'2338	153'3778	359'2295	161'2093
20	+ 0'02	8'66	20'14	88'0902	285'1418	358'6999	162'3233
July 30	+ 0'05	8'65	20'13	97'9467	56'9058	358'1704	163'4374
10	+ 0'08	8'66	20'14	107'8032	188'6698	357'6408	164'5514
20	+ 0'11	8'66	20'15	117'6596	320'4337	357'1113	165'6654
Aug. 30	+ 0'13	8'67	20'17	127'5161	92'1977	356'5817	166'7795
9	+ 0'14	8'68	20'20	137'3726	223'9617	356'0522	167'8935
19	+ 0'15	8'70	20'23	147'2291	355'7256	355'5227	169'0076
Sept. 29	+ 0'14	8'72	20'27	157'0855	127'4896	354'9931	170'1216
8	+ 0'13	8'74	20'32	166'9420	259'2536	354'4636	171'2356
18	+ 0'12	8'76	20'38	176'7985	31'0175	353'9340	172'3497
Oct. 28	+ 0'10	8'78	20'43	186'6550	162'7815	353'4045	173'4637
8	+ 0'08	8'81	20'49	196'5114	294'5455	352'8750	174'5778
18	+ 0'07	8'84	20'55	206'3679	66'3095	352'3454	175'6918
Nov. 28	+ 0'07	8'86	20'61	216'2244	198'0734	351'8159	176'8058
7	+ 0'07	8'88	20'66	226'0808	329'8374	351'2863	177'9199
17	+ 0'09	8'90	20'71	235'9373	101'6014	350'7568	179'0339
Dec. 27	+ 0'11	8'92	20'75	245'7938	233'3653	350'2273	180'1480
7	+ 0'14	8'93	20'78	255'6503	5'1293	349'6977	181'2620
17	+ 0'18	8'94	20'80	265'5067	136'8933	349'1682	182'3760
27	+ 0'22	8'95	20'82	275'3632	268'6572	348'6386	183'4901
37	+ 0'26	8'95	20'82	285'2197	40'4212	348'1091	184'6041

		Daily Motion.			
Mean Obliquity, 1913'0	.....23 27 2'17	+	+	-	+
Precession for the Year 1913	.....50'2594	°	°	°	°
Precession for 1 Day	.....0'1376	0'98565	13'17640	0'05295	0'11140



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	18 45 41.24	11.048	S. 23 2 14.7	12.05	16 17.57	3 33.52	1.188
Thur. 2	18 50 6.25	11.035	22 57 11.7	13.20	16 17.57	4 1.89	1.175
Frid. 3	18 54 30.93	11.021	22 51 41.1	14.34	16 17.56	4 29.94	1.161
Sat. 4	18 58 55.25	11.005	22 45 43.2	15.48	16 17.54	4 57.63	1.145
Sun. 5	19 3 19.18	10.988	22 39 18.1	16.61	16 17.53	5 24.92	1.128
Mon. 6	19 7 42.67	10.969	22 32 26.0	17.73	16 17.51	5 51.78	1.110
Tues. 7	19 12 5.70	10.950	22 25 7.1	18.84	16 17.48	6 18.18	1.090
Wed. 8	19 16 28.25	10.929	22 17 21.7	19.94	16 17.45	6 44.10	1.069
Thur. 9	19 20 50.28	10.906	22 9 10.0	21.03	16 17.42	7 9.49	1.047
Frid. 10	19 25 11.75	10.883	22 0 32.1	22.11	16 17.38	7 34.34	1.023
Sat. 11	19 29 32.64	10.858	21 51 28.5	23.18	16 17.34	7 58.61	0.999
Sun. 12	19 33 52.93	10.832	21 41 59.4	24.24	16 17.30	8 22.27	0.973
Mon. 13	19 38 12.59	10.806	21 32 5.0	25.29	16 17.25	8 45.31	0.946
Tues. 14	19 42 31.60	10.778	21 21 45.7	26.32	16 17.20	9 7.70	0.919
Wed. 15	19 46 49.94	10.750	21 11 1.7	27.34	16 17.14	9 29.42	0.891
Thur. 16	19 51 7.59	10.720	20 59 53.5	28.34	16 17.08	9 50.45	0.861
Frid. 17	19 55 24.52	10.690	20 48 21.3	29.34	16 17.01	10 10.77	0.832
Sat. 18	19 59 40.72	10.660	20 36 25.4	30.31	16 16.94	10 30.37	0.801
Sun. 19	20 3 56.19	10.629	20 24 6.2	31.28	16 16.86	10 49.23	0.770
Mon. 20	20 8 10.91	10.597	20 11 24.0	32.23	16 16.77	11 7.33	0.738
Tues. 21	20 12 24.86	10.565	19 58 19.2	33.16	16 16.68	11 24.67	0.707
Wed. 22	20 16 38.04	10.533	19 44 52.1	34.09	16 16.59	11 41.25	0.675
Thur. 23	20 20 50.44	10.501	19 31 3.0	35.00	16 16.48	11 57.06	0.643
Frid. 24	20 25 2.07	10.468	19 16 52.3	35.89	16 16.37	12 12.09	0.610
Sat. 25	20 29 12.92	10.436	19 2 20.3	36.77	16 16.26	12 26.34	0.577
Sun. 26	20 33 22.98	10.403	18 47 27.4	37.63	16 16.13	12 39.80	0.545
Mon. 27	20 37 32.25	10.370	18 32 13.9	38.48	16 16.01	12 52.48	0.512
Tues. 28	20 41 40.73	10.337	18 16 40.2	39.32	16 15.88	13 4.37	0.479
Wed. 29	20 45 48.41	10.303	18 0 46.7	40.13	16 15.74	13 15.46	0.446
Thur. 30	20 49 55.29	10.270	17 44 33.8	40.94	16 15.60	13 25.76	0.412
Frid. 31	20 54 1.36	10.236	17 28 1.8	41.72	16 15.45	13 35.25	0.379
Sat. 32	20 58 6.63	10.203	S. 17 11 11.2	42.49	16 15.30	13 43.94	0.345

\* 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	18 45 40.59	S. 23 2 15.5	280 29 51.4	S. 0.18	3 33.45	18 42 7.14
2	18 50 5.51	22 57 12.6	281 31 2.0	0.30	4 1.81	18 46 3.70
3	18 54 30.10	22 51 42.2	282 32 12.8	0.40	4 29.85	18 50 0.25
4	18 58 54.34	22 45 44.5	283 33 23.8	0.48	4 57.53	18 53 56.81
5	19 3 18.19	22 39 19.6	284 34 34.9	0.54	5 24.81	18 57 53.37
6	19 7 41.60	22 32 27.7	285 35 45.9	0.57	5 51.67	19 1 49.93
7	19 12 4.56	22 25 9.1	286 36 56.8	0.56	6 18.07	19 5 46.49
8	19 16 27.03	22 17 24.0	287 38 7.6	0.53	6 43.98	19 9 43.05
9	19 20 48.98	22 9 12.5	288 39 18.0	0.47	7 9.37	19 13 39.61
10	19 25 10.38	22 0 34.9	289 40 28.0	0.38	7 34.21	19 17 36.17
11	19 29 31.20	21 51 31.6	290 41 37.6	0.28	7 58.47	19 21 32.72
12	19 33 51.42	21 42 2.8	291 42 46.7	0.18	8 22.14	19 25 29.28
13	19 38 11.01	21 32 8.7	292 43 55.1	S. 0.07	8 45.17	19 29 25.84
14	19 42 29.96	21 21 49.7	293 45 2.9	N. 0.06	9 7.56	19 33 22.40
15	19 46 48.24	21 11 6.0	294 46 10.0	0.18	9 29.28	19 37 18.96
16	19 51 5.83	20 59 58.1	295 47 16.3	0.29	9 50.31	19 41 15.52
17	19 55 22.71	20 48 26.2	296 48 21.7	0.39	10 10.63	19 45 12.07
18	19 59 38.86	20 36 30.7	297 49 26.3	0.47	10 30.23	19 49 8.63
19	20 3 54.27	20 24 11.8	298 50 30.1	0.52	10 49.09	19 53 5.19
20	20 8 8.94	20 11 30.0	299 51 32.9	0.53	11 7.19	19 57 1.75
21	20 12 22.85	19 58 25.5	300 52 34.9	0.52	11 24.54	20 0 58.31
22	20 16 35.99	19 44 58.7	301 53 36.2	0.47	11 41.12	20 4 54.86
23	20 20 48.35	19 31 9.9	302 54 36.6	0.40	11 56.93	20 8 51.42
24	20 24 59.94	19 16 59.5	303 55 36.3	0.31	12 11.97	20 12 47.98
25	20 29 10.75	19 2 27.9	304 56 35.4	0.19	12 26.22	20 16 44.54
26	20 33 20.78	18 47 35.3	305 57 33.8	N. 0.05	12 39.69	20 20 41.09
27	20 37 30.02	18 32 22.2	306 58 31.6	S. 0.08	12 52.38	20 24 37.65
28	20 41 38.47	18 16 48.8	307 59 28.7	0.22	13 4.27	20 28 34.21
29	20 45 46.13	18 0 55.6	309 0 25.2	0.34	13 15.37	20 32 30.76
30	20 49 52.99	17 44 43.0	310 1 20.9	0.44	13 25.67	20 36 27.32
31	20 53 59.05	17 28 11.3	311 2 15.9	0.52	13 35.17	20 40 23.88
32	20 58 4.30	S. 17 11 20.9	312 3 10.2	S. 0.58	13 43.86	20 44 20.44



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 58 6.63	10.203	S. 17 11 11.2	42.49	16 15.30	13 43.94	0.345
Sun. 2	21 2 11.09	10.169	16 54 2.4	43.24	16 15.15	13 51.82	0.311
Mon. 3	21 6 14.74	10.135	16 36 35.7	43.97	16 14.99	13 58.89	0.278
Tues. 4	21 10 17.57	10.101	16 18 51.6	44.69	16 14.83	14 5.15	0.244
Wed. 5	21 14 19.59	10.067	16 0 50.6	45.39	16 14.67	14 10.60	0.210
Thur. 6	21 18 20.79	10.033	15 42 33.0	46.07	16 14.51	14 15.23	0.176
Frid. 7	21 22 21.18	9.999	15 23 59.3	46.73	16 14.34	14 19.06	0.143
Sat. 8	21 26 20.76	9.966	15 5 9.9	47.37	16 14.17	14 22.08	0.109
Sun. 9	21 30 19.54	9.932	14 46 5.3	48.00	16 14.00	14 24.29	0.075
Mon. 10	21 34 17.51	9.899	14 26 45.9	48.61	16 13.82	14 25.70	0.042
Tues. 11	21 38 14.69	9.866	14 7 12.1	49.20	16 13.64	14 26.32	0.009
Wed. 12	21 42 11.08	9.833	13 47 24.4	49.77	16 13.46	14 26.15	0.023
Thur. 13	21 46 6.69	9.801	13 27 23.2	50.32	16 13.27	14 25.21	0.055
Frid. 14	21 50 1.53	9.769	13 7 8.9	50.86	16 13.08	14 23.50	0.087
Sat. 15	21 53 55.60	9.737	12 46 42.0	51.37	16 12.89	14 21.02	0.119
Sun. 16	21 57 48.92	9.706	12 26 3.0	51.87	16 12.69	14 17.79	0.150
Mon. 17	22 1 41.50	9.676	12 5 12.1	52.36	16 12.49	14 13.83	0.180
Tues. 18	22 5 33.36	9.646	11 44 9.8	52.82	16 12.29	14 9.15	0.210
Wed. 19	22 9 24.52	9.617	11 22 56.6	53.27	16 12.08	14 3.77	0.239
Thur. 20	22 13 14.99	9.589	11 1 32.8	53.71	16 11.87	13 57.70	0.267
Frid. 21	22 17 4.79	9.562	10 39 58.7	54.13	16 11.65	13 50.97	0.294
Sat. 22	22 20 53.95	9.535	10 18 14.8	54.53	16 11.42	13 43.59	0.321
Sun. 23	22 24 42.48	9.509	9 56 21.4	54.91	16 11.20	13 35.58	0.346
Mon. 24	22 28 30.40	9.484	9 34 18.9	55.29	16 10.97	13 26.97	0.371
Tues. 25	22 32 17.73	9.460	9 12 7.7	55.64	16 10.73	13 17.78	0.395
Wed. 26	22 36 4.49	9.437	8 49 48.1	55.98	16 10.49	13 8.01	0.419
Thur. 27	22 39 50.70	9.414	8 27 20.6	56.30	16 10.25	12 57.69	0.441
Frid. 28	22 43 36.37	9.392	8 4 45.5	56.61	16 10.00	12 46.84	0.463
Sat. 29	22 47 21.53	9.371	S. 7 42 3.3	56.90	16 9.76	12 35.47	0.484

\*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 58 4.30	S. 17 11 20.9	312 3 10.2	S. 0.58	13 43.86	20 44 20.44
2	21 2 8.74	16 54 12.3	313 4 3.6	0.61	13 51.75	20 48 16.99
3	21 6 12.37	16 36 45.9	314 4 56.0	0.60	13 58.83	20 52 13.55
4	21 10 15.20	16 19 2.1	315 5 47.3	0.57	14 5.09	20 56 10.10
5	21 14 17.21	16 1 1.3	316 6 37.6	0.51	14 10.55	21 0 6.66
6	21 18 18.41	15 42 43.9	317 7 26.7	0.43	14 15.19	21 4 3.22
7	21 22 18.80	15 24 10.4	318 8 14.5	0.33	14 19.02	21 7 59.77
8	21 26 18.38	15 5 21.2	319 9 1.0	0.22	14 22.05	21 11 56.33
9	21 30 17.16	14 46 16.8	320 9 46.0	S. 0.10	14 24.27	21 15 52.89
10	21 34 15.13	14 26 57.5	321 10 29.6	N. 0.03	14 25.69	21 19 49.44
11	21 38 12.32	14 7 23.9	322 11 11.6	0.15	14 26.32	21 23 46.00
12	21 42 8.72	13 47 36.3	323 11 52.0	0.27	14 26.16	21 27 42.55
13	21 46 4.33	13 27 35.3	324 12 30.7	0.37	14 25.22	21 31 39.11
14	21 49 59.18	13 7 21.1	325 13 7.7	0.45	14 23.52	21 35 35.66
15	21 53 53.27	12 46 54.3	326 13 42.9	0.51	14 21.05	21 39 32.22
16	21 57 46.60	12 26 15.3	327 14 16.3	0.53	14 17.83	21 43 28.77
17	22 1 39.20	12 5 24.5	328 14 47.9	0.53	14 13.87	21 47 25.33
18	22 5 31.09	11 44 22.3	329 15 17.7	0.49	14 9.20	21 51 21.89
19	22 9 22.27	11 23 9.1	330 15 45.8	0.42	14 3.83	21 55 18.44
20	22 13 12.76	11 1 45.3	331 16 12.1	0.33	13 57.77	21 59 14.99
21	22 17 2.59	10 40 11.2	332 16 36.7	0.21	13 51.04	22 3 11.55
22	22 20 51.77	10 18 27.3	333 16 59.8	N. 0.09	13 43.66	22 7 8.11
23	22 24 40.32	9 56 33.9	334 17 21.3	S. 0.05	13 35.66	22 11 4.66
24	22 28 28.27	9 34 31.3	335 17 41.2	0.19	13 27.05	22 15 1.21
25	22 32 15.63	9 12 20.0	336 17 59.7	0.32	13 17.86	22 18 57.77
26	22 36 2.42	8 50 0.4	337 18 16.8	0.43	13 8.10	22 22 54.32
27	22 39 48.66	8 27 32.8	338 18 32.4	0.51	12 57.79	22 26 50.88
28	22 43 34.37	8 4 57.6	339 18 46.5	0.58	12 46.94	22 30 47.43
29	22 47 19.57	S. 7 42 15.2	340 18 59.1	S. 0.60	12 35.58	22 34 43.99



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	22 47 21.53	9.371	S. 7 42 3.3	56.90	16 9.76	12 35.47	0.484
Sun. 2	22 51 6.19	9.351	7 19 14.3	57.17	16 9.51	12 23.61	0.504
Mon. 3	22 54 50.36	9.331	6 56 18.9	57.43	16 9.26	12 11.27	0.524
Tues. 4	22 58 34.07	9.312	6 33 17.6	57.67	16 9.00	11 58.46	0.543
Wed. 5	23 2 17.33	9.293	6 10 10.7	57.89	16 8.75	11 45.19	0.562
Thur. 6	23 6 0.15	9.275	5 46 58.7	58.10	16 8.50	11 31.49	0.579
Frid. 7	23 9 42.55	9.258	5 23 42.0	58.29	16 8.24	11 17.38	0.596
Sat. 8	23 13 24.55	9.242	5 0 20.9	58.46	16 7.99	11 2.87	0.613
Sun. 9	23 17 6.16	9.226	4 36 55.9	58.61	16 7.73	10 47.97	0.629
Mon. 10	23 20 47.41	9.211	4 13 27.4	58.75	16 7.47	10 32.70	0.643
Tues. 11	23 24 28.31	9.197	3 49 55.9	58.87	16 7.21	10 17.09	0.657
Wed. 12	23 28 8.87	9.184	3 26 21.6	58.98	16 6.96	10 1.15	0.671
Thur. 13	23 31 49.12	9.171	3 2 45.0	59.06	16 6.70	9 44.89	0.684
Frid. 14	23 35 29.07	9.159	2 39 6.6	59.13	16 6.44	9 28.33	0.696
Sat. 15	23 39 8.74	9.147	2 15 26.7	59.19	16 6.18	9 11.49	0.707
Sun. 16	23 42 48.15	9.137	1 51 45.6	59.23	16 5.91	8 54.40	0.717
Mon. 17	23 46 27.33	9.128	1 28 3.7	59.25	16 5.65	8 37.07	0.727
Tues. 18	23 50 6.29	9.119	1 4 21.5	59.26	16 5.39	8 19.52	0.735
Wed. 19	23 53 45.05	9.111	0 40 39.2	59.26	16 5.12	8 1.77	0.743
Thur. 20	23 57 23.64	9.105	S. 0 16 57.2	59.24	16 4.85	7 43.85	0.750
Frid. 21	0 1 2.08	9.099	N. 0 6 44.2	59.20	16 4.58	7 25.79	0.755
Sat. 22	0 4 40.39	9.094	0 30 24.6	59.16	16 4.30	7 7.61	0.760
Sun. 23	0 8 18.61	9.091	0 54 3.7	59.10	16 4.03	6 49.32	0.764
Mon. 24	0 11 56.76	9.089	1 17 41.2	59.02	16 3.75	6 30.96	0.766
Tues. 25	0 15 34.86	9.087	1 41 16.8	58.94	16 3.47	6 12.56	0.767
Wed. 26	0 19 12.93	9.086	2 4 50.2	58.84	16 3.19	5 54.13	0.768
Thur. 27	0 22 51.00	9.087	2 28 21.1	58.72	16 2.91	5 35.69	0.768
Frid. 28	0 26 29.09	9.088	2 51 49.0	58.59	16 2.62	5 17.28	0.766
Sat. 29	0 30 7.21	9.090	3 15 13.6	58.45	16 2.34	4 58.91	0.764
Sun. 30	0 33 45.40	9.093	3 38 34.6	58.29	16 2.06	4 40.59	0.762
Mon. 31	0 37 23.67	9.096	4 1 51.7	58.12	16 1.77	4 22.35	0.758
Tues. 32	0 41 2.03	9.101	N. 4 25 4.4	57.93	16 1.49	4 4.21	0.754

\* 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	22 47 19.57	S. 7 42 15.2	340 18 59.1	S. 0.60	12 35.58	22 34 43.99
2	22 51 4.26	7 19 26.0	341 19 10.2	0.59	12 23.72	22 38 40.54
3	22 54 48.47	6 56 30.5	342 19 19.7	0.57	12 11.37	22 42 37.10
4	22 58 32.21	6 33 29.0	343 19 27.5	0.52	11 58.56	22 46 33.65
5	23 2 15.51	6 10 22.0	344 19 33.7	0.45	11 45.30	22 50 30.20
6	23 5 58.37	5 47 9.8	345 19 38.1	0.35	11 31.60	22 54 26.76
7	23 9 40.81	5 23 52.9	346 19 40.7	0.23	11 17.49	22 58 23.31
8	23 13 22.85	5 0 31.7	347 19 41.4	S. 0.12	11 2.98	23 2 19.87
9	23 17 4.50	4 37 6.5	348 19 40.2	N. 0.01	10 48.08	23 6 16.42
10	23 20 45.79	4 13 37.8	349 19 37.0	0.15	10 32.82	23 10 12.97
11	23 24 26.73	3 50 6.0	350 19 31.7	0.28	10 17.21	23 14 9.53
12	23 28 7.34	3 26 31.5	351 19 24.3	0.39	10 1.26	23 18 6.08
13	23 31 47.63	3 2 54.7	352 19 14.7	0.48	9 45.00	23 22 2.63
14	23 35 27.62	2 39 16.0	353 19 2.9	0.54	9 28.44	23 25 59.19
15	23 39 7.34	2 15 35.7	354 18 48.9	0.58	9 11.60	23 29 55.74
16	23 42 46.80	1 51 54.3	355 18 32.6	0.59	8 54.50	23 33 52.30
17	23 46 26.02	1 28 12.2	356 18 13.9	0.56	8 37.17	23 37 48.85
18	23 50 5.02	1 4 29.7	357 17 52.9	0.50	8 19.62	23 41 45.40
19	23 53 43.83	0 40 47.1	358 17 29.7	0.42	8 1.87	23 45 41.96
20	23 57 22.46	S. 0 17 4.8	359 17 4.3	0.31	7 43.95	23 49 38.51
21	0 1 0.95	N. 0 6 36.8	0 16 36.7	0.17	7 25.89	23 53 35.06
22	0 4 39.31	0 30 17.5	1 16 6.9	N. 0.03	7 7.70	23 57 31.62
23	0 8 17.58	0 53 56.9	2 15 35.1	S. 0.12	6 49.41	0 1 28.17
24	0 11 55.77	1 17 34.8	3 15 1.4	0.25	6 31.05	0 5 24.72
25	0 15 33.91	1 41 10.8	4 14 25.7	0.36	6 12.64	0 9 21.28
26	0 19 12.03	2 4 44.5	5 13 48.2	0.47	5 54.20	0 13 17.83
27	0 22 50.15	2 28 15.6	6 13 8.9	0.54	5 35.76	0 17 14.39
28	0 26 28.29	2 51 43.8	7 12 27.8	0.58	5 17.35	0 21 10.94
29	0 30 6.46	3 15 8.7	8 11 45.0	0.60	4 58.97	0 25 7.49
30	0 33 44.69	3 38 30.1	9 11 0.4	0.58	4 40.65	0 29 4.05
31	0 37 23.00	4 1 47.5	10 10 14.0	0.53	4 22.41	0 33 0.60
32	0 41 1.41	N. 4 25 0.5	11 9 25.8	S. 0.47	4 4.26	0 36 57.15



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	° / ' "	"	' "		
Tues. 1	0 41 2'03	9'101	N. 4 25 4'4	57'93	16 1'49	4 4'21	0'754
Wed. 2	0 44 40'51	9'106	4 48 12'4	57'73	16 1'21	3 46'18	0'749
Thur. 3	0 48 19'12	9'112	5 11 15'4	57'51	16 0'93	3 28'28	0'743
Frid. 4	0 51 57'88	9'118	5 34 13'0	57'28	16 0'65	3 10'53	0'736
Sat. 5	0 55 36'80	9'126	5 57 4'8	57'03	16 0'37	2 52'95	0'729
Sun. 6	0 59 15'91	9'134	6 19 50'4	56'76	16 0'09	2 35'55	0'721
Mon. 7	1 2 55'21	9'142	6 42 29'5	56'49	15 59'82	2 18'35	0'712
Tues. 8	1 6 34'72	9'151	7 5 1'7	56'19	15 59'54	2 1'36	0'703
Wed. 9	1 10 14'46	9'161	7 27 26'7	55'88	15 59'27	1 44'59	0'694
Thur. 10	1 13 54'44	9'171	7 49 44'0	55'55	15 59'00	1 28'06	0'683
Frid. 11	1 17 34'68	9'182	8 11 53'3	55'21	15 58'74	1 11'79	0'672
Sat. 12	1 21 15'19	9'194	8 33 54'3	54'86	15 58'47	0 55'79	0'661
Sun. 13	1 24 55'98	9'206	8 55 46'6	54'49	15 58'21	0 40'07	0'649
Mon. 14	1 28 37'06	9'218	9 17 29'9	54'11	15 57'94	0 24'64	0'636
Tues. 15	1 32 18'46	9'232	9 39 3'8	53'71	15 57'68	0 9'53	0'623
Wed. 16	1 36 0'20	9'246	10 0 28'0	53'30	15 57'42	0 5'25	0'609
Thur. 17	1 39 42'28	9'261	10 21 42'1	52'87	15 57'16	0 19'69	0'594
Frid. 18	1 43 24'72	9'276	10 42 45'9	52'44	15 56'90	0 33'77	0'579
Sat. 19	1 47 7'54	9'292	11 3 39'1	51'99	15 56'64	0 47'46	0'562
Sun. 20	1 50 50'76	9'310	11 24 21'4	51'53	15 56'38	1 0'76	0'545
Mon. 21	1 54 34'40	9'328	11 44 52'5	51'05	15 56'12	1 13'64	0'527
Tues. 22	1 58 18'48	9'346	12 5 12'0	50'57	15 55'86	1 26'08	0'509
Wed. 23	2 2 3'01	9'365	12 25 19'7	50'07	15 55'61	1 38'07	0'490
Thur. 24	2 5 48'01	9'385	12 45 15'4	49'56	15 55'35	1 49'60	0'470
Frid. 25	2 9 33'49	9'405	13 4 58'6	49'03	15 55'09	2 0'64	0'450
Sat. 26	2 13 19'47	9'426	13 24 29'0	48'49	15 54'84	2 11'19	0'429
Sun. 27	2 17 5'96	9'448	13 43 46'3	47'94	15 54'58	2 21'23	0'408
Mon. 28	2 20 52'96	9'469	14 2 50'2	47'38	15 54'33	2 30'75	0'386
Tues. 29	2 24 40'49	9'492	14 21 40'4	46'80	15 54'08	2 39'75	0'364
Wed. 30	2 28 28'56	9'514	14 40 16'5	46'20	15 53'83	2 48'22	0'341
Thur. 31	2 32 17'18	9'537	N. 14 58 38'2	45'60	15 53'59	2 56'14	0'319

\*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	° / ' "	° / ' "	"		
1	0 41 1'41	N. 4 25 0'5	11 9 25'8	S. 0'47	4 4'26	0 36 57'15
2	0 44 39'93	4 48 8'8	12 8 35'8	0'37	3 46'23	0 40 53'71
3	0 48 18'59	5 11 12'1	13 7 43'9	0'27	3 28'33	0 44 50'26
4	0 51 57'39	5 34 10'0	14 6 50'1	0'15	3 10'58	0 48 46'82
5	0 55 36'36	5 57 2'0	15 5 54'4	S. 0'02	2 52'99	0 52 43'37
6	0 59 15'51	6 19 47'9	16 4 56'7	N. 0'12	2 35'58	0 56 39'92
7	1 2 54'85	6 42 27'3	17 3 57'0	0'24	2 18'38	1 0 36'48
8	1 6 34'41	7 4 59'8	18 2 55'2	0'36	2 1'38	1 4 33'03
9	1 10 14'20	7 27 25'0	19 1 51'3	0'45	1 44'61	1 8 29'59
10	1 13 54'22	7 49 42'6	20 0 45'3	0'52	1 28'08	1 12 26'14
11	1 17 34'50	8 11 52'2	20 59 37'0	0'58	1 11'81	1 16 22'69
12	1 21 15'04	8 33 53'5	21 58 26'5	0'59	0 55'80	1 20 19'25
13	1 24 55'87	8 55 46'0	22 57 13'7	0'57	0 40'07	1 24 15'80
14	1 28 37'00	9 17 29'5	23 55 58'6	0'52	0 24'64	1 28 12'36
15	1 32 18'44	9 39 3'6	24 54 41'3	0'44	0 9'53	1 32 8'91
16	1 36 0'21	10 0 28'0	25 53 21'7	0'33	0 5'26	1 36 5'47
17	1 39 42'33	10 21 42'4	26 51 59'8	0'21	0 19'70	1 40 2'02
18	1 43 24'81	10 42 46'4	27 50 35'8	N. 0'07	0 33'77	1 43 58'58
19	1 47 7'66	11 3 39'8	28 49 9'7	S. 0'09	0 47'47	1 47 55'13
20	1 50 50'92	11 24 22'3	29 47 41'5	0'23	1 0'77	1 51 51'69
21	1 54 34'60	11 44 53'5	30 46 11'4	0'35	1 13'65	1 55 48'24
22	1 58 18'71	12 5 13'2	31 44 39'4	0'45	1 26'09	1 59 44'80
23	2 2 3'27	12 25 21'1	32 43 5'7	0'53	1 38'08	2 3 41'35
24	2 5 48'30	12 45 16'9	33 41 30'3	0'59	1 49'61	2 7 37'91
25	2 9 33'81	13 5 0'2	34 39 53'2	0'61	2 0'66	2 11 34'46
26	2 13 19'81	13 24 30'7	35 38 14'5	0'60	2 11'21	2 15 31'02
27	2 17 6'32	13 43 48'1	36 36 34'3	0'58	2 21'25	2 19 27'57
28	2 20 53'36	14 2 52'1	37 34 52'6	0'52	2 30'77	2 23 24'13
29	2 24 40'92	14 21 42'4	38 33 9'3	0'43	2 39'77	2 27 20'68
30	2 28 29'01	14 40 18'6	39 31 24'5	0'32	2 48'23	2 31 17'24
31	2 32 17'64	N. 14 58 40'4	40 29 38'1	S. 0'22	2 56'15	2 35 13'80



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
Thur. 1	2 32 17.18	9.537	N. 14 58 38.2	45.60	15 53.59	2 56.14	0.319
Frid. 2	2 36 6.34	9.560	15 16 45.2	44.98	15 53.35	3 3.51	0.295
Sat. 3	2 39 56.06	9.583	15 34 37.1	44.34	15 53.11	3 10.32	0.272
Sun. 4	2 43 46.34	9.607	15 52 13.6	43.69	15 52.87	3 16.58	0.249
Mon. 5	2 47 37.19	9.630	16 9 34.4	43.03	15 52.64	3 22.28	0.226
Tues. 6	2 51 28.60	9.654	16 26 39.1	42.35	15 52.42	3 27.41	0.202
Wed. 7	2 55 20.58	9.678	16 43 27.4	41.66	15 52.20	3 31.98	0.179
Thur. 8	2 59 13.12	9.701	16 59 59.0	40.96	15 51.98	3 35.98	0.155
Frid. 9	3 3 6.22	9.724	17 16 13.6	40.25	15 51.76	3 39.42	0.132
Sat. 10	3 6 59.89	9.748	17 32 10.8	39.51	15 51.55	3 42.30	0.108
Sun. 11	3 10 54.13	9.771	17 47 50.3	38.77	15 51.34	3 44.62	0.085
Mon. 12	3 14 48.92	9.794	18 3 11.9	38.02	15 51.14	3 46.38	0.062
Tues. 13	3 18 44.26	9.817	18 18 15.2	37.25	15 50.94	3 47.59	0.039
Wed. 14	3 22 40.16	9.841	18 32 59.9	36.47	15 50.74	3 48.25	0.016
Thur. 15	3 26 36.61	9.864	18 47 25.9	35.69	15 50.55	3 48.35	0.007
Frid. 16	3 30 33.62	9.887	19 1 32.8	34.89	15 50.35	3 47.90	0.030
Sat. 17	3 34 31.18	9.910	19 15 20.4	34.07	15 50.16	3 46.90	0.053
Sun. 18	3 38 29.29	9.933	19 28 48.4	33.25	15 49.98	3 45.35	0.076
Mon. 19	3 42 27.95	9.956	19 41 56.6	32.42	15 49.79	3 43.25	0.099
Tues. 20	3 46 27.16	9.979	19 54 44.7	31.58	15 49.61	3 40.61	0.121
Wed. 21	3 50 26.92	10.001	20 7 12.5	30.73	15 49.43	3 37.42	0.144
Thur. 22	3 54 27.22	10.024	20 19 19.8	29.87	15 49.25	3 33.69	0.167
Frid. 23	3 58 28.06	10.046	20 31 6.4	29.00	15 49.07	3 29.41	0.189
Sat. 24	4 2 29.44	10.069	20 42 32.0	28.12	15 48.90	3 24.60	0.211
Sun. 25	4 6 31.35	10.090	20 53 36.3	27.23	15 48.73	3 19.27	0.233
Mon. 26	4 10 33.78	10.112	21 4 19.1	26.33	15 48.56	3 13.42	0.254
Tues. 27	4 14 36.71	10.133	21 14 40.3	25.42	15 48.39	3 7.06	0.275
Wed. 28	4 18 40.14	10.153	21 24 39.5	24.50	15 48.23	3 0.20	0.296
Thur. 29	4 22 44.06	10.173	21 34 16.5	23.58	15 48.07	2 52.86	0.316
Frid. 30	4 26 48.45	10.192	21 43 31.2	22.64	15 47.92	2 45.05	0.335
Sat. 31	4 30 53.30	10.211	21 52 23.4	21.70	15 47.77	2 36.78	0.354
Sun. 32	4 34 58.59	10.229	N. 22 0 52.8	20.74	15 47.63	2 28.07	0.371

\* 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 32 17.64	N. 14 58 40.4	40 29 38.1	S. 0.22	2 56.15	2 35 13.80
2	2 36 6.83	15 16 47.4	41 27 50.2	S. 0.10	3 3.52	2 39 10.35
3	2 39 56.57	15 34 39.4	42 26 0.8	N. 0.03	3 10.34	2 43 6.91
4	2 43 46.87	15 52 16.0	43 24 9.8	0.15	3 16.60	2 47 3.46
5	2 47 37.73	16 9 36.8	44 22 17.3	0.27	3 22.29	2 51 0.02
6	2 51 29.16	16 26 41.5	45 20 23.1	0.37	3 27.42	2 54 56.58
7	2 55 21.15	16 43 29.9	46 18 27.3	0.44	3 31.99	2 58 53.13
8	2 59 13.70	17 0 1.5	47 16 29.8	0.49	3 35.99	3 2 49.69
9	3 3 6.82	17 16 16.0	48 14 30.5	0.51	3 39.43	3 6 46.25
10	3 7 0.50	17 32 13.2	49 12 29.5	0.50	3 42.31	3 10 42.80
11	3 10 54.74	17 47 52.7	50 10 26.7	0.44	3 44.62	3 14 39.36
12	3 14 49.53	18 3 14.3	51 8 22.1	0.37	3 46.38	3 18 35.92
13	3 18 44.88	18 18 17.6	52 6 15.6	0.28	3 47.59	3 22 32.47
14	3 22 40.78	18 33 2.3	53 4 7.3	0.15	3 48.25	3 26 29.03
15	3 26 37.24	18 47 28.2	54 1 57.3	N. 0.02	3 48.35	3 30 25.59
16	3 30 34.25	19 1 35.0	54 59 45.5	S. 0.12	3 47.90	3 34 22.14
17	3 34 31.81	19 15 22.5	55 57 32.0	0.27	3 46.90	3 38 18.70
18	3 38 29.91	19 28 50.5	56 55 17.0	0.40	3 45.35	3 42 15.26
19	3 42 28.57	19 41 58.6	57 53 0.5	0.50	3 43.25	3 46 11.82
20	3 46 27.77	19 54 46.7	58 50 42.5	0.59	3 40.60	3 50 8.37
21	3 50 27.52	20 7 14.4	59 48 23.3	0.66	3 37.41	3 54 4.93
22	3 54 27.81	20 19 21.6	60 46 2.8	0.68	3 33.68	3 58 1.49
23	3 58 28.64	20 31 8.1	61 43 41.2	0.67	3 29.40	4 1 58.05
24	4 2 30.01	20 42 33.6	62 41 18.5	0.66	3 24.59	4 5 54.60
25	4 6 31.91	20 53 37.8	63 38 54.8	0.62	3 19.26	4 9 51.16
26	4 10 34.32	21 4 20.5	64 36 30.1	0.54	3 13.40	4 13 47.72
27	4 14 37.24	21 14 41.6	65 34 4.5	0.44	3 7.04	4 17 44.28
28	4 18 40.65	21 24 40.7	66 31 38.0	0.33	3 0.19	4 21 40.84
29	4 22 44.55	21 34 17.7	67 29 10.7	0.22	2 52.85	4 25 37.39
30	4 26 48.92	21 43 32.3	68 26 42.6	S. 0.10	2 45.03	4 29 33.95
31	4 30 53.74	21 52 24.3	69 24 13.6	N. 0.02	2 36.76	4 33 30.51
32	4 34 59.01	N. 22 0 53.6	70 21 43.7	N. 0.13	2 28.06	4 37 27.07



AT GREENWICH APPARENT NOON.

Date.	THE SUN'S					Equation of Time, to be subtracted from added to Apparent Time.	Var. in i hour.
	Apparent Right Ascension.	Var. in i hour.	Apparent Declination.	Var. in i hour.	Semi-diameter.*		
	h m s	s	° / ' "	"	' "		
Sun. 1	4 34 58.59	10.229	N. 22 0 52.8	20.74	15 47.63	2 28.07	0.371
Mon. 2	4 39 4.30	10.246	22 8 59.1	19.78	15 47.49	2 18.95	0.388
Tues. 3	4 43 10.41	10.262	22 16 42.3	18.81	15 47.35	2 9.43	0.405
Wed. 4	4 47 16.90	10.278	22 24 2.2	17.84	15 47.22	1 59.52	0.420
Thur. 5	4 51 23.75	10.292	22 30 58.6	16.85	15 47.10	1 49.25	0.435
Frid. 6	4 55 30.93	10.306	22 37 31.2	15.86	15 46.98	1 38.65	0.448
Sat. 7	4 59 38.43	10.319	22 43 40.0	14.87	15 46.87	1 27.74	0.460
Sun. 8	5 3 46.22	10.330	22 49 24.9	13.87	15 46.76	1 16.55	0.472
Mon. 9	5 7 54.27	10.340	22 54 45.7	12.86	15 46.66	1 5.09	0.482
Tues. 10	5 12 2.56	10.350	22 59 42.2	11.85	15 46.56	0 53.39	0.492
Wed. 11	5 16 11.06	10.358	23 4 14.4	10.84	15 46.46	0 41.48	0.500
Thur. 12	5 20 19.76	10.366	23 8 22.3	9.82	15 46.37	0 29.37	0.508
Frid. 13	5 24 28.63	10.373	23 12 5.7	8.80	15 46.29	0 17.09	0.515
Sat. 14	5 28 37.65	10.379	23 15 24.6	7.78	15 46.21	0 4.66	0.521
Sun. 15	5 32 46.80	10.384	23 18 18.9	6.75	15 46.13	0 7.90	0.526
Mon. 16	5 36 56.07	10.388	23 20 48.5	5.72	15 46.05	0 20.57	0.530
Tues. 17	5 41 5.43	10.391	23 22 53.5	4.69	15 45.98	0 33.33	0.533
Wed. 18	5 45 14.86	10.394	23 24 33.8	3.66	15 45.91	0 46.17	0.536
Thur. 19	5 49 24.35	10.396	23 25 49.3	2.63	15 45.84	0 59.07	0.538
Frid. 20	5 53 33.87	10.397	23 26 40.1	1.60	15 45.78	1 12.00	0.539
Sat. 21	5 57 43.41	10.397	23 27 6.1	0.57	15 45.72	1 24.94	0.539
Sun. 22	6 1 52.95	10.397	23 27 7.4	0.46	15 45.67	1 37.88	0.539
Mon. 23	6 6 2.46	10.395	23 26 43.9	1.50	15 45.61	1 50.80	0.537
Tues. 24	6 10 11.92	10.393	23 25 55.6	2.53	15 45.56	2 3.67	0.535
Wed. 25	6 14 21.31	10.390	23 24 42.5	3.56	15 45.52	2 16.47	0.531
Thur. 26	6 18 30.62	10.385	23 23 4.7	4.59	15 45.48	2 29.18	0.527
Frid. 27	6 22 39.81	10.380	23 21 2.3	5.61	15 45.44	2 41.78	0.522
Sat. 28	6 26 48.86	10.374	23 18 35.2	6.64	15 45.41	2 54.24	0.516
Sun. 29	6 30 57.75	10.367	23 15 43.5	7.66	15 45.38	3 6.54	0.509
Mon. 30	6 35 6.46	10.359	23 12 27.3	8.69	15 45.36	3 18.65	0.500
Tues. 31	6 39 14.96	10.349	N. 23 8 46.6	9.70	15 45.34	3 30.56	0.491

\* 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	° / ' "	° / ' "	"		
1	4 34 59.01	N. 22 0 53.6	70 21 43.7	N. 0.13	2 28.06	4 37 27.07
2	4 39 4.60	22 8 59.9	71 19 13.1	0.23	2 18.94	4 41 23.63
3	4 43 10.77	22 16 43.0	72 16 41.6	0.31	2 9.41	4 45 20.18
4	4 47 17.24	22 24 2.8	73 14 9.3	0.36	1 59.50	4 49 16.74
5	4 51 24.06	22 30 59.1	74 11 36.0	0.39	1 49.24	4 53 13.30
6	4 55 31.21	22 37 31.7	75 9 1.8	0.39	1 38.64	4 57 9.86
7	4 59 38.68	22 43 40.4	76 6 26.7	0.35	1 27.73	5 1 6.42
8	5 3 46.44	22 49 25.2	77 3 50.5	0.28	1 16.54	5 5 2.98
9	5 7 54.46	22 54 45.9	78 1 13.3	0.19	1 5.08	5 8 59.53
10	5 12 2.71	22 59 42.4	78 58 35.0	N. 0.08	0 53.38	5 12 56.09
11	5 16 11.18	23 4 14.6	79 55 55.8	S. 0.05	0 41.47	5 16 52.65
12	5 20 19.84	23 8 22.4	80 53 15.5	0.18	0 29.37	5 20 49.21
13	5 24 28.68	23 12 5.7	81 50 34.2	0.32	0 17.00	5 24 45.77
14	5 28 37.66	23 15 24.6	82 47 52.0	0.44	0 4.66	5 28 42.33
15	5 32 46.78	23 18 18.9	83 45 8.9	0.56	0 7.90	5 32 38.88
16	5 36 56.01	23 20 48.5	84 42 25.0	0.65	0 20.57	5 36 35.44
17	5 41 5.33	23 22 53.5	85 39 40.4	0.71	0 33.33	5 40 32.00
18	5 45 14.73	23 24 33.8	86 36 55.2	0.74	0 46.17	5 44 28.56
19	5 49 24.18	23 25 49.3	87 34 9.6	0.75	0 59.06	5 48 25.12
20	5 53 33.66	23 26 40.1	88 31 23.5	0.72	1 11.99	5 52 21.68
21	5 57 43.16	23 27 6.1	89 28 37.1	0.67	1 24.93	5 56 18.24
22	6 1 52.66	23 27 7.4	90 25 50.4	0.60	1 37.87	6 0 14.80
23	6 6 2.14	23 26 43.9	91 23 3.5	0.51	1 50.78	6 4 11.35
24	6 10 11.57	23 25 55.7	92 20 16.5	0.40	2 3.65	6 8 7.91
25	6 14 20.93	23 24 42.7	93 17 29.5	0.29	2 16.45	6 12 4.47
26	6 18 30.19	23 23 4.9	94 14 42.4	0.16	2 29.16	6 16 1.03
27	6 22 39.34	23 21 2.5	95 11 55.3	S. 0.05	2 41.75	6 19 57.59
28	6 26 48.36	23 18 35.5	96 9 8.3	N. 0.06	2 54.21	6 23 54.15
29	6 30 57.22	23 15 43.9	97 6 21.4	0.16	3 6.51	6 27 50.71
30	6 35 5.89	23 12 27.8	98 3 34.6	0.24	3 18.62	6 31 47.27
31	6 39 14.35	N. 23 8 47.2	99 0 47.8	N. 0.30	3 30.53	6 35 43.82



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
Tues. 1	6 39 14.96	10.349	N. 23 8 46.6	9.70	15 45.34	3 30.56	0.491
Wed. 2	6 43 23.22	10.339	23 4 41.6	10.71	15 45.33	3 42.24	0.481
Thur. 3	6 47 31.23	10.328	23 0 12.3	11.72	15 45.32	3 53.65	0.470
Frid. 4	6 51 38.95	10.315	22 55 18.9	12.72	15 45.32	4 4.78	0.457
Sat. 5	6 55 46.36	10.302	22 50 1.5	13.72	15 45.33	4 15.60	0.444
Sun. 6	6 59 53.43	10.287	22 44 20.2	14.71	15 45.34	4 26.08	0.429
Mon. 7	7 4 0.14	10.271	22 38 15.2	15.70	15 45.36	4 36.21	0.414
Tues. 8	7 8 6.46	10.255	22 31 46.6	16.68	15 45.38	4 45.95	0.397
Wed. 9	7 12 12.38	10.238	22 24 54.7	17.65	15 45.41	4 55.28	0.380
Thur. 10	7 16 17.87	10.220	22 17 39.6	18.61	15 45.44	5 4.19	0.362
Frid. 11	7 20 22.92	10.201	22 10 1.5	19.56	15 45.48	5 12.66	0.343
Sat. 12	7 24 27.51	10.181	22 2 0.5	20.51	15 45.52	5 20.67	0.324
Sun. 13	7 28 31.63	10.161	21 53 36.9	21.45	15 45.57	5 28.21	0.304
Mon. 14	7 32 35.26	10.141	21 44 50.9	22.38	15 45.62	5 35.26	0.283
Tues. 15	7 36 38.39	10.120	21 35 42.7	23.30	15 45.67	5 41.81	0.262
Wed. 16	7 40 41.01	10.099	21 26 12.4	24.22	15 45.73	5 47.86	0.241
Thur. 17	7 44 43.12	10.077	21 16 20.3	25.12	15 45.79	5 53.40	0.220
Frid. 18	7 48 44.71	10.055	21 6 6.7	26.01	15 45.85	5 58.41	0.198
Sat. 19	7 52 45.76	10.033	20 55 31.6	26.90	15 45.91	6 2.89	0.176
Sun. 20	7 56 46.27	10.010	20 44 35.3	27.78	15 45.98	6 6.84	0.153
Mon. 21	8 0 46.24	9.987	20 33 18.1	28.65	15 46.06	6 10.25	0.130
Tues. 22	8 4 45.66	9.964	20 21 40.2	29.51	15 46.13	6 13.10	0.107
Wed. 23	8 8 44.53	9.941	20 9 41.8	30.36	15 46.21	6 15.40	0.084
Thur. 24	8 12 42.83	9.917	19 57 23.0	31.20	15 46.29	6 17.14	0.061
Frid. 25	8 16 40.56	9.894	19 44 44.2	32.03	15 46.38	6 18.31	0.037
Sat. 26	8 20 37.72	9.870	19 31 45.7	32.84	15 46.47	6 18.91	0.013
Sun. 27	8 24 34.31	9.846	19 18 27.7	33.65	15 46.56	6 18.94	0.011
Mon. 28	8 28 30.31	9.821	19 4 50.4	34.45	15 46.66	6 18.39	0.035
Tues. 29	8 32 25.73	9.797	18 50 54.1	35.24	15 46.76	6 17.25	0.060
Wed. 30	8 36 20.56	9.772	18 36 39.1	36.01	15 46.87	6 15.53	0.084
Thur. 31	8 40 14.80	9.747	18 22 5.7	36.77	15 46.99	6 13.22	0.109
Frid. 32	8 44 8.44	9.722	N. 18 7 14.2	37.52	15 47.10	6 10.31	0.134

\* 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	6 39 14.35	N. 23 8 47.2	99 0 47.8	N. 0.30	3 30.53	6 35 43.82
2	6 43 22.58	23 4 42.3	99 58 1.1	0.33	3 42.20	6 39 40.38
3	6 47 30.56	23 0 13.1	100 55 14.5	0.33	3 53.62	6 43 36.94
4	6 51 38.25	22 55 19.8	101 52 28.0	0.29	4 4.75	6 47 33.50
5	6 55 45.63	22 50 2.5	102 40 41.5	0.23	4 15.57	6 51 30.06
6	6 59 52.67	22 44 21.3	103 46 54.9	0.15	4 26.05	6 55 26.62
7	7 3 59.35	22 38 16.4	104 44 8.2	N. 0.03	4 36.18	6 59 23.17
8	7 8 5.65	22 31 48.0	105 41 21.4	S. 0.09	4 45.92	7 3 19.73
9	7 12 11.54	22 24 56.2	106 38 34.5	0.22	4 55.25	7 7 16.29
10	7 16 17.01	22 17 41.2	107 35 47.5	0.36	5 4.16	7 11 12.85
11	7 20 22.03	22 10 3.2	108 33 0.3	0.49	5 12.63	7 15 9.41
12	7 24 26.60	22 2 2.4	109 30 13.1	0.59	5 20.64	7 19 5.97
13	7 28 30.70	21 53 38.9	110 27 25.9	0.68	5 28.18	7 23 2.52
14	7 32 34.31	21 44 53.0	111 24 38.8	0.75	5 35.23	7 26 59.08
15	7 36 37.43	21 35 44.9	112 21 51.8	0.78	5 41.79	7 30 55.64
16	7 40 40.04	21 26 14.8	113 19 5.0	0.79	5 47.84	7 34 52.20
17	7 44 42.13	21 16 22.8	114 16 18.5	0.76	5 53.38	7 38 48.76
18	7 48 43.71	21 6 9.2	115 13 32.4	0.71	5 58.39	7 42 45.31
19	7 52 44.75	20 55 34.3	116 10 46.8	0.64	6 2.88	7 46 41.87
20	7 56 45.25	20 44 38.2	117 8 1.7	0.54	6 6.83	7 50 38.43
21	8 0 45.22	20 33 21.1	118 5 17.3	0.43	6 10.23	7 54 34.99
22	8 4 44.63	20 21 43.2	119 2 33.6	0.31	6 13.09	7 58 31.54
23	8 8 43.49	20 9 44.9	119 59 50.6	0.18	6 15.39	8 2 28.10
24	8 12 41.79	19 57 26.3	120 57 8.5	S. 0.06	6 17.13	8 6 24.66
25	8 16 39.52	19 44 47.6	121 54 27.3	N. 0.05	6 18.31	8 10 21.22
26	8 20 36.68	19 31 49.2	122 51 47.1	0.16	6 18.91	8 14 17.77
27	8 24 33.27	19 18 31.3	123 49 7.8	0.25	6 18.94	8 18 14.33
28	8 28 29.28	19 4 54.1	124 46 29.5	0.30	6 18.39	8 22 10.89
29	8 32 24.70	18 50 57.9	125 43 52.3	0.33	6 17.26	8 26 7.45
30	8 36 19.54	18 36 42.9	126 41 16.1	0.33	6 15.54	8 30 4.00
31	8 40 13.79	18 22 9.5	127 38 40.9	0.31	6 13.23	8 34 0.56
32	8 44 7.44	N. 18 7 18.0	128 36 6.7	N. 0.25	6 10.32	8 37 57.12



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	
Frid. 1	8 44 8.44	9.722	N. 18 7 14.2	37.52	15 47.10	6 10.31	0.134	
Sat. 2	8 48 1.47	9.697	17 52 4.8	38.26	15 47.23	6 6.80	0.159	
Sun. 3	8 51 53.90	9.672	17 36 37.9	38.98	15 47.36	6 2.68	0.184	
Mon. 4	8 55 45.72	9.646	17 20 53.8	39.69	15 47.49	5 57.95	0.210	
Tues. 5	8 59 36.92	9.621	17 4 52.8	40.39	15 47.63	5 52.61	0.235	
Wed. 6	9 3 27.51	9.595	16 48 35.2	41.07	15 47.78	5 46.66	0.261	
Thur. 7	9 7 17.48	9.569	16 32 1.4	41.74	15 47.93	5 40.09	0.286	
Frid. 8	9 11 6.84	9.544	16 15 11.8	42.39	15 48.08	5 32.91	0.312	
Sat. 9	9 14 55.59	9.519	15 58 6.6	43.04	15 48.24	5 25.13	0.337	
Sun. 10	9 18 43.74	9.494	15 40 46.1	43.66	15 48.40	5 16.75	0.362	
Mon. 11	9 22 31.29	9.469	15 23 10.7	44.28	15 48.57	5 7.77	0.386	
Tues. 12	9 26 18.26	9.445	15 5 20.6	44.89	15 48.74	4 58.21	0.410	
Wed. 13	9 30 4.66	9.421	14 47 16.1	45.48	15 48.91	4 48.08	0.434	
Thur. 14	9 33 50.49	9.398	14 28 57.5	46.06	15 49.08	4 37.39	0.457	
Frid. 15	9 37 35.77	9.375	14 10 25.2	46.63	15 49.26	4 26.14	0.480	
Sat. 16	9 41 20.51	9.353	13 51 39.4	47.18	15 49.44	4 14.36	0.502	
Sun. 17	9 45 4.73	9.332	13 32 40.5	47.72	15 49.61	4 2.06	0.523	
Mon. 18	9 48 48.44	9.311	13 13 28.6	48.26	15 49.80	3 49.24	0.544	
Tues. 19	9 52 31.64	9.290	12 54 4.1	48.78	15 49.99	3 35.93	0.565	
Wed. 20	9 56 14.36	9.270	12 34 27.3	49.28	15 50.17	3 22.14	0.585	
Thur. 21	9 59 56.61	9.251	12 14 38.6	49.77	15 50.36	3 7.87	0.604	
Frid. 22	10 3 38.41	9.232	11 54 38.1	50.26	15 50.55	2 53.15	0.622	
Sat. 23	10 7 19.77	9.214	11 34 26.2	50.73	15 50.75	2 37.99	0.640	
Sun. 24	10 11 0.70	9.197	11 14 3.2	51.18	15 50.95	2 22.41	0.658	
Mon. 25	10 14 41.22	9.180	10 53 29.4	51.63	15 51.15	2 6.42	0.675	
Tues. 26	10 18 21.34	9.164	10 32 45.1	52.06	15 51.35	1 50.03	0.691	
Wed. 27	10 22 1.08	9.148	10 11 50.6	52.48	15 51.56	1 33.26	0.706	
Thur. 28	10 25 40.45	9.133	9 50 46.3	52.88	15 51.77	1 16.13	0.721	
Frid. 29	10 29 19.47	9.119	9 29 32.5	53.27	15 51.98	0 58.64	0.736	
Sat. 30	10 32 58.14	9.104	9 8 9.5	53.64	15 52.20	0 40.80	0.750	
Sun. 31	10 36 36.48	9.091	8 46 37.7	54.00	15 52.42	0 22.64	0.763	
Mon. 32	10 40 14.50	9.078	N. 8 24 57.4	54.35	15 52.65	0 4.16	0.776	

\* 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	8 44 7.44	N. 18 7 18.0	128 36 6.7	N. 0.25	6 10.32	8 37 57.12
2	8 48 0.48	17 52 8.7	129 33 33.5	0.16	6 6.81	8 41 53.67
3	8 51 52.92	17 36 41.8	130 31 1.3	N. 0.05	6 2.70	8 45 50.23
4	8 55 44.76	17 20 57.7	131 28 29.9	S. 0.07	5 57.97	8 49 46.79
5	8 59 35.98	17 4 56.7	132 25 59.3	0.20	5 52.63	8 53 43.34
6	9 3 26.58	16 48 39.2	133 23 29.6	0.35	5 46.68	8 57 39.90
7	9 7 16.57	16 32 5.4	134 21 0.6	0.48	5 40.12	9 1 36.45
8	9 11 5.95	16 15 15.7	135 18 32.3	0.60	5 32.94	9 5 33.01
9	9 14 54.73	15 58 10.5	136 16 4.9	0.69	5 25.16	9 9 29.57
10	9 18 42.90	15 40 50.0	137 13 38.3	0.75	5 16.78	9 13 26.12
11	9 22 30.48	15 23 14.5	138 11 12.5	0.79	5 7.80	9 17 22.68
12	9 26 17.48	15 5 24.3	139 8 47.6	0.81	4 58.24	9 21 19.23
13	9 30 3.90	14 47 19.7	140 6 23.8	0.79	4 48.11	9 25 15.79
14	9 33 49.77	14 29 1.1	141 4 1.0	0.74	4 37.42	9 29 12.35
15	9 37 35.08	14 10 28.7	142 1 39.3	0.66	4 26.18	9 33 8.90
16	9 41 19.85	13 51 42.8	142 59 18.9	0.57	4 14.40	9 37 5.46
17	9 45 4.10	13 32 43.7	143 56 59.7	0.46	4 2.09	9 41 2.01
18	9 48 47.84	13 13 31.7	144 54 41.9	0.33	3 49.27	9 44 58.57
19	9 52 31.08	12 54 7.0	145 52 25.5	0.21	3 35.96	9 48 55.12
20	9 56 13.84	12 34 30.1	146 50 10.7	S. 0.08	3 22.17	9 52 51.68
21	9 59 56.13	12 14 41.2	147 47 57.4	N. 0.04	3 7.90	9 56 48.23
22	10 3 37.97	11 54 40.5	148 45 45.7	0.15	2 53.18	10 0 44.79
23	10 7 19.37	11 34 28.4	149 43 35.7	0.24	2 38.02	10 4 41.34
24	10 11 0.34	11 14 5.2	150 41 27.4	0.31	2 22.44	10 8 37.90
25	10 14 40.90	10 53 31.2	151 39 20.9	0.36	2 6.45	10 12 34.45
26	10 18 21.06	10 32 46.7	152 37 16.3	0.37	1 50.06	10 16 31.01
27	10 22 0.85	10 11 52.0	153 35 13.4	0.35	1 33.28	10 20 27.56
28	10 25 40.26	9 50 47.4	154 33 12.3	0.31	1 16.14	10 24 24.12
29	10 29 19.32	9 29 33.3	155 31 13.1	0.23	0 58.65	10 28 20.67
30	10 32 58.04	9 8 10.1	156 29 15.7	N. 0.13	0 40.81	10 32 17.23
31	10 36 36.43	8 46 38.0	157 27 20.0	0.00	0 22.64	10 36 13.78
32	10 40 14.50	N. 8 24 57.4	158 25 25.9	S. 0.13	0 4.16	10 40 10.34



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.*		
Mon. 1	h m s 10 40 14.50	s 9.078	N. 8 24 57.4	54.35	15 52.65	m s 0 4.16	s 0.776
Tues. 2	10 43 52.22	9.065	8 3 9.0	54.68	15 52.88	0 14.63	0.789
Wed. 3	10 47 29.64	9.053	7 41 12.9	54.99	15 53.12	0 33.71	0.801
Thur. 4	10 51 6.78	9.042	7 19 9.4	55.29	15 53.36	0 53.07	0.812
Frid. 5	10 54 43.65	9.031	6 56 58.8	55.58	15 53.60	1 12.70	0.823
Sat. 6	10 58 20.27	9.021	6 34 41.6	55.85	15 53.85	1 32.58	0.833
Sun. 7	11 1 56.65	9.011	6 12 18.1	56.11	15 54.09	1 52.70	0.843
Mon. 8	11 5 32.82	9.003	5 49 48.5	56.35	15 54.34	2 13.03	0.851
Tues. 9	11 9 8.79	8.995	5 27 13.2	56.58	15 54.59	2 33.55	0.859
Wed. 10	11 12 44.59	8.989	5 4 32.5	56.80	15 54.84	2 54.25	0.866
Thur. 11	11 16 20.24	8.983	4 41 46.8	57.00	15 55.10	3 15.11	0.872
Frid. 12	11 19 55.75	8.977	4 18 56.3	57.20	15 55.36	3 36.10	0.877
Sat. 13	11 23 31.15	8.973	3 56 1.3	57.38	15 55.61	3 57.19	0.881
Sun. 14	11 27 6.46	8.970	3 33 2.2	57.54	15 55.87	4 18.37	0.884
Mon. 15	11 30 41.70	8.968	3 9 59.3	57.69	15 56.13	4 39.62	0.886
Tues. 16	11 34 16.90	8.966	2 46 52.9	57.84	15 56.39	5 0.92	0.888
Wed. 17	11 37 52.08	8.966	2 23 43.2	57.96	15 56.64	5 22.24	0.888
Thur. 18	11 41 27.26	8.966	2 0 30.6	58.08	15 56.90	5 43.55	0.887
Frid. 19	11 45 2.47	8.968	1 37 15.4	58.18	15 57.16	6 4.84	0.886
Sat. 20	11 48 37.73	8.970	1 13 57.9	58.27	15 57.42	6 26.08	0.884
Sun. 21	11 52 13.05	8.974	0 50 38.4	58.35	15 57.69	6 47.25	0.880
Mon. 22	11 55 48.46	8.978	N. 0 27 17.3	58.41	15 57.95	7 8.33	0.876
Tues. 23	11 59 23.99	8.983	0 3 54.8	58.46	15 58.21	7 29.30	0.871
Wed. 24	12 2 59.65	8.989	S. 0 19 28.7	58.49	15 58.48	7 50.13	0.865
Thur. 25	12 6 35.47	8.996	0 42 52.8	58.51	15 58.74	8 10.81	0.858
Frid. 26	12 10 11.47	9.004	1 6 17.2	58.51	15 59.01	8 31.31	0.850
Sat. 27	12 13 47.66	9.012	1 29 41.5	58.50	15 59.27	8 51.62	0.842
Sun. 28	12 17 24.06	9.021	1 53 5.4	58.48	15 59.55	9 11.72	0.833
Mon. 29	12 21 0.69	9.031	2 16 28.5	58.44	15 59.82	9 31.59	0.823
Tues. 30	12 24 37.57	9.042	2 39 50.4	58.38	16 0.09	9 51.21	0.812
Wed. 31	12 28 14.71	9.053	S. 3 3 10.7	58.30	16 0.37	10 10.57	0.801

\* 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 10 40 14.50	N. 8 24 57.4	158 25 25.9	S. 0.13	m s 0 4.16	h m s 10 40 10.34
2	10 43 52.26	8 3 8.7	159 23 33.5	0.28	0 14.63	10 44 6.89
3	10 47 29.73	7 41 12.3	160 21 42.7	0.42	0 33.72	10 48 3.44
4	10 51 6.91	7 19 8.5	161 19 53.3	0.53	0 53.09	10 52 0.00
5	10 54 43.83	6 56 57.7	162 18 5.4	0.63	1 12.72	10 55 56.55
6	10 58 20.50	6 34 40.2	163 16 19.0	0.71	1 32.61	10 59 53.11
7	11 1 56.93	6 12 16.3	164 14 34.1	0.76	1 52.73	11 3 49.66
8	11 5 33.15	5 49 46.4	165 12 50.6	0.79	2 13.06	11 7 46.22
9	11 9 9.18	5 27 10.8	166 11 8.6	0.78	2 33.59	11 11 42.77
10	11 12 45.03	5 4 29.8	167 9 28.2	0.74	2 54.30	11 15 39.32
11	11 16 20.72	4 41 43.7	168 7 49.4	0.67	3 15.16	11 19 35.88
12	11 19 56.29	4 18 52.9	169 6 12.2	0.58	3 36.15	11 23 32.43
13	11 23 31.74	3 55 57.6	170 4 36.7	0.47	3 57.25	11 27 28.98
14	11 27 7.10	3 32 58.1	171 3 3.0	0.34	4 18.44	11 31 25.54
15	11 30 42.40	3 9 54.8	172 1 31.2	0.21	4 39.69	11 35 22.09
16	11 34 17.65	2 46 48.0	173 0 1.2	S. 0.09	5 0.99	11 39 18.65
17	11 37 52.89	2 23 38.0	173 58 33.2	N. 0.04	5 22.31	11 43 15.20
18	11 41 28.12	2 0 25.0	174 57 7.2	0.16	5 43.63	11 47 11.75
19	11 45 3.38	1 37 9.4	175 55 43.3	0.27	6 4.92	11 51 8.31
20	11 48 38.69	1 13 51.6	176 54 21.5	0.34	6 26.17	11 55 4.86
21	11 52 14.06	0 50 31.8	177 53 1.9	0.39	6 47.35	11 59 1.42
22	11 55 49.53	0 27 10.3	178 51 44.5	0.41	7 8.44	12 2 57.97
23	11 59 25.11	N. 0 3 47.5	179 50 29.4	0.41	7 29.41	12 6 54.52
24	12 3 0.83	S. 0 19 36.3	180 49 16.5	0.38	7 50.25	12 10 51.08
25	12 6 36.70	0 43 0.7	181 48 5.9	0.31	8 10.93	12 14 47.63
26	12 10 12.75	1 6 25.5	182 46 57.6	0.21	8 31.43	12 18 44.18
27	12 13 48.99	1 29 50.2	183 45 51.6	N. 0.08	8 51.74	12 22 40.74
28	12 17 25.45	1 53 14.4	184 44 47.8	S. 0.05	9 11.84	12 26 37.29
29	12 21 2.13	2 16 37.8	185 43 46.1	0.19	9 31.71	12 30 33.84
30	12 24 39.06	2 40 0.0	186 42 46.5	0.33	9 51.34	12 34 30.40
31	12 28 16.25	S. 3 3 20.6	187 41 48.9	S. 0.46	10 10.70	12 38 26.95



AT GREENWICH APPARENT NOON.								
Date.	THE SUN'S					Equation of Time, to be subtracted from Apparent Time.	Var. in I hour.	
	Apparent Right Ascension.	Var. in I hour.	Apparent Declination.	Var. in I hour.	Semi-diameter.*			
	h m s	s	° / ' "	"	' "	m s	s	
Wed. 1	12 28 14.71	9.053	S. 3 3 10.7	58.30	16 0.37	10 10.57	0.801	
Thur. 2	12 31 52.13	9.065	3 26 29.0	58.21	16 0.65	10 29.65	0.789	
Frid. 3	12 35 29.84	9.078	3 49 45.0	58.11	16 0.93	10 48.44	0.776	
Sat. 4	12 39 7.86	9.091	4 12 58.2	57.98	16 1.21	11 6.92	0.763	
Sun. 5	12 42 46.21	9.105	4 36 8.2	57.84	16 1.49	11 25.08	0.749	
Mon. 6	12 46 24.91	9.120	4 59 14.7	57.69	16 1.78	11 42.89	0.735	
Tues. 7	12 50 3.97	9.135	5 22 17.4	57.53	16 2.06	12 0.34	0.719	
Wed. 8	12 53 43.41	9.152	5 45 15.9	57.34	16 2.34	12 17.40	0.702	
Thur. 9	12 57 23.26	9.170	6 8 9.8	57.14	16 2.62	12 34.05	0.685	
Frid. 10	13 1 3.55	9.188	6 30 58.8	56.93	16 2.91	12 50.27	0.667	
Sat. 11	13 4 44.29	9.207	6 53 42.5	56.70	16 3.19	13 6.05	0.648	
Sun. 12	13 8 25.49	9.227	7 16 20.5	56.46	16 3.47	13 21.36	0.628	
Mon. 13	13 12 7.18	9.248	7 38 52.5	56.20	16 3.75	13 36.18	0.607	
Tues. 14	13 15 49.39	9.270	8 1 18.2	55.93	16 4.02	13 50.49	0.585	
Wed. 15	13 19 32.13	9.293	8 23 37.3	55.65	16 4.30	14 4.27	0.562	
Thur. 16	13 23 15.43	9.316	8 45 49.3	55.34	16 4.57	14 17.49	0.539	
Frid. 17	13 26 59.30	9.340	9 7 53.8	55.03	16 4.84	14 30.14	0.515	
Sat. 18	13 30 43.77	9.366	9 29 50.6	54.70	16 5.11	14 42.19	0.489	
Sun. 19	13 34 28.85	9.392	9 51 39.3	54.35	16 5.38	14 53.63	0.463	
Mon. 20	13 38 14.57	9.419	10 13 19.5	53.99	16 5.64	15 4.43	0.436	
Tues. 21	13 42 0.95	9.446	10 34 50.8	53.61	16 5.91	15 14.58	0.409	
Wed. 22	13 45 48.00	9.475	10 56 12.8	53.21	16 6.17	15 24.06	0.381	
Thur. 23	13 49 35.74	9.504	11 17 25.1	52.80	16 6.43	15 32.85	0.351	
Frid. 24	13 53 24.19	9.534	11 38 27.4	52.38	16 6.69	15 40.93	0.322	
Sat. 25	13 57 13.36	9.564	11 59 19.3	51.93	16 6.95	15 48.30	0.292	
Sun. 26	14 1 3.26	9.595	12 20 0.2	51.47	16 7.20	15 54.94	0.261	
Mon. 27	14 4 53.90	9.626	12 40 29.8	50.99	16 7.46	16 0.84	0.230	
Tues. 28	14 8 45.29	9.657	13 0 47.7	50.49	16 7.72	16 5.98	0.198	
Wed. 29	14 12 37.45	9.689	13 20 53.4	49.97	16 7.97	16 10.36	0.167	
Thur. 30	14 16 30.38	9.721	13 40 46.5	49.44	16 8.23	16 13.98	0.135	
Frid. 31	14 20 24.08	9.754	14 0 26.6	48.89	16 8.48	16 16.83	0.103	
Sat. 32	14 24 18.56	9.786	S. 14 19 53.1	48.31	16 8.74	16 18.90	0.070	

\*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	12 28 16.25	S. 3 3 20.6	187 41 48.9	S. 0.46	10 10.70	12 38 26.95
2	12 31 53.72	3 26 39.2	188 40 53.3	0.57	10 29.79	12 42 23.50
3	12 35 31.48	3 49 55.4	189 39 59.5	0.66	10 48.58	12 46 20.06
4	12 39 9.55	4 13 8.9	190 39 7.6	0.71	11 7.06	12 50 16.61
5	12 42 47.04	4 36 19.2	191 38 17.4	0.75	11 25.22	12 54 13.17
6	12 46 26.68	4 59 26.0	192 37 29.0	0.75	11 43.03	12 58 9.72
7	12 50 5.79	5 22 29.0	193 36 42.3	0.72	12 0.48	13 2 6.27
8	12 53 45.29	5 45 27.7	194 35 57.4	0.66	12 17.54	13 6 2.83
9	12 57 25.19	6 8 21.8	195 35 14.3	0.57	12 34.19	13 9 59.38
10	13 1 5.52	6 31 10.9	196 34 33.0	0.47	12 50.42	13 13 55.94
11	13 4 46.30	6 53 54.8	197 33 53.6	0.35	13 6.20	13 17 52.49
12	13 8 27.54	7 16 33.0	198 33 16.0	0.22	13 21.50	13 21 49.04
13	13 12 9.28	7 39 5.2	199 32 40.3	S. 0.08	13 36.32	13 25 45.60
14	13 15 51.53	8 1 31.1	200 32 6.6	N. 0.04	13 50.63	13 29 42.15
15	13 19 34.31	8 23 50.3	201 31 34.9	0.15	14 4.40	13 33 38.71
16	13 23 17.65	8 46 2.4	202 31 5.2	0.26	14 17.62	13 37 35.26
17	13 27 1.56	9 8 7.1	203 30 37.6	0.34	14 30.26	13 41 31.82
18	13 30 46.06	9 30 4.0	204 30 12.2	0.39	14 42.31	13 45 28.37
19	13 34 31.18	9 51 52.8	205 29 49.0	0.43	14 53.74	13 49 24.93
20	13 38 16.94	10 13 33.1	206 29 28.0	0.44	15 4.54	13 53 21.48
21	13 42 3.35	10 35 4.4	207 29 9.2	0.41	15 14.69	13 57 18.03
22	13 45 50.43	10 56 26.4	208 28 52.6	0.35	15 24.16	14 1 14.59
23	13 49 38.20	11 17 38.8	209 28 38.4	0.26	15 32.94	14 5 11.14
24	13 53 26.68	11 38 41.1	210 28 26.5	0.16	15 41.02	14 9 7.70
25	13 57 15.87	11 59 32.9	211 28 16.8	N. 0.03	15 48.38	14 13 4.25
26	14 1 5.80	12 20 13.9	212 28 9.4	S. 0.11	15 55.01	14 17 0.81
27	14 4 56.47	12 40 43.5	213 28 4.1	0.24	16 0.90	14 20 57.36
28	14 8 47.89	13 1 1.3	214 28 0.9	0.36	16 6.03	14 24 53.92
29	14 12 40.07	13 21 6.9	215 27 59.7	0.47	16 10.41	14 28 50.48
30	14 16 33.01	13 40 59.9	216 28 0.5	0.57	16 14.02	14 32 47.03
31	14 20 26.73	14 0 39.8	217 28 3.1	0.63	16 16.86	14 36 43.59
32	14 24 21.23	S. 14 20 6.2	218 28 7.4	S. 0.66	16 18.92	14 40 40.14



AT GREENWICH APPARENT NOON.								
Date.	THE SUN'S					Equation of Time, to be subtracted from Apparent Time.	Var. in I hour.	
	Apparent Right Ascension.	Var. in I hour.	Apparent Declination.	Var. in I hour.	Semi-diameter.*			
	h m s	s	° ' "	"	' "	m s	s	
Sat. 1	14 24 18.56	9.786	S. 14 19 53.1	48.31	16 8.74	16 18.90	0.070	
Sun. 2	14 28 13.83	9.819	14 39 5.7	47.73	16 8.99	16 20.18	0.037	
Mon. 3	14 32 9.89	9.852	14 58 4.0	47.12	16 9.25	16 20.67	0.004	
Tues. 4	14 36 6.75	9.886	15 16 47.6	46.50	16 9.50	16 20.37	0.029	
Wed. 5	14 40 4.42	9.920	15 35 16.0	45.86	16 9.75	16 19.26	0.063	
Thur. 6	14 44 2.90	9.954	15 53 28.9	45.20	16 9.99	16 17.34	0.097	
Frid. 7	14 48 2.20	9.988	16 11 25.8	44.53	16 10.24	16 14.61	0.131	
Sat. 8	14 52 2.32	10.022	16 29 6.4	43.84	16 10.48	16 11.06	0.165	
Sun. 9	14 56 3.27	10.057	16 46 30.3	43.14	16 10.72	16 6.68	0.200	
Mon. 10	15 0 5.06	10.092	17 3 37.0	42.41	16 10.95	16 1.46	0.235	
Tues. 11	15 4 7.68	10.127	17 20 26.2	41.68	16 11.18	15 55.41	0.270	
Wed. 12	15 8 11.15	10.162	17 36 57.6	40.93	16 11.41	15 48.52	0.305	
Thur. 13	15 12 15.46	10.197	17 53 10.7	40.16	16 11.63	15 40.78	0.340	
Frid. 14	15 16 20.62	10.233	18 9 5.2	39.37	16 11.85	15 32.20	0.375	
Sat. 15	15 20 26.63	10.268	18 24 40.7	38.57	16 12.06	15 22.77	0.411	
Sun. 16	15 24 33.50	10.304	18 39 56.7	37.76	16 12.27	15 12.49	0.446	
Mon. 17	15 28 41.22	10.339	18 54 53.0	36.93	16 12.47	15 1.36	0.481	
Tues. 18	15 32 49.79	10.375	19 9 29.2	36.08	16 12.68	14 49.38	0.517	
Wed. 19	15 36 59.21	10.410	19 23 44.9	35.22	16 12.87	14 36.55	0.552	
Thur. 20	15 41 9.47	10.445	19 37 39.7	34.34	16 13.06	14 22.88	0.587	
Frid. 21	15 45 20.57	10.480	19 51 13.2	33.45	16 13.25	14 8.38	0.622	
Sat. 22	15 49 32.51	10.515	20 4 25.1	32.54	16 13.44	13 53.04	0.656	
Sun. 23	15 53 45.27	10.548	20 17 15.0	31.61	16 13.62	13 36.89	0.690	
Mon. 24	15 57 58.83	10.582	20 29 42.5	30.67	16 13.80	13 19.93	0.723	
Tues. 25	16 2 13.19	10.614	20 41 47.2	29.71	16 13.97	13 2.18	0.756	
Wed. 26	16 6 28.32	10.646	20 53 28.8	28.75	16 14.15	12 43.66	0.787	
Thur. 27	16 10 44.20	10.677	21 4 47.0	27.76	16 14.32	12 24.39	0.818	
Frid. 28	16 15 0.82	10.707	21 15 41.3	26.76	16 14.48	12 4.38	0.848	
Sat. 29	16 19 18.15	10.736	21 26 11.5	25.75	16 14.65	11 43.67	0.877	
Sun. 30	16 23 36.16	10.764	21 36 17.2	24.72	16 14.81	11 22.27	0.905	
Mon. 31	16 27 54.84	10.792	S. 21 45 58.1	23.68	16 14.97	11 0.21	0.932	

\* 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	14 24 21.23	S. 14 20 6.2	218 28 7.4	S. 0.66	16 18.92	14 40 40.14
2	14 28 16.51	14 39 18.7	219 28 13.4	0.67	16 20.19	14 44 36.70
3	14 32 12.58	14 58 16.9	220 28 21.1	0.64	16 20.67	14 48 33.25
4	14 36 9.45	15 17 0.3	221 28 30.3	0.59	16 20.36	14 52 29.81
5	14 40 7.12	15 35 28.5	222 28 41.0	0.51	16 19.25	14 56 26.37
6	14 44 5.60	15 53 41.1	223 28 53.3	0.40	16 17.32	15 0 22.92
7	14 48 4.90	16 11 37.8	224 29 7.0	0.29	16 14.57	15 4 19.48
8	14 52 5.02	16 29 18.2	225 29 22.3	0.18	16 11.01	15 8 16.03
9	14 56 5.97	16 46 41.8	226 29 39.1	S. 0.05	16 6.62	15 12 12.59
10	15 0 7.75	17 3 48.3	227 29 57.5	N. 0.07	16 1.40	15 16 9.15
11	15 4 10.37	17 20 37.3	228 30 17.4	0.19	15 55.34	15 20 5.70
12	15 8 13.82	17 37 8.4	229 30 38.8	0.29	15 48.44	15 24 2.26
13	15 12 18.12	17 53 21.2	230 31 1.8	0.38	15 40.70	15 27 58.82
14	15 16 23.27	18 9 15.4	231 31 26.4	0.45	15 32.11	15 31 55.38
15	15 20 29.27	18 24 50.6	232 31 52.7	0.49	15 22.67	15 35 51.93
16	15 24 36.11	18 40 6.3	233 32 20.7	0.50	15 12.38	15 39 48.49
17	15 28 43.81	18 55 2.3	234 32 50.4	0.48	15 1.24	15 43 45.05
18	15 32 52.35	19 9 38.2	235 33 21.8	0.43	14 49.25	15 47 41.60
19	15 37 1.74	19 23 53.5	236 33 55.0	0.35	14 36.42	15 51 38.16
20	15 41 11.98	19 37 47.9	237 34 30.0	0.24	14 22.74	15 55 34.72
21	15 45 23.05	19 51 21.1	238 35 6.7	N. 0.13	14 8.23	15 59 31.28
22	15 49 34.95	20 4 32.7	239 35 45.2	0.00	13 52.89	16 3 27.84
23	15 53 47.66	20 17 22.2	240 36 25.5	S. 0.14	13 36.73	16 7 24.39
24	15 58 1.18	20 29 49.3	241 37 7.4	0.26	13 19.77	16 11 20.95
25	16 2 15.49	20 41 53.7	242 37 50.9	0.37	13 2.02	16 15 17.51
26	16 6 30.57	20 53 35.0	243 38 35.9	0.47	12 43.50	16 19 14.07
27	16 10 46.41	21 4 52.8	244 39 22.4	0.54	12 24.22	16 23 10.63
28	16 15 2.97	21 15 46.7	245 40 10.2	0.58	12 4.21	16 27 7.18
29	16 19 20.24	21 26 16.5	246 40 59.2	0.59	11 43.50	16 31 3.74
30	16 23 38.20	21 36 21.9	247 41 49.3	0.57	11 22.10	16 35 0.30
31	16 27 56.82	S. 21 46 2.5	248 42 40.5	S. 0.53	11 0.04	16 38 56.86



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.*	m s	s	
	h m s	s	° / ' "	"	' "	m s	s	
Mon. 1	16 27 54.84	10.792	S. 21 45 58.1	23.68	16 14.97	11 0.21	0.932	
Tues. 2	16 32 14.16	10.818	21 55 14.0	22.63	16 15.13	10 37.51	0.959	
Wed. 3	16 36 34.10	10.843	22 4 4.5	21.57	16 15.28	10 14.19	0.984	
Thur. 4	16 40 54.63	10.867	22 12 20.4	20.50	16 15.43	9 50.29	1.008	
Frid. 5	16 45 15.72	10.890	22 20 28.4	19.41	16 15.58	9 25.82	1.031	
Sat. 6	16 49 37.36	10.912	22 28 1.3	18.32	16 15.72	9 0.81	1.053	
Sun. 7	16 53 59.51	10.933	22 35 7.9	17.22	16 15.85	8 35.29	1.074	
Mon. 8	16 58 22.15	10.953	22 41 48.0	16.11	16 15.99	8 9.28	1.093	
Tues. 9	17 2 45.26	10.972	22 48 1.3	14.99	16 16.11	7 42.81	1.112	
Wed. 10	17 7 8.80	10.989	22 53 47.7	13.87	16 16.23	7 15.90	1.130	
Thur. 11	17 11 32.75	11.006	22 59 6.9	12.73	16 16.35	6 48.58	1.146	
Frid. 12	17 15 57.08	11.021	23 3 58.9	11.60	16 16.46	6 20.88	1.162	
Sat. 13	17 20 21.77	11.036	23 8 23.5	10.45	16 16.56	5 52.82	1.176	
Sun. 14	17 24 46.80	11.049	23 12 20.5	9.30	16 16.66	5 24.43	1.189	
Mon. 15	17 29 12.13	11.061	23 15 49.8	8.14	16 16.75	4 55.75	1.201	
Tues. 16	17 33 37.73	11.072	23 18 51.2	6.98	16 16.83	4 26.79	1.212	
Wed. 17	17 38 3.58	11.081	23 21 24.7	5.81	16 16.91	3 57.58	1.222	
Thur. 18	17 42 29.64	11.090	23 23 30.2	4.64	16 16.99	3 28.15	1.230	
Frid. 19	17 46 55.89	11.097	23 25 7.6	3.47	16 17.05	2 58.54	1.237	
Sat. 20	17 51 22.30	11.103	23 26 16.8	2.29	16 17.12	2 28.77	1.243	
Sun. 21	17 55 48.83	11.107	23 26 57.7	1.12	16 17.17	1 58.88	1.247	
Mon. 22	18 0 15.44	11.110	23 27 10.4	0.06	16 17.23	1 28.91	1.250	
Tues. 23	18 4 42.10	11.111	23 26 54.7	1.25	16 17.27	0 58.89	1.251	
Wed. 24	18 9 8.78	11.111	23 26 10.6	2.43	16 17.32	0 28.85	1.251	
Thur. 25	18 13 35.43	11.109	23 24 58.2	3.61	16 17.36	0 1.16	1.249	
Frid. 26	18 18 2.02	11.106	23 23 17.5	4.79	16 17.39	0 31.11	1.246	
Sat. 27	18 22 28.51	11.101	23 21 8.5	5.96	16 17.43	1 0.95	1.240	
Sun. 28	18 26 54.85	11.094	23 18 31.3	7.14	16 17.46	1 30.65	1.234	
Mon. 29	18 31 21.01	11.086	23 15 26.0	8.31	16 17.48	2 0.17	1.226	
Tues. 30	18 35 46.96	11.076	23 11 52.6	9.47	16 17.50	2 29.48	1.216	
Wed. 31	18 40 12.65	11.064	23 7 51.3	10.63	16 17.52	2 58.53	1.204	
Thur. 32	18 44 38.05	11.051	S. 23 3 22.2	11.79	16 17.53	3 27.29	1.192	

\*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 27 56.82	S. 21 46 2.5	248 42 40.5	S. 0.53	11 0.04	16 38 56.86
2	16 32 16.08	21 55 18.0	249 43 32.6	0.45	10 37.34	16 42 53.42
3	16 36 35.95	22 4 8.2	250 44 25.6	0.35	10 14.03	16 46 49.98
4	16 40 56.41	22 12 32.7	251 45 19.4	0.24	9 50.13	16 50 46.53
5	16 45 17.43	22 20 31.4	252 46 14.0	S. 0.12	9 25.66	16 54 43.09
6	16 49 38.99	22 28 4.1	253 47 9.4	0.00	9 0.65	16 58 39.65
7	16 54 1.07	22 35 10.4	254 48 5.5	N. 0.12	8 35.14	17 2 36.21
8	16 58 23.64	22 41 50.2	255 49 2.4	0.23	8 9.14	17 6 32.77
9	17 2 46.66	22 48 3.2	256 50 0.0	0.34	7 42.67	17 10 29.33
10	17 7 10.12	22 53 49.3	257 50 58.2	0.43	7 15.76	17 14 25.89
11	17 11 33.99	22 59 8.3	258 51 57.1	0.49	6 48.45	17 18 22.45
12	17 15 58.25	23 4 0.1	259 52 56.7	0.52	6 20.76	17 22 19.00
13	17 20 22.86	23 8 24.5	260 53 57.1	0.54	5 52.71	17 26 15.56
14	17 24 47.80	23 12 21.3	261 54 58.2	0.52	5 24.33	17 30 12.12
15	17 29 13.03	23 15 50.4	262 56 0.0	0.48	4 55.65	17 34 8.68
16	17 33 38.55	23 18 51.7	263 57 2.7	0.40	4 26.69	17 38 5.24
17	17 38 4.31	23 21 25.1	264 58 6.2	0.30	3 57.49	17 42 1.80
18	17 42 30.28	23 23 30.5	265 59 10.6	0.19	3 28.08	17 45 58.36
19	17 46 56.44	23 25 7.8	267 0 15.8	N. 0.06	2 58.48	17 49 54.92
20	17 51 22.76	23 26 16.9	268 1 21.8	S. 0.08	2 28.72	17 53 51.48
21	17 55 49.19	23 26 57.8	269 2 28.6	0.20	1 58.84	17 57 48.04
22	18 0 15.71	23 27 10.4	270 3 36.2	0.32	1 28.88	18 1 44.60
23	18 4 42.28	23 26 54.7	271 4 44.6	0.41	0 58.87	18 5 41.16
24	18 9 8.87	23 26 10.6	272 5 53.6	0.49	0 28.84	18 9 37.71
25	18 13 35.43	23 24 58.2	273 7 3.1	0.52	0 1.16	18 13 34.27
26	18 18 1.93	23 23 17.5	274 8 13.1	0.54	0 31.09	18 17 30.83
27	18 22 28.32	23 21 8.6	275 9 23.4	0.51	1 0.93	18 21 27.39
28	18 26 54.57	23 18 31.5	276 10 34.0	0.47	1 30.63	18 25 23.95
29	18 31 20.65	23 15 26.3	277 11 44.7	0.40	2 0.14	18 29 20.51
30	18 35 46.50	23 11 53.0	278 12 55.5	0.31	2 29.43	18 33 17.07
31	18 40 12.10	23 7 51.8	279 14 6.2	0.19	2 58.47	18 37 13.63
32	18 44 37.41	S. 23 3 22.9	280 15 16.8	S. 0.07	3 27.22	18 41 10.19



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	211 12 49.1	217 49 27.3	S. 2 0 25.6	S. 2 31 30.6	23.79	19 49.6	7 25.5
2	224 22 36.2	230 52 30.0	3 0 16.9	3 26 25.9	24.79	20 39.4	8 14.2
3	237 19 21.5	243 43 21.2	3 49 42.0	4 9 51.8	25.79	21 31.6	9 5.2
4	250 4 38.1	256 23 19.0	4 26 44.9	4 40 13.1	26.79	22 25.4	9 58.4
5	262 39 28.9	268 53 11.7	4 50 11.0	4 56 35.7	27.79	23 19.7	10 52.6
6	275 4 30.3	281 13 27.5	4 59 26.9	4 58 46.5	28.79	* *	11 46.4
7	287 20 6.4	293 24 31.2	4 54 39.0	4 47 10.6	0.06	0 12.6	12 38.2
8	299 26 47.3	305 27 2.3	4 36 29.6	4 22 46.0	1.06	1 3.0	13 26.9
9	311 25 26.6	317 22 12.6	4 6 11.1	3 46 57.5	2.06	1 50.1	14 12.4
10	323 17 36.7	329 11 57.7	3 25 18.4	3 1 28.0	3.06	2 34.0	14 55.0
11	335 5 38.2	340 59 4.2	2 35 40.8	2 8 12.2	4.06	3 15.4	15 35.3
12	346 52 44.6	352 47 11.5	1 39 17.6	1 9 12.8	5.06	3 55.0	16 14.6
13	358 42 59.5	4 40 46.2	S. 0 38 14.2	S. 0 6 38.5	6.06	4 34.1	16 53.7
14	10 41 10.7	16 44 53.6	N. 0 25 16.8	N. 0 57 13.4	7.06	5 13.7	17 34.2
15	22 52 35.8	29 4 58.8	1 28 51.8	1 59 51.4	8.06	5 55.3	18 17.1
16	35 22 42.3	41 46 23.9	2 29 50.2	2 58 24.5	9.06	6 40.0	19 4.1
17	48 16 37.5	54 53 51.5	3 25 8.7	3 49 36.6	10.06	7 29.4	19 56.1
18	61 38 27.7	68 30 38.5	4 11 20.1	4 29 50.9	11.06	8 24.4	20 54.1
19	75 30 26.1	82 37 40.6	4 44 40.9	4 55 23.2	12.06	9 25.0	21 57.0
20	89 51 58.8	97 12 43.5	5 1 33.8	5 2 53.2	13.06	10 29.7	23 2.6
21	104 39 4.8	112 10 0.2	4 59 8.0	4 50 11.3	14.06	11 35.2	* *
22	119 44 17.3	127 20 37.1	4 36 5.3	4 17 1.6	15.06	12 38.3	0 7.2
23	134 57 37.3	142 33 56.0	3 53 20.3	3 25 30.2	16.06	13 37.1	1 8.3
24	150 8 15.6	157 39 26.3	2 54 6.9	2 19 51.4	17.06	14 31.4	2 4.8
25	165 6 28.1	172 28 32.7	1 43 27.7	N. 1 5 40.7	18.06	15 22.1	2 57.1
26	179 45 4.3	186 55 38.7	N. 0 27 14.7	S. 0 11 8.4	19.06	16 10.5	3 46.5
27	194 0 3.2	200 58 15.1	S. 0 48 49.9	1 25 15.6	20.06	16 58.3	4 34.4
28	207 50 19.6	214 36 29.4	1 59 55.6	2 32 24.3	21.06	17 46.6	5 22.3
29	221 17 1.8	227 52 17.2	3 2 20.1	3 29 25.5	22.06	18 36.3	6 11.2
30	234 22 38.8	240 48 30.4	3 53 26.6	4 14 12.4	23.06	19 28.0	7 1.9
31	247 10 15.9	253 28 18.7	4 31 34.7	4 45 27.8	24.06	20 21.3	7 54.5
32	259 43 0.9	265 54 43.1	S. 4 55 48.1	S. 5 2 33.9	25.06	21 15.1	8 48.2

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 41.14	15 36.18	57 28.11	57 9.93					
2	15 31.40	15 26.80	56 52.39	56 35.57					
3	15 22.40	15 18.21	56 19.46	56 4.11					
4	15 14.23	15 10.45	55 49.49	55 35.62					
5	15 6.86	15 3.47	55 22.48	55 10.08					
6	15 0.29	14 57.34	54 58.44	54 47.62					
7	14 54.61	14 52.15	54 37.65	54 28.61					
8	14 49.96	14 48.09	54 20.61	54 13.75					
9	14 46.56	14 45.42	54 8.14	54 3.94					
10	14 44.69	14 44.43	54 1.28	54 0.32					
11	14 44.66	14 45.44	54 1.18	54 4.04					
12	14 46.80	14 48.77	54 9.02	54 16.21					
13	14 51.37	14 54.63	54 25.75	54 37.68					
14	14 58.55	15 3.13	54 52.06	55 8.86					
15	15 8.38	15 14.25	55 28.06	55 49.56					
16	15 20.69	15 27.66	56 13.20	56 38.74					
17	15 35.07	15 42.82	57 5.88	57 34.25					
18	15 50.76	15 58.75	58 3.36	58 32.66					
19	16 6.64	16 14.23	59 1.55	59 29.33					
20	16 21.31	16 27.69	59 55.28	60 18.67					
21	16 33.19	16 37.63	60 38.82	60 55.08					
22	16 40.87	16 42.82	61 6.95	61 14.10					
23	16 43.43	16 42.69	61 16.32	61 13.60					
24	16 40.65	16 37.41	61 6.13	60 54.27					
25	16 33.10	16 27.89	60 38.51	60 19.43					
26	16 21.96	16 15.49	59 57.68	59 33.94					
27	16 8.64	16 1.59	59 8.85	58 43.04					
28	15 54.50	15 47.49	58 17.05	57 51.36					
29	15 40.67	15 34.12	57 26.36	57 2.38					
30	15 27.91	15 22.09	56 39.64	56 18.31					
31	15 16.69	15 11.72	55 58.52	55 40.32					
32	15 7.19	15 3.10	55 23.73	55 8.72					

WEDNESDAY 1.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	13 53 21.86	20.690	S. 13 46 46.2	141.41
4	14 1 39.63	20.792	14 42 42.0	138.23
8	14 9 59.98	20.904	15 37 20.1	134.91
12	14 18 23.10	21.024	16 30 36.2	131.41
16	14 26 49.18	21.151	17 22 26.4	127.74
20	14 35 18.38	21.284	S. 18 12 46.5	123.91

THURSDAY 2.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	14 43 50.86	21.422	S. 19 1 32.8	119.92
4	14 52 26.72	21.566	19 48 41.2	115.75
8	15 1 6.04	21.712	20 34 7.7	111.43
12	15 9 48.92	21.860	21 17 48.7	106.95
16	15 18 35.37	22.010	21 59 40.4	102.33
20	15 27 25.39	22.159	S. 22 39 39.2	97.54

FRIDAY 3.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	15 36 18.98	22.305	S. 23 17 41.4	92.61
4	15 45 16.06	22.450	23 53 43.6	87.54
8	15 54 16.53	22.589	24 27 42.6	82.34
12	16 3 20.30	22.723	24 59 35.0	77.01
16	16 12 27.19	22.849	25 29 18.1	71.56
20	16 21 37.02	22.967	S. 25 56 48.9	66.00

SATURDAY 4.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	16 30 49.57	23.077	S. 26 22 5.0	60.32
4	16 40 4.59	23.173	26 45 3.9	54.57
8	16 49 21.79	23.257	27 5 43.6	48.72
12	16 58 40.87	23.330	27 24 2.3	42.82
16	17 8 1.50	23.387	27 39 58.4	36.85
20	17 17 23.32	23.429	S. 27 53 30.7	30.83

SUNDAY 5.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	17 26 45.96	23.455	S. 28 4 38.2	24.79
4	17 36 9.02	23.464	28 13 20.4	18.72
8	17 45 32.11	23.457	28 19 37.0	12.67
12	17 54 54.84	23.432	28 23 28.2	6.61
16	18 4 16.78	23.392	28 24 54.3	0.57
20	18 13 37.52	23.333	S. 28 23 56.0	5.42

MONDAY 6.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	18 22 56.67	23.259	S. 28 20 34.4	11.37
4	18 32 13.83	23.167	28 14 50.9	17.24
8	18 41 28.61	23.062	28 6 47.4	23.04
12	18 50 40.65	22.940	27 56 25.6	28.76
16	18 59 49.61	22.805	27 43 48.0	34.36
20	19 8 55.16	22.656	S. 27 28 57.1	39.87



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, WEDNESDAY 8, THURSDAY 9, FRIDAY 10, SATURDAY 11, SUNDAY 12, MONDAY 13, TUESDAY 14, WEDNESDAY 15, THURSDAY 16, FRIDAY 17, SATURDAY 18, SUNDAY 19, MONDAY 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, WEDNESDAY 22, THURSDAY 23, FRIDAY 24, SATURDAY 25, SUNDAY 26, MONDAY 27, TUESDAY 28, WEDNESDAY 29, THURSDAY 30, FRIDAY 31, SATURDAY, FEB. 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	259 43 0'9	265 54 43'1	S. 4 55 48'1	S. 5 2 33'9	25'06	21 15'1	8 48'2
2	272 3 44'1	278 10 20'7	5 5 45'8	5 5 26'1	26'06	22 8'1	9 41'8
3	284 14 48'1	290 17 19'5	5 1 38'4	4 54 28'4	27'06	22 59'0	10 33'9
4	296 18 7'5	302 17 23'4	4 44 3'3	4 30 31'8	28'06	23 46'9	11 23'3
5	308 15 17'8	314 12 1'4	4 14 4'3	3 54 52'5	29'06	* *	12 9'7
6	320 7 45'4	326 2 41'4	3 33 9'1	3 9 8'4	0'28	0 31'7	12 53'0
7	331 57 2'6	337 51 3'3	2 43 5'7	2 15 16'5	1'28	1 13'8	13 34'1
8	343 44 59'9	349 39 11'0	1 45 57'8	1 15 27'0	2'28	1 53'9	14 13'5
9	355 33 57'3	1 29 41'8	S. 0 44 1'6	S. 0 12 0'1	3'28	2 33'0	14 52'5
10	7 26 50'3	13 25 50'7	N. 0 20 19'1	N. 0 52 37'0	4'28	3 12'1	15 32'0
11	19 27 13'3	25 31 30'3	1 24 34'1	1 55 50'5	5'28	3 52'3	16 13'2
12	31 39 15'6	37 51 3'8	2 26 6'0	2 54 59'3	6'28	4 34'8	16 57'4
13	44 7 29'9	50 29 8'3	3 22 8'5	3 47 11'4	7'28	5 21'0	17 45'8
14	56 56 32'0	63 30 10'8	4 9 44'7	4 29 24'3	8'28	6 11'9	18 39'4
15	70 10 30'5	76 57 50'9	4 45 46'4	4 58 27'0	9'28	7 8'1	19 38'0
16	83 52 24'5	90 54 14'3	5 7 3'2	5 11 13'9	10'28	8 8'9	20 40'5
17	98 3 13'0	105 19 1'4	5 10 41'0	5 5 10'8	11'28	9 12'5	21 44'5
18	112 41 7'2	120 8 46'2	4 54 35'1	4 38 53'1	12'28	10 16'0	22 46'8
19	127 41 1'4	135 16 46'0	4 18 12'0	3 52 48'1	13'28	11 16'8	23 45'8
20	142 54 45'0	150 33 38'9	3 23 6'7	2 49 41'2	14'28	12 13'8	* *
21	158 12 6'3	165 48 48'0	2 13 12'7	1 34 27'5	15'28	13 7'4	0 41'0
22	173 22 30'5	180 52 7'8	N. 0 54 14'9	N. 0 13 25'1	16'28	13 58'4	1 33'1
23	188 16 44'0	195 35 34'9	S. 0 27 13'1	S. 1 6 54'4	17'28	14 48'2	2 23'4
24	202 48 8'1	209 54 2'3	1 44 58'5	2 20 50'4	18'28	15 38'2	3 13'1
25	216 53 7'4	223 45 23'3	2 54 1'3	3 24 8'1	19'28	16 29'2	4 3'5
26	230 30 57'4	237 10 4'8	3 50 53'5	4 14 5'2	20'28	17 21'8	4 55'3
27	243 43 5'4	250 10 23'5	4 33 35'0	4 49 18'3	21'28	18 15'9	5 48'7
28	256 32 25'8	262 49 41'3	5 1 13'7	5 9 22'0	22'28	19 10'3	6 43'1
29	269 2 39'2	275 11 49'3	S. 5 13 46'0	S. 5 14 29'9	23'28	20 4'1	7 37'4

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 7'19	15 3'10	55 23'73	55 8'72					
2	14 59'44	14 56'18	54 55'29	54 43'36					
3	14 53'31	14 50'83	54 32'87	54 23'78					
4	14 48'72	14 46'95	54 16'03	54 9'56					
5	14 45'52	14 44'43	54 4'33	54 0'35					
6	14 43'69	14 43'29	53 57'61	53 56'15					
7	14 43'24	14 43'55	53 55'95	53 57'10					
8	14 44'26	14 45'38	53 59'69	54 3'79					
9	14 46'94	14 48'96	54 9'51	54 16'90					
10	14 51'47	14 54'49	54 26'09	54 37'18					
11	14 58'05	15 2'17	54 50'23	55 5'33					
12	15 6'86	15 12'10	55 22'48	55 41'69					
13	15 17'89	15 24'20	56 2'90	56 26'05					
14	15 31'00	15 38'21	56 50'94	57 17'36					
15	15 45'75	15 53'51	57 44'99	58 13'43					
16	16 1'37	16 9'16	58 42'23	59 10'77					
17	16 16'72	16 23'84	59 38'46	60 4'56					
18	16 30'32	16 35'97	60 28'31	60 49'01					
19	16 40'60	16 44'03	61 5'96	61 18'55					
20	16 46'15	16 46'87	61 26'31	61 28'95					
21	16 46'16	16 44'04	61 26'34	61 18'58					
22	16 40'59	16 35'94	61 5'96	60 48'92					
23	16 30'25	16 23'71	60 28'07	60 4'10					
24	16 16'52	16 8'87	59 37'74	59 9'72					
25	16 0'98	15 53'01	58 40'80	58 11'59					
26	15 45'13	15 37'47	57 42'71	57 14'66					
27	15 30'15	15 23'26	56 47'85	56 22'61					
28	15 16'87	15 11'02	55 59'17	55 37'73					
29	15 5'74	15 1'05	55 18'38	55 1'20					
<b>SATURDAY 1.</b>									
0	17 13 29'37	23'265	S. 27 58 5'4	32'05					
4	17 22 48'02	23'286	28 9 42'9	26'07					
8	17 32 6'97	23'291	28 18 56'9	20'08					
12	17 41 25'87	23'281	28 25 46'9	14'08					
16	17 50 44'37	23'257	28 30 13'2	8'11					
20	18 0 2'09	23'218	S. 28 32 16'4	2'16					
<b>SUNDAY 2.</b>									
0	18 9 18'68	23'163	S. 28 31 57'1	3'76					
4	18 18 33'78	23'092	28 29 16'3	9'63					
8	18 27 47'04	23'009	28 24 15'3	15'44					
12	18 36 58'12	22'912	28 16 55'5	21'18					
16	18 46 6'68	22'799	28 7 18'8	26'86					
20	18 55 12'39	22'674	S. 27 55 27'1	32'43					
<b>MONDAY 3.</b>									
0	19 4 14'98	22'538	S. 27 41 22'9	37'90					
4	19 13 14'15	22'391	27 25 8'6	43'27					
8	19 22 9'66	22'233	27 6 46'9	48'52					
12	19 31 1'27	22'067	26 46 20'7	53'64					
16	19 39 48'78	21'892	26 23 53'0	58'64					
20	19 48 32'02	21'710	S. 25 59 27'0	63'50					
<b>TUESDAY 4.</b>									
0	19 57 10'82	21'522	S. 25 33 5'9	68'22					
4	20 5 45'05	21'330	25 4 53'3	72'80					
8	20 14 14'65	21'135	24 34 52'6	77'23					
12	20 22 39'50	20'935	24 3 7'4	81'51					
16	20 30 59'57	20'737	23 29 41'4	85'63					
20	20 39 14'85	20'537	S. 22 54 38'4	89'60					
<b>WEDNESDAY 5.</b>									
0	20 47 25'34	20'337	S. 22 18 1'9	93'42					
4	20 55 31'05	20'140	21 39 55'8	97'07					
8	21 3 32'06	19'944	21 0 23'7	100'58					
12	21 11 28'40	19'752	20 19 29'4	103'93					
16	21 19 20'18	19'563	19 37 16'5	107'12					
20	21 27 7'50	19'381	S. 18 53 48'8	110'16					
<b>THURSDAY 6.</b>									
0	21 34 50'48	19'202	S. 18 9 9'8	113'06					
4	21 42 29'26	19'030	17 23 23'1	115'80					
8	21 50 3'99	18'865	16 36 32'4	118'40					
12	21 57 34'83	18'706	15 48 41'1	120'85					
16	22 5 1'97	18'557	14 59 52'7	123'16					
20	22 12 25'58	18'413	S. 14 10 10'6	125'33					



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, MAR. 1.

PHASES OF THE MOON.

Table with columns: Date, Phase, Time (h m). Rows: Feb. 5 New Moon 17 21.9, Feb. 13 First Quarter 20 33.9, Feb. 20 Full Moon 14 3.3, Feb. 27 Last Quarter 9 15.4, Feb. 6 Apogee 19.8, Feb. 20 Perigee 12.1.



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	269 2 39.2	275 11 49.3	S. 5 13 46.0	S. 5 14 29.9	23.28	20 4.1	7 37.4
2	281 17 40.6	287 20 41.4	5 11 39.5	5 5 21.4	24.28	20 55.7	8 30.2
3	293 21 18.4	299 19 57.0	4 55 43.8	4 42 55.5	25.28	21 44.4	9 20.4
4	305 17 1.0	311 12 52.3	4 27 6.1	4 8 26.9	26.28	22 30.0	10 7.6
5	317 7 51.3	323 2 16.9	3 47 9.8	3 23 27.8	27.28	23 12.8	10 51.7
6	328 56 26.6	334 50 37.1	2 57 35.2	2 29 47.1	28.28	23 53.4	11 33.3
7	340 45 4.0	346 40 2.6	2 0 20.0	1 29 31.2	29.28	* *	12 13.2
8	352 35 47.8	358 32 34.8	S. 0 57 38.8	S. 0 25 1.9	0.48	0 32.8	12 52.3
9	4 30 38.8	10 30 15.9	N. 0 7 59.5	N. 0 41 5.2	1.48	1 11.9	13 31.7
10	16 31 43.0	22 35 17.6	1 13 54.3	1 46 5.7	2.48	1 51.8	14 12.4
11	28 41 18.9	34 50 7.0	2 17 18.0	2 47 9.8	3.48	2 33.5	14 55.4
12	41 2 3.0	47 17 29.0	3 15 19.2	3 41 24.9	4.48	3 18.2	15 41.9
13	53 36 47.9	60 0 22.6	4 5 5.5	4 25 59.8	5.48	4 6.7	16 32.7
14	66 28 35.6	73 1 48.1	4 43 47.2	4 58 7.6	6.48	4 59.9	17 28.1
15	79 40 19.8	86 24 26.7	5 8 41.9	5 15 12.3	7.48	5 57.3	18 27.3
16	93 14 21.6	100 10 11.4	5 17 22.9	5 15 0.7	8.48	6 57.8	19 28.5
17	107 11 57.0	114 19 31.8	5 7 55.6	4 56 2.2	9.48	7 59.2	20 29.5
18	121 32 40.5	128 50 58.6	4 39 20.3	4 17 56.0	10.48	8 59.2	21 28.2
19	136 13 52.7	143 40 39.4	3 52 2.3	3 21 59.8	11.48	9 56.4	22 23.8
20	151 10 27.0	158 42 16.7	2 48 16.9	2 11 29.2	12.48	10 50.5	23 16.7
21	166 15 4.3	173 47 42.4	1 32 18.1	N. 0 51 30.3	13.48	11 42.4	* *
22	181 19 3.1	188 47 59.9	N. 0 9 55.1	S. 0 31 37.2	14.48	12 33.1	0 7.8
23	196 13 31.0	203 34 40.9	S. 1 12 18.4	1 51 23.1	15.48	13 23.9	0 58.4
24	210 50 41.9	218 0 56.0	2 28 11.2	3 2 8.3	16.48	14 15.9	1 49.7
25	225 4 54.9	232 2 19.9	3 32 47.2	3 59 47.1	17.48	15 9.6	2 42.5
26	238 53 2.3	245 37 2.5	4 22 53.2	4 41 57.1	18.48	16 5.0	3 37.1
27	252 14 28.5	258 45 35.5	4 56 54.8	5 7 46.6	19.48	17 1.2	4 33.1
28	265 10 44.4	271 30 20.8	5 14 36.3	5 17 29.4	20.48	17 56.8	5 29.2
29	277 44 53.6	283 54 54.3	5 16 34.2	5 11 59.6	21.48	18 50.1	6 23.8
30	290 0 56.5	296 3 34.1	5 3 56.0	4 52 33.9	22.48	19 40.4	7 15.7
31	302 3 21.5	308 0 52.7	4 38 5.0	4 20 40.8	23.48	20 27.2	8 4.2
32	313 56 40.9	319 51 18.2	S. 4 0 33.9	S. 3 37 56.9	24.48	21 10.8	8 49.4

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 5.74	15 1.05	55 18.38	55 1.20					
2	14 56.95	14 53.43	54 46.17	54 33.28					
3	14 50.48	14 48.07	54 22.47	54 13.66					
4	14 46.19	14 44.80	54 6.77	54 1.66					
5	14 43.87	14 43.38	53 58.27	53 56.47					
6	14 43.29	14 43.59	53 56.16	53 57.24					
7	14 44.25	14 45.25	53 59.66	54 3.34					
8	14 46.59	14 48.26	54 8.26	54 14.38					
9	14 50.26	14 52.59	54 21.69	54 30.23					
10	14 55.25	14 58.26	54 39.98	54 51.01					
11	15 1.63	15 5.38	55 3.37	55 17.08					
12	15 9.51	15 14.02	55 32.20	55 48.73					
13	15 18.93	15 24.22	56 6.72	56 26.11					
14	15 29.88	15 35.89	56 46.86	57 8.85					
15	15 42.19	15 48.72	57 31.94	57 55.90					
16	15 55.41	16 2.15	58 20.39	58 45.11					
17	16 8.83	16 15.30	59 9.58	59 33.28					
18	16 21.40	16 26.97	59 55.63	60 16.03					
19	16 31.83	16 35.82	60 33.85	60 48.48					
20	16 38.80	16 40.62	60 59.37	61 6.03					
21	16 41.20	16 40.50	61 8.17	61 5.60					
22	16 38.50	16 35.26	60 58.30	60 46.43					
23	16 30.88	16 25.48	60 30.37	60 10.59					
24	16 19.22	16 12.29	59 47.65	59 22.23					
25	16 4.86	15 57.13	58 55.01	58 26.70					
26	15 49.29	15 41.49	57 57.97	57 29.40					
27	15 33.89	15 26.62	57 1.55	56 34.89					
28	15 19.77	15 13.43	56 9.80	55 46.58					
29	15 7.67	15 2.53	55 25.47	55 6.64					
30	14 58.04	14 54.23	54 50.21	54 36.23					
31	14 51.09	14 48.60	54 24.71	54 15.61					
32	14 46.76	14 45.54	54 8.88	54 4.42					
<b>SATURDAY 1.</b>									
	h m s	s	° / ' / "	"					
0	17 55 37.10	23.392	S. 28 40 44.2	4.48					
4	18 4 57.66	23.318	28 41 19.4	1.53					
8	18 14 16.27	23.229	28 39 30.7	7.50					
12	18 23 32.59	23.127	28 35 20.0	13.38					
16	18 32 46.31	23.013	28 28 48.9	19.19					
20	18 41 57.14	22.887	S. 28 19 59.7	24.90					
<b>SUNDAY 2.</b>									
0	18 51 4.78	22.748	S. 28 8 54.4	30.52					
4	19 0 8.97	22.599	27 55 35.6	36.02					
8	19 9 9.48	22.441	27 40 6.0	41.42					
12	19 18 6.07	22.273	27 22 28.5	46.69					
16	19 26 58.54	22.098	27 2 45.9	51.83					
20	19 35 46.74	21.916	S. 26 41 1.3	56.85					
<b>MONDAY 3.</b>									
0	19 44 30.49	21.729	S. 26 17 18.0	61.73					
4	19 53 9.70	21.537	25 51 39.3	66.47					
8	20 1 44.25	21.342	25 24 8.3	71.07					
12	20 10 14.07	21.143	24 54 48.7	75.53					
16	20 18 39.12	20.944	24 23 43.9	79.84					
20	20 26 59.37	20.744	S. 23 50 57.5	84.00					
<b>TUESDAY 4.</b>									
0	20 35 14.84	20.545	S. 23 16 32.9	88.02					
4	20 43 25.53	20.347	22 40 33.7	91.88					
8	20 51 31.49	20.150	22 3 3.6	95.60					
12	20 59 32.77	19.957	21 24 6.1	99.17					
16	21 7 29.47	19.768	20 43 44.7	102.59					
20	21 15 21.68	19.583	S. 20 2 2.9	105.87					
<b>WEDNESDAY 5.</b>									
0	21 23 9.50	19.403	S. 19 19 4.3	109.00					
4	21 30 53.07	19.228	18 34 52.3	111.98					
8	21 38 32.53	19.061	17 49 30.4	114.82					
12	21 46 8.04	18.900	17 3 2.0	117.52					
16	21 53 39.76	18.746	16 15 30.5	120.08					
20	22 1 7.86	18.599	S. 15 26 59.0	122.51					
<b>THURSDAY 6.</b>									
0	22 8 32.55	18.459	S. 14 37 31.1	124.79					
4	22 15 53.99	18.329	13 47 9.9	126.95					
8	22 23 12.40	18.207	12 55 58.5	128.97					
12	22 30 27.98	18.093	12 4 0.3	130.86					
16	22 37 40.95	17.989	11 11 18.4	132.62					
20	22 44 51.52	17.894	S. 10 17 55.7	134.24					



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, APRIL 1. Includes PHASES OF THE MOON section with dates and times for New Moon, First Quarter, Full Moon, Last Quarter, Apogee, and Perigee.



GREENWICH MEAN TIME.

THE MOON'S

Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	313 56 40.9	319 51 18.2	S. 4 0 33.9	S. 3 37 56.9	24.48	21 10.8	8 49.4
2	325 45 15.2	331 39 0.5	3 13 3.4	2 46 7.5	25.48	21 52.1	9 31.7
3	337 33 1.1	343 27 42.1	2 17 24.1	1 47 9.6	26.48	22 31.9	10 12.1
4	349 23 26.4	355 20 34.6	1 15 40.6	S. 0 43 15.3	27.48	23 11.1	10 51.5
5	1 19 25.4	7 20 15.4	S. 0 10 13.0	N. 0 23 6.3	28.48	23 50.8	11 30.8
6	13 23 19.7	19 28 51.4	N. 0 56 21.4	1 29 10.2	29.48	* *	12 11.3
7	25 37 1.9	31 48 1.5	2 1 10.3	2 31 58.6	0.76	0 32.3	12 53.9
8	38 1 59.6	44 19 3.9	3 1 12.0	3 28 27.5	1.76	1 16.3	13 39.7
9	50 39 22.3	57 3 1.4	3 53 22.6	4 15 35.6	2.76	2 4.0	14 29.4
10	63 30 8.0	70 0 48.6	4 34 45.8	4 50 34.0	3.76	2 55.9	15 23.4
11	76 35 9.2	83 13 15.3	5 2 42.5	5 10 56.1	4.76	3 51.9	16 21.1
12	89 55 12.3	96 41 4.4	5 15 1.4	5 14 48.2	5.76	4 50.8	17 20.8
13	103 30 54.8	110 24 44.7	5 10 9.1	5 1 0.3	6.76	5 50.8	18 20.4
14	117 22 33.0	124 24 15.7	4 47 22.0	4 29 18.6	7.76	6 49.5	19 18.0
15	131 29 45.1	138 38 49.4	4 6 59.6	3 40 39.5	8.76	7 45.7	20 12.7
16	145 51 11.3	153 6 28.6	3 10 38.5	2 37 22.1	9.76	8 39.0	21 4.7
17	160 24 13.1	167 43 50.8	2 1 21.3	1 23 12.2	10.76	9 30.0	21 54.9
18	175 4 42.9	182 26 5.5	N. 0 43 34.8	N. 0 3 12.4	11.76	10 19.7	22 44.5
19	189 47 10.9	197 7 9.2	S. 0 37 10.1	S. 1 16 47.8	12.76	11 9.5	23 34.8
20	204 25 9.9	211 40 23.2	1 54 57.2	2 30 58.0	13.76	12 0.6	* *
21	218 52 2.2	225 59 24.3	3 4 14.3	3 34 16.2	14.76	12 53.8	0 26.9
22	233 1 52.8	239 58 57.8	4 0 39.4	4 23 6.3	15.76	13 40.5	1 21.4
23	246 50 17.4	253 35 37.7	4 41 25.4	4 55 31.1	16.76	14 46.8	2 18.0
24	260 14 52.9	266 48 5.2	5 5 22.6	5 11 3.6	17.76	15 44.4	3 15.7
25	273 15 24.4	279 37 6.3	5 12 41.0	5 10 24.6	18.76	16 40.2	4 12.6
26	285 53 32.8	292 5 10.6	5 4 25.4	4 54 56.4	19.76	17 32.9	5 7.0
27	298 12 30.2	304 16 5.2	4 42 11.1	4 26 23.2	20.76	18 21.7	5 57.8
28	310 16 31.3	316 14 25.8	4 7 47.1	3 46 36.8	21.76	19 6.8	6 44.7
29	322 10 26.5	328 5 11.6	3 23 6.7	2 57 31.4	22.76	19 49.0	7 28.2
30	333 59 18.9	339 53 25.3	2 30 5.5	2 1 4.0	23.76	20 29.2	8 9.3
31	345 48 6.3	351 43 55.5	S. 1 30 42.8	S. 0 59 18.3	24.76	21 8.5	8 48.9

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	14 46.76	14 45.54	54 8.88	54 4.42					
2	14 44.91	14 44.85	54 2.12	54 1.88					
3	14 45.31	14 46.23	54 3.53	54 6.92					
4	14 47.59	14 49.34	54 11.90	54 18.33					
5	14 51.45	14 53.88	54 26.05	54 34.93					
6	14 56.59	14 59.55	54 44.87	54 55.72					
7	15 2.73	15 6.12	55 7.37	55 19.80					
8	15 9.70	15 13.45	55 32.90	55 46.65					
9	15 17.37	15 21.45	56 1.01	56 15.97					
10	15 25.60	15 30.08	56 31.51	56 47.60					
11	15 34.62	15 39.30	57 4.24	57 21.37					
12	15 44.09	15 48.97	57 38.92	57 56.81					
13	15 53.90	15 58.83	58 14.87	58 32.93					
14	16 3.70	16 8.43	58 50.77	59 8.09					
15	16 12.92	16 17.07	59 24.55	59 39.78					
16	16 20.78	16 23.93	59 53.36	60 4.88					
17	16 26.39	16 28.06	60 13.90	60 20.05					
18	16 28.87	16 28.73	60 22.99	60 22.46					
19	16 27.59	16 25.46	60 18.31	60 10.51					
20	16 22.36	16 18.34	59 59.14	59 44.41					
21	16 13.49	16 7.94	59 26.64	59 6.28					
22	16 1.80	15 55.23	58 43.80	58 19.73					
23	15 48.39	15 41.42	57 54.66	57 29.13					
24	15 34.47	15 27.68	57 3.67	56 38.79					
25	15 21.17	15 15.04	56 14.92	55 52.48					
26	15 9.39	15 4.29	55 31.78	55 13.09					
27	14 59.80	14 55.96	54 56.63	54 42.55					
28	14 52.79	14 50.33	54 30.96	54 21.94					
29	14 48.57	14 47.51	54 15.49	54 11.60					
30	14 47.12	14 47.39	54 10.20	54 11.18					
31	14 48.29	14 49.77	54 14.47	54 19.90					
<b>TUESDAY 1.</b>									
0	21 10 33.17	19.702	S. 20 29 27.1	104.06					
4	21 18 23.72	19.512	19 47 11.0	107.25					
8	21 26 9.77	19.327	19 3 40.5	110.28					
12	21 33 51.47	19.150	18 18 58.8	113.17					
16	21 41 29.02	18.981	17 33 9.4	115.93					
20	21 49 2.59	18.819	S. 16 46 15.4	118.54					
<b>WEDNESDAY 2.</b>									
0	21 56 32.39	18.666	S. 15 58 20.1	121.03					
4	22 3 58.62	18.522	15 9 26.6	123.40					
8	22 11 21.51	18.387	14 19 38.1	125.63					
12	22 18 41.27	18.262	13 28 57.6	127.72					
16	22 25 58.13	18.146	12 37 28.1	129.71					
20	22 33 12.31	18.038	S. 11 45 12.5	131.57					
<b>THURSDAY 3.</b>									
0	22 40 24.07	17.943	S. 10 52 13.8	133.29					
4	22 47 33.64	17.857	9 58 35.0	134.91					
8	22 54 41.26	17.781	9 4 19.0	136.40					
12	23 1 47.18	17.715	8 9 28.5	137.78					
16	23 8 51.65	17.659	7 14 6.5	139.03					
20	23 15 54.93	17.615	S. 6 18 15.8	140.17					
<b>FRIDAY 4.</b>									
0	23 22 57.25	17.582	S. 5 21 59.3	141.18					
4	23 29 58.89	17.557	4 25 20.0	142.07					
8	23 37 0.09	17.545	3 28 20.6	142.84					
12	23 44 1.12	17.543	2 31 4.1	143.50					
16	23 51 2.24	17.553	1 33 33.5	144.03					
20	23 58 3.72	17.573	S. 0 35 51.7	144.43					
<b>SATURDAY 5.</b>									
0	0 5 5.81	17.604	N. 0 21 58.4	144.71					
4	0 12 8.78	17.646	1 19 53.5	144.87					
8	0 19 12.89	17.699	2 17 50.7	144.88					
12	0 26 18.42	17.764	3 15 46.8	144.76					
16	0 33 25.63	17.839	4 13 38.5	144.52					
20	0 40 34.80	17.926	N. 5 11 22.6	144.12					
<b>SUNDAY 6.</b>									
0	0 47 46.18	18.025	N. 6 8 55.7	143.60					
4	0 55 0.05	18.133	7 6 14.3	142.92					
8	1 2 16.68	18.254	8 3 15.0	142.10					
12	1 9 36.34	18.385	8 59 54.0	141.13					
16	1 16 59.28	18.528	9 56 7.7	139.98					
20	1 24 25.76	18.682	N. 10 51 52.3	138.69					



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m., Declination, Var. in 10m. for days Monday 7 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. for days Monday 21 to Sunday 27, and Phases of the Moon for April and May.



GREENWICH MEAN TIME.

THE MOON'S

Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	345 48 6.3	351 43 55.5	S. 1 30 42.8	S. 0 59 18.3	24.76	21 8.5	8 48.9
2	357 41 24.5	3 41 2.3	S. 0 27 7.7	N. 0 5 30.6	25.76	21 48.0	9 28.1
3	9 43 14.7	15 48 24.5	N. 0 38 17.2	1 10 51.4	26.76	22 28.9	10 8.2
4	21 56 50.9	28 8 49.4	1 42 51.3	2 13 54.2	27.76	23 12.3	10 50.2
5	34 24 31.6	40 44 4.8	2 43 36.7	3 11 34.5	28.76	23 59.2	11 35.3
6	47 7 32.8	53 34 55.5	3 37 23.6	4 0 40.1	0.15	* *	12 24.3
7	60 6 9.1	66 41 6.6	4 21 1.1	4 38 5.5	1.15	0 50.5	13 17.8
8	73 19 38.7	80 1 33.7	4 51 33.8	5 1 9.1	2.15	1 46.2	14 15.4
9	86 46 38.8	93 34 40.2	5 6 38.0	5 7 50.5	3.15	2 45.2	15 15.3
10	100 25 24.2	107 18 37.3	5 4 40.3	4 57 5.3	4.15	3 45.4	16 15.3
11	114 14 6.4	121 11 40.3	4 45 7.9	4 28 54.8	5.15	4 44.6	17 13.2
12	128 11 8.4	135 12 20.6	4 8 37.1	3 44 29.9	6.15	5 41.0	18 7.9
13	142 15 7.8	149 19 21.3	3 16 52.9	2 46 9.6	7.15	6 34.0	18 59.4
14	156 24 51.0	163 31 26.5	2 12 47.5	1 37 17.0	8.15	7 24.2	19 48.6
15	170 38 55.0	177 47 1.6	N. 1 0 12.0	N. 0 22 8.3	9.15	8 12.7	20 36.7
16	184 55 28.0	192 3 52.7	S. 0 16 16.4	S. 0 54 23.5	10.15	9 0.8	21 25.1
17	199 11 50.8	206 18 54.2	1 31 34.6	2 7 12.5	11.15	9 49.8	22 15.0
18	213 24 31.8	220 28 11.2	2 40 42.2	3 11 31.7	12.15	10 40.9	23 7.6
19	227 29 18.9	234 27 21.5	3 39 13.0	4 3 23.1	13.15	11 34.9	* *
20	241 21 48.0	248 12 10.0	4 23 44.2	4 40 3.7	14.15	12 31.5	0 2.9
21	254 58 3.2	261 39 8.6	4 52 14.5	5 0 14.8	15.15	13 29.6	1 0.5
22	268 15 13.6	274 46 11.5	5 4 6.6	5 3 56.4	16.15	14 27.1	1 58.6
23	281 12 2.2	287 32 52.0	4 59 53.9	4 52 10.9	17.15	15 22.2	2 55.1
24	293 48 53.8	300 0 25.9	4 41 1.1	4 26 39.7	18.15	16 13.4	3 48.3
25	306 7 51.7	312 11 39.2	4 9 22.4	3 49 25.3	19.15	17 0.6	4 37.5
26	318 12 20.0	324 10 29.0	3 27 4.2	3 2 35.5	20.15	17 44.2	5 22.8
27	330 6 43.5	336 1 42.4	2 36 15.3	2 8 19.1	21.15	18 25.2	6 5.0
28	341 56 5.4	347 50 33.4	1 39 2.9	1 8 42.8	22.15	19 4.6	6 45.0
29	353 45 46.9	359 42 25.6	S. 0 37 34.9	S. 0 5 55.9	23.15	19 43.8	7 24.2
30	5 41 7.8	11 42 30.2	N. 0 25 56.6	N. 0 57 44.2	24.15	20 23.8	8 3.6
31	17 47 6.5	23 55 27.6	1 29 7.4	1 59 45.7	25.15	21 5.9	8 44.5
32	30 7 59.9	36 25 5.5	N. 2 29 17.5	N. 2 57 19.9	26.15	21 51.4	9 28.2

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	14 48'29	14 49'77	54 14'47	54 19'90					
2	14 51'79	14 54'30	54 27'31	54 36'51					
3	14 57'25	15 0'57	54 47'29	54 59'43					
4	15 4'19	15 8'07	55 12'73	55 26'93					
5	15 12'14	15 16'33	55 41'84	55 57'22					
6	15 20'60	15 24'89	56 12'86	56 28'56					
7	15 29'15	15 33'35	56 44'19	56 59'57					
8	15 37'45	15 41'43	57 14'57	57 29'13					
9	15 45'26	15 48'93	57 43'17	57 56'65					
10	15 52'44	15 55'77	58 9'50	58 21'70					
11	15 58'92	16 1'87	58 33'24	58 44'07					
12	16 4'61	16 7'12	58 54'13	59 3'31					
13	16 9'37	16 11'33	59 11'56	59 18'75					
14	16 12'96	16 14'21	59 24'70	59 29'25					
15	16 15'02	16 15'34	59 32'22	59 33'40					
16	16 15'13	16 14'34	59 32'65	59 29'77					
17	16 12'94	16 10'91	59 24'65	59 17'21					
18	16 8'25	16 4'97	59 7'46	58 55'43					
19	16 1'10	15 56'70	58 41'26	58 25'13					
20	15 51'84	15 46'61	58 7'31	57 48'13					
21	15 41'09	15 35'40	57 27'92	57 7'07					
22	15 29'65	15 23'95	56 46'00	56 25'11					
23	15 18'39	15 13'09	56 4'74	55 45'30					
24	15 8'13	15 3'59	55 27'13	55 10'52					
25	14 59'56	14 56'09	54 55'76	54 43'05					
26	14 53'23	14 51'03	54 32'58	54 24'51					
27	14 49'51	14 48'69	54 18'95	54 15'94					
28	14 48'58	14 49'17	54 15'52	54 17'68					
29	14 50'45	14 52'40	54 22'39	54 29'54					
30	14 54'98	14 58'16	54 39'00	54 50'64					
31	15 1'88	15 6'07	55 4'26	55 19'62					
32	15 10'67	15 15'58	55 36'44	55 54'45					

THURSDAY 1.									
Hour.	h	m	s	s		° / ' / "	"		
0	23	10	3'66	17.636	S.	6 59 58.8	138.74		
4	23	17	6'40	17.594	S.	6 4 15.4	139.85		
8	23	24	8'28	17.563		5 8 7.0	140.83		
12	23	31	9'56	17.545		4 11 36.4	141.70		
16	23	38	10'53	17.537		3 14 46.2	142.47		
20	23	45	11'46	17.542	S.	2 17 39.1	143.11		

FRIDAY 2.									
Hour.	h	m	s	s		° / ' / "	"		
0	23	52	12'65	17.559	S.	1 20 17.8	143.64		
4	23	59	14'38	17.587	S.	0 22 45.1	144.06		
8	0	6	16'93	17.628	N.	0 34 56.1	144.36		
12	0	13	20'60	17.680		1 32 43.1	144.53		
16	0	20	25'66	17.744		2 30 32.7	144.58		
20	0	27	32'41	17.821	N.	3 28 22.1	144.51		

SATURDAY 3.									
Hour.	h	m	s	s		° / ' / "	"		
0	0	34	41'14	17.908	N.	4 26 8.0	144.29		
4	0	41	52'12	18.009		5 23 47.3	143.96		
8	0	49	5'66	18.122		6 21 16.6	143.47		
12	0	56	22'04	18.246		7 18 32.7	142.84		
16	1	3	41'54	18.382		8 15 31.9	142.07		
20	1	11	4'45	18.529	N.	9 12 10.7	141.13		

SUNDAY 4.									
Hour.	h	m	s	s		° / ' / "	"		
0	1	18	31'05	18.689	N.	10 8 25.1	140.04		
4	1	26	1'62	18.860		11 4 11.3	138.78		
8	1	33	36'42	19.043		11 59 25.1	137.35		
12	1	41	15'74	19.237		12 54 2.6	135.74		
16	1	48	59'84	19.441		13 47 59.3	133.95		
20	1	56	48'97	19.656	N.	14 41 10.7	131.97		

MONDAY 5.									
Hour.	h	m	s	s		° / ' / "	"		
0	2	4	43'38	19.880	N.	15 33 32.3	129.78		
4	2	12	43'30	20.115		16 24 59.2	127.41		
8	2	20	48'97	20.359		17 15 26.4	124.82		
12	2	29	0'58	20.611		18 4 49.0	122.02		
16	2	37	18'33	20.870		18 53 1.8	119.00		
20	2	45	42'41	21.137	N.	19 39 59.2	115.75		

TUESDAY 6.									
Hour.	h	m	s	s		° / ' / "	"		
0	2	54	12'94	21.408	N.	20 25 36.1	112.28		
4	3	2	50'06	21.686		21 9 46.8	108.57		
8	3	11	33'86	21.965		21 52 25.6	104.62		
12	3	20	24'42	22.248		22 33 27.0	100.44		
16	3	29	21'77	22.532		23 12 45.1	96.02		
20	3	38	25'91	22.813	N.	23 50 14.2	91.37		



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: WEDNESDAY 7, THURSDAY 8, FRIDAY 9, SATURDAY 10, SUNDAY 11, MONDAY 12, TUESDAY 13, WEDNESDAY 14, THURSDAY 15, FRIDAY 16, SATURDAY 17, SUNDAY 18, MONDAY 19, TUESDAY 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: WEDNESDAY 21, THURSDAY 22, FRIDAY 23, SATURDAY 24, SUNDAY 25, MONDAY 26, TUESDAY 27, WEDNESDAY 28, THURSDAY 29, FRIDAY 30, SATURDAY 31, SUNDAY, JUNE 1. Includes PHASES OF THE MOON section with dates and moon phases.



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	30 7 59.9	36 25 5.5	N. 2 29 17.5	N. 2 57 19.9	26.15	21 51.4	9 28.2
2	42 47 1.0	49 13 57.0	3 23 29.3	3 47 21.5	27.15	22 41.3	10 15.8
3	55 45 57.8	62 23 1.2	4 8 32.2	4 26 38.0	28.15	23 36.1	11 8.1
4	69 4 58.1	75 51 33.2	4 41 16.5	4 52 7.3	29.15	* *	12 5.2
5	82 42 25.0	89 37 7.2	4 58 53.6	5 1 21.7	0.67	0 35.1	13 5.7
6	96 35 9.5	103 35 58.9	4 59 22.7	4 52 52.9	1.67	1 36.6	14 7.3
7	110 39 1.2	117 43 42.5	4 41 53.8	4 26 32.3	2.67	2 37.7	15 7.3
8	124 49 30.8	131 55 56.2	4 7 1.1	3 43 37.6	3.67	3 36.1	16 3.9
9	139 2 32.8	146 8 58.5	3 16 44.2	2 46 47.0	4.67	4 30.8	16 56.7
10	153 14 55.4	160 20 9.3	2 14 15.4	1 39 41.5	5.67	5 21.8	17 46.3
11	167 24 29.6	174 27 48.6	N. 1 3 39.1	N. 0 26 42.9	6.67	6 10.3	18 34.0
12	181 29 59.8	188 30 57.9	S. 0 10 31.8	S. 0 47 29.7	7.67	6 57.6	19 21.3
13	195 30 37.6	202 28 53.0	1 23 36.5	1 58 19.2	8.67	7 45.1	20 9.4
14	209 25 36.0	216 20 37.1	2 31 6.8	3 1 30.7	9.67	8 34.2	20 59.7
15	223 13 44.6	230 4 44.6	3 29 4.9	3 53 27.3	10.67	9 25.9	21 52.8
16	236 53 21.5	243 39 18.3	4 14 19.3	4 31 26.6	11.67	10 20.4	22 48.7
17	250 22 17.7	257 2 2.5	4 44 38.7	4 53 50.1	12.67	11 17.3	23 46.1
18	263 38 17.0	270 10 47.4	4 58 58.8	5 0 7.2	13.67	12 14.9	* *
19	276 39 22.9	283 3 56.6	4 57 21.7	4 50 50.9	14.67	13 11.1	0 43.3
20	289 24 26.1	295 40 53.0	4 40 46.7	4 27 23.0	15.67	14 4.2	1 38.1
21	301 53 24.2	308 2 11.2	4 10 55.4	3 51 40.3	16.67	14 53.3	2 29.3
22	314 7 30.7	320 9 43.5	3 29 54.8	3 5 56.7	17.67	15 38.6	3 16.4
23	326 9 14.8	332 6 33.2	2 40 3.4	2 12 32.5	18.67	16 20.7	4 0.0
24	338 2 11.3	343 56 43.9	1 43 41.2	1 13 46.6	19.67	17 0.6	4 40.8
25	349 50 48.5	355 45 4.4	S. 0 43 5.4	S. 0 11 54.5	20.67	17 39.6	5 20.1
26	1 40 12.0	7 36 52.5	N. 0 19 29.1	N. 0 50 48.2	21.67	18 18.7	5 59.0
27	13 35 47.0	19 37 36.2	1 21 45.3	1 52 2.2	22.67	18 59.4	6 38.8
28	25 42 59.2	31 52 32.9	2 21 19.4	2 49 17.0	23.67	19 42.8	7 20.6
29	38 6 51.3	44 26 23.8	3 15 33.7	3 39 47.5	24.67	20 30.2	8 5.9
30	50 51 34.8	57 22 42.5	4 1 35.6	4 20 34.9	25.67	21 22.6	8 55.8
31	63 59 57.8	70 43 23.2	N. 4 36 22.1	N. 4 48 34.9	26.67	22 20.1	9 50.7

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	15 10.67	15 15.58	55 36.44	55 54.45					
2	15 20.73	15 26.03	56 13.34	56 32.76					
3	15 31.38	15 36.69	56 52.35	57 11.79					
4	15 41.85	15 46.78	57 30.70	57 48.77					
5	15 51.40	15 55.64	58 5.70	58 21.24					
6	15 59.45	16 2.78	58 35.19	58 47.41					
7	16 5.61	16 7.93	58 57.77	59 6.25					
8	16 9.73	16 11.03	59 12.85	59 17.64					
9	16 11.86	16 12.24	59 20.68	59 22.07					
10	16 12.21	16 11.79	59 21.94	59 20.40					
11	16 11.01	16 9.89	59 17.55	59 13.47					
12	16 8.46	16 6.73	59 8.22	59 1.89					
13	16 4.71	16 2.40	58 54.48	58 46.00					
14	15 59.80	15 56.91	58 36.47	58 25.88					
15	15 53.73	15 50.29	58 14.24	58 1.63					
16	15 46.59	15 42.64	57 48.06	57 33.59					
17	15 38.47	15 34.13	57 18.31	57 2.39					
18	15 29.65	15 25.09	56 45.99	56 29.29					
19	15 20.51	15 15.98	56 12.53	55 55.94					
20	15 11.57	15 7.35	55 39.78	55 24.31					
21	15 3.38	14 59.74	55 9.76	54 56.42					
22	14 56.49	14 53.70	54 44.53	54 34.28					
23	14 51.42	14 49.70	54 25.93	54 19.62					
24	14 48.58	14 48.11	54 15.54	54 13.81					
25	14 48.31	14 49.19	54 14.53	54 17.77					
26	14 50.77	14 53.05	54 23.57	54 31.92					
27	14 56.02	14 59.65	54 42.79	54 56.09					
28	15 3.91	15 8.75	55 11.68	55 29.40					
29	15 14.10	15 19.88	55 49.00	56 10.22					
30	15 26.02	15 32.41	56 32.72	56 56.13					
31	15 38.92	15 45.44	57 20.00	57 43.87					

SUNDAY 1.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	1 48 30.38	19.446	N. 13 50 57.7	133.09
4	1 56 19.80	19.675	14 43 49.7	131.20
8	2 4 14.84	19.915	15 35 53.8	129.10
12	2 12 15.80	20.167	16 27 5.2	126.82
16	2 20 22.89	20.427	17 17 19.1	124.30
20	2 28 36.38	20.698	N. 18 6 30.1	121.57

MONDAY 2.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	2 36 56.48	20.978	N. 18 54 33.1	118.63
4	2 45 23.39	21.266	19 41 22.5	115.44
8	2 53 57.30	21.560	20 26 52.7	112.02
12	3 2 38.34	21.861	21 10 57.9	108.36
16	3 11 26.64	22.166	21 53 32.1	104.44
20	3 20 22.31	22.473	N. 22 34 29.3	100.27

TUESDAY 3.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	3 29 25.38	22.782	N. 23 13 43.3	95.85
4	3 38 35.88	23.092	23 51 8.0	91.16
8	3 47 53.76	23.398	24 26 36.9	86.21
12	3 57 18.95	23.700	25 0 4.0	81.00
16	4 6 51.33	23.997	25 31 23.0	75.53
20	4 16 30.72	24.284	N. 26 0 27.6	69.81

WEDNESDAY 4.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	4 26 16.89	24.561	N. 26 27 12.1	63.86
4	4 36 9.56	24.826	26 51 30.6	57.65
8	4 46 8.39	25.073	27 13 17.6	51.22
12	4 56 12.97	25.305	27 32 27.7	44.57
16	5 6 22.88	25.517	27 48 56.0	37.74
20	5 16 37.61	25.707	N. 28 2 38.1	30.73

THURSDAY 5.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	5 26 56.63	25.874	N. 28 13 30.0	23.56
4	5 37 19.35	26.015	28 21 27.8	16.23
8	5 47 45.17	26.131	28 26 28.7	8.82
12	5 58 13.43	26.219	28 28 30.2	1.29
16	6 8 43.47	26.279	28 27 30.3	6.29
20	6 19 14.61	26.311	N. 28 23 27.8	13.91

FRIDAY 6.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	6 29 46.17	26.314	N. 28 16 22.4	21.54
4	6 40 17.48	26.288	28 6 13.9	29.16
8	6 50 47.85	26.237	27 53 3.2	36.72
12	7 1 16.66	26.158	27 36 51.6	44.22
16	7 11 43.27	26.054	27 17 41.1	51.63
20	7 22 7.11	25.928	N. 26 55 34.2	58.92



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m., Declination, Var. in 10m. for dates 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. for dates Saturday 21, Sunday 22, Monday 23, Tuesday 24, Wednesday 25, Thursday 26, Friday 27, Saturday 28, Sunday 29, Monday 30, Tuesday, July 1. Includes PHASES OF THE MOON section with dates June 4, 11, 18, 26 and June 9, 24.



GREENWICH MEAN TIME.

THE MOON'S

Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "		h m	h m
1	63 59 57.8	70 43 23.2	N. 4 36 22.1	N. 4 48 34.9	26.67	22 20.1	9 50.7
2	77 32 52.3	84 28 9.9	4 56 52.6	5 0 57.3	27.67	23 21.4	10 50.4
3	91 28 51.4	98 34 23.7	5 0 34.5	4 55 34.7	28.67	* *	11 52.8
4	105 44 6.1	112 57 12.2	4 45 54.1	4 31 35.2	0.29	0 24.2	12 55.2
5	120 12 51.6	127 30 11.7	4 12 47.3	3 49 46.6	1.29	1 25.4	13 54.8
6	134 48 20.6	142 6 28.9	3 22 55.9	2 52 43.3	2.29	2 23.2	14 50.5
7	149 23 51.3	156 39 48.2	2 19 41.8	1 44 27.7	3.29	3 16.9	15 42.4
8	163 53 46.2	171 5 19.0	N. 1 7 39.7	N. 0 29 57.2	4.29	4 7.2	16 31.5
9	178 14 7.0	185 19 56.2	S. 0 8 1.2	S. 0 45 37.4	5.29	4 55.5	17 19.3
10	192 22 38.3	199 22 9.6	1 22 15.8	1 57 23.5	6.29	5 43.1	18 7.2
11	206 18 28.7	213 11 37.1	2 30 30.1	3 1 9.1	7.29	6 31.5	18 56.4
12	220 1 37.1	226 48 31.6	3 28 57.1	3 53 34.1	8.29	7 21.9	19 48.0
13	233 32 23.0	240 13 13.4	4 14 44.0	4 32 14.1	9.29	8 14.7	20 42.1
14	246 51 3.0	253 25 52.0	4 45 54.9	4 55 41.1	10.29	9 10.0	21 38.3
15	259 57 38.7	266 26 21.5	5 1 29.9	5 3 22.3	11.29	10 6.6	22 34.9
16	272 51 57.8	279 14 25.8	5 1 22.1	4 55 36.5	12.29	11 2.8	23 30.1
17	285 33 43.8	291 49 52.0	4 46 14.8	4 33 28.7	13.29	11 56.6	* *
18	298 2 52.2	304 12 47.9	4 17 32.2	3 58 40.5	14.29	12 47.0	0 22.3
19	310 19 46.0	316 23 56.0	3 37 10.5	3 13 19.6	15.29	13 33.6	1 10.8
20	322 25 30.6	328 24 45.7	2 47 26.3	2 19 48.9	16.29	14 16.8	1 55.6
21	334 22 0.4	340 17 37.2	1 50 46.2	1 20 36.6	17.29	14 57.5	2 37.4
22	346 12 1.8	352 5 42.6	S. 0 49 38.6	S. 0 18 10.1	18.29	15 36.6	3 17.2
23	357 59 11.1	3 53 1.1	N. 0 13 30.9	N. 0 45 6.9	19.29	16 15.3	3 55.9
24	9 47 48.1	15 44 9.8	1 16 20.2	1 46 53.0	20.29	16 54.8	4 34.9
25	21 42 44.9	27 44 12.9	2 16 27.7	2 44 46.1	21.29	17 36.3	5 15.2
26	33 49 13.3	39 58 24.3	3 11 29.1	3 36 17.9	22.29	18 21.0	5 58.1
27	46 12 23.4	52 31 44.8	3 58 52.3	4 18 51.7	23.29	19 10.1	6 45.0
28	58 56 59.0	65 28 31.9	4 35 55.1	4 49 41.4	24.29	20 4.3	7 36.6
29	72 6 43.0	78 51 43.6	4 59 49.8	5 6 0.5	25.29	21 3.3	8 33.3
30	85 43 37.0	92 42 15.8	5 7 55.7	5 5 20.6	26.29	22 5.4	9 34.1
31	99 47 22.7	106 58 29.3	4 58 4.4	4 46 1.7	27.29	23 8.0	10 36.8
32	114 14 56.9	121 35 56.9	N. 4 29 13.4	N. 4 7 47.9	28.29	* *	11 38.6

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 38.92	15 45.44	57 20.00	57 43.87					
2	15 51.83	15 57.94	58 7.26	58 29.65					
3	16 3.64	16 8.82	58 50.56	59 9.53					
4	16 13.35	16 17.15	59 26.14	59 40.04					
5	16 20.13	16 22.25	59 50.96	59 58.75					
6	16 23.51	16 23.91	60 3.36	60 4.83					
7	16 23.50	16 22.33	60 3.32	59 59.02					
8	16 20.47	16 18.01	59 52.20	59 43.21					
9	16 15.05	16 11.68	59 32.37	59 20.01					
10	16 7.98	16 4.04	59 6.46	58 52.01					
11	15 59.92	15 55.68	58 36.91	58 21.39					
12	15 51.38	15 47.05	58 5.63	57 49.78					
13	15 42.72	15 38.42	57 33.91	57 18.14					
14	15 34.15	15 29.94	57 2.51	56 47.06					
15	15 25.79	15 21.71	56 31.85	56 16.90					
16	15 17.71	15 13.82	56 2.26	55 48.00					
17	15 10.05	15 6.43	55 34.20	55 20.91					
18	15 2.98	14 59.74	55 8.28	54 56.42					
19	14 56.74	14 54.03	54 45.44	54 35.52					
20	14 51.66	14 49.66	54 26.81	54 19.47					
21	14 48.07	14 46.95	54 13.67	54 9.57					
22	14 46.34	14 46.29	54 7.32	54 7.07					
23	14 46.79	14 47.95	54 8.95	54 13.11					
24	14 49.70	14 52.12	54 19.61	54 28.51					
25	14 55.23	14 59.00	54 39.88	54 53.71					
26	15 3.44	15 8.50	55 9.96	55 28.52					
27	15 14.17	15 20.38	55 49.28	56 12.02					
28	15 27.05	15 34.10	56 36.49	57 2.32					
29	15 41.42	15 48.88	57 29.15	57 56.48					
30	15 56.33	16 3.61	58 23.77	58 50.43					
31	16 10.54	16 16.96	59 15.84	59 39.35					
32	16 22.69	16 27.58	60 0.36	60 18.27					

TUESDAY 1.				
h	m	s	° / ' / "	"
0	4	4	9.25	23.927 N. 25 28 47.5 75.80
4	4	13	47.30	24.242 25 58 0.0 70.19
8	4	23	32.82	24.550 26 24 54.9 64.33
12	4	33	25.60	24.846 26 49 26.2 58.22
16	4	43	25.33	25.129 27 11 27.7 51.86
20	4	53	31.66	25.396 N. 27 30 53.5 45.25

WEDNESDAY 2.				
h	m	s	° / ' / "	"
0	5	3	44.19	25.645 N. 27 47 38.0 38.42
4	5	14	2.45	25.873 28 1 35.9 31.37
8	5	24	25.91	26.078 28 12 42.4 24.13
12	5	34	54.02	26.259 28 20 53.2 16.73
16	5	45	26.15	26.413 28 26 4.2 9.17
20	5	56	1.64	26.539 N. 28 28 12.2 1.48

THURSDAY 3.				
h	m	s	° / ' / "	"
0	6	6	39.81	26.637 N. 28 27 14.6 6.30
4	6	17	19.95	26.703 28 23 9.3 14.15
8	6	28	1.32	26.739 28 15 55.1 22.04
12	6	38	43.20	26.745 28 5 31.2 29.94
16	6	49	24.85	26.720 27 51 57.8 37.83
20	7	0	5.57	26.667 N. 27 35 15.8 45.66

FRIDAY 4.				
h	m	s	° / ' / "	"
0	7	10	44.68	26.586 N. 27 15 26.8 53.42
4	7	21	21.49	26.477 26 52 33.0 61.05
8	7	31	55.39	26.344 26 26 37.4 68.55
12	7	42	25.82	26.187 25 57 43.5 75.91
16	7	52	52.22	26.010 25 25 55.6 83.05
20	8	3	14.15	25.814 N. 24 51 18.5 90.00

SATURDAY 5.				
h	m	s	° / ' / "	"
0	8	13	31.18	25.603 N. 24 13 57.5 96.71
4	8	23	42.94	25.377 23 33 58.5 103.17
8	8	33	49.17	25.140 22 51 27.3 109.37
12	8	43	49.62	24.896 22 6 30.5 115.30
16	8	53	44.11	24.645 21 19 15.1 120.93
20	9	3	32.54	24.390 N. 20 29 48.0 126.27

SUNDAY 6.				
h	m	s	° / ' / "	"
0	9	13	14.84	24.135 N. 19 38 16.3 131.31
4	9	22	51.00	23.879 18 44 47.4 136.03
8	9	32	21.07	23.627 17 49 28.8 140.46
12	9	41	45.13	23.379 16 52 28.0 144.56
16	9	51	3.30	23.137 15 53 52.5 148.34
20	10	0	15.74	22.902 N. 14 53 49.8 151.82



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 Monday 7 through 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 through Friday, Aug. 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	114 14 56.9	121 35 56.9	N. 4 29 13.4	N. 4 7 47.9	28.29	* *	11 38.6
2	129 0 33.6	136 27 45.0	3 42 1.2	3 12 17.4	29.29	0 8.4	12 37.3
3	143 56 26.0	151 25 31.2	2 39 7.1	2 3 8.1	0.96	1 5.2	13 32.2
4	158 53 57.0	166 20 44.4	1 25 2.6	N. 0 45 35.4	1.96	1 58.5	14 24.0
5	173 45 0.9	181 6 1.6	N. 0 5 32.8	S. 0 34 19.8	2.96	2 49.1	15 13.8
6	188 23 10.1	195 35 58.6	S. 1 13 19.5	1 50 46.5	3.96	3 38.4	16 2.9
7	202 44 7.7	209 47 25.6	2 26 5.8	2 58 47.1	4.96	4 27.7	16 52.8
8	216 45 47.3	223 39 13.4	3 28 25.4	3 54 40.3	5.96	5 18.3	17 44.3
9	230 27 48.7	237 11 41.8	4 17 16.3	4 36 2.2	6.96	6 16.9	18 38.0
10	243 51 3.2	250 26 5.3	4 50 50.8	5 1 38.2	7.96	7 5.6	19 33.6
11	256 57 1.2	263 24 4.6	5 8 23.9	5 11 10.5	8.96	8 1.7	20 29.8
12	269 47 28.4	276 7 25.6	5 10 2.1	5 5 6.0	9.96	8 57.7	21 25.1
13	282 24 8.6	288 37 48.9	4 56 31.2	4 44 28.8	10.96	9 51.8	22 17.8
14	294 48 38.0	300 56 46.7	4 29 11.2	4 10 52.4	11.96	10 42.9	23 7.1
15	307 2 25.7	313 5 46.1	3 49 48.0	3 26 14.5	12.96	11 30.4	23 52.8
16	319 6 59.4	325 6 17.9	3 0 29.4	2 32 50.6	13.96	12 14.4	* *
17	331 3 54.8	337 0 4.6	2 3 37.2	1 33 8.1	14.96	12 55.7	0 35.4
18	342 55 3.6	348 49 9.9	S. 1 1 42.6	S. 0 29 40.1	15.96	13 35.2	1 15.6
19	354 42 43.1	0 36 5.2	N. 0 2 40.5	N. 0 35 0.0	16.96	14 13.9	1 54.6
20	6 29 39.9	12 23 53.5	1 6 59.7	1 38 20.9	17.96	14 52.8	2 33.2
21	18 19 13.7	24 16 10.5	2 8 45.5	2 37 55.4	18.96	15 33.0	3 12.7
22	30 15 15.4	36 17 1.3	3 5 32.5	3 31 19.0	19.96	16 15.8	3 54.1
23	42 22 2.1	48 30 52.1	3 54 57.0	4 16 8.1	20.96	17 2.2	4 38.5
24	54 44 5.4	61 2 15.6	4 34 34.4	4 49 57.6	21.96	17 53.0	5 27.0
25	67 25 53.7	73 55 28.7	5 1 59.7	5 10 23.0	22.96	18 48.4	6 20.2
26	80 31 24.8	87 14 1.5	5 14 50.5	5 15 6.7	23.96	19 47.7	7 17.7
27	94 3 31.2	100 59 58.6	5 10 58.4	5 2 15.3	24.96	20 48.9	8 18.2
28	108 3 19.1	115 13 17.7	4 48 51.3	4 30 45.6	25.96	21 49.6	9 19.4
29	122 29 29.2	129 51 16.6	4 8 3.9	3 40 59.1	26.96	22 48.0	10 19.2
30	137 17 53.0	144 48 22.1	3 9 52.1	2 35 11.4	27.96	23 43.4	11 16.0
31	152 21 40.0	159 56 37.3	1 57 33.5	N. 1 17 41.7	28.96	* *	12 10.0
32	167 32 2.3	175 6 43.2	N. 0 36 23.3	S. 0 5 31.1	0.64	0 36.1	13 1.8

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	16 22'69	16 27'58	60 0'36	60 18'27					
2	16 31'49	16 34'32	60 32'59	60 42'95					
3	16 36'00	16 36'50	60 49'11	60 50'95					
4	16 35'84	16 34'09	60 48'54	60 42'11					
5	16 31'32	16 27'65	60 31'96	60 18'54					
6	16 23'23	16 18'20	60 2'34	59 43'90					
7	16 12'71	16 6'90	59 23'78	59 2'47					
8	16 0'90	15 54'83	58 40'49	58 18'25					
9	15 48'79	15 42'87	57 56'14	57 34'44					
10	15 37'13	15 31'61	57 13'40	56 53'20					
11	15 26'37	15 21'42	56 33'99	56 15'84					
12	15 16'77	15 12'43	55 58'79	55 42'90					
13	15 8'40	15 4'67	55 28'12	55 14'49					
14	15 1'26	14 58'13	55 1'96	54 50'53					
15	14 55'31	14 52'79	54 40'19	54 30'94					
16	14 50'57	14 48'66	54 22'81	54 15'83					
17	14 47'08	14 45'84	54 10'03	54 5'47					
18	14 44'96	14 44'47	54 2'26	54 0'47					
19	14 44'40	14 44'77	54 0'20	54 1'56					
20	14 45'62	14 46'97	54 4'66	54 9'64					
21	14 48'86	14 51'31	54 16'56	54 25'54					
22	14 54'35	14 57'99	54 36'67	54 50'00					
23	15 2'24	15 7'09	55 5'56	55 23'36					
24	15 12'55	15 18'56	55 43'33	56 5'39					
25	15 25'11	15 32'12	56 29'38	56 55'07					
26	15 39'51	15 47'18	57 22'14	57 50'25					
27	15 55'01	16 2'84	58 18'92	58 47'60					
28	16 10'49	16 17'80	59 15'66	59 42'44					
29	16 24'57	16 30'60	60 7'25	60 29'33					
30	16 35'70	16 39'72	60 48'03	61 2'76					
31	16 42'52	16 44'00	61 13'02	61 18'44					
32	16 44'12	16 42'90	61 18'88	61 14'40					

FRIDAY 1.									
	h	m	s	s	°	'	''	''	
0	7	48	2'93	26.313	N.	25	41	41.6	81.79
4	7	58	32.65	26.160		25	7	30.4	89.10
8	8	8	58.48	25.989		24	30	26.2	96.22
12	8	19	20.00	25.802		23	50	33.8	103.11
16	8	29	36.85	25.600		23	7	59.0	109.75
20	8	39	48.71	25.387	N.	22	22	47.7	116.14

SATURDAY 2.									
	h	m	s	s	°	'	''	''	
0	8	49	55.35	25.164	N.	21	35	6.4	122.24
4	8	59	56.56	24.936		20	45	2.1	128.06
8	9	9	52.21	24.702		19	52	42.0	133.57
12	9	19	42.23	24.466		18	58	13.5	138.75
16	9	29	26.59	24.230		18	1	44.1	143.63
20	9	39	5.30	23.996	N.	17	3	21.9	148.17

SUNDAY 3.									
	h	m	s	s	°	'	''	''	
0	9	48	38.43	23.765	N.	16	3	14.7	152.37
4	9	58	6.08	23.540		15	1	30.7	156.23
8	10	7	28.40	23.321		13	58	18.0	159.76
12	10	16	45.56	23.111		12	53	44.8	162.94
16	10	25	57.77	22.909		11	47	59.3	165.78
20	10	35	5.27	22.718	N.	10	41	9.6	168.30

MONDAY 4.									
	h	m	s	s	°	'	''	''	
0	10	44	8.31	22.538	N.	9	33	23.6	170.47
4	10	53	7.17	22.369		8	24	49.3	172.32
8	11	2	2.14	22.214		7	15	34.6	173.83
12	11	10	53.54	22.072		6	5	47.3	175.05
16	11	19	41.68	21.942		4	55	34.9	175.93
20	11	28	26.89	21.828	N.	3	45	4.9	176.51

TUESDAY 5.									
	h	m	s	s	°	'	''	''	
0	11	37	9.51	21.727	N.	2	34	24.6	176.78
4	11	45	49.89	21.640		1	23	41.2	176.77
8	11	54	28.36	21.568	N.	0	13	1.7	176.47
12	12	3	5.28	21.510	S.	0	57	27.0	175.87
16	12	11	40.98	21.467		2	7	38.3	175.02
20	12	20	15.81	21.438	S.	3	17	25.7	173.88

WEDNESDAY 6.									
	h	m	s	s	°	'	''	''	
0	12	28	50.11	21.423	S.	4	26	42.9	172.49
4	12	37	24.21	21.422		5	35	23.4	170.84
8	12	45	58.46	21.434		6	43	21.3	168.93
12	12	54	33.16	21.460		7	50	30.7	166.80
16	13	3	8.63	21.498		8	56	45.8	164.41
20	13	11	45.18	21.550	S.	10	2	0.7	161.80



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, SEPT. 1, PHASES OF THE MOON, TUESDAY 26, WEDNESDAY 27.



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	167 32 2'3	175 6 43'2	N. 0 36 23'3	S. 0 5 31'1	0'64	0 36'1	13 1'8
2	182 39 31'1	190 9 22'2	S. 0 47 10'3	1 27 45'1	1'64	1 27'3	13 52'7
3	197 35 20'2	204 56 37'8	2 6 29'6	2 42 43'4	2'64	2 18'2	14 44'0
4	212 12 37'1	219 22 50'0	3 15 52'5	3 45 29'5	3'64	3 10'1	15 36'6
5	226 26 58'3	233 24 53'2	4 11 13'5	4 32 50'7	4'64	4 3'7	16 31'3
6	240 16 33'6	247 2 5'4	4 50 12'5	5 3 15'5	5'64	4 59'3	17 27'6
7	253 41 40'4	260 15 35'1	5 12 0'9	5 16 32'8	6'64	5 56'1	18 24'6
8	266 44 9'2	273 7 45'1	5 16 58'4	5 13 26'7	7'64	6 52'9	19 20'8
9	279 26 46'7	285 41 38'4	5 6 8'6	4 55 16'5	8'64	7 48'0	20 14'4
10	291 52 45'8	298 0 33'1	4 41 4'0	4 23 45'2	9'64	8 39'9	21 4'5
11	304 5 24'8	310 7 43'6	4 3 35'3	3 40 50'2	10'64	9 28'2	21 51'0
12	316 7 51'7	322 6 10'3	3 15 46'4	2 48 41'0	11'64	10 13'0	22 34'3
13	328 2 58'9	333 58 36'6	2 19 51'9	1 49 37'1	12'64	10 54'9	23 15'1
14	339 53 21'6	345 47 31'0	1 18 15'4	S. 0 46 6'1	13'64	11 34'8	23 54'3
15	351 41 21'9	357 35 11'1	S. 0 13 28'6	N. 0 19 17'7	14'64	12 13'6	* *
16	3 29 15'3	9 23 51'7	N. 0 51 53'0	1 23 57'6	15'64	12 52'4	0 32'9
17	15 19 17'7	21 15 51'4	1 55 12'3	2 25 17'6	16'64	13 32'2	1 12'1
18	27 13 52'1	33 13 40'1	2 53 54'7	3 20 45'4	17'64	14 13'9	1 52'7
19	39 15 36'4	45 20 3'6	3 45 31'3	4 7 55'2	18'64	14 58'8	2 35'9
20	51 27 25'2	57 38 5'5	4 27 40'1	4 44 29'5	19'64	15 47'3	3 22'5
21	63 52 29'7	70 11 3'2	4 58 8'0	5 8 20'6	20'64	16 40'0	4 13'2
22	76 34 11'2	83 2 18'4	5 14 53'1	5 17 33'0	21'64	17 36'3	5 7'8
23	89 35 46'8	96 14 57'3	5 16 8'7	5 10 31'0	22'64	18 35'0	6 5'5
24	103 0 6'4	109 51 26'2	5 0 32'9	4 46 10'7	23'64	19 34'0	7 4'6
25	116 49 2'9	123 52 55'6	4 27 24'8	4 4 20'3	24'64	20 31'6	8 3'1
26	131 2 55'3	138 18 43'7	3 37 7'8	3 6 4'9	25'64	21 27'0	8 59'6
27	145 39 53'1	153 5 45'3	2 31 35'5	1 54 11'0	26'64	22 20'1	9 53'8
28	160 35 32'6	168 8 18'6	N. 1 14 29'2	N. 0 33 14'1	27'64	23 11'8	10 46'1
29	175 42 59'5	183 18 26'3	S. 0 8 46'0	S. 0 50 40'2	28'64	* *	11 37'4
30	190 53 27'3	198 26 50'4	1 31 37'0	2 10 47'1	0'29	0 3'2	12 29'2
31	205 57 26'6	213 24 12'0	S. 2 47 25'2	S. 3 20 51'8	1'29	0 55'6	13 22'5

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	16 44'12	16 42'90	61 18'88	61 14'40					
2	16 40'38	16 36'66	61 5'16	60 51'55					
3	16 31'90	16 26'25	60 34'09	60 13'39					
4	16 19'90	16 13'03	59 50'12	59 24'06					
5	16 5'83	15 58'48	58 58'59	58 31'63					
6	15 51'11	15 43'87	58 4'65	57 38'12					
7	15 36'86	15 30'17	57 12'41	56 47'91					
8	15 23'87	15 18'01	56 24'84	56 3'36					
9	15 12'62	15 7'72	55 43'61	55 25'66					
10	15 3'31	14 59'40	55 9'51	54 55'16					
11	14 55'96	14 52'99	54 42'56	54 31'68					
12	14 50'47	14 48'38	54 22'45	54 14'81					
13	14 46'70	14 45'41	54 8'65	54 3'92					
14	14 44'50	14 43'96	54 0'58	53 58'58					
15	14 43'77	14 43'93	53 57'89	53 58'50					
16	14 44'46	14 45'35	54 0'43	54 3'70					
17	14 46'62	14 48'27	54 8'33	54 14'38					
18	14 50'33	14 52'81	54 21'93	54 31'03					
19	14 55'74	14 59'13	54 41'76	54 54'18					
20	15 3'00	15 7'36	55 8'35	55 24'34					
21	15 12'22	15 17'56	55 42'12	56 1'69					
22	15 23'37	15 29'63	56 23'00	56 45'92					
23	15 36'28	15 43'26	57 10'29	57 35'88					
24	15 50'49	15 57'85	58 2'36	58 29'35					
25	16 5'23	16 12'46	58 56'37	59 22'87					
26	16 19'37	16 25'79	59 48'19	60 11'71					
27	16 31'52	16 36'39	60 32'71	60 50'54					
28	16 40'21	16 42'85	61 4'55	61 14'20					
29	16 44'19	16 44'18	61 19'13	61 19'09					
30	16 42'81	16 40'11	61 14'07	61 4'16					
31	16 36'16	16 31'10	60 49'70	60 31'18					

MONDAY 1.									
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .					
	h m s	s	° / ' / "	"					
0	11 15 3'05	22'481	N. 5 29 32'6	180'12					
4	11 24 1'44	22'387	4 17 16'7	181'13					
8	11 32 57'71	22'305	3 4 40'6	181'81					
12	11 41 52'17	22'237	1 51 52'5	182'14					
16	11 50 45'15	22'181	N. 0 39 0'2	182'15					
20	11 59 36'96	22'139	S. 0 33 48'3	181'83					

TUESDAY 2.									
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .					
	h m s	s	° / ' / "	"					
0	12 8 27'92	22'111	S. 1 46 25'1	181'18					
4	12 17 18'36	22'095	2 58 42'5	180'22					
8	12 26 8'59	22'093	4 10 33'1	178'94					
12	12 34 58'92	22'103	5 21 49'3	177'35					
16	12 43 49'66	22'127	6 32 23'8	175'47					
20	12 52 41'11	22'162	S. 7 42 9'6	173'29					

WEDNESDAY 3.									
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .					
	h m s	s	° / ' / "	"					
0	13 1 33'57	22'210	S. 8 50 59'6	170'83					
4	13 10 27'30	22'269	9 58 47'0	168'07					
8	13 19 22'56	22'338	11 5 25'3	165'06					
12	13 28 19'62	22'418	12 10 47'9	161'78					
16	13 37 18'70	22'507	13 14 48'5	158'23					
20	13 46 20'02	22'604	S. 14 17 21'1	154'44					

THURSDAY 4.									
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .					
	h m s	s	° / ' / "	"					
0	13 55 23'77	22'709	S. 15 18 19'7	150'40					
4	14 4 30'12	22'821	16 17 38'5	146'12					
8	14 13 39'22	22'938	17 15 12'1	141'63					
12	14 22 51'19	23'060	18 10 55'1	136'91					
16	14 32 6'11	23'185	19 4 42'3	131'98					
20	14 41 24'07	23'312	S. 19 56 28'8	126'86					

FRIDAY 5.									
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .					
	h m s	s	° / ' / "	"					
0	14 50 45'09	23'439	S. 20 46 9'9	121'54					
4	15 0 9'17	23'567	21 33 41'3	116'04					
8	15 9 36'29	23'692	22 18 58'7	110'37					
12	15 19 6'37	23'813	23 1 58'2	104'56					
16	15 28 39'32	23'931	23 42 36'1	98'58					
20	15 38 15'01	24'041	S. 24 20 49'0	92'47					

SATURDAY 6.									
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .					
	h m s	s	° / ' / "	"					
0	15 47 53'24	24'143	S. 24 56 33'7	86'23					
4	15 57 33'83	24'237	25 29 47'5	79'90					
8	16 7 16'53	24'320	26 0 27'9	73'46					
12	16 17 1'08	24'390	26 28 32'8	66'94					
16	16 26 47'17	24'448	26 54 0'4	60'36					
20	16 36 34'48	24'491	S. 27 16 49'3	53'71					



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, Oct. 1, and Phases of the Moon.

PHASES OF THE MOON.

Table showing moon phases: Sept. 7 First Quarter, 15 Full Moon, 23 Last Quarter, 29 New Moon.

Table showing moon phases: Sept. 15 Apogee, 29 Perigee.



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	205 57 26.6	213 24 12.0	S. 2 47 25.2	S. 3 20 51.8	1.29	0 55.6	13 22.5
2	220 46 10.0	228 2 33.8	3 50 34.5	4 16 8.9	2.29	1 50.0	14 18.0
3	235 12 46.7	242 16 22.8	4 37 18.3	4 53 53.3	3.29	2 46.7	15 15.8
4	249 13 7.0	256 2 54.4	5 5 51.3	5 13 15.2	4.29	3 45.2	16 14.7
5	262 45 49.3	269 22 4.2	5 16 12.4	5 14 53.7	5.29	4 44.0	17 12.9
6	275 51 57.8	282 15 54.4	5 9 32.6	5 0 24.1	6.29	5 41.2	18 8.7
7	288 34 22.4	294 47 53.0	4 47 44.3	4 31 50.0	7.29	6 35.2	19 0.7
8	300 56 59.3	307 2 15.5	4 12 58.2	3 51 25.8	8.29	7 25.1	19 48.6
9	313 4 15.8	319 3 33.9	3 27 30.4	3 1 29.0	9.29	8 11.1	20 32.8
10	325 0 42.9	330 56 14.4	2 33 38.9	2 4 17.5	10.29	8 53.8	21 14.3
11	336 50 38.2	342 44 22.4	1 33 42.5	S. 1 2 11.7	11.29	9 34.2	21 53.8
12	348 37 52.8	354 31 33.4	S. 0 30 3.6	N. 0 2 23.4	12.29	10 13.2	22 32.6
13	0 25 46.0	6 20 50.3	N. 0 34 50.1	1 6 57.3	13.29	10 52.0	23 11.6
14	12 17 4.1	18 14 43.4	1 38 25.2	2 8 54.0	14.29	11 31.5	23 51.9
15	24 14 2.5	30 15 14.7	2 38 4.2	3 5 36.0	15.29	12 12.8	* *
16	36 18 31.7	42 24 4.7	3 31 10.4	3 54 28.8	16.29	12 56.9	0 34.5
17	48 32 4.3	54 42 40.9	4 15 13.4	4 33 7.4	17.29	13 44.5	1 20.2
18	60 56 4.9	67 12 27.2	4 47 55.2	4 59 22.7	18.29	14 35.9	2 9.7
19	73 31 58.9	79 54 52.1	5 7 17.4	5 11 28.3	19.29	15 30.8	3 3.0
20	86 21 19.3	92 51 33.8	5 11 46.7	5 8 5.7	20.29	16 27.9	3 59.2
21	99 25 48.7	106 4 17.1	5 0 21.1	4 48 31.1	21.29	17 25.5	4 56.7
22	112 47 11.9	119 34 44.4	4 32 37.3	4 12 43.8	22.29	18 21.8	5 53.9
23	126 27 3.3	133 24 14.7	3 48 59.6	3 21 37.0	23.29	19 15.9	6 49.2
24	140 26 20.5	147 33 17.1	2 50 53.3	2 17 10.8	24.29	20 7.9	7 42.2
25	154 44 54.2	162 0 54.5	1 40 57.0	N. 1 2 44.5	25.29	20 58.3	8 33.2
26	169 20 52.2	176 44 13.4	N. 0 23 10.7	S. 0 17 2.7	26.29	21 48.3	9 23.3
27	184 10 14.8	191 38 5.9	S. 0 57 11.0	1 36 27.8	27.29	22 39.4	10 13.7
28	199 6 49.1	206 35 21.6	2 14 6.8	2 49 23.9	28.29	23 32.5	11 5.6
29	214 2 38.6	221 27 34.3	3 21 38.5	3 50 15.9	29.29	* *	12 0.2
30	228 49 6.0	236 6 16.2	4 14 48.1	4 34 54.5	0.90	0 28.7	12 57.9
31	243 18 14.4	250 24 19.5	4 50 22.5	5 1 7.0	1.90	1 27.7	13 57.9
32	257 24 0.8	264 16 58.1	S. 5 7 9.5	S. 5 8 37.6	2.90	2 28.3	14 58.6

GREENWICH MEAN TIME.

Day.	THE MOON'S									
	Semidiameter.		Horizontal Parallax.		RIGHT ASCENSION AND DECLINATION.					
	Noon.	Midnight.	Noon.	Midnight.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	
	' / "	' / "	' / "	' / "		h m s	s	° / ' / "	' / "	
1	16 36.16	16 31.10	60 49.70	60 31.18						
2	16 25.10	16 18.35	60 9.20	59 44.43						
3	16 11.03	16 3.34	59 17.61	58 49.46						
4	15 55.48	15 47.61	58 20.65	57 51.83						
5	15 39.89	15 32.45	57 23.53	56 56.26						
6	15 25.39	15 18.80	56 30.40	56 6.24						
7	15 12.74	15 7.25	55 44.03	55 23.93						
8	15 2.36	14 58.09	55 6.01	54 50.36						
9	14 54.44	14 51.40	54 37.00	54 25.86						
10	14 48.95	14 47.07	54 16.88	54 10.00						
11	14 45.73	14 44.90	54 5.08	54 2.04						
12	14 44.55	14 44.64	54 0.75	54 1.08						
13	14 45.14	14 46.03	54 2.93	54 6.17						
14	14 47.26	14 48.83	54 10.70	54 16.45						
15	14 50.72	14 52.90	54 23.35	54 31.34						
16	14 55.37	14 58.12	54 40.38	54 50.46						
17	15 1.14	15 4.46	55 1.55	55 13.72						
18	15 8.07	15 11.97	55 26.93	55 41.21						
19	15 16.17	15 20.67	55 56.60	56 13.09						
20	15 25.47	15 30.56	56 30.69	56 49.36						
21	15 35.93	15 41.54	57 9.02	57 29.59						
22	15 47.36	15 53.31	57 50.89	58 12.70						
23	15 59.33	16 5.31	58 34.74	58 56.67						
24	16 11.15	16 16.72	59 18.06	59 38.45						
25	16 21.86	16 26.43	59 57.29	60 14.05						
26	16 30.29	16 33.29	60 28.18	60 39.19						
27	16 35.30	16 36.22	60 46.56	60 49.93						
28	16 35.99	16 34.58	60 49.09	60 43.91						
29	16 31.99	16 28.29	60 34.44	60 20.87						
30	16 23.58	16 17.98	60 3.60	59 43.09						
31	16 11.65	16 4.75	59 19.88	58 54.61						
32	15 57.47	15 49.99	58 27.94	58 0.52						

WEDNESDAY 1.									
Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.					
0	13 32 3.80	23.012	S. 12 37 30.7	164.26					
4	13 41 17.59	23.139	13 42 30.0	160.63					
8	13 50 34.53	23.273	14 45 58.4	156.69					
12	13 59 54.76	23.413	15 47 49.0	152.47					
16	14 9 18.40	23.557	16 47 54.7	147.96					
20	14 18 45.55	23.705	S. 17 46 9.0	143.18					

THURSDAY 2.									
Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.					
0	14 28 16.27	23.855	S. 18 42 25.6	138.15					
4	14 37 50.59	24.005	19 36 38.1	132.86					
8	14 47 28.50	24.153	20 28 40.9	127.33					
12	14 57 9.96	24.301	21 18 28.4	121.58					
16	15 6 54.88	24.442	22 5 55.3	115.62					
20	15 16 43.12	24.577	S. 22 50 56.8	109.47					

FRIDAY 3.									
Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.					
0	15 26 34.53	24.705	S. 23 33 28.4	103.13					
4	15 36 28.90	24.824	24 13 25.8	96.63					
8	15 46 25.98	24.931	24 50 45.4	89.98					
12	15 56 25.49	25.026	25 25 23.9	83.21					
16	16 6 27.11	25.106	25 57 18.4	76.32					
20	16 16 30.48	25.172	S. 26 26 26.5	69.34					

SATURDAY 4.									
Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.					
0	16 26 35.21	25.220	S. 26 52 46.3	62.30					
4	16 36 40.88	25.250	27 16 16.3	55.19					
8	16 46 47.07	25.262	27 36 55.4	48.07					
12	16 56 53.31	25.254	27 54 43.1	40.91					
16	17 6 59.13	25.227	28 9 39.4	33.78					
20	17 17 4.03	25.178	S. 28 21 44.7	26.67					

SUNDAY 5.									
Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.					
0	17 27 7.56	25.112	S. 28 30 59.8	19.60					
4	17 37 9.21	25.023	28 37 26.1	12.60					
8	17 47 8.51	24.916	28 41 5.3	5.68					
12	17 57 5.01	24.789	28 41 59.5	1.15					
16	18 6 58.24	24.644	28 40 11.2	7.86					
20	18 16 47.79	24.482	S. 28 35 43.3	14.44					

MONDAY 6.									
Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.					
0	18 26 33.26	24.303	S. 28 28 38.9	20.89					
4	18 36 14.27	24.111	28 19 1.5	27.20					
8	18 45 50.48	23.905	28 6 54.7	33.34					
12	18 55 21.60	23.687	27 52 22.4	39.32					
16	19 4 47.35	23.457	27 35 28.9	45.12					
20	19 14 7.49	23.220	S. 27 16 18.3	50.74					



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, SATURDAY, NOV. 1, SUNDAY 26, 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	257 24 0'8	264 16 58'1	S. 5 7 9'5	S. 5 8 37'6	2'90	2 28'3	14 58'6
2	271 3 2'2	277 42 13'8	5 5 43'2	4 58 42'0	3'90	3 28'3	15 57'3
3	284 14 42'8	290 40 47'4	4 47 51'8	4 33 31'9	4'90	4 25'4	16 52'4
4	297 0 52'3	303 15 27'4	4 16 2'5	3 55 43'6	5'90	5 18'2	17 42'9
5	309 25 7'0	315 30 28'1	3 32 55'0	3 7 56'4	6'90	6 6'5	18 29'1
6	321 32 9'8	327 30 52'3	2 41 6'6	2 12 43'7	7'90	6 50'8	19 11'7
7	333 27 15'6	339 21 59'5	1 43 5'8	1 12 30'3	8'90	7 32'0	19 51'9
8	345 15 42'6	351 9 2'0	S. 0 41 14'7	S. 0 9 36'3	9'90	8 11'5	20 30'8
9	357 2 32'6	2 56 46'9	N. 0 22 7'4	N. 0 53 38'6	10'90	8 50'2	21 9'7
10	8 52 14'8	14 49 22'9	1 24 38'7	1 54 49'5	11'90	9 29'4	21 49'5
11	20 48 34'4	26 50 9'7	2 23 52'0	2 51 26'8	12'90	10 10'1	22 31'4
12	32 54 24'9	39 1 32'9	3 17 14'4	3 40 55'7	13'90	10 53'5	23 16'5
13	45 11 43'3	51 25 2'2	4 2 11'5	4 20 43'8	14'90	11 40'4	* *
14	57 41 32'7	64 1 15'3	4 36 15'3	4 48 30'2	15'90	12 31'3	0 5'4
15	70 24 8'3	76 50 8'5	4 57 14'6	5 2 17'3	16'90	13 25'9	0 58'2
16	83 19 11'7	89 51 13'3	5 3 28'9	5 0 43'6	17'90	14 23'0	1 54'3
17	96 26 9'0	103 3 55'1	4 53 58'1	4 43 12'9	18'90	15 20'8	2 52'0
18	109 44 29'0	116 27 49'9	4 28 31'6	4 10 1'3	19'90	16 17'3	3 49'3
19	123 13 57'9	130 2 54'8	3 47 52'8	3 22 20'3	20'90	17 11'2	4 44'6
20	136 54 42'9	143 49 25'2	2 53 41'6	2 22 17'8	21'90	18 2'5	5 37'2
21	150 47 4'0	157 47 40'6	1 48 33'6	N. 1 12 56'8	22'90	18 51'6	6 27'3
22	164 51 13'6	171 57 38'2	N. 0 35 58'7	S. 0 1 46'8	23'90	19 39'8	7 15'8
23	179 6 44'9	186 18 18'6	S. 0 39 43'5	1 17 13'3	24'90	20 28'4	8 4'0
24	193 31 58'1	200 47 15'2	1 53 37'2	2 28 16'3	25'90	21 18'9	8 53'3
25	208 3 35'2	215 20 16'7	3 0 33'0	3 29 52'1	26'90	22 12'3	9 45'2
26	222 36 33'7	229 51 36'0	3 55 42'3	4 17 37'2	27'90	23 9'3	10 40'4
27	237 4 32'4	244 14 31'5	4 35 16'5	4 48 26'2	28'90	* *	11 39'0
28	251 20 45'2	258 22 29'6	4 56 58'9	5 0 54'4	0'43	0 9'3	12 40'0
29	265 19 7'7	272 10 10'4	5 0 17'9	4 55 20'3	1'43	1 10'5	13 40'8
30	278 55 17'5	285 34 18'1	4 46 16'9	4 33 26'0	2'43	2 10'3	14 38'9
31	292 7 10'3	298 34 0'6	S. 4 17 8'3	S. 3 57 45'8	3'43	3 6'4	15 32'7

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	15 57'47	15 49'99	58 27'94	58 0'52					
2	15 42'46	15 35'05	57 32'94	57 5'78					
3	15 27'89	15 21'10	56 39'54	56 14'66					
4	15 14'77	15 8'99	55 51'48	55 30'29					
5	15 3'81	14 59'28	55 11'32	54 54'72					
6	14 55'42	14 52'25	54 40'59	54 28'96					
7	14 49'77	14 47'96	54 19'87	54 13'26					
8	14 46'82	14 46'31	54 9'07	54 7'21					
9	14 46'40	14 47'06	54 7'55	54 9'95					
10	14 48'23	14 49'87	54 14'24	54 20'26					
11	14 51'94	14 54'37	54 27'82	54 36'74					
12	14 57'13	15 0'17	54 46'86	54 57'97					
13	15 3'43	15 6'88	55 9'93	55 22'57					
14	15 10'48	15 14'19	55 35'76	55 49'36					
15	15 17'99	15 21'86	56 3'30	56 17'47					
16	15 25'79	15 29'75	56 31'85	56 46'37					
17	15 33'74	15 37'77	57 1'00	57 15'75					
18	15 41'81	15 45'86	57 30'56	57 45'41					
19	15 49'92	15 53'96	58 0'27	58 15'07					
20	15 57'95	16 1'86	58 29'70	58 44'02					
21	16 5'63	16 9'22	58 57'85	59 10'98					
22	16 12'54	16 15'52	59 23'16	59 34'07					
23	16 18'06	16 20'08	59 43'38	59 50'77					
24	16 21'47	16 22'18	59 55'90	59 58'49					
25	16 22'12	16 21'23	59 58'26	59 55'01					
26	16 19'50	16 16'92	59 48'67	59 39'22					
27	16 13'51	16 9'34	59 26'72	59 11'43					
28	16 4'48	15 59'03	58 53'62	58 33'66					
29	15 53'12	15 46'87	58 11'99	57 49'11					
30	15 40'42	15 33'92	57 25'48	57 1'67					
31	15 27'50	15 21'27	56 38'12	56 15'29					

SATURDAY 1.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	17 2 59'85	25'932	S. 27 57 0'8	37'09
4	17 13 21'84	25'897	28 10 21'0	29'60
8	17 23 42'69	25'837	28 20 41'7	22'14
12	17 34 1'83	25'753	28 28 4'0	14'72
16	17 44 18'64	25'643	28 32 29'5	7'41
20	17 54 32'57	25'513	S. 28 34 0'4	0'18

SUNDAY 2.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	18 4 43'09	25'359	S. 28 32 39'3	6'92
4	18 14 49'65	25'184	28 28 29'4	13'88
8	18 24 51'78	24'990	28 21 34'2	20'69
12	18 34 49'02	24'777	28 11 57'5	27'33
16	18 44 40'95	24'548	27 59 43'7	33'78
20	18 54 27'21	24'304	S. 27 44 57'2	40'05

MONDAY 3.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	19 4 7'48	24'049	S. 27 27 42'8	46'11
4	19 13 41'48	23'783	27 8 5'4	51'97
8	19 23 8'98	23'507	26 46 10'1	57'61
12	19 32 29'80	23'226	26 22 2'0	63'03
16	19 41 43'79	22'939	25 55 46'5	68'22
20	19 50 50'86	22'649	S. 25 27 28'8	73'20

TUESDAY 4.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	19 59 50'96	22'358	S. 24 57 14'3	77'97
4	20 8 44'06	22'067	24 25 8'2	82'50
8	20 17 30'20	21'778	23 51 15'6	86'84
12	20 26 9'42	21'491	23 15 41'6	90'97
16	20 34 41'82	21'210	22 38 31'2	94'87
20	20 43 7'52	20'933	S. 21 59 49'4	98'58

WEDNESDAY 5.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	20 51 26'67	20'663	S. 21 19 40'8	102'09
4	20 59 39'41	20'401	20 38 10'3	105'42
8	21 7 45'94	20'146	19 55 22'3	108'55
12	21 15 46'47	19'900	19 11 21'1	111'51
16	21 23 41'21	19'663	18 26 10'9	114'30
20	21 31 30'40	19'437	S. 17 39 55'8	116'92

THURSDAY 6.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	21 39 14'29	19'222	S. 16 52 39'6	119'39
4	21 46 53'14	19'017	16 4 26'2	121'70
8	21 54 27'20	18'823	15 15 19'1	123'87
12	22 1 56'76	18'641	14 25 21'9	125'88
16	22 9 22'07	18'471	13 34 38'1	127'75
20	22 16 43'41	18'311	S. 12 43 10'8	129'50



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: 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, DEC. 1. Includes PHASES OF THE MOON section with moon phases and apogee/perigee data.



GREENWICH MEAN TIME.

THE MOON'S

Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Upper.	Lower.
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	d	h m	h m
1	292 7 10.3	298 34 0.6	S. 4 17 8.3	S. 3 57 45.8	3.43	3 6.4	15 32.7
2	304 55 4.1	311 10 42.2	3 35 41.1	3 11 16.5	4.43	3 57.8	16 21.7
3	317 21 22.6	323 27 37.5	2 44 54.0	2 16 55.0	5.43	4 44.5	17 6.4
4	329 30 3.3	335 29 19.3	1 47 39.3	1 17 26.3	6.43	5 27.5	17 47.9
5	341 26 6.1	347 21 6.2	S. 0 46 34.4	S. 0 15 21.4	7.43	6 7.8	18 27.4
6	353 15 1.8	359 8 35.7	N. 0 15 55.7	N. 0 46 59.8	8.43	6 46.7	19 6.1
7	5 2 28.8	10 57 21.2	1 17 34.2	1 47 22.2	9.43	7 25.6	19 45.3
8	16 53 50.6	22 52 32.0	2 16 6.4	2 43 29.5	10.43	8 5.5	20 26.2
9	28 53 57.2	34 58 34.3	3 9 13.6	3 33 0.5	11.43	8 47.6	21 9.9
10	41 6 47.0	47 18 54.3	3 54 31.7	4 13 29.0	12.43	9 33.1	21 57.4
11	53 35 10.1	59 55 42.6	4 29 34.0	4 42 29.6	13.43	10 22.8	22 49.3
12	66 20 35.1	72 49 44.9	4 51 59.6	4 57 49.7	14.43	11 16.8	23 45.1
13	79 23 4.4	86 0 21.3	4 59 48.0	4 57 45.8	15.43	12 14.2	* *
14	92 41 19.3	99 25 39.5	4 51 37.8	4 41 22.9	16.43	13 13.2	0 43.6
15	106 13 0.2	113 2 59.8	4 27 4.0	4 8 49.2	17.43	14 11.4	1 42.6
16	119 55 16.2	126 49 29.0	3 46 50.4	3 21 24.5	18.43	15 7.2	2 39.7
17	133 45 19.5	140 42 31.9	2 52 52.3	2 21 38.0	19.43	15 59.8	3 33.9
18	147 40 53.1	154 40 12.9	1 48 9.3	N. 1 12 56.4	20.43	16 49.4	4 24.9
19	161 40 24.0	168 41 21.1	N. 0 36 31.4	S. 0 0 31.8	21.43	17 37.2	5 13.5
20	175 43 0.0	182 45 17.1	S. 0 37 39.0	1 14 15.1	22.43	18 24.5	6 0.8
21	189 48 7.9	196 51 26.9	1 49 45.8	2 23 37.0	23.43	19 12.7	6 48.3
22	203 55 5.5	210 58 51.9	2 55 16.5	3 24 14.0	24.43	20 3.5	7 37.8
23	218 2 30.7	225 5 42.6	3 50 2.0	4 12 16.1	25.43	20 57.3	8 30.0
24	232 8 3.8	239 9 7.4	4 30 36.1	4 44 46.3	26.43	21 54.7	9 25.6
25	246 8 23.6	253 5 21.1	4 54 35.9	4 59 59.4	27.43	22 54.5	10 24.4
26	259 59 28.4	266 50 14.8	5 0 56.4	4 57 31.8	28.43	23 54.7	11 24.7
27	273 37 12.1	280 19 56.1	4 49 55.3	4 38 20.5	29.43	* *	12 24.0
28	286 58 7.5	293 31 32.6	4 23 5.0	4 4 28.9	0.88	0 52.6	13 20.1
29	300 0 3.9	306 23 40.3	3 42 54.1	3 18 43.8	1.88	1 46.5	14 11.7
30	312 42 27.5	318 56 37.3	2 52 21.7	2 24 11.3	2.88	2 35.8	14 58.8
31	325 6 26.8	331 12 19.2	1 54 35.7	1 23 57.1	3.88	3 20.8	15 42.0
32	337 14 42.0	343 14 6.7	S. 0 52 36.6	S. 0 20 54.2	4.88	4 2.6	16 22.6

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 27.50	15 21.27	56 38.12	56 15.29					
2	15 15.35	15 9.84	55 53.60	55 33.41					
3	15 4.83	15 0.39	55 15.05	54 58.77					
4	14 56.57	14 53.41	54 44.79	54 33.21					
5	14 50.95	14 49.21	54 24.22	54 17.83					
6	14 48.19	14 47.89	54 14.09	54 12.98					
7	14 48.28	14 49.36	54 14.43	54 18.36					
8	14 51.07	14 53.38	54 24.63	54 33.09					
9	14 56.23	14 59.57	54 43.56	54 55.80					
10	15 3.34	15 7.45	55 9.60	55 24.67					
11	15 11.83	15 16.41	55 40.72	55 57.50					
12	15 21.10	15 25.83	56 14.69	56 32.00					
13	15 30.51	15 35.08	56 49.15	57 5.91					
14	15 39.48	15 43.65	57 22.03	57 37.30					
15	15 47.55	15 51.15	57 51.59	58 4.77					
16	15 54.42	15 57.36	58 16.76	58 27.53					
17	15 59.97	16 2.25	58 37.10	58 45.47					
18	16 4.22	16 5.88	58 52.67	58 58.76					
19	16 7.25	16 8.33	59 3.77	59 7.72					
20	16 9.13	16 9.64	59 10.64	59 12.52					
21	16 9.85	16 9.75	59 13.31	59 12.94					
22	16 9.31	16 8.51	59 11.33	59 8.38					
23	16 7.31	16 5.69	59 4.00	58 58.08					
24	16 3.64	16 1.12	58 50.53	58 41.32					
25	15 58.14	15 54.72	58 30.41	58 17.86					
26	15 50.87	15 46.63	58 3.76	57 48.23					
27	15 42.05	15 37.21	57 31.46	57 13.71					
28	15 32.18	15 27.04	56 55.27	56 36.43					
29	15 21.88	15 16.80	56 17.53	55 58.92					
30	15 11.89	15 7.24	55 40.93	55 23.90					
31	15 2.94	14 59.06	55 8.13	54 53.92					
32	14 55.68	14 52.86	54 41.54	54 31.19					

MONDAY 1.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	19 38 36.57	23.483	S. 25 51 55.7	68.63
4	19 47 56.55	23.183	25 23 25.4	73.86
8	19 57 9.29	22.878	24 52 52.6	78.83
12	20 6 14.72	22.573	24 20 23.0	83.58
16	20 15 12.81	22.268	23 46 2.4	88.09
20	20 24 3.58	21.963	S. 23 9 56.6	92.36

TUESDAY 2.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	20 32 47.07	21.662	S. 22 32 11.0	96.39
4	20 41 23.38	21.365	21 52 51.2	100.21
8	20 49 52.63	21.073	21 12 2.5	103.81
12	20 58 14.97	20.790	20 29 50.2	107.18
16	21 6 30.58	20.513	19 46 19.3	110.36
20	21 14 39.66	20.245	S. 19 1 34.7	113.33

WEDNESDAY 3.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	21 22 42.41	19.987	S. 18 15 41.1	116.10
4	21 30 39.08	19.738	17 28 43.2	118.69
8	21 38 29.93	19.501	16 40 45.3	121.11
12	21 46 15.21	19.274	15 51 51.5	123.35
16	21 53 55.20	19.060	15 2 5.9	125.42
20	22 1 30.18	18.857	S. 14 11 32.3	127.35

THURSDAY 4.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	22 9 0.44	18.667	S. 13 20 14.4	129.11
4	22 16 26.28	18.489	12 28 15.8	130.74
8	22 23 48.00	18.323	11 35 39.9	132.23
12	22 31 5.88	18.170	10 42 29.8	133.58
16	22 38 20.25	18.030	9 48 48.8	134.81
20	22 45 31.41	17.903	S. 8 54 39.9	135.91

FRIDAY 5.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	22 52 39.67	17.788	S. 8 0 6.0	136.89
4	22 59 45.35	17.687	7 5 9.9	137.77
8	23 6 48.74	17.598	6 9 54.3	138.52
12	23 13 50.17	17.523	5 14 22.0	139.16
16	23 20 49.93	17.459	4 18 35.3	139.71
20	23 27 48.33	17.410	S. 3 22 37.0	140.13

SATURDAY 6.				
Hour.	Right Ascension.	Var. in 10 <sup>m</sup> .	Declination.	Var. in 10 <sup>m</sup> .
0	23 34 45.70	17.373	S. 2 26 29.4	140.47
4	23 41 42.34	17.349	1 30 15.1	140.70
8	23 48 38.55	17.338	S. 0 33 56.5	140.83
12	23 55 34.64	17.339	N. 0 22 23.9	140.86
16	0 2 30.91	17.353	1 18 43.8	140.78
20	0 9 27.67	17.380	N. 2 15 0.6	140.60



GREENWICH MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Table with columns: Hour, Right Ascension, Var. in 10m., Declination, Var. in 10m. 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. for days Sunday 21 through Sunday 28, Monday 29 through Monday 22, Tuesday 23 through Tuesday 30, Wednesday 31, Thursday, Jan. 1, 1914, and Phases of the Moon.



GREENWICH MEAN TIME.

JANUARY.						FEBRUARY.					
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.			
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	21 44 55.68	11.371	S. 15 24 21.2	63.52	3 2.9	1	23 53 48.26	9.501	S. 0 23 44.9	76.59	3 9.4
2	21 49 27.77	11.303	14 58 45.7	64.43	3 3.5	2	23 57 35.65	9.448	N. 0 6 52.6	76.52	3 9.3
3	21 53 58.24	11.236	14 32 48.7	65.31	3 4.0	3	0 1 21.76	9.395	0 37 28.1	76.42	3 9.1
4	21 58 27.10	11.169	14 6 30.9	66.16	3 4.6	4	0 5 6.60	9.342	1 8 0.8	76.29	3 8.9
5	22 2 54.36	11.102	13 39 53.1	66.97	3 5.1	5	0 8 50.16	9.288	1 38 30.0	76.13	3 8.7
6	22 7 20.02	11.036	S. 13 12 56.1	67.75	3 5.6	6	0 12 32.43	9.234	N. 2 8 55.0	75.94	3 8.5
7	22 11 44.10	10.970	12 45 40.8	68.50	3 6.0	7	0 16 13.41	9.180	2 39 15.1	75.72	3 8.2
8	22 16 6.60	10.905	12 18 8.0	69.21	3 6.5	8	0 19 53.07	9.125	3 9 29.5	75.47	3 7.9
9	22 20 27.54	10.840	11 50 18.5	69.89	3 6.9	9	0 23 31.40	9.069	3 39 37.5	75.18	3 7.6
10	22 24 46.94	10.776	11 22 13.0	70.54	3 7.2	10	0 27 8.39	9.012	4 9 38.3	74.87	3 7.3
11	22 29 4.80	10.713	S. 10 53 52.4	71.16	3 7.6	11	0 30 43.99	8.954	N. 4 39 31.3	74.53	3 6.9
12	22 33 21.14	10.650	10 25 17.5	71.74	3 7.9	12	0 34 18.19	8.895	5 9 15.7	74.15	3 6.5
13	22 37 35.98	10.587	9 56 29.1	72.28	3 8.2	13	0 37 50.97	8.835	5 38 50.7	73.75	3 6.1
14	22 41 49.31	10.525	9 27 28.1	72.79	3 8.5	14	0 41 22.28	8.773	6 8 15.6	73.31	3 5.7
15	22 46 1.16	10.463	8 58 15.2	73.27	3 8.7	15	0 44 52.09	8.710	6 37 29.7	72.85	3 5.3
16	22 50 11.53	10.402	S. 8 28 51.2	73.71	3 9.0	16	0 48 20.36	8.645	N. 7 6 32.2	72.35	3 4.8
17	22 54 20.44	10.341	7 59 16.9	74.12	3 9.2	17	0 51 47.04	8.578	7 35 22.4	71.82	3 4.3
18	22 58 27.90	10.281	7 29 33.2	74.50	3 9.3	18	0 55 12.10	8.509	8 3 59.6	71.27	3 3.8
19	23 2 33.93	10.221	6 59 40.8	74.85	3 9.5	19	0 58 35.47	8.437	8 32 23.1	70.68	3 3.2
20	23 6 38.54	10.162	6 29 40.5	75.17	3 9.6	20	1 1 57.11	8.364	9 0 32.2	70.07	3 2.6
21	23 10 41.74	10.104	S. 5 59 33.1	75.45	3 9.7	21	1 5 16.96	8.289	N. 9 28 26.1	69.42	3 2.0
22	23 14 43.54	10.047	5 29 19.2	75.70	3 9.8	22	1 8 34.97	8.211	9 56 4.3	68.75	3 1.4
23	23 18 43.96	9.990	4 58 59.6	75.92	3 9.9	23	1 11 51.08	8.130	10 23 26.1	68.05	3 0.7
24	23 22 43.03	9.933	4 28 35.1	76.11	3 9.9	24	1 15 5.22	8.047	10 50 30.8	67.33	3 0.0
25	23 26 40.75	9.877	3 58 6.4	76.27	3 9.9	25	1 18 17.33	7.961	11 17 17.7	66.58	2 59.2
26	23 30 37.14	9.822	S. 3 27 34.1	76.40	3 9.9	26	1 21 27.33	7.871	N. 11 43 46.1	65.80	2 58.4
27	23 34 32.22	9.767	2 56 58.9	76.50	3 9.9	27	1 24 35.14	7.778	12 9 55.4	64.98	2 57.6
28	23 38 26.00	9.713	2 26 21.6	76.58	3 9.8	28	1 27 40.67	7.681	12 35 45.0	64.14	2 56.8
29	23 42 18.48	9.660	1 55 42.9	76.63	3 9.8	29	1 30 43.84	7.580	N. 13 1 14.0	63.28	2 55.9
30	23 46 9.68	9.607	1 25 3.4	76.65	3 9.7						
31	23 49 59.61	9.554	S. 0 54 23.9	76.63	3 9.6						
32	23 53 48.26	9.501	S. 0 23 44.9	76.59	3 9.4						

Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	8.41	8.70	9.03	9.38	9.78	10.21	Semidiameter.	10.79	11.32	11.92	12.59	13.33	14.18
Hor. Parallax.	8.81	9.12	9.46	9.83	10.24	10.69	Hor. Parallax.	11.30	11.86	12.49	13.19	13.97	14.85

GREENWICH MEAN TIME.

MARCH.						APRIL.					
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.			
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m
1	1 30 43.84	7.580	N. 13 1 14.0	63.28	2 55.9	1	2 30 58.96	0.684	N. 21 55 53.7	14.29	1 53.7
2	1 33 44.53	7.475	13 26 21.8	62.38	2 54.9	2	2 31 10.92	0.312	22 1 4.6	11.61	1 50.0
3	1 36 42.63	7.365	13 51 7.5	61.44	2 54.0	3	2 31 13.88	0.066	22 5 10.1	8.84	1 46.1
4	1 39 38.04	7.250	14 15 30.5	60.48	2 53.0	4	2 31 7.70	0.449	22 8 7.7	5.96	1 42.1
5	1 42 30.62	7.130	14 39 29.9	59.48	2 51.9	5	2 30 52.28	0.836	22 9 55.1	2.98	1 37.9
6	1 45 20.24	7.004	N. 15 3 4.9	58.45	2 50.8	6	2 30 27.55	1.225	N. 22 10 29.8	0.10	1 33.5
7	1 48 6.76	6.872	15 26 14.8	57.38	2 49.6	7	2 29 53.50	1.613	22 9 49.5	3.27	1 29.0
8	1 50 50.03	6.733	15 48 58.7	56.28	2 48.4	8	2 29 10.16	1.999	22 7 51.8	6.54	1 24.3
9	1 53 29.89	6.587	16 11 15.6	55.14	2 47.1	9	2 28 17.59	2.381	22 4 34.7	9.90	1 19.5
10	1 56 6.16	6.434	16 33 4.6	53.96	2 45.7	10	2 27 15.95	2.755	21 59 56.1	13.33	1 14.6
11	1 58 38.68	6.274	N. 16 54 24.9	52.74	2 44.3	11	2 26 5.44	3.119	N. 21 53 54.5	16.82	1 9.5
12	2 1 7.25	6.106	17 15 15.5	51.48	2 42.9	12	2 24 46.33	3.471	21 46 28.4	20.36	1 4.2
13	2 3 31.69	5.929	17 35 35.3	50.17	2 41.3	13	2 23 18.97	3.807	21 37 37.0	23.92	0 58.8
14	2 5 51.78	5.743	17 55 23.1	48.82	2 39.7	14	2 21 43.78	4.123	21 27 19.9	27.49	0 53.3
15	2 8 7.28	5.548	18 14 38.0	47.42	2 38.0	15	2 20 1.26	4.416	21 15 37.3	31.05	0 47.7
16	2 10 18.00	5.344	N. 18 33 18.9	45.98	2 36.2	16	2 18 12.01	4.684	N. 21 2 29.9	34.55	0 41.9
17	2 12 23.71	5.130	18 51 24.5	44.48	2 34.3	17	2 16 16.68	4.923	20 47 59.4	37.97	0 36.1
18	2 14 24.16	4.906	19 8 53.5	42.93	2 32.4	18	2 14 15.99	5.130	20 32 7.8	41.29	0 30.2
19	2 16 19.11	4.672	19 25 44.6	41.33	2 30.4	19	2 12 10.74	5.302	20 14 58.4	44.47	0 24.2
20	2 18 8.30	4.427	19 41 56.6	39.67	2 28.3	20	2 10 1.79	5.437	19 56 35.0	47.46	0 18.1
21	2 19 51.48	4.172	N. 19 57 27.9	37.95	2 26.0	21	2 7 50.03	5.535	N. 19 37 2.3	50.23	0 12.0
22	2 21 28.42	3.906	20 12 17.2	36.16	2 23.7	22	2 5 36.41	5.594	19 16 25.9	52.76	0 5.8
23	2 22 58.86	3.629	20 26 23.1	34.31	2 21.3	23	2 3 21.88	5.612	18 54 51.9	55.02	23 53.5
24	2 24 22.53	3.342	20 39 44.0	32.40	2 18.7	24	2 1 7.39	5.590	18 32 27.3	56.98	23 47.4
25	2 25 39.19	3.045	20 52 18.1	30.42	2 16.0	25	1 58 53.89	5.528	18 9 19.4	58.62	23 41.3
26	2 26 48.60	2.737	N. 21 4 3.8	28.37	2 13.2	26	1 56 42.33	5.429	N. 17 45 36.1	59.93	23 35.2
27	2 27 50.50	2.419	21 14 59.2	26.23	2 10.3	27	1 54 33.60	5.293	17 21 25.4	60.89	23 29.2
28	2 28 44.64	2.091	21 25 2.6	24.02	2 7.3	28	1 52 28.55	5.122	16 56 55.8	61.51	23 23.3
29	2 29 30.77	1.753	21 34 11.9	21.73	2 4.1	29	1 50 27.99	4.920	16 32 15.7	61.78	23 17.4
30	2 30 8.68	1.405	21 42 25.0	19.35	2 0.8	30	1 48 32.65	4.688	16 7 33.5	61.69	23 11.7
31	2 30 38.15	1.049	N. 21 49 39.7	16.87	1 57.3	31	1 46 43.22	4.429	N. 15 42 57.3	61.26	23 6.0
32	2 30 58.96	0.684	N. 21 55 53.7	14.29	1 53.7						

Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	14.73	15.75	16.91	18.20	19.65	21.27	Semidiameter.	23.37	25.18	26.90	28.33	29.23	29.39
Hor. Parallax.	15.43	16.50	17.71	19.07	20.59	22.28	Hor. Parallax.	24.48	26.38	28.18	29.68	30.62	30.79



GREENWICH MEAN TIME.

MAY.						JUNE.							
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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 46 43.22	4.429	N.15 42 57.3	61.26	23 6.0	1	1 56 6.64	5.289	N.10 5 38.4	10.29	21 17.1		
2	1 45 0.31	4.145	15 18 35.2	60.52	23 0.5	2	1 58 16.04	5.494	10 10 7.1	12.08	21 15.4		
3	1 43 24.45	3.840	14 54 34.7	59.47	22 55.1	3	2 0 30.29	5.692	10 15 17.7	13.78	21 13.7		
4	1 41 56.10	3.518	14 31 3.0	58.13	22 49.9	4	2 2 49.20	5.883	10 21 8.1	15.40	21 12.2		
5	1 40 35.67	3.181	14 8 6.5	56.54	22 44.7	5	2 5 12.62	6.067	10 27 36.5	16.94	21 10.7		
6	1 39 23.48	2.833	N.13 45 51.1	54.71	22 39.7	6	2 7 40.37	6.245	N.10 34 40.9	18.40	21 9.3		
7	1 38 19.77	2.475	13 24 22.2	52.66	22 34.9	7	2 10 12.31	6.416	10 42 19.3	19.78	21 7.9		
8	1 37 24.72	2.110	13 3 44.6	50.44	22 30.2	8	2 12 48.29	6.582	10 50 30.1	21.09	21 6.6		
9	1 36 38.46	1.742	12 44 2.3	48.06	22 25.6	9	2 15 28.19	6.742	10 59 11.4	22.33	21 5.4		
10	1 36 1.08	1.372	12 25 18.9	45.54	22 21.2	10	2 18 11.86	6.897	11 8 21.6	23.50	21 4.3		
11	1 35 32.61	1.001	N.12 7 37.2	42.92	22 16.9	11	2 20 59.21	7.048	N.11 17 59.0	24.60	21 3.2		
12	1 35 13.04	0.632	11 50 59.7	40.21	22 12.8	12	2 23 50.12	7.194	11 28 1.9	25.63	21 2.1		
13	1 35 2.31	0.265	11 35 28.1	37.43	22 8.8	13	2 26 44.49	7.336	11 38 28.8	26.60	21 1.1		
14	1 35 0.34	0.098	11 21 3.7	34.60	22 5.0	14	2 29 42.22	7.474	11 49 18.2	27.50	21 0.2		
15	1 35 7.02	0.456	11 7 47.5	31.75	22 1.3	15	2 32 43.22	7.609	12 0 28.4	28.34	20 59.3		
16	1 35 22.22	0.809	N.10 55 40.0	28.89	21 57.8	16	2 35 47.42	7.741	N.12 11 58.1	29.12	20 58.5		
17	1 35 45.79	1.154	10 44 41.2	26.03	21 54.3	17	2 38 54.73	7.869	12 23 45.7	29.84	20 57.7		
18	1 36 17.57	1.492	10 34 51.0	23.18	21 51.0	18	2 42 5.08	7.993	12 35 49.9	30.50	20 57.0		
19	1 36 57.36	1.823	10 26 8.8	20.35	21 47.9	19	2 45 18.39	8.115	12 48 9.1	31.10	20 56.3		
20	1 37 44.97	2.145	10 18 33.7	17.57	21 44.9	20	2 48 34.60	8.234	13 0 42.0	31.64	20 55.7		
21	1 38 40.19	2.457	N.10 12 4.7	14.85	21 42.0	21	2 51 53.64	8.350	N.13 13 27.3	32.12	20 55.1		
22	1 39 42.81	2.760	10 6 40.4	12.10	21 39.2	22	2 55 15.43	8.464	13 26 23.5	32.55	20 54.6		
23	1 40 52.61	3.054	10 2 19.5	9.58	21 36.5	23	2 58 39.92	8.575	13 39 29.2	32.92	20 54.1		
24	1 42 9.35	3.339	9 59 0.2	7.04	21 34.0	24	3 2 7.06	8.684	13 52 43.2	33.24	20 53.6		
25	1 43 32.81	3.615	9 56 40.8	4.58	21 31.5	25	3 5 36.78	8.791	14 6 4.2	33.50	20 53.2		
26	1 45 2.77	3.881	N. 9 55 19.4	2.21	21 29.2	26	3 9 9.02	8.895	N.14 19 30.8	33.71	20 52.8		
27	1 46 38.99	4.137	9 54 54.1	0.08	21 26.9	27	3 12 43.74	8.997	14 33 1.9	33.87	20 52.5		
28	1 48 21.27	4.385	9 55 22.9	2.29	21 24.8	28	3 16 20.88	9.097	14 46 36.2	33.98	20 52.2		
29	1 50 9.38	4.624	9 56 43.8	4.42	21 22.7	29	3 20 0.40	9.195	15 0 12.4	34.04	20 51.9		
30	1 52 3.12	4.854	9 58 54.7	6.46	21 20.8	30	3 23 42.24	9.291	15 13 49.5	34.04	20 51.7		
31	1 54 2.27	5.075	N.10 1 53.6	8.42	21 18.9	31	3 27 26.36	9.385	N.15 27 26.2	34.00	20 51.6		
32	1 56 6.64	5.289	N.10 5 38.4	10.29	21 17.1								
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	28.78	27.54	25.88	24.04	22.20	20.47	Semidiameter.	18.57	17.17	15.94	14.85	13.88	13.02
Hor. Parallax.	30.15	28.85	27.11	25.19	23.26	21.44	Hor. Parallax.	19.46	17.99	16.70	15.55	14.54	13.64

GREENWICH MEAN TIME.

JULY.						AUGUST.							
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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	3 27 26.36	9.385	N.15 27 26.2	34.00	20 51.6	1	5 38 58.79	11.623	N.20 57 8.5	13.55	21 1.7		
2	3 31 12.71	9.477	15 41 1.4	33.92	20 51.4	2	5 43 38.32	11.671	21 2 20.0	12.39	21 2.4		
3	3 35 1.26	9.567	15 54 33.9	33.79	20 51.3	3	5 48 18.99	11.717	21 7 3.4	11.21	21 3.2		
4	3 38 51.95	9.656	16 8 2.7	33.61	20 51.3	4	5 53 0.74	11.761	21 11 18.1	10.01	21 3.9		
5	3 42 44.75	9.743	16 21 26.7	33.39	20 51.2	5	5 57 43.52	11.803	21 15 3.7	8.78	21 4.7		
6	3 46 39.62	9.828	N.16 34 45.0	33.13	20 51.2	6	6 2 27.30	11.843	N.21 18 19.8	7.54	21 5.5		
7	3 50 36.52	9.913	16 47 56.4	32.83	20 51.3	7	6 7 12.02	11.882	21 21 5.9	6.28	21 6.3		
8	3 54 35.43	9.996	17 1 0.1	32.48	20 51.3	8	6 11 57.65	11.919	21 23 21.5	5.01	21 7.1		
9	3 58 36.31	10.077	17 13 54.9	32.09	20 51.4	9	6 16 44.14	11.954	21 25 6.3	3.72	21 8.0		
10	4 2 39.14	10.157	17 26 40.0	31.67	20 51.6	10	6 21 31.44	11.987	21 26 19.9	2.41	21 8.8		
11	4 6 43.89	10.237	N.17 39 14.5	31.21	20 51.7	11	6 26 19.51	12.018	N.21 27 1.9	1.09	21 9.7		
12	4 10 50.54	10.316	17 51 37.5	30.71	20 51.9	12	6 31 8.31	12.047	21 27 12.1	0.25	21 10.6		
13	4 14 59.05	10.393	18 3 47.9	30.17	20 52.1	13	6 35 57.79	12.075	21 26 50.0	1.60	21 11.5		
14	4 19 9.41	10.470	18 15 45.0	29.59	20 52.4	14	6 40 47.90	12.101	21 25 55.5	2.96	21 12.4		
15	4 23 21.59	10.545	18 27 28.0	28.98	20 52.7	15	6 45 38.61	12.124	21 24 28.2	4.32	21 13.3		
16	4 27 35.57	10.619	N.18 38 55.8	28.34	20 53.0	16	6 50 29.86	12.146	N.21 22 27.9	5.70	21 14.2		
17	4 31 51.32	10.693	18 50 7.7	27.66	20 53.4	17	6 55 21.61	12.166	21 19 54.4	7.09	21 15.1		
18	4 36 8.82	10.765	19 1 2.8	26.94	20 53.7	18	7 0 13.81	12.183	21 16 47.4	8.49	21 16.1		
19	4 40 28.03	10.836	19 11 40.2	26.18	20 54.1	19	7 5 6.41	12.199	21 13 6.9	9.89	21 17.0		
20	4 44 48.93	10.905	19 21 59.2	25.40	20 54.6	20	7 9 59.37	12.212	21 8 52.6	11.30	21 18.0		
21	4 49 11.49	10.974	N.19 31 58.9	24.58	20 55.0	21	7 14 52.63	12.224	N.21 4 4.6	12.71	21 18.9		
22	4 53 35.67	11.041	19 41 38.5	23.73	20 55.5	22	7 19 46.14	12.234	20 58 42.7	14.12	21 19.9		
23	4 58 1.45	11.106	19 50 57.3	22.84	20 56.0	23	7 24 39.87	12.242	20 52 46.8	15.53	21 20.8		
24	5 2 28.78	11.170	19 59 54.5	21.93	20 56.6	24	7 29 33.75	12.248	20 46 17.0	16.95	21 21.8		
25	5 6 57.62	11.233	20 8 29.4	20.98	20 57.1	25	7 34 27.76	12.252	20 39 13.1	18.37	21 22.8		
26	5 11 27.96	11.294	N.20 16 41.1	20.00	20 57.7	26	7 39 21.82	12.253	N.20 31 35.4	19.78	21 23.7		
27	5 15 59.74	11.353	20 24 29.1	19.00	20 58.3	27	7 44 15.91	12.253	20 23 23.8	21.19	21 24.7		
28	5 20 32.92	11.411	20 31 52.5	17.96	20 58.9	28	7 49 9.98	12.251	20 14 38.3	22.59	21 25.6		
29	5 25 7.45	11.466	20 38 50.8	16.89	20 59.6	29	7 54 3.97	12.247	20 5 19.3	23.99	21 26.6		
30	5 29 43.31	11.520	20 45 23.3	15.80	21 0.3	30	7 58 57.85	12.241	19 55 26.8	25.38	21 27.5		
31	5 34 20.44	11.573	N.20 51 29.4	14.69	21 0.9	31	8 3 51.56	12.234	N.19 45 0.9	26.77	21 28.5		
32	5 38 58.79	11.623	N.20 57 8.5	13.55	21 1.7	32	8 8 45.07	12.225	N.19 34 2.0	28.14	21 29.4		
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	12.26	11.58	10.98	10.44	9.96	9.52	Semidiameter.	9.04	8.69	8.36	8.07	7.81	7.56
Hor. Parallax.	12.84	12.13	11.50	10.94	10.43	9.97	Hor. Parallax.	9.47	9.10	8.76	8.46	8.18	7.92



GREENWICH MEAN TIME.

SEPTEMBER.						OCTOBER.					
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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 8 45.07	12.225	N.19 34 2.0	28.14	21 29.4	1	10 32 0.31	11.598	N.10 17 19.5	61.63	21 54.2
2	8 13 38.34	12.214	19 22 30.1	29.50	21 30.4	2	10 36 38.40	11.577	9 52 31.1	62.39	21 54.9
3	8 18 31.33	12.201	19 10 25.7	30.86	21 31.3	3	10 41 15.99	11.556	9 27 24.8	63.12	21 55.5
4	8 23 24.00	12.187	18 57 48.9	32.20	21 32.2	4	10 45 53.09	11.536	9 2 1.3	63.82	21 56.2
5	8 28 16.33	12.172	18 44 40.1	33.52	21 33.1	5	10 50 29.73	11.517	8 36 21.2	64.50	21 56.9
6	8 33 8.28	12.156	N.18 30 59.6	34.84	21 34.1	6	10 55 5.93	11.499	N. 8 10 25.2	65.15	21 57.5
7	8 37 59.83	12.139	18 16 47.6	36.15	21 35.0	7	10 59 41.71	11.482	7 44 14.0	65.77	21 58.2
8	8 42 50.96	12.121	18 2 4.5	37.44	21 35.9	8	11 4 17.09	11.466	7 17 48.2	66.36	21 58.8
9	8 47 41.64	12.102	17 46 50.8	38.71	21 36.8	9	11 8 52.10	11.452	6 51 8.4	66.93	21 59.5
10	8 52 31.85	12.082	17 31 6.6	39.97	21 37.7	10	11 13 26.77	11.438	6 24 15.4	67.48	22 0.1
11	8 57 21.58	12.061	N.17 14 52.5	41.21	21 38.6	11	11 18 1.12	11.425	N. 5 57 9.7	67.99	22 0.7
12	9 2 10.80	12.040	16 58 8.8	42.43	21 39.4	12	11 22 35.18	11.414	5 29 52.2	68.47	22 1.3
13	9 6 59.51	12.018	16 40 55.9	43.63	21 40.3	13	11 27 8.99	11.404	5 2 23.3	68.92	22 2.0
14	9 11 47.69	11.996	16 23 14.2	44.82	21 41.1	14	11 31 42.58	11.395	4 34 43.9	69.35	22 2.6
15	9 16 35.32	11.973	16 5 4.3	45.99	21 42.0	15	11 36 15.97	11.388	4 6 54.6	69.75	22 3.2
16	9 21 22.41	11.950	N.15 46 26.6	47.14	21 42.8	16	11 40 49.20	11.382	N. 3 38 56.1	70.12	22 3.8
17	9 26 8.93	11.927	15 27 21.5	48.27	21 43.6	17	11 45 22.30	11.377	3 10 49.1	70.46	22 4.4
18	9 30 54.89	11.903	15 7 49.5	49.38	21 44.5	18	11 49 55.30	11.374	2 42 34.2	70.77	22 5.0
19	9 35 40.28	11.879	14 47 51.2	50.47	21 45.3	19	11 54 28.24	11.372	2 14 12.1	71.05	22 5.6
20	9 40 25.09	11.855	14 27 27.0	51.54	21 46.1	20	11 59 1.15	11.371	1 45 43.6	71.31	22 6.2
21	9 45 9.32	11.831	N.14 6 37.5	52.58	21 46.8	21	12 3 34.07	11.372	N. 1 17 9.4	71.53	22 6.8
22	9 49 52.98	11.807	13 45 23.3	53.60	21 47.6	22	12 8 7.03	11.375	0 48 30.2	71.72	22 7.4
23	9 54 36.06	11.783	13 23 44.9	54.59	21 48.4	23	12 12 40.07	11.379	N. 0 19 46.8	71.88	22 8.0
24	9 59 18.56	11.759	13 1 42.9	55.56	21 49.2	24	12 17 13.21	11.384	S. 0 9 0.2	72.02	22 8.7
25	10 4 0.49	11.735	12 39 17.9	56.51	21 49.9	25	12 21 46.48	11.390	0 37 50.0	72.12	22 9.3
26	10 8 41.85	11.711	N.12 16 30.5	57.43	21 50.6	26	12 26 19.93	11.398	S. 1 6 41.8	72.19	22 9.9
27	10 13 22.64	11.688	11 53 21.3	58.32	21 51.4	27	12 30 53.59	11.407	1 35 34.9	72.22	22 10.5
28	10 18 2.87	11.665	11 29 50.9	59.19	21 52.1	28	12 35 27.49	11.418	2 4 28.5	72.22	22 11.1
29	10 22 42.56	11.642	11 6 0.1	60.03	21 52.8	29	12 40 1.67	11.430	2 33 21.9	72.20	22 11.8
30	10 27 21.70	11.620	10 41 49.4	60.84	21 53.5	30	12 44 36.16	11.444	3 2 14.3	72.14	22 12.4
31	10 32 0.31	11.598	N.10 17 19.5	61.63	21 54.2	31	12 49 10.98	11.459	S. 3 31 4.8	72.05	22 13.1
32						32	12 53 46.19	11.475	S. 3 59 52.9	71.93	22 13.7

Day.	1	6	11	16	21	26
Semidiameter.	7.29	7.08	6.90	6.73	6.57	6.42
Hor. Parallax.	7.64	7.42	7.23	7.05	6.88	6.72

GREENWICH MEAN TIME.

NOVEMBER.						DECEMBER.					
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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 53 46.19	11.475	S. 3 59 52.9	71.93	22 13.7	1	15 17 6.04	12.584	S.17 0 42.7	53.26	22 39.2
2	12 58 21.80	11.494	4 28 37.5	71.78	22 14.4	2	15 22 8.64	12.633	17 21 47.4	52.12	22 40.3
3	13 2 57.86	11.513	4 57 18.2	71.60	22 15.0	3	15 27 12.43	12.682	17 42 24.3	50.94	22 41.5
4	13 7 34.41	11.534	5 25 54.1	71.38	22 15.7	4	15 32 17.40	12.731	18 2 32.7	49.74	22 42.6
5	13 12 11.48	11.556	5 54 24.4	71.13	22 16.4	5	15 37 23.56	12.781	18 22 11.9	48.51	22 43.8
6	13 16 49.10	11.580	S. 6 22 48.3	70.85	22 17.1	6	15 42 30.91	12.831	S.18 41 21.2	47.25	22 45.0
7	13 21 27.31	11.605	6 51 5.2	70.54	22 17.8	7	15 47 39.44	12.880	18 59 59.7	45.96	22 46.2
8	13 26 6.16	11.632	7 19 14.2	70.20	22 18.5	8	15 52 49.13	12.928	19 18 6.7	44.63	22 47.5
9	13 30 45.66	11.660	7 47 14.6	69.83	22 19.2	9	15 57 59.99	12.976	19 35 41.6	43.27	22 48.7
10	13 35 25.87	11.690	8 15 5.7	69.42	22 20.0	10	16 3 11.99	13.024	19 52 43.7	41.89	22 50.0
11	13 40 6.81	11.722	S. 8 42 46.6	68.98	22 20.7	11	16 8 25.14	13.071	S.20 9 12.3	40.48	22 51.3
12	13 44 48.53	11.755	9 10 16.7	68.50	22 21.5	12	16 13 39.39	13.117	20 25 6.6	39.04	22 52.6
13	13 49 31.04	11.789	9 37 35.0	68.00	22 22.3	13	16 18 54.75	13.162	20 40 26.0	37.57	22 53.9
14	13 54 14.40	11.824	10 4 40.9	67.47	22 23.1	14	16 24 11.18	13.207	20 55 9.9	36.08	22 55.3
15	13 58 58.63	11.861	10 31 33.5	66.90	22 23.9	15	16 29 28.67	13.250	21 9 17.6	34.56	22 56.6
16	14 3 43.76	11.900	S.10 58 12.2	66.30	22 24.7	16	16 34 47.19	13.292	S.21 22 48.5	33.01	22 58.0
17	14 8 29.82	11.939	11 24 36.1	65.67	22 25.5	17	16 40 6.71	13.333	21 35 42.1	31.44	22 59.4
18	14 13 16.84	11.980	11 50 44.3	65.00	22 26.4	18	16 45 27.19	13.373	21 47 57.7	29.85	23 0.8
19	14 18 4.86	12.022	12 16 36.1	64.30	22 27.3	19	16 50 48.60	13.411	21 59 34.7	28.23	23 2.3
20	14 22 53.89	12.065	12 42 10.8	63.57	22 28.2	20	16 56 10.89	13.447	22 10 32.6	26.59	23 3.7
21	14 27 43.96	12.109	S.13 7 27.4	62.80	22 29.1	21	17 1 34.04	13.481	S.22 20 50.9	24.93	23 5.2
22	14 32 35.10	12.154	13 32 25.2	62.00	22 30.0	22	17 6 57.99	13.514	22 30 29.2	23.25	23 6.6
23	14 37 27.33	12.199	13 57 3.4	61.16	22 30.9	23	17 12 22.69	13.544	22 39 26.8	21.55	23 8.1
24	14 42 20.66	12.245	14 21 21.1	60.29	22 31.9	24	17 17 48.10	13.572	22 47 43.4	19.83	23 9.6
25	14 47 15.11	12.292	14 45 17.5	59.39	22 32.9	25	17 23 14.17	13.599	22 55 18.6	18.10	23 11.1
26	14 52 10.69	12.340	S.15 8 51.7	58.45	22 33.9	26	17 28 40.83	13.623	S.23 2 12.1	16.35	23 12.6
27	14 57 7.43	12.388	15 32 3.0	57.48	22 34.9	27	17 34 8.04	13.644	23 8 23.4	14.59	23 14.2
28	15 2 5.32	12.436	15 54 50.6	56.47	22 36.0	28	17 39 35.72	13.663	23 13 52.3	12.81	23 15.7
29	15 7 4.39	12.485	16 17 13.6	55.43	22 37.0	29	17 45 3.83	13.679	23 18 38.4	11.03	23 17.2
30	15 12 4.62	12.534	16 39 11.2	54.36	22 38.1	30	17 50 32.30	13.693	23 22 41.6	9.23	23 18.8
31	15 17 6.04	12.584	S.17 0 42.7	53.26	22 39.2	31	17 56 1.08	13.704	S.23 26 1.6	7.43	23 20.3
32						32	18 1 30.10	13.712	S.23 28 38.2	5.62	23 21.8

Day.	1	6	11	16	21	26	31
Semidiameter.	5.63	5.56	5.48	5.42	5.36	5.30	5.26
Hor. Parallax.	5.90	5.82	5.74	5.68	5.61	5.55	5.50



GREENWICH MEAN TIME.

JANUARY.						FEBRUARY.							
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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	17 30 41.06	8.024	S. 23 44 4.7	7.14	22 47.8	1	19 11 41.78	8.178	S. 23 12 8.9	12.43	22 26.7		
2	17 33 53.80	8.038	23 46 49.2	6.55	22 47.1	2	19 14 58.01	8.174	23 7 3.0	13.06	22 26.0		
3	17 37 6.86	8.051	23 49 19.1	5.94	22 46.4	3	19 18 14.14	8.169	23 1 41.9	13.69	22 25.4		
4	17 40 20.23	8.063	23 51 34.2	5.33	22 45.7	4	19 21 30.14	8.164	22 56 5.9	14.31	22 24.7		
5	17 43 33.89	8.075	23 53 34.6	4.71	22 45.0	5	19 24 46.02	8.158	22 50 14.9	14.93	22 24.0		
6	17 46 47.83	8.086	S. 23 55 20.2	4.09	22 44.3	6	19 28 1.74	8.152	S. 22 44 9.0	15.55	22 23.3		
7	17 50 2.03	8.097	23 56 50.8	3.47	22 43.6	7	19 31 17.31	8.145	22 37 48.4	16.16	22 22.6		
8	17 53 16.49	8.107	23 58 6.5	2.84	22 42.9	8	19 34 32.70	8.138	22 31 13.0	16.77	22 21.9		
9	17 56 31.18	8.117	23 59 7.2	2.21	22 42.2	9	19 37 47.90	8.130	22 24 23.1	17.38	22 21.3		
10	17 59 46.09	8.126	23 59 52.7	1.58	22 41.5	10	19 41 2.91	8.121	22 17 18.5	17.99	22 20.6		
11	18 3 1.20	8.134	S. 24 0 23.1	0.95	22 40.8	11	19 44 17.70	8.112	S. 22 9 59.5	18.59	22 19.9		
12	18 6 16.50	8.141	24 0 38.4	0.32	22 40.1	12	19 47 32.27	8.102	22 2 26.2	19.19	22 19.2		
13	18 9 31.98	8.148	24 0 38.5	0.31	22 39.4	13	19 50 46.61	8.092	21 54 38.6	19.78	22 18.5		
14	18 12 47.62	8.155	24 0 23.3	0.95	22 38.8	14	19 54 0.70	8.082	21 46 36.9	20.37	22 17.7		
15	18 16 3.41	8.161	23 59 52.9	1.59	22 38.1	15	19 57 14.54	8.071	21 38 21.1	20.95	22 17.0		
16	18 19 19.33	8.166	S. 23 59 7.2	2.22	22 37.4	16	20 0 28.12	8.060	S. 21 29 51.4	21.53	22 16.3		
17	18 22 35.36	8.171	23 58 6.1	2.86	22 36.7	17	20 3 41.44	8.049	21 21 7.9	22.10	22 15.6		
18	18 25 51.51	8.175	23 56 49.7	3.50	22 36.1	18	20 6 54.47	8.038	21 12 10.6	22.67	22 14.8		
19	18 29 7.75	8.178	23 55 18.0	4.14	22 35.4	19	20 10 7.23	8.026	21 2 59.8	23.23	22 14.1		
20	18 32 24.07	8.181	23 53 30.9	4.78	22 34.7	20	20 13 19.70	8.014	20 53 35.5	23.79	22 13.4		
21	18 35 40.46	8.183	S. 23 51 28.4	5.42	22 34.0	21	20 16 31.89	8.002	S. 20 43 57.7	24.35	22 12.7		
22	18 38 56.90	8.185	23 49 10.6	6.06	22 33.4	22	20 19 43.77	7.989	20 34 6.7	24.90	22 11.9		
23	18 42 13.39	8.187	23 46 37.4	6.70	22 32.7	23	20 22 55.35	7.976	20 24 2.5	25.44	22 11.2		
24	18 45 29.92	8.189	23 43 48.9	7.34	22 32.1	24	20 26 6.62	7.963	20 13 45.3	25.98	22 10.4		
25	18 48 46.47	8.190	23 40 45.0	7.98	22 31.4	25	20 29 17.58	7.950	20 3 15.2	26.52	22 9.6		
26	18 52 3.02	8.190	S. 23 37 25.7	8.62	22 30.7	26	20 32 28.21	7.937	S. 19 52 32.4	27.05	22 8.8		
27	18 55 19.57	8.189	23 33 51.1	9.26	22 30.1	27	20 35 38.52	7.923	19 41 36.9	27.57	22 8.0		
28	18 58 36.11	8.188	23 30 1.2	9.90	22 29.4	28	20 38 48.50	7.909	19 30 29.0	28.08	22 7.3		
29	19 1 52.61	8.187	23 25 56.0	10.54	22 28.7	29	20 41 58.13	7.895	S. 19 19 8.8	28.59	22 6.5		
30	19 5 9.07	8.184	23 21 35.5	11.17	22 28.1								
31	19 8 25.46	8.181	S. 23 16 59.8	11.80	22 27.4								
32	19 11 41.78	8.178	S. 23 12 8.9	12.43	22 26.7								
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	1.95	1.96	1.98	2.00	2.01	2.03	Semidiameter.	2.05	2.07	2.09	2.12	2.14	2.16
Hor. Parallax.	3.66	3.69	3.72	3.75	3.79	3.82	Hor. Parallax.	3.86	3.90	3.94	3.98	4.02	4.06

GREENWICH MEAN TIME.

MARCH.						APRIL.							
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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 41 58.13	7.895	S. 19 19 8.8	28.59	22 6.5	1	22 16 50.45	7.411	S. 12 1 12.2	40.86	21 39.0		
2	20 45 7.42	7.880	19 7 36.4	29.10	22 5.7	2	22 19 48.14	7.397	11 44 48.2	41.13	21 38.0		
3	20 48 16.36	7.865	18 55 51.9	29.60	22 4.9	3	22 22 45.49	7.382	11 28 17.8	41.39	21 37.0		
4	20 51 24.94	7.850	18 43 55.6	30.09	22 4.1	4	22 25 42.49	7.368	11 11 41.2	41.64	21 36.0		
5	20 54 33.15	7.834	18 31 47.6	30.57	22 3.3	5	22 28 39.15	7.354	10 54 58.5	41.89	21 35.0		
6	20 57 41.00	7.819	S. 18 19 28.1	31.04	22 2.5	6	22 31 35.48	7.340	S. 10 38 9.9	42.13	21 34.0		
7	21 0 48.46	7.803	18 6 57.2	31.51	22 1.7	7	22 34 31.46	7.326	10 21 15.7	42.37	21 33.0		
8	21 3 55.55	7.787	17 54 15.2	31.98	22 0.8	8	22 37 27.12	7.312	10 4 16.1	42.59	21 32.0		
9	21 7 2.27	7.771	17 41 22.2	32.44	22 0.0	9	22 40 22.45	7.299	9 47 11.2	42.80	21 30.9		
10	21 10 8.59	7.755	17 28 18.3	32.89	21 59.1	10	22 43 17.46	7.285	9 30 1.3	43.01	21 29.9		
11	21 13 14.52	7.739	S. 17 15 3.8	33.33	21 58.3	11	22 46 12.14	7.272	S. 9 12 46.6	43.21	21 28.9		
12	21 16 20.06	7.723	17 1 38.9	33.76	21 57.4	12	22 49 6.51	7.259	8 55 27.3	43.40	21 27.8		
13	21 19 25.22	7.707	16 48 3.6	34.18	21 56.6	13	22 52 0.57	7.246	8 38 3.5	43.58	21 26.8		
14	21 22 29.98	7.690	16 34 18.3	34.60	21 55.7	14	22 54 54.33	7.234	8 20 35.5	43.75	21 25.7		
15	21 25 34.34	7.674	16 20 23.0	35.01	21 54.8	15	22 57 47.79	7.222	8 3 3.4	43.91	21 24.7		
16	21 28 38.31	7.658	S. 16 6 18.0	35.41	21 54.0	16	23 0 40.97	7.210	S. 7 45 27.4	44.07	21 23.6		
17	21 31 41.89	7.641	15 52 3.4	35.81	21 53.1	17	23 3 33.87	7.199	7 27 47.7	44.23	21 22.5		
18	21 34 45.08	7.625	15 37 39.4	36.20	21 52.2	18	23 6 26.50	7.188	7 10 4.4	44.37	21 21.5		
19	21 37 47.87	7.609	15 23 6.1	36.58	21 51.3	19	23 9 18.87	7.177	6 52 17.8	44.50	21 20.4		
20	21 40 50.29	7.593	15 8 23.8	36.96	21 50.4	20	23 12 10.99	7.166	6 34 28.0	44.63	21 19.4		
21	21 43 52.32	7.577	S. 14 53 32.6	37.33	21 49.5	21	23 15 2.85	7.156	S. 6 16 35.2	44.75	21 18.3		
22	21 46 53.98	7.561	14 38 32.6	37.68	21 48.5	22	23 17 54.48	7.146	5 58 39.5	44.87	21 17.2		
23	21 49 55.26	7.546	14 23 24.1	38.03	21 47.6	23	23 20 45.87	7.137	5 40 41.2	44.98	21 16.1		
24	21 52 56.17	7.530	14 8 7.2	38.37	21 46.7	24	23 23 37.04	7.128	5 22 40.4	45.08	21 15.0		
25	21 55 56.72	7.515	13 52 42.1	38.71	21 45.7	25	23 26 28.00	7.119	5 4 37.3	45.17	21 13.9		
26	21 58 56.90	7.500	S. 13 37 9.0	39.04	21 44.8	26	23 29 18.74	7.110	S. 4 46 32.1	45.25	21 12.8		
27	22 1 56.71	7.485	13 21 28.0	39.37	21 43.8	27	23 32 9.28	7.101	4 28 25.1	45.33	21 11.7		
28	22 4 56.17	7.470	13 5 39.4	39.68	21 42.8	28	23 34 59.62	7.093	4 10 16.3	45.40	21 10.6		
29	22 7 55.27	7.455	12 49 43.3	39.99	21 41.9	29	23 37 49.76	7.085	3 52 6.0	45.46	21 9.5		
30	22 10 54.02	7.440	12 33 39.9	40.29	21 40.9	30	23 40 39.70	7.077	3 33 54.4	45.51	21 8.4		
31	22 13 52.41	7.426	S. 12 17 29.5	40.58	21 39.9	31	23 43 29.47	7.069	S. 3 15 41.7	45.55	21 7.3		
32	22 16 50.45	7.411	S. 12 1 12.2	40.86	21 39.0								
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	2.17	2.19	2.22	2.24	2.27	2.29	Semidiameter.	2.32	2.35	2.37	2.40	2.43	2.45
Hor. Parallax.	4.08	4.13	4.17	4.21	4.26	4.31	Hor. Parallax.	4.36	4.41	4.46	4.51	4.56	4.61



GREENWICH MEAN TIME.

MAY.						JUNE.					
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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 43 29.47	7.069	S. 3 15 41.7	45.55	21 7.3	1	1 10 12.20	6.958	N. 6 1 3.9	43.10	20 31.8
2	23 46 19.05	7.062	2 57 28.2	45.59	21 6.1	2	1 12 59.19	6.958	6 18 16.2	42.92	20 30.6
3	23 49 8.46	7.055	2 39 13.9	45.61	21 5.0	3	1 15 46.18	6.958	6 35 23.8	42.72	20 29.4
4	23 51 57.71	7.048	2 20 59.1	45.62	21 3.9	4	1 18 33.16	6.958	6 52 26.5	42.51	20 28.3
5	23 54 46.78	7.041	2 2 44.0	45.63	21 2.8	5	1 21 20.15	6.958	7 9 24.1	42.29	20 27.1
6	23 57 35.70	7.035	S. 1 44 28.9	45.63	21 1.7	6	1 24 7.14	6.958	N. 7 26 16.5	42.07	20 26.0
7	0 0 24.46	7.029	1 26 13.8	45.62	21 0.5	7	1 26 54.14	6.958	7 43 3.5	41.84	20 24.8
8	0 3 13.07	7.023	1 7 59.0	45.61	20 59.4	8	1 29 41.14	6.958	7 59 44.9	41.60	20 23.7
9	0 6 1.53	7.017	0 49 44.7	45.58	20 58.3	9	1 32 28.16	6.959	8 16 20.7	41.36	20 22.5
10	0 8 49.86	7.011	0 31 31.0	45.55	20 57.1	10	1 35 15.19	6.960	8 32 50.6	41.11	20 21.4
11	0 11 38.05	7.006	S. 0 13 18.2	45.52	20 56.0	11	1 38 2.23	6.961	N. 8 49 14.5	40.86	20 20.2
12	0 14 26.11	7.001	N. 0 4 53.7	45.47	20 54.8	12	1 40 49.30	6.962	9 5 32.3	40.61	20 19.0
13	0 17 14.06	6.996	0 23 4.3	45.41	20 53.7	13	1 43 36.39	6.963	9 21 43.9	40.35	20 17.9
14	0 20 1.89	6.991	0 41 13.5	45.35	20 52.5	14	1 46 23.52	6.964	9 37 49.1	40.08	20 16.7
15	0 22 49.62	6.987	0 59 21.2	45.28	20 51.4	15	1 49 10.68	6.966	9 53 47.8	39.81	20 15.6
16	0 25 37.25	6.983	N. 1 17 27.3	45.21	20 50.2	16	1 51 57.88	6.968	N. 10 9 39.9	39.53	20 14.4
17	0 28 24.80	6.979	1 35 31.5	45.13	20 49.1	17	1 54 45.13	6.970	10 25 25.3	39.25	20 13.3
18	0 31 12.27	6.976	1 53 33.7	45.05	20 47.9	18	1 57 32.42	6.972	10 41 3.9	38.96	20 12.1
19	0 33 59.67	6.973	2 11 33.8	44.96	20 46.8	19	2 0 19.76	6.974	10 56 35.4	38.66	20 10.9
20	0 36 47.00	6.971	2 29 31.6	44.86	20 45.6	20	2 3 7.16	6.976	11 11 59.8	38.36	20 9.8
21	0 39 34.28	6.969	N. 2 47 26.9	44.75	20 44.5	21	2 5 54.61	6.978	N. 11 27 16.9	38.06	20 8.6
22	0 42 21.51	6.967	3 5 19.6	44.64	20 43.3	22	2 8 42.11	6.980	11 42 26.7	37.75	20 7.5
23	0 45 8.70	6.965	3 23 9.5	44.52	20 42.2	23	2 11 29.67	6.983	11 57 28.9	37.43	20 6.3
24	0 47 55.84	6.964	3 40 56.4	44.39	20 41.0	24	2 14 17.28	6.985	12 12 23.5	37.11	20 5.2
25	0 50 42.96	6.962	3 58 40.2	44.26	20 39.9	25	2 17 4.95	6.987	12 27 10.3	36.78	20 4.0
26	0 53 30.04	6.961	N. 4 16 20.7	44.12	20 38.7	26	2 19 52.67	6.989	N. 12 41 49.1	36.45	20 2.9
27	0 56 17.11	6.960	4 33 57.7	43.97	20 37.6	27	2 22 40.44	6.991	12 56 19.9	36.11	20 1.8
28	0 59 4.15	6.960	4 51 31.0	43.81	20 36.4	28	2 25 28.26	6.993	13 10 42.5	35.76	20 0.6
29	1 1 51.18	6.959	5 9 0.5	43.64	20 35.2	29	2 28 16.12	6.995	13 24 56.8	35.41	19 59.5
30	1 4 38.20	6.959	5 26 25.9	43.47	20 34.1	30	2 31 4.02	6.997	13 39 2.6	35.06	19 58.3
31	1 7 25.20	6.959	N. 5 43 47.1	43.29	20 32.9	31	2 33 51.96	6.998	N. 13 52 59.8	34.70	19 57.2
32	1 10 12.20	6.958	N. 6 1 3.9	43.10	20 31.8						

Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	2.48	2.51	2.54	2.57	2.60	2.63	Semidiameter.	2.67	2.70	2.73	2.77	2.80	2.84
Hor. Parallax.	4.66	4.72	4.77	4.83	4.88	4.94	Hor. Parallax.	5.01	5.08	5.14	5.20	5.27	5.34

GREENWICH MEAN TIME.

JULY.						AUGUST.					
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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 33 51.96	6.998	N. 13 52 59.8	34.70	19 57.2	1	4 0 33.92	6.947	N. 19 46 15.6	21.82	19 21.7
2	2 36 39.94	6.999	14 6 48.3	34.34	19 56.0	2	4 3 20.55	6.939	19 54 53.9	21.37	19 20.5
3	2 39 27.94	7.000	14 20 28.0	33.97	19 54.9	3	4 6 6.99	6.931	20 3 21.4	20.92	19 19.4
4	2 42 15.97	7.001	14 33 58.8	33.59	19 53.7	4	4 8 53.24	6.922	20 11 38.0	20.47	19 18.2
5	2 45 4.01	7.002	14 47 20.5	33.21	19 52.6	5	4 11 39.27	6.913	20 19 43.7	20.01	19 17.0
6	2 47 52.07	7.002	N. 15 0 33.0	32.83	19 51.5	6	4 14 25.09	6.904	N. 20 27 38.6	19.56	19 15.8
7	2 50 40.13	7.003	15 13 36.3	32.44	19 50.3	7	4 17 10.67	6.894	20 35 22.6	19.11	19 14.6
8	2 53 28.20	7.003	15 26 30.2	32.05	19 49.2	8	4 19 56.01	6.884	20 42 55.7	18.66	19 13.4
9	2 56 16.27	7.003	15 39 14.6	31.65	19 48.0	9	4 22 41.10	6.873	20 50 18.0	18.21	19 12.2
10	2 59 4.35	7.003	15 51 49.5	31.25	19 46.9	10	4 25 25.93	6.862	20 57 29.5	17.76	19 11.0
11	3 1 52.42	7.003	N. 16 4 14.9	30.85	19 45.7	11	4 28 10.49	6.851	N. 21 4 30.2	17.31	19 9.8
12	3 4 40.49	7.002	16 16 30.6	30.45	19 44.6	12	4 30 54.78	6.839	21 11 20.1	16.86	19 8.6
13	3 7 28.55	7.002	16 28 36.5	30.04	19 43.5	13	4 33 38.77	6.827	21 17 59.4	16.41	19 7.4
14	3 10 16.60	7.002	16 40 32.7	29.63	19 42.3	14	4 36 22.47	6.814	21 24 27.9	15.96	19 6.2
15	3 13 4.64	7.001	16 52 19.0	29.22	19 41.2	15	4 39 5.85	6.801	21 30 45.8	15.52	19 5.0
16	3 15 52.67	7.001	N. 17 3 55.4	28.81	19 40.0	16	4 41 48.91	6.787	N. 21 36 53.0	15.08	19 3.7
17	3 18 40.68	7.000	17 15 21.8	28.39	19 38.9	17	4 44 31.63	6.773	21 42 49.7	14.64	19 2.5
18	3 21 28.67	6.999	17 26 38.1	27.97	19 37.8	18	4 47 14.00	6.758	21 48 35.7	14.20	19 1.3
19	3 24 16.63	6.998	17 37 44.3	27.55	19 36.6	19	4 49 56.01	6.742	21 54 11.2	13.76	19 0.0
20	3 27 4.56	6.997	17 48 40.3	27.12	19 35.5	20	4 52 37.63	6.726	21 59 36.3	13.32	18 58.8
21	3 29 52.45	6.995	N. 17 59 26.1	26.69	19 34.3	21	4 55 18.87	6.709	N. 22 4 50.9	12.89	18 57.5
22	3 32 40.30	6.993	18 10 1.6	26.26	19 33.2	22	4 57 59.69	6.692	22 9 55.1	12.46	18 56.2
23	3 35 28.08	6.990	18 20 26.6	25.83	19 32.1	23	5 0 40.09	6.674	22 14 49.0	12.03	18 55.0
24	3 38 15.80	6.987	18 30 41.2	25.39	19 30.9	24	5 3 20.04	6.655	22 19 32.6	11.60	18 53.7
25	3 41 3.44	6.983	18 40 45.3	24.95	19 29.8	25	5 5 59.52	6.635	22 24 5.9	11.18	18 52.4
26	3 43 51.00	6.979	N. 18 50 38.9	24.51	19 28.6	26	5 8 38.52	6.614	N. 22 28 29.1	10.76	18 51.1
27	3 46 38.46	6.975	19 0 21.8	24.07	19 27.5	27	5 11 17.02	6.593	22 32 42.3	10.34	18 49.8
28	3 49 25.81	6.971	19 9 54.1	23.62	19 26.3	28	5 13 55.00	6.571	22 36 45.4	9.92	18 48.5
29	3 52 13.05	6.966	19 19 15.6	23.17	19 25.1	29	5 16 32.43	6.548	22 40 38.7	9.51	18 47.1
30	3 55 0.16	6.960	19 28 26.4	22.72	19 24.0	30	5 19 9.29	6.524	22 44 22.1	9.11	18 45.8
31	3 57 47.12	6.954	N. 19 37 26.4	22.27	19 22.8	31	5 21 45.57	6.499	N. 22 47 55.8	8.70	18 44.5
32	4 0 33.92	6.947	N. 19 46 15.6	21.82	19 21.7	32	5 24 21.25	6.473	N. 22 51 19.8	8.30	18 43.1

Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	2.88	2.92	2.97	3.01	3.06	3.11	Semidiameter.	3.17	3.23	3.29	3.35	3.42	3.49
Hor. Parallax.	5.42	5.50	5.58	5.66	5.75	5.84	Hor. Parallax.	5.96	6.07	6.18	6.30	6.43	6.57



GREENWICH MEAN TIME.

SEPTEMBER.						OCTOBER.							
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.		
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.					
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m		
1	5 24 21.25	6.473	N.22 51 19.8	8.30	18 43.1	1	6 36 3.80	5.347	N.23 30 14.7	0.77	17 56.3		
2	5 26 56.30	6.447	22 54 34.3	7.91	18 41.8	2	6 38 11.51	5.294	23 29 54.2	0.95	17 54.4		
3	5 29 30.71	6.420	22 57 39.5	7.52	18 40.4	3	6 40 17.95	5.240	23 29 29.5	1.12	17 52.6		
4	5 32 4.46	6.392	23 0 35.4	7.14	18 39.0	4	6 42 23.08	5.186	23 29 0.8	1.28	17 50.7		
5	5 34 37.54	6.364	23 3 22.2	6.76	18 37.6	5	6 44 26.90	5.131	23 28 28.5	1.42	17 48.8		
6	5 37 9.92	6.335	N.23 6 0.0	6.39	18 36.2	6	6 46 29.37	5.075	N.23 27 52.8	1.55	17 46.9		
7	5 39 41.60	6.305	23 8 28.9	6.02	18 34.7	7	6 48 30.48	5.018	23 27 13.9	1.67	17 45.0		
8	5 42 12.56	6.275	23 10 49.1	5.66	18 33.3	8	6 50 30.20	4.960	23 26 32.0	1.79	17 43.0		
9	5 44 42.79	6.244	23 13 0.7	5.30	18 31.9	9	6 52 28.51	4.900	23 25 47.5	1.90	17 41.0		
10	5 47 12.27	6.212	23 15 3.7	4.95	18 30.4	10	6 54 25.39	4.840	23 25 0.5	2.00	17 39.0		
11	5 49 40.99	6.180	N.23 16 58.5	4.61	18 28.9	11	6 56 20.80	4.778	N.23 24 11.4	2.08	17 37.0		
12	5 52 8.93	6.147	23 18 45.1	4.28	18 27.5	12	6 58 14.72	4.715	23 23 20.3	2.15	17 34.9		
13	5 54 36.07	6.113	23 20 23.7	3.95	18 26.0	13	7 0 7.12	4.651	23 22 27.5	2.22	17 32.8		
14	5 57 2.39	6.079	23 21 54.4	3.62	18 24.5	14	7 1 57.98	4.586	23 21 33.4	2.28	17 30.7		
15	5 59 27.86	6.044	23 23 17.3	3.30	18 22.9	15	7 3 47.26	4.520	23 20 38.1	2.32	17 28.6		
16	6 1 52.49	6.008	N.23 24 32.7	2.99	18 21.4	16	7 5 34.94	4.452	N.23 19 41.9	2.35	17 26.4		
17	6 4 16.25	5.971	23 25 40.6	2.68	18 19.9	17	7 7 20.98	4.383	23 18 45.1	2.37	17 24.2		
18	6 6 39.11	5.933	23 26 41.3	2.38	18 18.3	18	7 9 5.34	4.313	23 17 48.0	2.38	17 22.0		
19	6 9 1.05	5.894	23 27 35.0	2.09	18 16.7	19	7 10 47.99	4.241	23 16 50.9	2.37	17 19.7		
20	6 11 22.05	5.854	23 28 21.7	1.81	18 15.1	20	7 12 28.90	4.168	23 15 54.0	2.36	17 17.5		
21	6 13 42.09	5.814	N.23 29 1.7	1.54	18 13.4	21	7 14 8.02	4.092	N.23 14 57.7	2.33	17 15.2		
22	6 16 1.15	5.773	23 29 35.1	1.27	18 11.8	22	7 15 45.31	4.015	23 14 2.3	2.29	17 12.8		
23	6 18 19.19	5.730	23 30 2.1	1.01	18 10.1	23	7 17 20.73	3.936	23 13 8.0	2.23	17 10.5		
24	6 20 36.19	5.686	23 30 23.0	0.75	18 8.5	24	7 18 54.24	3.856	23 12 15.2	2.16	17 8.1		
25	6 22 52.13	5.641	23 30 37.9	0.51	18 6.8	25	7 20 25.80	3.773	23 11 24.2	2.08	17 5.6		
26	6 25 6.97	5.595	N.23 30 47.1	0.28	18 5.1	26	7 21 55.35	3.689	N.23 10 35.4	1.98	17 3.1		
27	6 27 20.69	5.548	23 30 50.8	0.04	18 3.4	27	7 23 22.86	3.603	23 9 49.0	1.87	17 0.6		
28	6 29 33.26	5.500	23 30 49.2	0.18	18 1.6	28	7 24 48.28	3.515	23 9 5.4	1.75	16 58.1		
29	6 31 44.65	5.450	23 30 42.5	0.38	17 59.8	29	7 26 11.58	3.426	23 8 24.9	1.62	16 55.5		
30	6 33 54.84	5.399	23 30 30.9	0.58	17 58.1	30	7 27 32.70	3.334	23 7 47.8	1.47	16 52.9		
31	6 36 3.80	5.347	N.23 30 14.7	0.77	17 56.3	31	7 28 51.62	3.241	N.23 7 14.4	1.31	16 50.2		
						32	7 30 8.28	3.147	N.23 6 45.1	1.13	16 47.6		
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	3.59	3.67	3.76	3.86	3.96	4.08	Semidiameter.	4.20	4.33	4.47	4.63	4.79	4.97
Hor. Parallax.	6.75	6.91	7.08	7.26	7.46	7.67	Hor. Parallax.	7.90	8.15	8.41	8.70	9.01	9.34

GREENWICH MEAN TIME.

NOVEMBER.						DECEMBER.								
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.			
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.						
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m			
1	7 30 8.28	3.147	N.23 6 45.1	1.13	16 47.6	1	7 47 16.57	0.600	N.23 45 32.9	8.83	15 5.7			
2	7 31 22.65	3.051	23 6 20.1	0.94	16 44.9	2	7 47 0.34	0.752	23 49 9.6	9.22	15 1.4			
3	7 32 34.70	2.953	23 5 59.8	0.74	16 42.1	3	7 46 40.45	0.905	23 52 55.6	9.61	14 57.1			
4	7 33 44.37	2.853	23 5 44.4	0.53	16 39.3	4	7 46 16.88	1.059	23 56 50.8	9.99	14 52.8			
5	7 34 51.64	2.752	23 5 34.2	0.31	16 36.5	5	7 45 49.62	1.212	24 0 54.9	10.35	14 48.4			
6	7 35 56.45	2.649	N.23 5 29.5	0.07	16 33.6	6	7 45 18.68	1.366	N.24 5 7.5	10.70	14 43.9			
7	7 36 58.77	2.544	23 5 30.6	0.17	16 30.6	7	7 44 44.06	1.519	24 9 28.4	11.04	14 39.3			
8	7 37 58.55	2.437	23 5 37.8	0.43	16 27.7	8	7 44 5.76	1.672	24 13 57.2	11.36	14 34.7			
9	7 38 55.75	2.328	23 5 51.3	0.70	16 24.7	9	7 43 23.80	1.824	24 18 33.6	11.67	14 30.1			
10	7 39 50.32	2.218	23 6 11.5	0.98	16 21.6	10	7 42 38.20	1.976	24 23 17.1	11.95	14 25.3			
11	7 40 42.21	2.106	N.23 6 38.6	1.28	16 18.5	11	7 41 48.98	2.126	N.24 28 7.2	12.22	14 20.6			
12	7 41 31.38	1.991	23 7 12.8	1.58	16 15.3	12	7 40 56.18	2.274	24 33 3.4	12.46	14 15.7			
13	7 42 17.77	1.874	23 7 54.4	1.89	16 12.1	13	7 39 59.83	2.421	24 38 5.2	12.68	14 10.8			
14	7 43 1.33	1.755	23 8 43.6	2.22	16 8.9	14	7 38 59.97	2.566	24 43 11.9	12.88	14 5.9			
15	7 43 42.02	1.634	23 9 40.8	2.55	16 5.6	15	7 37 56.67	2.708	24 48 23.1	13.05	14 0.9			
16	7 44 19.76	1.511	N.23 10 46.1	2.89	16 2.2	16	7 36 49.98	2.848	N.24 53 38.1	13.19	13 55.8			
17	7 44 54.52	1.385	23 11 59.8	3.25	15 58.8	17	7 35 39.97	2.985	24 58 56.2	13.31	13 50.7			
18	7 45 26.22	1.256	23 13 22.1	3.61	15 55.4	18	7 34 26.71	3.119	25 4 16.7	13.39	13 45.5			
19	7 45 54.82	1.126	23 14 53.3	3.99	15 51.9	19	7 33 10.29	3.249	25 9 38.9	13.45	13 40.3			
20	7 46 20.25	0.993	23 16 33.5	4.37	15 48.4	20	7 31 50.82	3.373	25 15 2.2	13.48	13 35.0			
21	7 46 42.47	0.858	N.23 18 23.0	4.76	15 44.8	21	7 30 28.41	3.493	N.25 20 25.7	13.47	13 29.7			
22	7 47 1.41	0.720	23 20 22.0	5.16	15 41.1	22	7 29 3.18	3.608	25 25 48.5	13.43	13 24.3			
23	7 47 17.02	0.580	23 22 30.5	5.56	15 37.4	23	7 27 35.27	3.717	25 31 10.0	13.36	13 18.9			
24	7 47 29.24	0.438	23 24 48.8	5.97	15 33.7	24	7 26 4.83	3.819	25 36 29.4	13.25	13 13.4			
25	7 47 38.04	0.294	23 27 16.9	6.38	15 29.9	25	7 24 32.03	3.914	25 41 45.7	13.10	13 7.9			
26	7 47 43.36	0.148	N.23 29 54.9	6.79	15 26.0	26	7 22 57.03	4.001	N.25 46 58.1	12.93	13 2.4			
27	7 47 45.16	0.001	23 32 42.8	7.20	15 22.0	27	7 21 20.03	4.081	25 52 5.9	12.72	12 56.9			
28	7 47 43.42	0.147	23 35 40.6	7.61	15 18.0	28	7 19 41.22	4.152	25 57 8.2	12.47	12 51.3			
29	7 47 38.08	0.297	23 38 48.3	8.02	15 14.0	29	7 18 0.80	4.214	26 2 4.3	12.19	12 45.7			
30	7 47 29.14	0.448	23 42 5.7	8.43	15 9.9	30	7 16 18.99	4.268	26 6 53.3	11.89	12 40.0			
31	7 47 16.57	0.600	N.23 45 32.9	8.83	15 5.7	31	7 14 36.00	4.313	N.26 11 34.6	11.55	12 34.4			
						32	7 12 52.05	4.348	N.26 16 7.6	11.19	12 28.7			
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26	31
Semidiameter.	5.20	5.40	5.62	5.85	6.08	6.33	Semidiameter.	6.57	6.81	7.03	7.22	7.37	7.48	7.52
Hor. Parallax.	9.77	10.16	10.57	10.99	11.44	11.90	Hor. Parallax.	12.36	12.80	13.21	13.58	13.86	14.06	14.14



GREENWICH MEAN TIME.

JANUARY.						FEBRUARY.							
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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	17 58 41.59	2.472	S. 23 13 31.7	0.29	23 13.7	1	18 28 14.49	2.251	S. 23 6 33.1	1.32	21 41.1		
2	17 59 40.88	2.469	23 13 38.0	0.23	23 10.8	2	18 29 8.40	2.240	23 6 0.9	1.36	21 38.1		
3	18 0 40.10	2.466	23 13 42.9	0.17	23 7.8	3	18 30 2.02	2.229	23 5 27.7	1.40	21 35.1		
4	18 1 39.23	2.462	23 13 46.4	0.11	23 4.8	4	18 30 55.36	2.217	23 4 53.6	1.44	21 32.0		
5	18 2 38.27	2.458	23 13 48.5	0.06	23 1.9	5	18 31 48.40	2.205	23 4 18.5	1.48	21 29.0		
6	18 3 37.22	2.454	S. 23 13 49.1	0.00	22 58.9	6	18 32 41.15	2.192	S. 23 3 42.6	1.51	21 25.9		
7	18 4 36.07	2.450	23 13 48.3	0.06	22 56.0	7	18 33 33.58	2.179	23 3 5.8	1.55	21 22.8		
8	18 5 34.80	2.445	23 13 46.2	0.12	22 53.0	8	18 34 25.70	2.165	23 2 28.2	1.58	21 19.8		
9	18 6 33.42	2.440	23 13 42.7	0.18	22 50.1	9	18 35 17.50	2.151	23 1 49.7	1.62	21 16.7		
10	18 7 31.91	2.435	23 13 37.8	0.24	22 47.1	10	18 36 8.97	2.137	23 1 10.5	1.65	21 13.6		
11	18 8 30.27	2.429	S. 23 13 31.5	0.29	22 44.1	11	18 37 0.10	2.123	S. 23 0 30.5	1.68	21 10.5		
12	18 9 28.49	2.423	23 13 23.9	0.35	22 41.2	12	18 37 50.89	2.109	22 59 49.8	1.71	21 7.4		
13	18 10 26.57	2.417	23 13 15.0	0.40	22 38.2	13	18 38 41.33	2.094	22 59 8.4	1.73	21 4.3		
14	18 11 24.50	2.411	23 13 4.8	0.46	22 35.2	14	18 39 31.41	2.079	22 58 26.3	1.76	21 1.2		
15	18 12 22.27	2.404	23 12 53.3	0.51	22 32.2	15	18 40 21.13	2.064	22 57 43.6	1.79	20 58.1		
16	18 13 19.88	2.397	S. 23 12 40.4	0.57	22 29.3	16	18 41 10.48	2.048	S. 22 57 0.3	1.82	20 55.0		
17	18 14 17.32	2.390	23 12 26.3	0.62	22 26.3	17	18 41 59.46	2.032	22 56 16.4	1.84	20 51.9		
18	18 15 14.58	2.383	23 12 11.0	0.67	22 23.3	18	18 42 48.05	2.016	22 55 31.9	1.86	20 48.7		
19	18 16 11.66	2.375	23 11 54.4	0.72	22 20.3	19	18 43 36.26	2.000	22 54 47.0	1.89	20 45.6		
20	18 17 8.55	2.367	23 11 36.6	0.77	22 17.3	20	18 44 24.08	1.984	22 54 1.5	1.91	20 42.4		
21	18 18 5.25	2.359	S. 23 11 17.5	0.82	22 14.3	21	18 45 11.50	1.967	S. 22 53 15.6	1.93	20 39.3		
22	18 19 1.75	2.350	23 10 57.3	0.87	22 11.3	22	18 45 58.52	1.950	22 52 29.2	1.95	20 36.1		
23	18 19 58.04	2.341	23 10 35.9	0.92	22 8.3	23	18 46 45.13	1.933	22 51 42.4	1.96	20 33.0		
24	18 20 54.13	2.332	23 10 13.3	0.97	22 5.3	24	18 47 31.32	1.915	22 50 55.2	1.98	20 29.8		
25	18 21 50.00	2.323	23 9 49.6	1.02	22 2.3	25	18 48 17.09	1.897	22 50 7.7	1.99	20 26.6		
26	18 22 45.64	2.314	S. 23 9 24.8	1.06	21 59.3	26	18 49 2.43	1.879	S. 22 49 19.8	2.00	20 23.4		
27	18 23 41.06	2.304	23 8 58.8	1.11	21 56.3	27	18 49 47.32	1.861	22 48 31.7	2.01	20 20.2		
28	18 24 36.25	2.294	23 8 31.8	1.15	21 53.3	28	18 50 31.77	1.843	22 47 43.3	2.02	20 17.0		
29	18 25 31.19	2.284	23 8 3.7	1.20	21 50.2	29	18 51 15.77	1.825	S. 22 46 54.7	2.03	20 13.8		
30	18 26 25.88	2.273	23 7 34.5	1.24	21 47.2								
31	18 27 20.32	2.262	S. 23 7 4.3	1.28	21 44.2								
32	18 28 14.49	2.251	S. 23 6 33.1	1.32	21 41.1								
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	14.64	14.69	14.75	14.82	14.91	15.01	Semidiameter.	15.14	15.27	15.41	15.56	15.73	15.91
Hor. Parallax.	1.41	1.42	1.43	1.43	1.44	1.45	Hor. Parallax.	1.46	1.47	1.49	1.50	1.52	1.54

GREENWICH MEAN TIME.

MARCH.						APRIL.							
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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	18 51 15.77	1.823	S. 22 46 54.7	2.03	20 13.8	1	19 9 35.32	1.088	S. 22 23 9.8	1.58	18 29.9		
2	18 51 59.31	1.803	22 46 5.9	2.04	20 10.6	2	19 10 1.00	1.060	22 22 32.5	1.54	18 26.4		
3	18 52 42.37	1.784	22 45 17.0	2.04	20 7.4	3	19 10 26.18	1.031	22 21 56.1	1.50	18 22.9		
4	18 53 24.96	1.764	22 44 27.0	2.05	20 4.2	4	19 10 50.58	1.002	22 21 20.7	1.46	18 19.3		
5	18 54 7.06	1.744	22 43 38.8	2.05	20 0.9	5	19 11 14.28	0.973	22 20 46.2	1.42	18 15.8		
6	18 54 48.67	1.723	S. 22 42 49.6	2.05	19 57.7	6	19 11 37.29	0.944	S. 22 20 12.8	1.37	18 12.3		
7	18 55 29.78	1.702	22 42 0.4	2.04	19 54.4	7	19 11 59.59	0.914	22 19 40.4	1.33	18 8.7		
8	18 56 10.38	1.681	22 41 11.2	2.04	19 51.1	8	19 12 21.17	0.884	22 19 9.1	1.28	18 5.1		
9	18 56 50.47	1.660	22 40 22.1	2.04	19 47.9	9	19 12 42.03	0.854	22 18 38.9	1.24	18 1.5		
10	18 57 30.04	1.638	22 39 33.1	2.03	19 44.6	10	19 13 2.17	0.824	22 18 9.8	1.19	17 57.9		
11	18 58 9.07	1.616	S. 22 38 44.2	2.03	19 41.3	11	19 13 21.58	0.794	S. 22 17 41.9	1.14	17 54.3		
12	18 58 47.57	1.593	22 37 55.5	2.02	19 38.0	12	19 13 40.26	0.764	22 17 15.2	1.09	17 50.7		
13	18 59 25.52	1.570	22 37 7.0	2.01	19 34.7	13	19 13 58.19	0.733	22 16 49.7	1.04	17 47.0		
14	19 0 2.93	1.547	22 36 18.7	2.00	19 31.3	14	19 14 15.38	0.702	22 16 25.5	0.99	17 43.3		
15	19 0 39.78	1.524	22 35 30.7	1.99	19 28.0	15	19 14 31.83	0.671	22 16 2.5	0.94	17 39.7		
16	19 1 16.07	1.500	S. 22 34 43.0	1.98	19 24.7	16	19 14 47.53	0.639	S. 22 15 40.8	0.88	17 36.0		
17	19 1 51.79	1.476	22 33 55.7	1.96	19 21.3	17	19 15 2.48	0.607	22 15 20.4	0.83	17 32.3		
18	19 2 26.94	1.452	22 33 8.7	1.95	19 18.0	18	19 15 16.67	0.575	22 15 1.3	0.77	17 28.6		
19	19 3 1.50	1.428	22 32 22.2	1.93	19 14.6	19	19 15 30.09	0.543	22 14 43.5	0.71	17 24.9		
20	19 3 35.48	1.404	22 31 36.1	1.91	19 11.2	20	19 15 42.75	0.511	22 14 27.1	0.65	17 21.1		
21	19 4 8.88	1.379	S. 22 30 50.5	1.89	19 7.9	21	19 15 54.64	0.479	S. 22 14 12.0	0.59	17 17.4		
22	19 4 41.68	1.354	22 30 5.4	1.87	19 4.5	22	19 16 5.76	0.448	22 13 58.4	0.53	17 13.6		
23	19 5 13.87	1.329	22 29 20.9	1.85	19 1.0	23	19 16 16.09	0.415	22 13 46.2	0.47	17 9.9		
24	19 5 45.46	1.303	22 28 36.9	1.82	18 57.6	24	19 16 25.64	0.382	22 13 35.4	0.42	17 6.1		
25	19 6 16.43	1.277	22 27 53.5	1.80	18 54.2	25	19 16 34.41	0.349	22 13 26.0	0.36	17 2.3		
26	19 6 46.77	1.251	S. 22 27 10.8	1.77	18 50.7	26	19 16 42.38	0.316	S. 22 13 18.1	0.30	16 58.5		
27	19 7 16.48	1.225	22 26 28.7	1.74	18 47.3	27	19 16 49.56	0.283	22 13 11.7	0.24	16 54.7		
28	19 7 45.56	1.198	22 25 47.3	1.71	18 43.9	28	19 16 55.94	0.249	22 13 6.8	0.18	16 50.8		
29	19 8 13.99	1.171	22 25 6.7	1.68	18 40.4	29	19 17 1.52	0.215	22 13 3.3	0.12	16 47.0		
30	19 8 41.76	1.144	22 24 26.9	1.65	18 36.9	30	19 17 6.30	0.182	22 13 1.4	0.05	16 43.1		
31	19 9 8.87	1.116	S. 22 23 47.9	1.62	18 33.4	31	19 17 10.26	0.148	S. 22 13 1.0	0.01	16 39.2		
32	19 9 35.32	1.088	S. 22 23 9.8	1.58	18 29.9								
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	16.02	16.23	16.44	16.67	16.91	17.16	Semidiameter.	17.47	17.75	18.03	18.32	18.61	18.91
Hor. Parallax.	1.55	1.57	1.59	1.61	1.63	1.66	Hor. Parallax.	1.69	1.71	1.74	1.77	1.80	1.83



GREENWICH MEAN TIME.

MAY.						JUNE.							
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.		
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.					
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m		
1	19 17 10.26	0.148	S. 22 13 1.0	0.01	16 39.2	1	19 12 38.66	0.849	S. 22 25 4.5	1.82	14 32.6		
2	19 17 13.41	0.114	22 13 2.1	0.03	16 35.4	2	19 12 17.93	0.877	22 25 48.6	1.86	14 28.3		
3	19 17 15.76	0.081	22 13 4.8	0.15	16 31.5	3	19 11 56.54	0.905	22 26 33.8	1.90	14 24.0		
4	19 17 17.29	0.047	22 13 9.0	0.21	16 27.5	4	19 11 34.50	0.932	22 27 19.9	1.94	14 19.7		
5	19 17 18.00	0.013	22 13 14.8	0.28	16 23.6	5	19 11 11.83	0.958	22 28 7.0	1.98	14 15.4		
6	19 17 17.90	0.021	S. 22 13 22.1	0.34	16 19.7	6	19 10 48.54	0.983	S. 22 28 55.0	2.02	14 11.1		
7	19 17 16.99	0.055	22 13 31.0	0.41	16 15.7	7	19 10 24.64	1.008	22 29 43.7	2.05	14 6.7		
8	19 17 15.26	0.089	22 13 41.4	0.47	16 11.7	8	19 10 0.15	1.032	22 30 33.3	2.08	14 2.4		
9	19 17 12.71	0.122	22 13 53.4	0.53	16 7.8	9	19 9 35.09	1.055	22 31 23.6	2.11	13 58.0		
10	19 17 9.36	0.156	22 14 7.0	0.60	16 3.8	10	19 9 9.48	1.077	22 32 14.6	2.14	13 53.7		
11	19 17 5.20	0.190	S. 22 14 22.1	0.66	15 59.8	11	19 8 43.33	1.099	S. 22 33 6.2	2.17	13 49.3		
12	19 17 0.24	0.223	22 14 38.7	0.73	15 55.7	12	19 8 16.66	1.120	22 33 58.5	2.19	13 44.9		
13	19 16 54.48	0.257	22 14 56.8	0.79	15 51.7	13	19 7 49.48	1.141	22 34 51.3	2.21	13 40.6		
14	19 16 47.92	0.290	22 15 16.4	0.85	15 47.7	14	19 7 21.82	1.161	22 35 44.6	2.23	13 36.2		
15	19 16 40.56	0.323	22 15 37.5	0.91	15 43.6	15	19 6 53.69	1.180	22 36 38.3	2.25	13 31.8		
16	19 16 32.41	0.356	S. 22 16 0.1	0.97	15 39.5	16	19 6 25.11	1.199	S. 22 37 32.5	2.27	13 27.3		
17	19 16 23.48	0.388	22 16 24.1	1.03	15 35.4	17	19 5 56.10	1.217	22 38 27.0	2.28	13 22.9		
18	19 16 13.77	0.421	22 16 49.6	1.09	15 31.3	18	19 5 26.68	1.234	22 39 21.8	2.29	13 18.5		
19	19 16 3.28	0.453	22 17 16.5	1.15	15 27.2	19	19 4 56.86	1.250	22 40 16.9	2.30	13 14.1		
20	19 15 52.01	0.485	22 17 44.7	1.20	15 23.1	20	19 4 26.66	1.265	22 41 12.2	2.30	13 9.6		
21	19 15 39.98	0.517	S. 22 18 14.4	1.26	15 18.9	21	19 3 56.11	1.280	S. 22 42 7.7	2.31	13 5.2		
22	19 15 27.18	0.549	22 18 45.4	1.32	15 14.8	22	19 3 25.22	1.294	22 43 3.4	2.32	13 0.8		
23	19 15 13.63	0.580	22 19 17.7	1.37	15 10.6	23	19 2 54.01	1.307	22 43 59.1	2.33	12 56.3		
24	19 14 59.32	0.611	22 19 51.4	1.43	15 6.4	24	19 2 22.50	1.319	22 44 54.9	2.33	12 51.8		
25	19 14 44.27	0.642	22 20 26.3	1.48	15 2.3	25	19 1 50.72	1.330	22 45 50.7	2.33	12 47.4		
26	19 14 28.48	0.673	S. 22 21 2.5	1.53	14 58.1	26	19 1 18.69	1.340	S. 22 46 46.5	2.32	12 42.9		
27	19 14 11.96	0.703	22 21 40.0	1.58	14 53.8	27	19 0 46.42	1.349	22 47 42.2	2.32	12 38.5		
28	19 13 54.71	0.733	22 22 18.6	1.63	14 49.6	28	19 0 13.94	1.357	22 48 37.8	2.31	12 34.0		
29	19 13 36.75	0.762	22 22 58.4	1.68	14 45.4	29	18 59 41.28	1.364	22 49 33.2	2.30	12 29.5		
30	19 13 18.08	0.791	22 23 39.3	1.73	14 41.1	30	18 59 8.45	1.370	22 50 28.4	2.29	12 25.0		
31	19 12 58.71	0.820	S. 22 24 21.4	1.77	14 36.9	31	18 58 35.49	1.375	S. 22 51 23.3	2.28	12 20.5		
32	19 12 38.66	0.849	S. 22 25 4.5	1.82	14 32.6								
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	19.21	19.51	19.81	20.10	20.38	20.64	Semidiameter.	20.93	21.16	21.35	21.52	21.65	21.75
Hor. Parallax.	1.86	1.88	1.91	1.94	1.97	1.99	Hor. Parallax.	2.02	2.04	2.06	2.08	2.09	2.10

GREENWICH MEAN TIME.

JULY.						AUGUST.							
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.		
	Noon.	Noon.	Noon.	Noon.			Noon.	Noon.					
	h m s	s	° / ' "	"	h m		h m s	s	° / ' "	"	h m		
1	18 58 35.49	1.375	S. 22 51 23.3	2.28	12 20.5	1	18 42 34.73	1.061	S. 23 14 54.8	1.39	10 2.8		
2	18 58 2.41	1.380	22 52 18.0	2.27	12 16.1	2	18 42 9.56	1.037	23 15 27.6	1.35	9 58.5		
3	18 57 29.24	1.384	22 53 12.4	2.26	12 11.6	3	18 41 44.97	1.012	23 15 59.5	1.32	9 54.1		
4	18 56 56.00	1.386	22 54 6.4	2.24	12 7.1	4	18 41 20.98	0.987	23 16 30.5	1.28	9 49.8		
5	18 56 22.72	1.387	22 54 59.9	2.22	12 2.6	5	18 40 57.61	0.961	23 17 0.7	1.24	9 45.5		
6	18 55 49.43	1.387	S. 22 55 53.0	2.20	11 58.1	6	18 40 34.86	0.934	S. 23 17 29.9	1.20	9 41.2		
7	18 55 16.15	1.386	22 56 45.7	2.18	11 53.6	7	18 40 12.76	0.907	23 17 58.2	1.16	9 36.9		
8	18 54 42.91	1.384	22 57 37.9	2.16	11 49.2	8	18 39 51.32	0.879	23 18 25.7	1.12	9 32.6		
9	18 54 9.72	1.381	22 58 29.5	2.14	11 44.7	9	18 39 30.55	0.851	23 18 52.3	1.09	9 28.3		
10	18 53 36.62	1.377	22 59 20.6	2.12	11 40.2	10	18 39 10.46	0.822	23 19 18.0	1.05	9 24.1		
11	18 53 3.63	1.372	S. 23 0 11.0	2.09	11 35.7	11	18 38 51.07	0.793	S. 23 19 42.9	1.01	9 19.8		
12	18 52 30.77	1.366	23 1 0.8	2.06	11 31.3	12	18 38 32.39	0.764	23 20 6.9	0.97	9 15.6		
13	18 51 58.07	1.359	23 1 49.9	2.03	11 26.8	13	18 38 14.42	0.734	23 20 30.0	0.93	9 11.3		
14	18 51 25.55	1.351	23 2 38.3	2.00	11 22.3	14	18 37 57.17	0.703	23 20 52.2	0.90	9 7.1		
15	18 50 53.23	1.342	23 3 26.0	1.97	11 17.8	15	18 37 40.65	0.672	23 21 13.6	0.87	9 2.9		
16	18 50 21.13	1.332	S. 23 4 13.0	1.94	11 13.4	16	18 37 24.88	0.641	S. 23 21 34.1	0.84	8 58.7		
17	18 49 49.27	1.322	23 4 59.3	1.91	11 8.9	17	18 37 9.86	0.610	23 21 53.9	0.80	8 54.6		
18	18 49 17.68	1.311	23 5 44.8	1.88	11 4.5	18	18 36 55.60	0.579	23 22 12.8	0.77	8 50.4		
19	18 48 46.37	1.299	23 6 29.5	1.85	11 0.0	19	18 36 42.10	0.547	23 22 30.9	0.73	8 46.3		
20	18 48 15.37	1.286	23 7 13.4	1.82	10 55.6	20	18 36 29.38	0.514	23 22 48.2	0.70	8 42.1		
21	18 47 44.70	1.272	S. 23 7 56.5	1.79	10 51.2	21	18 36 17.43	0.481	S. 23 23 4.7	0.67	8 38.0		
22	18 47 14.38	1.256	23 8 38.8	1.75	10 46.7	22	18 36 6.27	0.448	23 23 20.4	0.63	8 33.9		
23	18 46 44.42	1.240	23 9 20.3	1.72	10 42.3	23	18 35 55.90	0.415	23 23 35.3	0.60	8 29.8		
24	18 46 14.86	1.223	23 10 0.9	1.68	10 37.9	24	18 35 46.32	0.382	23 23 49.5	0.57	8 25.7		
25	18 45 45.70	1.206	23 10 40.6	1.64	10 33.5	25	18 35 37.55	0.349	23 24 2.8	0.54	8 21.6		
26	18 45 16.97	1.188	S. 23 11 19.5	1.60	10 29.1	26	18 35 29.60	0.315	S. 23 24 15.4	0.51	8 17.5		
27	18 44 48.70	1.169	23 11 57.6	1.56	10 24.7	27	18 35 22.45	0.281	23 24 27.2	0.48	8 13.5		
28	18 44 20.89	1.149	23 12 34.8	1.52	10 20.3	28	18 35 16.12	0.247	23 24 38.3	0.45	8 9.5		
29	18 43 53.57	1.128	23 13 11.1	1.49	10 15.9	29	18 35 10.62	0.213	23 24 48.6	0.42	8 5.5		
30	18 43 26.76	1.106	23 13 46.5	1.45	10 11.5	30	18 35 5.94	0.178	23 24 58.2	0.39	8 1.5		
31	18 43 0.47	1.084	S. 23 14 21.1	1.42	10 7.2	31	18 35 2.10	0.143	S. 23 25 7.0	0.36	7 57.5		
32	18 42 34.73	1.061	S. 23 14 54.8	1.39	10 2.8	32	18 34 59.09	0.108	S. 23 25 15.0	0.33	7 53.5		
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	21.80	21.83	21.81	21.76	21.66	21.54	Semidiameter.	21.34	21.15	20.93	20.69	20.43	20.16
Hor. Parallax.	2.11	2.11	2.11	2.10	2.09	2.08	Hor. Parallax.	2.06	2.04	2.02	2.00	1.97	1.95



GREENWICH MEAN TIME.

SEPTEMBER.						OCTOBER.							
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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	18 34 59.09	0.108	S. 23 25 15.0	0.33	7 53.5	1	18 39 50.17	0.896	S. 23 23 18.0	0.68	6 0.5		
2	18 34 56.92	0.073	23 25 22.3	0.29	7 49.5	2	18 40 12.04	0.926	23 23 1.3	0.72	5 56.9		
3	18 34 55.58	0.038	23 25 28.8	0.25	7 45.6	3	18 40 34.65	0.957	23 22 43.7	0.76	5 53.4		
4	18 34 55.09	0.003	23 25 34.6	0.22	7 41.7	4	18 40 57.99	0.987	23 22 25.1	0.80	5 49.8		
5	18 34 55.43	0.031	23 25 39.6	0.19	7 37.7	5	18 41 22.05	1.017	23 22 5.6	0.84	5 46.3		
6	18 34 56.61	0.066	S. 23 25 43.8	0.16	7 33.8	6	18 41 46.82	1.046	S. 23 21 45.1	0.88	5 42.8		
7	18 34 58.62	0.101	23 25 47.3	0.13	7 29.9	7	18 42 12.30	1.075	23 21 23.6	0.92	5 39.3		
8	18 35 1.47	0.136	23 25 50.0	0.09	7 26.0	8	18 42 38.48	1.104	23 21 1.1	0.96	5 35.8		
9	18 35 5.15	0.171	23 25 52.0	0.06	7 22.2	9	18 43 5.35	1.133	23 20 37.6	1.00	5 32.3		
10	18 35 9.67	0.205	23 25 53.3	0.03	7 18.3	10	18 43 32.90	1.162	23 20 13.1	1.05	5 28.8		
11	18 35 15.01	0.240	S. 23 25 53.8	0.00	7 14.5	11	18 44 1.13	1.190	S. 23 19 47.5	1.09	5 25.4		
12	18 35 21.18	0.274	23 25 53.5	0.03	7 10.7	12	18 44 30.02	1.218	23 19 20.9	1.13	5 21.9		
13	18 35 28.16	0.308	23 25 52.5	0.06	7 6.9	13	18 44 59.57	1.245	23 18 53.3	1.17	5 18.5		
14	18 35 35.96	0.342	23 25 50.7	0.08	7 3.1	14	18 45 29.78	1.272	23 18 24.6	1.21	5 15.0		
15	18 35 44.57	0.376	23 25 48.1	0.11	6 59.3	15	18 46 0.63	1.299	23 17 54.8	1.26	5 11.6		
16	18 35 54.00	0.409	S. 23 25 44.7	0.14	6 55.5	16	18 46 32.12	1.325	S. 23 17 23.9	1.30	5 8.2		
17	18 36 4.23	0.443	23 25 40.6	0.18	6 51.7	17	18 47 4.23	1.351	23 16 51.9	1.35	5 4.8		
18	18 36 15.26	0.477	23 25 35.7	0.22	6 48.0	18	18 47 36.97	1.377	23 16 18.8	1.40	5 1.4		
19	18 36 27.10	0.510	23 25 30.1	0.25	6 44.3	19	18 48 10.33	1.402	23 15 44.5	1.45	4 58.0		
20	18 36 39.73	0.543	23 25 23.7	0.28	6 40.5	20	18 48 44.30	1.427	23 15 9.0	1.50	4 54.7		
21	18 36 53.15	0.576	S. 23 25 16.4	0.31	6 36.8	21	18 49 18.88	1.452	S. 23 14 32.4	1.55	4 51.3		
22	18 37 7.37	0.609	23 25 8.4	0.35	6 33.1	22	18 49 54.05	1.477	23 13 54.6	1.60	4 48.0		
23	18 37 22.37	0.642	23 24 59.5	0.38	6 29.5	23	18 50 29.82	1.502	23 13 15.5	1.65	4 44.7		
24	18 37 38.15	0.674	23 24 49.8	0.42	6 25.8	24	18 51 6.17	1.527	23 12 35.3	1.70	4 41.3		
25	18 37 54.71	0.706	23 24 39.3	0.46	6 22.2	25	18 51 43.10	1.551	23 11 53.8	1.75	4 38.0		
26	18 38 12.05	0.738	S. 23 24 27.9	0.49	6 18.5	26	18 52 20.60	1.575	S. 23 11 11.0	1.80	4 34.7		
27	18 38 30.15	0.770	23 24 15.7	0.52	6 14.9	27	18 52 58.66	1.598	23 10 27.0	1.85	4 31.4		
28	18 38 49.02	0.802	23 24 2.6	0.56	6 11.3	28	18 53 37.28	1.621	23 9 41.7	1.91	4 28.1		
29	18 39 8.65	0.834	23 23 48.7	0.60	6 7.7	29	18 54 16.45	1.644	23 8 55.1	1.97	4 24.8		
30	18 39 29.04	0.865	23 23 33.8	0.64	6 4.1	30	18 54 56.16	1.667	23 8 7.2	2.03	4 21.6		
31	18 39 50.17	0.896	S. 23 23 18.0	0.68	6 0.5	31	18 55 36.41	1.689	S. 23 7 17.9	2.08	4 18.3		
						32	18 56 17.18	1.710	S. 23 6 27.2	2.14	4 15.0		
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	19.82	19.53	19.24	18.95	18.66	18.37	Semidiameter.	18.09	17.82	17.56	17.30	17.06	16.83
Hor. Parallax.	1.91	1.89	1.86	1.83	1.80	1.77	Hor. Parallax.	1.75	1.72	1.70	1.67	1.65	1.63

GREENWICH MEAN TIME.

NOVEMBER.						DECEMBER.								
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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	18 56 17.18	1.710	S. 23 6 27.2	2.14	4 15.0	1	19 20 4.62	2.210	S. 22 29 42.5	4.05	2 40.8			
2	18 56 58.46	1.731	23 5 35.2	2.19	4 11.8	2	19 20 57.81	2.222	22 28 4.5	4.12	2 37.7			
3	18 57 40.25	1.752	23 4 41.8	2.25	4 8.6	3	19 21 51.28	2.234	22 26 24.9	4.19	2 34.7			
4	18 58 22.54	1.772	23 3 47.0	2.31	4 5.3	4	19 22 45.03	2.245	22 24 43.6	4.26	2 31.7			
5	18 59 5.31	1.792	23 2 50.8	2.37	4 2.1	5	19 23 39.05	2.256	22 23 0.7	4.32	2 28.6			
6	18 59 48.57	1.812	S. 23 1 53.2	2.43	3 58.9	6	19 24 33.32	2.267	S. 22 21 16.1	4.39	2 25.6			
7	19 0 32.30	1.832	23 0 54.2	2.49	3 55.7	7	19 25 27.84	2.277	22 19 29.9	4.46	2 22.6			
8	19 1 16.50	1.851	22 59 53.8	2.55	3 52.5	8	19 26 22.60	2.287	22 17 42.0	4.53	2 19.5			
9	19 2 1.16	1.870	22 58 51.9	2.61	3 49.3	9	19 27 17.60	2.297	22 15 52.5	4.60	2 16.5			
10	19 2 46.27	1.889	22 57 48.6	2.67	3 46.1	10	19 28 12.84	2.306	22 14 1.3	4.66	2 13.5			
11	19 3 31.82	1.907	S. 22 56 43.7	2.73	3 43.0	11	19 29 8.30	2.315	S. 22 12 8.5	4.73	2 10.5			
12	19 4 17.80	1.925	22 55 37.4	2.79	3 39.8	12	19 30 3.98	2.324	22 10 14.0	4.80	2 7.5			
13	19 5 4.21	1.943	22 54 29.6	2.85	3 36.6	13	19 30 59.87	2.333	22 8 17.9	4.87	2 4.5			
14	19 5 51.03	1.960	22 53 20.3	2.92	3 33.5	14	19 31 55.96	2.341	22 6 20.1	4.94	2 1.5			
15	19 6 38.27	1.977	22 52 9.5	2.98	3 30.3	15	19 32 52.25	2.349	22 4 20.7	5.01	1 58.5			
16	19 7 25.91	1.994	S. 22 50 57.2	3.04	3 27.2	16	19 33 48.73	2.357	S. 22 2 19.6	5.08	1 55.5			
17	19 8 13.95	2.010	22 49 43.3	3.10	3 24.0	17	19 34 45.40	2.365	22 0 16.9	5.14	1 52.5			
18	19 9 2.38	2.026	22 48 27.9	3.17	3 20.9	18	19 35 42.25	2.372	21 58 12.5	5.21	1 49.5			
19	19 9 51.20	2.042	22 47 10.9	3.24	3 17.8	19	19 36 39.28	2.379	21 56 6.5	5.28	1 46.5			
20	19 10 40.40	2.057	22 45 52.4	3.31	3 14.7	20	19 37 36.48	2.386	21 53 58.9	5.35	1 43.5			
21	19 11 29.97	2.072	S. 22 44 32.3	3.37	3 11.6	21	19 38 33.84	2.393	S. 21 51 49.6	5.42	1 40.5			
22	19 12 19.90	2.087	22 43 10.6	3.44	3 8.5	22	19 39 31.36	2.400	21 49 38.7	5.49	1 37.6			
23	19 13 10.20	2.102	22 41 47.3	3.50	3 5.4	23	19 40 29.03	2.406	21 47 26.2	5.56	1 34.6			
24	19 14 0.85	2.117	22 40 22.3	3.57	3 2.3	24	19 41 26.85	2.412	21 45 12.1	5.62	1 31.6			
25	19 14 51.84	2.131	22 38 55.8	3.64	2 59.2	25	19 42 24.81	2.417	21 42 56.3	5.69	1 28.7			
26	19 15 43.17	2.145	S. 22 37 27.7	3.71	2 56.1	26	19 43 22.89	2.422	S. 21 40 38.9	5.76	1 25.7			
27	19 16 34.83	2.159	22 35 57.9	3.78	2 53.0	27	19 44 21.09	2.427	21 38 19.9	5.82	1 22.7			
28	19 17 26.82	2.172	22 34 26.5	3.85	2 50.0	28	19 45 19.41	2.432	21 35 59.4	5.89	1 19.8			
29	19 18 19.12	2.185	22 32 53.4	3.91	2 46.9	29	19 46 17.84	2.436	21 33 37.3	5.95	1 16.8			
30	19 19 11.72	2.198	22 31 18.8	3.98	2 43.8	30	19 47 16.37	2.440	21 31 13.6	6.01	1 13.8			
31	19 20 4.62	2.210	S. 22 29 42.5	4.05	2 40.8	31	19 48 15.00	2.443	S. 21 28 48.3	6.08	1 10.9			
						32	19 49 13.71	2.447	S. 21 26 21.6	6.15	1 7.9			
Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26	31
Semidiameter.	16.57	16.37	16.18	16.01	15.84	15.69	Semidiameter.	15.56	15.43	15.32	15.23	15.14	15.08	15.02
Hor. Parallax.	1.60	1.58	1.56	1.55	1.53	1.52	Hor. Parallax.	1.50	1.49	1.48	1.47	1.46	1.46	1.45



GREENWICH MEAN TIME.

JANUARY.						FEBRUARY.					
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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	3 44 18.80	0.506	N.17 38 15.0	1.04	9 0.6	1	3 41 27.00	0.062	N.17 37 22.2	0.93	6 56.0
2	3 44 6.85	0.490	17 37 50.8	0.98	8 56.5	2	3 41 28.71	0.081	17 37 45.3	1.00	6 52.1
3	3 43 55.28	0.474	17 37 28.0	0.92	8 52.4	3	3 41 30.89	0.100	17 38 10.0	1.06	6 48.2
4	3 43 44.10	0.457	17 37 6.6	0.86	8 48.3	4	3 41 33.53	0.120	17 38 36.2	1.12	6 44.3
5	3 43 33.32	0.440	17 36 46.6	0.80	8 44.2	5	3 41 36.63	0.139	17 39 3.9	1.19	6 40.4
6	3 43 22.94	0.423	N.17 36 28.1	0.74	8 40.1	6	3 41 40.19	0.158	N.17 39 33.1	1.25	6 36.6
7	3 43 12.97	0.406	17 36 11.0	0.68	8 36.0	7	3 41 44.22	0.178	17 40 3.9	1.31	6 32.7
8	3 43 3.42	0.389	17 35 55.4	0.62	8 31.9	8	3 41 48.71	0.197	17 40 36.2	1.37	6 28.8
9	3 42 54.29	0.371	17 35 41.3	0.56	8 27.8	9	3 41 53.66	0.216	17 41 9.9	1.43	6 25.0
10	3 42 45.58	0.353	17 35 28.7	0.50	8 23.7	10	3 41 59.07	0.235	17 41 45.1	1.50	6 21.1
11	3 42 37.30	0.335	N.17 35 17.6	0.44	8 19.7	11	3 42 4.94	0.254	N.17 42 21.8	1.56	6 17.3
12	3 42 29.46	0.317	17 35 8.0	0.37	8 15.6	12	3 42 11.27	0.273	17 42 59.9	1.62	6 13.5
13	3 42 22.05	0.299	17 34 59.9	0.31	8 11.6	13	3 42 18.05	0.292	17 43 39.5	1.68	6 9.7
14	3 42 15.08	0.281	17 34 53.4	0.24	8 7.5	14	3 42 25.27	0.311	17 44 20.5	1.74	6 5.9
15	3 42 8.55	0.263	17 34 48.4	0.18	8 3.5	15	3 42 32.94	0.329	17 45 2.8	1.80	6 2.1
16	3 42 2.47	0.245	N.17 34 45.0	0.11	7 59.4	16	3 42 41.06	0.348	N.17 45 46.5	1.85	5 58.3
17	3 41 56.84	0.226	17 34 43.1	0.05	7 55.4	17	3 42 49.62	0.366	17 46 31.6	1.91	5 54.5
18	3 41 51.65	0.207	17 34 42.8	0.02	7 51.4	18	3 42 58.62	0.384	17 47 18.1	1.96	5 50.7
19	3 41 46.91	0.188	17 34 44.0	0.08	7 47.4	19	3 43 8.05	0.402	17 48 5.9	2.02	5 46.9
20	3 41 42.63	0.169	17 34 46.8	0.15	7 43.4	20	3 43 17.92	0.420	17 48 55.0	2.07	5 43.2
21	3 41 38.80	0.150	N.17 34 51.2	0.21	7 39.4	21	3 43 28.22	0.438	N.17 49 45.4	2.13	5 39.4
22	3 41 35.43	0.131	17 34 57.1	0.27	7 35.4	22	3 43 38.94	0.456	17 50 37.0	2.18	5 35.6
23	3 41 32.52	0.112	17 35 4.6	0.34	7 31.5	23	3 43 50.09	0.473	17 51 29.9	2.23	5 31.9
24	3 41 30.06	0.093	17 35 13.7	0.41	7 27.5	24	3 44 1.66	0.491	17 52 24.1	2.28	5 28.1
25	3 41 28.06	0.074	17 35 24.3	0.47	7 23.5	25	3 44 13.65	0.509	17 53 19.5	2.33	5 24.4
26	3 41 26.52	0.055	N.17 35 36.4	0.54	7 19.6	26	3 44 26.05	0.526	N.17 54 16.1	2.38	5 20.7
27	3 41 25.44	0.036	17 35 50.1	0.60	7 15.6	27	3 44 38.87	0.543	17 55 13.9	2.43	5 17.0
28	3 41 24.82	0.017	17 36 5.4	0.67	7 11.7	28	3 44 52.10	0.560	17 56 12.9	2.48	5 13.3
29	3 41 24.67	0.003	17 36 22.3	0.74	7 7.7	29	3 45 5.74	0.577	N.17 57 13.0	2.53	5 9.6
30	3 41 24.98	0.022	17 36 40.7	0.80	7 3.8						
31	3 41 25.76	0.042	N.17 37 0.7	0.87	6 59.9						
32	3 41 27.00	0.062	N.17 37 22.2	0.93	6 56.0						

Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	9.23	9.17	9.10	9.03	8.95	8.87	Semidiameter.	8.77	8.69	8.61	8.53	8.46	8.38
Hor. Parallax.	1.06	1.05	1.04	1.03	1.02	1.02	Hor. Parallax.	1.00	1.00	0.99	0.98	0.97	0.96

GREENWICH MEAN TIME.

MARCH.						APRIL.					
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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	3 45 5.74	0.577	N.17 57 13.0	2.53	5 9.6	1	3 55 9.79	1.019	N.18 35 53.2	3.56	3 17.7
2	3 45 19.78	0.594	17 58 14.3	2.57	5 5.9	2	3 55 34.37	1.030	18 37 18.8	3.58	3 14.2
3	3 45 34.23	0.611	17 59 16.7	2.62	5 2.2	3	3 55 59.22	1.041	18 38 44.8	3.59	3 10.7
4	3 45 49.08	0.627	18 0 20.2	2.67	4 58.5	4	3 56 24.33	1.052	18 40 11.3	3.61	3 7.2
5	3 46 4.32	0.643	18 1 24.8	2.71	4 54.8	5	3 56 49.71	1.063	18 41 38.2	3.63	3 3.7
6	3 46 19.95	0.659	N.18 2 30.4	2.76	4 51.1	6	3 57 15.36	1.074	N.18 43 5.4	3.64	3 0.2
7	3 46 35.97	0.675	18 3 37.1	2.80	4 47.5	7	3 57 41.26	1.084	18 44 32.9	3.66	2 56.7
8	3 46 52.38	0.691	18 4 44.8	2.84	4 43.8	8	3 58 7.40	1.094	18 46 0.8	3.67	2 53.2
9	3 47 9.16	0.707	18 5 53.5	2.88	4 40.2	9	3 58 33.79	1.104	18 47 29.0	3.68	2 49.7
10	3 47 26.31	0.723	18 7 3.1	2.92	4 36.5	10	3 59 0.41	1.114	18 48 57.4	3.69	2 46.2
11	3 47 43.84	0.738	N.18 8 13.7	2.96	4 32.9	11	3 59 27.27	1.124	N.18 50 26.1	3.70	2 42.7
12	3 48 1.74	0.753	18 9 25.2	3.00	4 29.2	12	3 59 54.36	1.133	18 51 55.0	3.71	2 39.2
13	3 48 20.00	0.768	18 10 37.7	3.04	4 25.6	13	4 0 21.67	1.142	18 53 24.1	3.71	2 35.7
14	3 48 38.61	0.783	18 11 51.0	3.08	4 22.0	14	4 0 49.19	1.151	18 54 53.4	3.72	2 32.3
15	3 48 57.58	0.798	18 13 5.1	3.11	4 18.4	15	4 1 16.93	1.160	18 56 22.9	3.73	2 28.8
16	3 49 16.90	0.812	N.18 14 20.0	3.14	4 14.8	16	4 1 44.88	1.169	N.18 57 52.5	3.73	2 25.3
17	3 49 36.56	0.826	18 15 35.8	3.17	4 11.2	17	4 2 13.03	1.177	18 59 22.2	3.74	2 21.8
18	3 49 56.56	0.840	18 16 52.3	3.20	4 7.6	18	4 2 41.38	1.185	19 0 52.0	3.74	2 18.4
19	3 50 16.90	0.854	18 18 9.6	3.23	4 4.0	19	4 3 9.93	1.193	19 2 21.9	3.75	2 14.9
20	3 50 37.57	0.868	18 19 27.7	3.26	4 0.4	20	4 3 38.67	1.201	19 3 51.9	3.75	2 11.5
21	3 50 58.56	0.882	N.18 20 46.4	3.29	3 56.8	21	4 4 7.59	1.209	N.19 5 21.9	3.75	2 8.0
22	3 51 19.87	0.895	18 22 5.8	3.32	3 53.2	22	4 4 36.70	1.217	19 6 51.9	3.75	2 4.6
23	3 51 41.50	0.908	18 23 25.9	3.35	3 49.7	23	4 5 5.98	1.224	19 8 22.0	3.75	2 1.1
24	3 52 3.45	0.921	18 24 46.6	3.38	3 46.1	24	4 5 35.43	1.231	19 9 52.0	3.75	1 57.7
25	3 52 25.70	0.934	18 26 8.0	3.40	3 42.5	25	4 6 5.06	1.238	19 11 22.0	3.75	1 54.2
26	3 52 48.25	0.946	N.18 27 30.0	3.43	3 39.0	26	4 6 34.85	1.245	N.19 12 52.0	3.75	1 50.8
27	3 53 11.11	0.959	18 28 52.5	3.45	3 35.4	27	4 7 4.80	1.252	19 14 22.0	3.74	1 47.4
28	3 53 34.27	0.971	18 30 15.6	3.48	3 31.9	28	4 7 34.91	1.258	19 15 51.9	3.74	1 43.9
29	3 53 57.72	0.983	18 31 39.2	3.50	3 28.3	29	4 8 5.17	1.264	19 17 21.7	3.74	1 40.5
30	3 54 21.46	0.995	18 33 3.4	3.52	3 24.8	30	4 8 35.58	1.270	19 18 51.4	3.74	1 37.1
31	3 54 45.48	1.007	N.18 34 28.1	3.54	3 21.3	31	4 9 6.14	1.276	N.19 20 20.9	3.73	1 33.7
32	3 55 9.79	1.019	N.18 35 53.2	3.56	3 17.7						

Day.	1	6	11	16	21	26	Day.	1	6	11	16	21	26
Semidiameter.	8.34	8.26	8.19	8.13	8.07	8.01	Semidiameter.	7.94	7.89	7.85	7.81	7.77	7.74
Hor. Parallax.	0.95	0.95	0.94	0.93	0.92	0.92	Hor. Parallax.	0.91	0.90	0.90	0.89	0.89	0.89



GREENWICH MEAN TIME.

MAY.						JUNE.					
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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	4 9 6.14	1.276	N.19 20 20.9	3.73	1 33.7	1	4 25 39.06	1.363	N.20 4 6.9	3.25	23 44.8
2	4 9 36.83	1.282	19 21 50.3	3.73	1 30.2	2	4 26 11.78	1.363	20 5 24.4	3.22	23 41.4
3	4 10 7.66	1.287	19 23 19.5	3.72	1 26.8	3	4 26 44.50	1.363	20 6 41.4	3.19	23 38.0
4	4 10 38.62	1.292	19 24 48.6	3.71	1 23.4	4	4 27 17.21	1.362	20 7 57.8	3.17	23 34.7
5	4 11 9.71	1.297	19 26 17.5	3.70	1 20.0	5	4 27 49.90	1.362	20 9 13.6	3.14	23 31.3
6	4 11 40.91	1.302	N.19 27 46.2	3.69	1 16.6	6	4 28 22.57	1.361	N.20 10 28.8	3.12	23 27.9
7	4 12 12.23	1.307	19 29 14.6	3.68	1 13.1	7	4 28 55.22	1.360	20 11 43.3	3.10	23 24.5
8	4 12 43.66	1.312	19 30 42.8	3.67	1 9.7	8	4 29 27.83	1.358	20 12 57.2	3.07	23 21.1
9	4 13 15.20	1.316	19 32 10.7	3.66	1 6.3	9	4 30 0.41	1.357	20 14 10.5	3.05	23 17.7
10	4 13 46.83	1.320	19 33 38.3	3.65	1 2.9	10	4 30 32.95	1.355	20 15 23.1	3.02	23 14.3
11	4 14 18.56	1.324	N.19 35 5.6	3.64	0 59.5	11	4 31 5.44	1.353	N.20 16 35.1	2.99	23 10.9
12	4 14 50.38	1.328	19 36 32.6	3.62	0 56.1	12	4 31 37.89	1.351	20 17 46.4	2.96	23 7.5
13	4 15 22.29	1.331	19 37 59.3	3.61	0 52.7	13	4 32 10.28	1.348	20 18 57.1	2.93	23 4.1
14	4 15 54.28	1.334	19 39 25.6	3.59	0 49.3	14	4 32 42.64	1.346	20 20 7.1	2.90	23 0.7
15	4 16 26.35	1.337	19 40 51.6	3.58	0 45.9	15	4 33 14.88	1.343	20 21 16.4	2.87	22 57.3
16	4 16 58.49	1.340	N.19 42 17.2	3.56	0 42.5	16	4 33 47.09	1.340	N.20 22 25.1	2.84	22 53.9
17	4 17 30.69	1.343	19 43 42.4	3.55	0 39.1	17	4 34 19.23	1.337	20 23 33.1	2.81	22 50.5
18	4 18 2.95	1.346	19 45 7.2	3.53	0 35.7	18	4 34 51.29	1.334	20 24 40.4	2.78	22 47.1
19	4 18 35.28	1.349	19 46 31.6	3.51	0 32.3	19	4 35 23.27	1.331	20 25 46.9	2.75	22 43.7
20	4 19 7.66	1.351	19 47 55.6	3.49	0 28.9	20	4 35 55.17	1.328	20 26 52.7	2.73	22 40.3
21	4 19 40.09	1.353	N.19 49 19.2	3.47	0 25.5	21	4 36 26.99	1.324	N.20 27 57.9	2.70	22 36.9
22	4 20 12.57	1.355	19 50 42.3	3.45	0 22.1	22	4 36 58.71	1.320	20 29 2.3	2.67	22 33.5
23	4 20 45.10	1.357	19 52 5.0	3.43	0 18.7	23	4 37 30.34	1.316	20 30 6.1	2.64	22 30.1
24	4 21 17.66	1.358	19 53 27.2	3.41	0 15.4	24	4 38 1.87	1.312	20 31 9.2	2.61	22 26.7
25	4 21 50.25	1.359	19 54 48.9	3.39	0 12.0	25	4 38 33.30	1.307	20 32 11.5	2.58	22 23.3
26	4 22 22.88	1.360	N.19 56 10.2	3.37	0 8.6	26	4 39 4.62	1.303	N.20 33 13.1	2.55	22 19.9
27	4 22 55.54	1.361	19 57 31.0	3.35	0 5.2	27	4 39 35.83	1.298	20 34 13.9	2.52	22 16.4
28	4 23 28.22	1.362	19 58 51.2	3.33	0 1.8	28	4 40 6.92	1.293	20 35 14.0	2.49	22 13.0
29	4 24 0.91	1.362	20 0 10.9	3.31	23 55.0	29	4 40 37.89	1.288	20 36 13.3	2.46	22 9.6
30	4 24 33.62	1.363	20 1 30.1	3.29	23 51.6	30	4 41 8.73	1.282	20 37 11.9	2.43	22 6.2
31	4 25 6.34	1.363	N.20 2 48.8	3.27	23 48.2	31	4 41 39.44	1.277	N.20 38 9.8	2.40	22 2.7
32	4 25 39.06	1.363	N.20 4 6.9	3.25	23 44.8						

Day.	1	6	11	16	21	26
Semidiameter.	7.71	7.69	7.67	7.65	7.64	7.64
Hor. Parallax.	0.88	0.88	0.88	0.88	0.87	0.87

Day.	1	6	11	16	21	26
Semidiameter.	7.64	7.64	7.65	7.67	7.68	7.71
Hor. Parallax.	0.87	0.87	0.88	0.88	0.88	0.88

GREENWICH MEAN TIME.

JULY.						AUGUST.					
Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.	Meridian Passage.	Day.	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 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	4 41 39.44	1.277	N.20 38 9.8	2.40	22 2.7	1	4 56 0.11	1.007	N.21 1 39.3	1.39	20 15.1
2	4 42 10.01	1.271	20 39 6.9	2.36	21 59.3	2	4 56 24.13	0.995	21 2 12.3	1.36	20 11.5
3	4 42 40.44	1.265	20 40 3.2	2.33	21 55.9	3	4 56 47.86	0.983	21 2 44.6	1.33	20 8.0
4	4 43 10.73	1.259	20 40 58.8	2.30	21 52.5	4	4 57 11.30	0.971	21 3 16.2	1.30	20 4.5
5	4 43 40.86	1.253	20 41 53.6	2.27	21 49.0	5	4 57 34.44	0.958	21 3 46.9	1.26	20 0.9
6	4 44 10.83	1.246	N.20 42 47.6	2.24	21 45.6	6	4 57 57.28	0.945	N.21 4 16.9	1.23	19 57.3
7	4 44 40.64	1.239	20 43 40.9	2.20	21 42.2	7	4 58 19.81	0.932	21 4 46.1	1.20	19 53.8
8	4 45 10.28	1.232	20 44 33.3	2.17	21 38.7	8	4 58 42.03	0.919	21 5 14.6	1.17	19 50.2
9	4 45 39.75	1.225	20 45 25.0	2.14	21 35.3	9	4 59 3.94	0.906	21 5 42.3	1.14	19 46.6
10	4 46 9.05	1.217	20 46 15.9	2.11	21 31.9	10	4 59 25.53	0.893	21 6 9.3	1.11	19 43.0
11	4 46 38.16	1.209	N.20 47 6.0	2.08	21 28.4	11	4 59 46.80	0.880	N.21 6 35.6	1.08	19 39.4
12	4 47 7.09	1.201	20 47 55.4	2.04	21 24.9	12	5 0 7.74	0.866	21 7 1.1	1.05	19 35.9
13	4 47 35.83	1.193	20 48 43.9	2.01	21 21.5	13	5 0 28.35	0.852	21 7 25.9	1.02	19 32.3
14	4 48 4.38	1.185	20 49 31.7	1.98	21 18.0	14	5 0 48.63	0.838	21 7 49.9	0.99	19 28.7
15	4 48 32.73	1.177	20 50 18.7	1.95	21 14.5	15	5 1 8.57	0.824	21 8 13.2	0.96	19 25.1
16	4 49 0.87	1.169	N.20 51 4.9	1.92	21 11.1	16	5 1 28.17	0.810	N.21 8 35.8	0.93	19 21.4
17	4 49 28.80	1.160	20 51 50.4	1.88	21 7.6	17	5 1 47.42	0.795	21 8 57.7	0.90	19 17.8
18	4 49 56.53	1.151	20 52 35.1	1.85	21 4.1	18	5 2 6.31	0.780	21 9 18.9	0.87	19 14.2
19	4 50 24.05	1.142	20 53 19.0	1.82	21 0.7	19	5 2 24.85	0.765	21 9 39.4	0.84	19 10.6
20	4 50 51.34	1.133	20 54 2.1	1.78	20 57.2	20	5 2 43.04	0.750	21 9 59.2	0.81	19 7.0
21	4 51 18.41	1.123	N.20 54 44.5	1.75	20 53.7	21	5 3 0.86	0.735	N.21 10 18.2	0.78	19 3.3
22	4 51 45.26	1.114	20 55 26.1	1.72	20 50.2	22	5 3 18.32	0.720	21 10 36.6	0.75	18 59.6
23	4 52 11.87	1.104	20 56 6.9	1.69	20 46.7	23	5 3 35.40	0.704	21 10 54.3	0.72	18 56.0
24	4 52 38.24	1.094	20 56 46.9	1.66	20 43.2	24	5 3 52.11	0.688	21 11 11.3	0.69	18 52.4
25	4 53 4.37	1.084	20 57 26.1	1.62	20 39.7	25	5 4 8.44	0.672	21 11 27.5	0.66	18 48.7
26	4 53 30.26	1.073	N.20 58 4.6	1.59	20 36.2	26	5 4 24.38	0.656	N.21 11 43.1	0.63	18 45.0
27	4 53 55.89	1.063	20 58 42.3	1.55	20 32.7	27	5 4 39.93	0.640	21 11 58.0	0.61	18 41.3
28	4 54 21.27	1.052	20 59 19.2	1.52	20 29.2	28	5 4 55.09	0.623	21 12 12.2	0.58	18 37.6
29	4 54 46.39	1.041	20 59 55.4	1.49	20 25.6	29	5 5 9.85	0.607	21 12 25.7	0.55	18 33.9
30	4 55 11.24	1.030	21 0 30.8	1.46	20 22.1	30	5 5 24.21	0.590	21 12 38.6	0.52	18 30.2
31	4 55 35.82	1.019	N.21 1 5.4	1.42	20 18.6	31	5 5 38.16	0.573	N.21 12 50.8	0.49	18 26.5
32	4 56 0.11	1.007	N.21 1 39.3	1.39	20 15.1	32	5 5 51.70	0.555	N.21 13 2.4	0.46	18 22.8

Day.	1	6	11	16	21	26
Semidiameter.	7.73	7.77	7.80	7.84	7.89	7.93
Hor. Parallax.	0.89	0.89	0.89	0.90	0.90	0.91

Day.	1	6	11	16	21	26
Semidiameter.	8.00	8.05	8.12	8.18	8.25	8.32
Hor. Parallax.	0.92	0.92	0.93	0.94	0.94	0.95







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FOR JANUARY <sup>d</sup><sub>0.462</sub>

Star's Name.	Mag.	Right Ascension.			Declination.	Annual Variation.
		h	m	s		
α Andromedæ	2.1	0	3	53.258	N. 28 36 36.47	+ 19.880
β Cassiopeiæ	2.4	0	4	31.687	N. 58 40 11.83	19.862
γ Pegasi ( <i>Algenib</i> )	2.9	0	8	45.248	N. 14 41 59.77	20.021
ι Ceti	3.8	0	14	59.731	S. 9 18 22.07	19.973
β Hydri	2.9	0	21	11.849	S. 77 44 39.19	20.279
α Phœnicis	2.4	0	21	59.227	S. 42 46 42.40	+ 19.551
δ Andromedæ	3.5	0	34	40.340	N. 30 23 5.69	19.719
α Cassiopeiæ var.	2.2-2.8	0	35	33.725	N. 56 3 37.32	19.773
β Ceti	2.2	0	39	13.394	S. 18 27 50.02	19.794
γ Cassiopeiæ	2.3	0	51	26.840	N. 60 14 45.10	19.537
μ Andromedæ	3.9	0	51	55.175	N. 38 1 39.56	+ 19.563
β Phœnicis	3.4	1	2	12.087	S. 47 11 5.20	19.287
β Andromedæ	2.4	1	4	51.359	N. 35 9 34.34	19.130
θ Ceti	3.8	1	19	40.453	S. 8 37 55.19	18.631
δ Cassiopeiæ	2.8	1	20	6.841	N. 59 47 1.10	18.795
γ Phœnicis	3.3	1	24	35.284	S. 43 45 50.11	+ 18.470
η Piscium	3.7	1	26	49.512	N. 14 53 51.59	18.621
α Ursæ Minoris ( <i>Polaris</i> )	2.1	1	28	18.952	N. 88 50 29.37	18.571
α Eridani ( <i>Achernar</i> )	0.5	1	34	28.506	S. 57 40 42.96	18.325
ζ Ceti	3.9	1	47	9.943	S. 10 45 51.88	17.866
ε Cassiopeiæ	3.5	1	48	7.349	N. 63 14 31.86	+ 17.840
β Arietis	2.7	1	49	49.824	N. 20 22 59.36	17.675
α Hydri	3.0	1	56	1.317	S. 61 59 34.61	17.557
γ <sup>1</sup> Andromedæ	2.2	1	58	33.178	N. 41 54 45.99	17.371
α Arietis	2.2	2	2	15.925	N. 23 3 5.55	17.115
β Trianguli	3.1	2	4	21.720	N. 34 34 34.52	+ 17.120
φ Eridani	3.7	2	13	23.991	S. 51 54 52.73	16.715
γ <sup>2</sup> Ceti	3.0	2	38	47.453	N. 2 52 10.89	15.272
θ Eridani	3.0	2	54	57.857	S. 40 39 10.35	14.506
α Ceti	2.8	2	57	43.790	N. 3 44 56.39	14.235
γ Persei	3.1	2	58	29.224	N. 53 9 59.72	+ 14.261
β Persei ( <i>Algol</i> ) var.	2.2-3.7	3	2	30.150	N. 40 37 16.39	14.015
α Persei	1.9	3	18	6.259	N. 49 33 8.55	12.981
ο Tauri	3.8	3	20	7.762	N. 8 43 24.15	12.801
ε Eridani	3.8	3	28	49.841	S. 9 45 7.42	12.308
δ Persei	3.2	3	36	43.465	N. 47 30 36.93	+ 11.692
δ Eridani	3.7	3	39	4.802	S. 10 3 26.71	12.293
17 Tauri	3.8	3	39	42.370	N. 23 50 25.84	11.466
η Tauri	3.0	3	42	18.596	N. 23 50 12.62	11.281
γ Hydri	3.1	3	48	34.375	S. 74 30 20.92	+ 10.993

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FOR JANUARY <sup>d</sup><sub>0.462</sub>

Star's Name.	Mag.	Right Ascension.			Declination.	Annual Variation.
		h	m	s		
ζ Persei	3.0	3	48	39.574	N. 31 37 33.85	+ 10.853
ε Persei	3.0	3	52	0.709	N. 39 45 33.88	10.592
γ <sup>1</sup> Eridani	3.3	3	53	58.196	S. 13 45 19.36	10.364
α Horologii	3.8	4	11	7.122	S. 42 30 31.44	8.937
α Reticuli	3.4	4	13	18.011	S. 62 41 29.16	9.042
υ <sup>1</sup> Eridani	3.8	4	14	35.998	S. 34 0 36.15	+ 8.896
γ Tauri	3.9	4	14	50.431	N. 15 25 5.94	8.850
ε Tauri	3.7	4	23	32.083	N. 18 59 17.84	8.154
α Tauri ( <i>Aldebaran</i> )	1.1	4	30	55.598	N. 16 20 6.72	7.405
α Doradûs	3.5	4	32	6.930	S. 55 13 28.81	7.488
π <sup>1</sup> Orionis	3.3	4	45	6.962	N. 6 48 36.95	+ 6.455
ι Aurigæ	2.9	4	51	19.541	N. 33 1 45.36	5.893
ε Aurigæ var.	3.0-4.5	4	55	43.415	N. 43 41 44.01	5.532
η Aurigæ	3.3	5	0	24.709	N. 41 7 4.04	5.079
ε Leporis	3.4	5	1	46.658	S. 22 29 14.10	4.972
β Eridani	2.9	5	3	34.351	S. 5 11 53.24	+ 4.809
μ Leporis	3.3	5	9	1.385	N. 16 18 28.01	4.392
α Aurigæ ( <i>Capella</i> )	0.2	5	10	15.591	N. 45 54 38.17	3.885
β Orionis ( <i>Rigel</i> )	0.3	5	10	21.362	S. 8 18 5.05	4.306
η Orionis (mean)	3.4	5	20	6.128	S. 2 28 35.07	3.467
γ Orionis ( <i>Bellatrix</i> )	1.7	5	20	27.843	N. 6 16 17.91	+ 3.422
β Tauri	1.8	5	20	47.470	N. 28 32 5.62	3.233
β Leporis	3.0	5	24	31.059	S. 20 49 41.17	3.000
δ Orionis var.	2.2-2.7	5	27	33.680	S. 0 21 45.96	2.823
α Leporis	2.7	5	28	53.574	S. 17 53 2.07	2.710
ι Orionis	3.0	5	31	10.622	S. 5 57 58.68	+ 2.510
ε Orionis	1.7	5	31	47.901	S. 1 15 24.02	2.459
ζ Tauri	3.0	5	32	26.681	N. 21 5 24.95	2.370
β Doradûs	3.7	5	32	52.233	S. 62 32 48.86	2.341
ζ Orionis (1st star)	2.0	5	36	22.119	S. 1 59 16.64	2.047
α Columbæ	2.7	5	36	29.919	S. 34 7 12.02	+ 2.012
κ Orionis	2.2	5	43	37.807	S. 9 41 59.33	1.425
β Columbæ	3.1	5	47	53.484	S. 35 48 2.17	1.445
α Orionis ( <i>Betelgeuse</i> ) var.	1.0-1.4	5	50	27.691	N. 7 23 29.99	0.841
β Aurigæ	2.1	5	53	8.857	N. 44 56 22.89	0.590
θ Aurigæ	2.7	5	53	47.318	N. 37 12 26.80	+ 0.449
η Geminorum var.	3.2-4.2	6	9	37.608	N. 22 31 58.39	- 0.861
ζ Canis Majoris	3.2	6	16	58.322	S. 30 1 27.97	1.508
μ Geminorum	3.2	6	17	41.863	N. 22 33 32.99	1.663
β Canis Majoris	2.0	6	18	52.089	S. 17 54 43.07	- 1.646



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FOR JANUARY <sup>d</sup><sub>0.462</sub>

Star's Name.	Mag.	Right Ascension.			Declination.	Annual Variation.
		h	m	s		
α Argūs ( <i>Canopus</i> )	-1.0	6	22	1.238	S. 52 38 52.37	- 1.916
γ Geminorum	1.9	6	32	41.195	N. 16 28 27.70	2.900
ν Argūs	3.2	6	35	6.036	S. 43 7 9.24	3.078
ε Geminorum	3.2	6	38	34.818	N. 25 13 5.50	3.379
ξ Geminorum	3.4	6	40	24.423	N. 12 59 24.90	3.711
α Canis Majoris ( <i>Sirius</i> )	-1.4	6	41	18.638	S. 16 35 46.70	- 4.803
α Pictoris	3.3	6	47	18.005	S. 61 50 52.42	3.871
τ Argūs	2.8	6	47	46.631	S. 50 30 39.28	4.256
ε Canis Majoris	1.6	6	55	12.387	S. 28 51 10.95	4.781
22 Canis Majoris	3.5	6	58	15.192	S. 27 48 34.41	5.040
ζ Geminorum var.	3.7-4.5	6	58	57.005	N. 20 41 55.52	- 5.109
ο <sup>2</sup> Canis Majoris	3.0	6	59	23.501	S. 23 42 19.74	5.133
δ Canis Majoris	2.0	7	4	51.179	S. 26 15 15.97	5.595
π Argūs	2.7	7	14	4.205	S. 36 56 27.42	6.377
δ Geminorum	3.6	7	14	55.740	N. 22 8 36.20	6.455
δ Volantis	3.9	7	16	53.036	S. 67 47 52.92	- 6.606
η Canis Majoris	2.4	7	20	39.276	S. 29 7 57.97	6.904
β Canis Minoris	3.1	7	22	26.027	N. 8 27 55.37	7.105
σ Argūs	3.0	7	26	28.193	S. 43 7 29.25	7.206
α <sup>2</sup> Geminorum ( <i>Caster</i> )	2.0	7	29	3.069	N. 32 4 49.81	7.679
α <sup>1</sup> Geminorum	2.8	Δα - 0.262	+ 3.8334	Δδ - 4.02	- 7.679	
α Canis Minoris ( <i>Procyon</i> )	0.5	7	34	44.859	N. 5 26 54.19	9.092
β Geminorum ( <i>Pollux</i> )	1.2	7	39	59.666	N. 28 14 13.77	8.529
ξ Argūs	3.4	7	45	38.119	S. 24 38 26.88	8.917
ζ Argūs	2.3	8	0	31.546	S. 39 45 27.88	10.070
15 Argūs	2.9	8	3	50.318	S. 24 3 10.13	- 10.262
γ Argūs	1.9	8	6	51.147	S. 47 4 47.56	10.550
β Cancri	3.7	8	11	47.893	N. 9 27 15.79	10.957
ε Argūs	1.7	8	20	43.779	S. 59 13 45.38	11.543
30 Monocerotis	3.9	8	21	18.869	S. 3 37 18.95	11.613
ο Ursæ Majoris	3.5	8	23	2.882	N. 61 0 36.13	- 11.830
α Mali	3.7	8	40	5.740	S. 32 52 20.14	12.882
ε Hydræ	3.5	8	42	10.222	N. 6 44 19.29	13.080
δ Argūs	2.0	8	42	17.895	S. 54 23 21.91	13.139
ζ Hydræ	3.3	8	50	47.805	N. 6 16 38.18	13.589
ι Ursæ Majoris	3.1	8	53	15.468	N. 48 23 2.27	- 14.002
λ Argūs	2.3	9	4	47.725	S. 43 4 51.89	14.476
β Argūs	1.7	9	12	14.984	S. 69 21 31.56	14.818
ι Argūs	2.2	9	14	45.574	S. 58 54 35.35	15.051
α Lyncis	3.4	9	15	45.551	N. 34 45 39.84	- 15.104

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FOR JANUARY <sup>d</sup><sub>0.462</sub>

Star's Name.	Mag.	Right Ascension.			Declination.	Annual Variation.	
		h	m	s			
κ Argūs	2.6	9	19	25.095	+ 1.8552	S. 54 38 20.50	- 15.342
α Hydræ	2.2	9	23	18.756	2.9487	S. 8 16 51.39	15.509
θ Ursæ Majoris	3.3	9	27	2.793	4.0312	N. 52 4 28.28	16.290
ψ Argūs	3.5	9	27	16.245	2.3593	S. 40 5 8.59	15.720
N Velorum	3.0	9	28	34.663	1.8209	S. 56 39 0.65	15.824
ο Leonis	3.8	9	36	30.550	+ 3.2052	N. 10 17 19.38	- 16.278
ε Leonis	3.1	9	40	54.949	3.4112	N. 24 10 31.00	16.489
α Leonis ( <i>Regulus</i> )	1.3	10	3	44.428	3.1983	N. 12 23 34.10	17.524
γ Carinæ	3.4	10	14	10.541	1.9986	S. 60 53 50.23	17.946
γ <sup>1</sup> Leonis	2.5	10	15	10.692	3.3118	N. 20 16 55.27	18.138
γ <sup>2</sup> Leonis	3.7	Δα + 0.251	+ 3.3118	Δδ - 1.80	- 18.138		
μ Ursæ Majoris	3.2	10	17	9.102	3.5865	N. 41 56 14.90	18.035
ρ Leonis	3.8	10	28	13.913	3.1617	N. 9 45 16.80	18.464
θ Argūs	3.0	10	39	50.959	2.1321	S. 63 56 20.26	18.860
η Argūs var.	1-7.4	10	41	40.951	2.3205	S. 59 13 36.99	18.896
μ Argūs	2.8	10	43	1.464	+ 2.5733	S. 48 57 37.90	- 19.007
ν Hydræ	3.3	10	45	19.858	2.9581	S. 15 44 16.54	18.781
ν Ursæ Majoris	2.4	10	56	36.032	3.6416	N. 56 50 56.40	19.259
α Ursæ Majoris ( <i>Dubhe</i> )	2.0	10	58	22.218	3.7300	N. 62 13 15.30	19.397
ψ Ursæ Majoris	3.2	11	4	46.698	3.3857	N. 44 58 14.81	19.500
δ Leonis	2.6	11	9	29.043	+ 3.1955	N. 21 0 1.82	- 19.702
θ Leonis	3.4	11	9	40.558	3.1506	N. 15 54 18.92	19.649
θ Crateris	3.8	11	14	59.386	2.9973	S. 14 18 27.32	19.465
ξ Hydræ	3.7	11	28	43.219	2.9459	S. 31 22 34.36	19.914
λ Centauri	3.3	11	31	45.642	2.7495	S. 62 32 18.19	19.921
β Leonis ( <i>Denebola</i> )	2.2	11	44	37.403	+ 3.0625	N. 15 3 30.40	- 20.119
β Virginis	3.8	11	46	9.810	3.1251	N. 2 15 18.30	20.284
γ Ursæ Majoris	2.5	11	49	15.673	3.1706	N. 54 10 42.55	20.019
δ Centauri	2.8	12	3	50.606	3.0947	S. 50 14 16.90	20.073
ε Corvi	3.2	12	5	38.882	3.0810	S. 22 8 9.45	20.037
δ Crucis	3.1	12	10	31.365	+ 3.1741	S. 58 15 55.07	- 20.063
δ Ursæ Majoris	3.4	12	11	7.678	2.9855	N. 57 30 57.57	20.017
γ Corvi	2.7	12	11	19.778	3.0815	S. 17 3 31.82	20.004
α <sup>1</sup> Crucis	1.6	12	21	44.933	3.3110	S. 62 37 1.45	19.995
α <sup>2</sup> Crucis	2.1	Δα + 0.614	3.3110	Δδ - 1.28	19.995		
ε <sup>2</sup> Corvi	3.1	12	25	21.660	+ 3.1010	S. 16 1 52.20	- 20.071
γ Crucis	1.6	12	26	19.814	3.3026	S. 56 37 33.55	20.174
β Corvi	3.0	12	29	48.824	3.1452	S. 22 54 56.66	19.937
α Muscæ	2.9	12	31	58.907	3.5400	S. 68 39 22.66	19.879
γ Centauri	2.4	12	36	42.774	+ 3.2940	S. 48 28 55.85	- 19.808



\* \* 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 106-140.

FOR JANUARY <sup>d</sup><sub>0.462</sub>

Star's Name.	Mag.	Right Ascension.			Declination.	Annual Variation.
		h	m	s		
γ <sup>1</sup> Virginis.....	3.5	12 37	15.012	+ 3.0397	S. 0 58 17.91	- 19.777
γ <sup>2</sup> Virginis.....	3.5	Δα +	0.235	3.0397	Δδ - 5.22	19.777
β Muscae.....	3.3	12 40	55.847	3.6415	S. 67 37 54.94	19.753
β Crucis.....	1.5	12 42	37.717	3.4813	S. 59 12 48.21	19.732
ε Ursae Majoris.....	1.8	12 50	12.343	2.6486	N. 56 25 54.77	19.579
δ Virginis.....	3.7	12 51	13.225	+ 3.0207	N. 3 52 12.22	- 19.607
α Canum Venaticorum.....	2.8	12 51	57.614	2.8108	N. 38 47 16.91	19.484
ε Virginis.....	3.0	12 57	50.768	2.9865	N. 11 25 35.54	19.395
γ Hydrae.....	3.3	13 14	11.316	3.2552	S. 22 42 45.99	19.056
ι Centauri.....	3.0	13 15	42.018	3.3613	S. 36 15 13.18	19.058
ζ <sup>1</sup> Ursae Majoris.....	2.1	13 20	25.561	+ 2.4224	N. 55 22 46.08	- 18.853
α Virginis ( <i>Spica</i> ).....	1.2	13 20	36.462	3.1569	S. 10 42 26.80	18.850
ζ Virginis.....	3.4	13 30	15.517	3.0544	S. 0 9 4.89	18.471
ε Centauri.....	2.6	13 34	22.008	3.7793	S. 53 1 28.29	18.408
η Ursae Majoris.....	1.9	13 44	6.869	2.3681	N. 49 44 49.70	18.034
μ Centauri.....	3.3	13 44	22.154	+ 3.5997	S. 42 2 25.98	- 18.023
ζ Centauri.....	2.8	13 50	6.321	3.7249	S. 46 51 38.05	17.840
η Boötis.....	2.8	13 50	32.541	2.8568	N. 18 50 0.44	18.121
β Centauri.....	0.8	13 57	40.409	4.2045	S. 59 57 13.57	17.492
π Hydrae.....	3.5	14 1	24.806	3.4091	S. 26 15 49.42	17.443
θ Centauri.....	2.1	14 1	33.440	+ 3.5192	S. 35 56 32.60	- 17.815
α Draconis.....	3.6	14 2	2.056	1.6243	N. 64 47 29.04	17.259
α Boötis ( <i>Arcturus</i> ).....	0.3	14 11	41.559	2.7355	N. 19 38 5.69	18.829
ρ Boötis.....	3.7	14 28	4.862	2.5865	N. 30 45 10.28	15.890
γ Boötis.....	3.0	14 28	34.531	2.4172	N. 38 41 18.23	15.833
η Centauri.....	2.7	14 29	58.636	+ 3.7963	S. 41 46 34.20	- 15.934
α <sup>2</sup> Centauri.....	0.3	14 33	41.520	4.0536	S. 60 28 29.81	14.979
α <sup>1</sup> Centauri.....	1.7	Δα -	1.494	4.0536	Δδ - 15.22	14.979
α Circini.....	3.4	14 35	27.579	4.8050	S. 64 35 49.04	15.845
α Lupi.....	2.5	14 36	8.150	3.9718	S. 47 0 55.46	15.604
ε <sup>2</sup> Boötis.....	2.6	14 41	11.253	+ 2.6203	N. 27 26 25.67	- 15.278
α Librae.....	2.9	14 46	3.753	+ 3.3135	S. 15 40 50.89	15.085
β Ursae Minoris.....	2.2	14 50	56.879	- 0.2062	N. 74 30 39.70	14.720
β Lupi.....	2.7	14 52	49.527	+ 3.9125	S. 42 47 3.39	14.671
κ Centauri.....	3.3	14 53	29.973	3.8925	S. 41 45 20.12	14.595
β Boötis.....	3.6	14 58	40.142	+ 2.2600	N. 40 43 59.62	- 14.295
20 Librae.....	3.4	14 58	58.493	3.5045	S. 24 56 26.08	14.283
ζ Lupi.....	3.5	15 6	1.652	4.2909	S. 51 46 7.22	13.861
γ Trianguli Australis.....	3.0	15 10	46.150	5.5506	S. 68 21 33.08	13.532
δ Boötis.....	3.5	15 11	59.729	+ 2.4193	N. 33 38 19.72	- 13.537

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FOR JANUARY <sup>d</sup><sub>0.462</sub>

Star's Name.	Mag.	Right Ascension.			Declination.	Annual Variation.
		h	m	s		
β Librae.....	2.8	15 12	19.394	+ 3.2246	S. 9 3 45.09	- 13.414
γ Ursae Minoris.....	3.1	15 20	51.523	- 0.1168	N. 72 8 36.75	12.815
ι Draconis.....	3.4	15 22	59.659	+ 1.3332	N. 59 16 13.66	12.673
γ Lupi.....	3.0	15 29	20.282	3.9863	S. 40 52 30.88	12.295
α Coronae.....	2.3	15 31	0.234	2.5394	N. 27 0 24.71	12.232
α Serpentis.....	2.8	15 39	58.890	+ 2.9530	N. 6 41 55.29	- 11.455
μ Serpentis.....	3.6	15 45	4.692	3.1282	S. 3 9 52.77	11.157
ε Serpentis.....	3.8	15 46	28.671	2.9883	N. 4 44 20.67	10.958
β Trianguli Australis.....	3.1	15 47	27.977	5.2558	S. 63 9 47.51	11.361
π Scorpis.....	3.1	15 53	35.147	3.6235	S. 25 51 51.92	10.551
δ Scorpis.....	2.5	15 55	11.162	+ 3.5420	S. 22 22 29.55	- 10.418
β <sup>1</sup> Scorpis.....	2.7	16 0	22.506	3.4833	S. 19 34 4.95	10.020
δ Ophiuchi.....	3.0	16 9	47.090	3.1414	S. 3 28 15.58	9.415
ε Ophiuchi.....	3.3	16 13	42.983	3.1717	S. 4 28 52.15	8.927
σ Scorpis.....	3.1	16 15	53.855	3.6413	S. 25 23 5.52	8.832
γ Herculis.....	3.8	16 18	4.895	+ 2.6454	N. 19 21 24.19	- 8.585
η Draconis.....	2.9	16 22	48.659	0.8076	N. 61 42 39.21	8.190
η Scorpis ( <i>Antares</i> ).....	1.3	16 24	4.226	3.6739	S. 26 14 23.10	8.174
β Herculis.....	2.8	16 26	28.722	2.5774	N. 21 40 42.39	7.977
λ Ophiuchi.....	3.8	16 26	31.459	3.0238	N. 2 10 25.03	8.028
τ Scorpis.....	2.9	16 30	27.824	+ 3.7294	S. 28 2 11.01	- 7.665
ζ Ophiuchi.....	2.7	16 32	21.991	3.3007	S. 10 23 29.88	7.455
ζ Herculis.....	3.0	16 38	0.373	2.2613	N. 31 45 35.38	6.628
α Trianguli Australis.....	1.9	16 39	26.462	6.3222	S. 68 52 9.73	6.947
ε Scorpis.....	2.3	16 44	31.509	3.8795	S. 34 8 10.77	6.744
ζ Arae.....	3.0	16 51	24.632	+ 4.9540	S. 55 51 14.10	- 5.955
κ Ophiuchi.....	3.4	16 53	32.962	2.8382	N. 9 30 34.34	5.740
ε Herculis.....	3.9	16 56	57.627	2.2946	N. 31 3 13.97	5.420
η Ophiuchi.....	2.6	17 5	23.200	3.4374	S. 15 37 4.72	4.638
ζ Draconis.....	3.2	17 8	31.968	0.1687	N. 65 49 18.06	4.446
α <sup>1</sup> Herculis.....var.	3.1-3.9	17 10	40.792	+ 2.7344	N. 14 29 19.44	- 4.249
δ Herculis.....	3.2	17 11	27.443	2.4631	N. 24 56 28.07	4.371
π Herculis.....	3.3	17 12	0.962	2.0884	N. 36 54 23.79	4.165
θ Ophiuchi.....	3.4	17 16	39.893	3.6817	S. 24 54 48.96	3.801
β Arae.....	2.7	17 18	3.901	4.9806	S. 55 26 55.15	3.671
υ Scorpis.....	2.8	17 24	50.719	+ 4.0736	S. 37 13 38.34	- 3.094
α Arae.....	2.9	17 25	6.842	4.6327	S. 49 48 29.77	3.120
λ Scorpis.....	1.8	17 27	41.949	4.0708	S. 37 2 28.28	2.840
β Draconis.....	3.0	17 28	27.976	1.3542	N. 52 21 55.41	2.739
α Ophiuchi.....	2.1	17 30	53.722	+ 2.7837	N. 12 37 21.20	- 2.772



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FOR JANUARY <sup>d</sup><sub>0.462</sub>

Star's Name.	Mag.	Right Ascension.			Declination.	Annual Variation.
		h	m	s		
θ Scorpii	2.0	17	31	3.869	S. 42 56 36.29	- 2.530
κ Scorpii	2.6	17	36	28.141	S. 38 59 8.93	2.066
η Pavonis	3.5	17	37	11.394	S. 64 41 0.84	2.068
β Ophiuchi	2.9	17	39	10.462	N. 4 36 10.42	1.659
ι <sup>1</sup> Scorpii	3.1	17	41	29.973	S. 40 5 39.28	1.621
μ Herculis	3.5	17	43	3.184	N. 27 46 15.32	- 2.228
ν Ophiuchi	3.7	17	54	14.187	S. 9 45 49.48	0.621
γ Draconis	2.4	17	54	35.147	N. 51 29 55.33	0.497
γ <sup>2</sup> Sagittarii	3.0	18	0	13.074	S. 30 25 33.89	- 0.176
γ <sup>2</sup> Ophiuchi	3.7	18	3	13.475	N. 9 33 2.91	+ 0.371
η Sagittarii	3.1	18	11	44.457	S. 36 47 18.69	+ 0.877
δ Sagittarii	2.8	18	15	25.460	S. 29 51 57.64	1.317
η Serpentis	3.4	18	16	48.436	S. 2 55 19.59	0.779
ε Sagittarii	1.9	18	18	23.829	S. 34 25 35.54	1.488
α Telescopii	3.7	18	20	31.365	S. 46 1 2.63	1.728
λ Sagittarii	2.9	18	22	36.101	S. 25 28 14.78	+ 1.778
α Lyræ (Vega)	0.1	18	33	59.569	N. 38 42 7.62	3.244
φ Sagittarii	3.3	18	40	13.269	S. 27 4 51.82	3.496
β <sup>1</sup> Lyræ	var. 3.4-4.5	18	46	52.060	N. 33 15 39.82	4.067
σ Sagittarii	2.1	18	49	52.234	S. 26 24 20.71	4.255
ξ <sup>2</sup> Sagittarii	3.5	18	52	32.402	S. 21 13 18.63	+ 4.535
γ Lyræ	3.3	18	55	41.324	N. 32 34 10.44	4.819
ζ Sagittarii	2.7	18	57	4.612	S. 30 0 19.99	4.925
ζ Aquilæ	3.0	19	1	24.670	N. 13 44 0.26	5.210
ζ Sagittarii	3.5	19	1	30.583	S. 27 47 54.44	5.064
λ Aquilæ	3.5	19	1	37.917	S. 5 0 49.21	+ 5.246
π Sagittarii	3.0	19	4	35.437	S. 21 9 45.81	5.542
δ Draconis	3.2	19	12	32.325	N. 67 30 30.54	6.327
δ Aquilæ	3.4	19	21	6.719	N. 2 56 26.06	7.031
β Cygni	3.1	19	27	12.750	N. 27 46 34.64	7.437
γ Aquilæ	2.8	19	42	7.410	N. 10 24 1.91	+ 8.638
δ Cygni	3.0	19	42	15.393	N. 44 55 4.44	8.696
α Aquilæ (Altair)	0.9	19	46	32.316	N. 8 38 16.10	9.367
β Aquilæ	3.9	19	51	2.388	N. 6 11 19.63	8.858
δ Pavonis	3.6	20	0	11.895	S. 66 24 16.86	8.911
θ Aquilæ	3.4	20	6	48.987	S. 1 4 48.67	+ 10.542
α <sup>2</sup> Capricorni	3.8	20	13	13.724	S. 12 48 54.64	11.018
β Capricorni	3.2	20	16	7.506	S. 15 3 24.43	11.227
α Pavonis	2.0	20	18	46.281	S. 57 0 53.18	11.320
γ Cygni	2.3	20	19	6.337	N. 39 58 39.71	+ 11.436

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FOR JANUARY <sup>d</sup><sub>0.462</sub>

Star's Name.	Mag.	Right Ascension.			Declination.	Annual Variation.	
		h	m	s			
α Indi	3.2	20	31	27.041	+ 4.2304	S. 47 35 44.70	+ 12.359
α Delphini	3.9	20	35	35.841	2.7868	N. 15 36 17.17	12.606
β Pavonis	3.5	20	37	7.908	5.4449	S. 66 31 0.70	12.692
α Cygni (Deneb)	1.3	20	38	27.940	2.0447	N. 44 58 8.26	12.781
ε Cygni	2.6	20	42	41.459	2.4274	N. 33 38 37.90	13.392
ε Aquarii	3.9	20	42	58.057	+ 3.2494	S. 9 48 53.40	+ 13.054
ζ Cygni	3.5	21	9	13.968	2.5520	N. 29 52 10.32	14.674
α Cephei	2.6	21	16	30.283	1.4350	N. 62 13 0.09	15.208
ζ Capricorni	3.8	21	21	42.172	3.4306	S. 22 47 19.31	15.473
β Aquarii	3.3	21	26	58.803	3.1600	S. 5 57 16.06	15.732
β <sup>2</sup> Cephei	3.4	21	27	32.588	+ 0.7866	N. 70 10 43.11	+ 15.777
ε Pegasi	2.5	21	39	54.768	2.9462	N. 9 28 32.30	16.417
δ Capricorni	3.0	21	42	14.441	3.3143	S. 16 31 21.22	16.236
γ Gruis	3.2	21	48	39.850	3.6416	S. 37 46 28.50	16.824
α Aquarii	3.2	22	1	18.967	3.0821	S. 0 44 34.29	17.416
α Gruis	1.9	22	2	45.301	+ 3.7943	S. 47 22 58.67	+ 17.306
ι Pegasi	3.9	22	2	57.611	2.7914	N. 24 55 11.15	17.509
ζ Cephei	3.6	22	7	50.053	2.0779	N. 57 46 19.83	17.703
α Toucani	2.9	22	12	32.956	4.1361	S. 60 41 36.46	17.850
γ Aquarii	3.9	22	17	9.789	3.0992	S. 1 49 33.54	18.078
ζ Pegasi	3.6	22	37	7.360	+ 2.9914	N. 10 22 36.72	+ 18.736
β Gruis	2.1	22	37	28.656	3.5966	S. 47 20 23.92	18.735
η Pegasi	3.1	22	38	55.329	2.8090	N. 29 45 56.98	18.768
ε Gruis	3.7	22	43	18.282	3.6389	S. 51 46 28.29	18.875
μ Pegasi	3.7	22	45	48.176	2.8931	N. 24 8 30.97	18.963
λ Aquarii	3.9	22	48	4.589	+ 3.1310	S. 8 2 34.12	+ 19.102
δ Aquarii	3.5	22	50	2.062	3.1864	S. 16 17 1.49	19.094
α Piscis Aust. (Fomalhaut)	1.3	22	52	50.766	3.3213	S. 30 5 1.07	19.021
β Pegasi	var. 2.2-2.7	22	59	33.287	2.9050	N. 27 36 38.27	19.488
α Pegasi (Markab)	2.6	23	0	25.557	2.9863	N. 14 44 13.07	19.334
ε <sup>2</sup> Aquarii	3.8	23	4	48.568	+ 3.2022	S. 21 38 41.69	+ 19.509
γ Piscium	3.8	23	12	39.294	3.1093	N. 2 48 24.38	19.640
γ Cephei	3.4	23	35	46.104	+ 2.4378	N. 77 8 48.46	+ 20.091



AT UPPER TRANSIT AT GREENWICH.

$\alpha$  Ursæ 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	° /	h m	° /	h m	° /	h m	° /	h m	° /	h m	° /
	I 27	88 50	I 27	88 50	I 26	88 50	I 26	88 50	I 26	88 50	I 27	88 50
	s	"	s	"	s	"	s	"	s	"	s	"
1	65.90	51.82	33.84	52.83	68.67	48.59	54.58	40.23	59.23	31.04	21.14	24.31
2	65.02	51.92	32.87	52.79	67.97	48.41	54.30	39.93	59.67	30.73	22.20	24.15
3	64.16	52.05	31.85	52.75	67.23	48.22	54.05	39.62	60.17	30.42	23.27	24.01
4	63.28	52.19	30.77	52.70	66.45	48.01	53.84	39.29	60.75	30.13	24.33	23.90
5	62.35	52.32	29.65	52.63	65.65	47.79	53.69	38.95	61.40	29.85	25.34	23.82
6	61.35	52.46	28.51	52.53	64.85	47.54	53.62	38.60	62.09	29.59	26.29	23.76
7	60.28	52.60	27.37	52.42	64.08	47.27	53.62	38.25	62.80	29.35	27.17	23.69
8	59.16	52.72	26.26	52.30	63.36	46.99	53.70	37.91	63.48	29.13	28.00	23.61
9	57.99	52.83	25.19	52.14	62.70	46.70	53.85	37.58	64.11	28.93	28.81	23.50
10	56.79	52.91	24.19	51.98	62.12	46.40	54.03	37.28	64.68	28.73	29.63	23.38
11	55.59	52.97	23.26	51.80	61.62	46.09	54.22	36.99	65.19	28.54	30.52	23.25
12	54.42	53.01	22.40	51.63	61.19	45.80	54.37	36.73	65.67	28.33	31.50	23.12
13	53.30	53.02	21.60	51.46	60.81	45.52	{54.47}	{36.48}	66.15	28.10	32.57	22.99
14	52.22	53.02	20.83	51.31	60.46	45.26	54.51	35.96	66.68	27.86	33.71	22.87
15	51.21	53.03	20.06	51.17	60.09	45.02	54.48	35.67	67.29	27.59	34.91	22.78
16	50.25	53.04	19.26	51.06	59.67	44.79	54.49	35.36	68.00	27.33	36.10	22.72
17	49.34	53.05	18.39	50.94	59.19	44.57	54.57	35.03	68.81	27.08	37.25	22.68
18	48.44	53.09	17.46	50.82	58.66	44.34	54.74	34.68	69.69	26.84	38.36	22.65
19	47.51	53.14	16.46	50.69	58.09	44.09	55.02	34.35	70.60	26.63	39.40	22.64
20	46.52	53.19	15.44	50.54	57.52	43.80	55.39	34.03	71.50	26.44	40.38	22.63
21	45.45	53.24	14.43	50.36	57.01	43.49	55.82	33.72	72.37	26.26	41.32	22.61
22	44.30	53.29	13.48	50.15	56.58	43.16	56.27	33.43	73.19	26.11	42.24	22.58
23	43.10	53.32	12.61	49.92	56.24	42.83	56.71	33.17	73.94	25.97	43.16	22.54
24	41.86	53.32	11.84	49.67	56.01	42.51	57.11	32.92	74.67	25.82	44.11	22.48
25	40.66	53.29	11.16	49.43	55.85	42.20	57.46	32.68	75.36	25.65	45.11	22.42
26	39.50	53.22	10.53	49.21	55.74	41.89	57.76	32.43	76.05	25.47	46.16	22.36
27	38.43	53.14	9.93	48.99	55.64	41.60	58.04	32.17	76.75	25.28	47.28	22.31
28	37.44	53.07	9.32	48.78	55.51	41.33	58.29	31.91	77.50	25.09	48.45	22.27
29	36.52	52.99	8.67	48.59	55.34	41.06	58.57	31.64	78.31	24.90	49.68	22.25
30	35.63	52.93			55.12	40.80	58.87	31.35	79.19	24.69	50.92	22.26
31	34.75	52.87			54.86	40.52	59.23	31.04	80.13	24.49	52.17	22.29
32	33.84	52.83			54.58	40.23			81.14	24.31		

Mean R.A. 1<sup>h</sup> 28<sup>m</sup> 18<sup>s</sup>.952 Mean Dec. + 88° 50' 29".37 Sec  $\delta$  49.460 Tan  $\delta$  + 49.449

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	° /	h m	° /	h m	° /	h m	° /	h m	° /	h m	° /
	I 27	88 50	I 28	88 50	I 28	88 50	I 29	88 50	I 29	88 50	I 28	88 51
	s	"	s	"	s	"	s	"	s	"	s	"
1	52.17	22.29	25.95	25.41	54.18	33.00	11.93	43.27	16.34	55.20	64.50	5.68
2	53.36	22.34	26.84	25.62	54.93	33.27	12.46	43.63	16.25	55.63	63.74	6.00
3	54.49	22.40	27.71	25.82	55.75	33.53	12.99	44.01	16.07	56.05	62.94	6.30
4	55.54	22.47	28.60	26.00	56.62	33.82	13.48	44.41	15.82	56.46	62.11	6.58
5	56.52	22.55	29.54	26.16	57.53	34.12	13.91	44.83	15.49	56.87	61.30	6.84
6	57.46	22.61	30.55	26.32	58.43	34.44	14.25	45.25	15.12	57.25	60.50	7.09
7	58.40	22.65	31.65	26.47	59.28	34.78	14.50	45.68	14.75	57.61	59.75	7.33
8	59.38	22.67	32.80	26.65	60.06	35.14	14.66	46.09	14.38	57.95	59.03	7.57
9	60.43	22.68	33.96	26.86	60.75	35.51	14.78	46.48	14.04	58.27	58.36	7.79
10	61.57	22.69	35.11	27.08	61.36	35.88	14.88	46.87	13.74	58.58	57.72	8.02
11	62.78	22.72	36.21	27.32	61.90	36.24	14.97	47.24	13.48	58.89	57.08	8.26
12	64.04	22.76	37.23	27.59	62.42	36.59	15.08	47.59	13.25	59.22	56.42	8.52
13	65.31	22.83	38.17	27.86	62.92	36.92	15.23	47.94	13.04	59.56	55.73	8.79
14	66.56	22.94	39.04	28.12	63.42	37.23	15.41	48.28	12.83	59.91	54.97	9.06
15	67.75	23.06	39.86	28.38	63.95	37.54	15.63	48.63	12.59	60.27	54.12	9.34
16	68.87	23.19	40.66	28.63	64.52	37.85	15.88	48.99	12.29	60.65	53.18	9.61
17	69.92	23.33	41.46	28.86	65.13	38.16	16.14	49.36	11.90	61.04	52.18	9.87
18	70.91	23.46	42.27	29.08	65.79	38.47	16.40	49.74	11.43	61.44	51.13	10.09
19	71.87	23.58	43.12	29.30	66.47	38.80	16.61	50.15	10.87	61.81	50.13	10.29
20	72.82	23.69	44.02	29.51	67.16	39.15	16.75	50.57	10.25	62.16	49.16	10.46
21	73.78	23.79	44.97	29.73	67.83	39.52	16.80	51.00	9.61	62.50	48.25	10.61
22	74.77	23.88	45.96	29.96	68.45	39.91	16.76	51.43	8.99	62.81	47.43	10.77
23	75.81	23.97	46.97	30.21	68.99	40.31	16.64	51.85	8.44	63.10	46.65	10.94
24	76.90	24.05	47.99	30.49	69.44	40.73	16.48	52.25	7.94	63.38	45.90	11.11
25	78.05	24.15	48.97	30.78	69.80	41.14	16.32	52.62	7.52	63.67	45.13	11.31
26	79.24	24.28	49.91	31.10	70.11	41.54	16.19	52.98	7.13	63.96	44.30	11.52
27	80.45	24.42	50.77	31.44	70.39	41.92	16.13	53.32	6.74	64.28	43.39	11.73
28	81.67	24.58	51.53	31.78	70.68	42.26	16.14	53.66	6.30	64.62	42.40	11.93
29	82.85	24.77	52.22	32.11	71.03	42.59	16.20	54.01	5.79	64.97	41.33	12.12
30	83.96	24.98	52.87	32.43	71.45	42.92	16.28	54.39	5.19	65.33	40.22	12.29
31	85.00	25.20	53.51	32.72	71.93	43.27	16.34	54.78	4.50	65.68	39.08	12.44
32	85.95	25.41	54.18	33.00			16.34	55.20			37.94	12.56

Mean R.A. 1<sup>h</sup> 28<sup>m</sup> 18<sup>s</sup>.952 Mean Dec. + 88° 50' 29".37 Sec  $\delta$  49.460 Tan  $\delta$  + 49.449



AT UPPER TRANSIT AT GREENWICH.								
Date.	α Andromedæ. Mag. 2.1		β Cassiopeiæ. Mag. 2.4		γ Pegasi. (Algenib) Mag. 2.9		β Hydri. Mag. 2.9	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.
	h m	° /	h m	° /	h m	° /	h m	° /
	0 3	28 36	0 4	58 40	0 8	14 41	0 21	77 44
	s	"	s	"	s	"	s	"
Jan. 1	52.61	44.28	30.25	27.79	44.81	63.10	13.86	59.27
11	52.48	43.40	29.95	27.04	44.70	62.32	12.98	58.11
21	52.35	42.23	29.66	25.78	44.60	61.41	12.16	56.37
31	52.25	40.89	29.40	24.06	44.51	60.45	11.42	54.07
Feb. 10	52.15	39.39	29.17	21.98	44.44	59.47	10.79	51.33
20	52.09	37.82	29.00	19.59	44.38	58.52	10.28	48.18
Mar. 2	52.05	36.25	28.88	17.01	44.36	57.64	9.89	44.72
12	52.06	34.76	28.83	14.35	44.37	56.92	9.66	41.00
Apr. 22	52.11	33.30	28.87	11.46	44.41	56.38	9.57	37.18
1	52.21	32.21	28.99	9.00	44.50	56.05	9.66	32.87
11	52.35	31.43	29.19	6.80	44.63	56.05	9.90	28.96
21	52.54	30.99	29.46	4.96	44.80	56.36	10.30	25.18
May 1	52.78	30.91	29.80	3.51	45.01	56.98	10.85	21.59
11	53.05	31.21	30.21	2.57	45.26	57.92	11.53	18.27
21	53.35	31.92	30.66	2.13	45.54	59.14	12.34	15.26
31	53.68	33.00	31.15	2.20	45.85	60.65	13.25	12.66
June 10	54.02	34.44	31.66	2.80	46.17	62.40	14.26	10.52
20	54.38	36.20	32.18	3.93	46.50	64.36	15.32	8.87
30	54.73	38.23	32.70	5.53	46.83	66.45	16.42	7.76
July 10	55.07	40.47	33.20	7.59	47.15	68.64	17.53	7.23
20	55.40	42.89	33.67	10.04	47.46	70.86	18.61	7.26
30	55.70	45.42	34.10	12.83	47.75	73.06	19.63	7.87
Aug. 9	55.97	47.99	34.48	15.86	48.01	75.22	20.58	9.03
19	56.20	50.56	34.81	19.12	48.23	77.27	21.40	10.71
Sept. 29	56.39	53.08	35.07	22.53	48.42	79.18	22.09	12.83
8	56.54	55.50	35.28	26.00	48.57	80.92	22.62	15.31
18	56.65	57.77	35.42	29.46	48.68	82.44	22.97	18.09
28	56.72	59.88	35.50	32.89	48.76	83.76	23.14	21.04
Oct. 8	56.76	61.75	35.51	36.15	48.80	84.84	23.11	24.06
18	56.76	63.39	35.47	39.22	48.81	85.69	22.90	27.02
28	56.72	64.78	35.37	42.01	48.79	86.33	22.51	29.79
Nov. 7	56.67	65.88	35.23	44.49	48.74	86.74	21.97	32.26
17	56.59	66.69	35.03	46.56	48.68	86.94	21.29	34.33
27	56.49	67.19	34.80	48.22	48.60	86.91	20.50	35.91
Dec. 7	56.37	67.36	34.54	49.36	48.51	86.70	19.63	36.93
17	56.25	67.21	34.26	49.99	48.41	86.30	18.72	37.36
27	56.12	66.76	33.96	50.07	48.30	85.72	17.79	37.14
37	55.99	66.00	33.65	49.60	48.19	84.98	16.88	36.30
Mean R.A.	0 <sup>h</sup> 3 <sup>m</sup> 53 <sup>s</sup> .258		0 <sup>h</sup> 4 <sup>m</sup> 31 <sup>s</sup> .687		0 <sup>h</sup> 8 <sup>m</sup> 45 <sup>s</sup> .248		0 <sup>h</sup> 21 <sup>m</sup> 11 <sup>s</sup> .849	
Mean Dec.	+28° 36' 36".47		+58° 40' 11".83		+14° 41' 59".77		-77° 44' 39".19	
Secδ, Tanδ	1.139, + 0.545		1.923, + 1.643		1.034, + 0.262		4.711, - 4.603	

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 46	0 35	56 3	0 39	18 27	0 51	60 14
	s	"	s	"	s	"	s	"
Jan. 1	59.51	57.18	32.74	54.06	13.48	57.13	25.89	63.30
11	59.34	56.97	32.46	53.68	13.37	57.53	25.57	63.15
21	59.17	56.32	32.18	52.78	13.25	57.68	25.24	62.50
31	59.02	55.23	31.92	51.41	13.14	57.58	24.92	61.34
Feb. 10	58.89	53.74	31.69	49.63	13.05	57.18	24.64	59.71
20	58.79	51.86	31.49	47.55	12.97	56.52	24.38	57.71
Mar. 2	58.73	49.66	31.34	45.22	12.92	55.60	24.19	55.42
12	58.70	47.17	31.26	42.76	12.90	54.41	24.05	52.94
Apr. 22	58.72	44.43	31.24	40.28	12.91	52.97	24.00	50.39
1	58.79	41.19	31.31	37.67	12.96	51.10	24.02	47.86
11	58.91	38.12	31.44	35.46	13.06	49.17	24.15	45.22
21	59.08	35.00	31.66	33.56	13.19	47.06	24.35	43.10
May 1	59.30	31.88	31.94	32.00	13.37	44.80	24.63	41.30
11	59.56	28.82	32.28	30.89	13.59	42.42	24.99	39.89
21	59.87	25.88	32.68	30.26	13.84	39.98	25.41	38.92
31	60.21	23.13	33.13	30.10	14.12	37.54	25.88	38.45
June 10	60.58	20.66	33.60	30.44	14.43	35.14	26.40	38.47
20	60.97	18.52	34.09	31.25	14.76	32.84	26.94	38.98
30	61.37	16.73	34.59	32.56	15.09	30.71	27.48	40.01
July 10	61.76	15.36	35.08	34.30	15.42	28.82	28.03	41.49
20	62.15	14.46	35.55	36.44	15.75	27.17	28.56	43.41
30	62.51	14.02	35.99	38.93	16.05	25.83	29.06	45.70
Aug. 9	62.84	14.04	36.40	41.70	16.34	24.82	29.52	48.33
19	63.14	14.54	36.75	44.71	16.59	24.17	29.94	51.22
Sept. 29	63.38	15.49	37.06	47.89	16.82	23.87	30.30	54.35
8	63.58	16.83	37.31	51.17	17.00	23.91	30.61	57.62
18	63.73	18.50	37.51	54.48	17.15	24.29	30.85	60.97
28	63.82	20.45	37.65	57.75	17.25	24.95	31.04	64.35
Oct. 8	63.86	22.58	37.72	60.94	17.32	25.87	31.15	67.68
18	63.85	24.78	37.75	63.99	17.35	26.97	31.21	70.89
28	63.80	27.00	37.72	66.82	17.35	28.20	31.20	73.94
Nov. 7	63.71	29.10	37.64	69.36	17.32	29.48	31.13	76.73
17	63.58	31.00	37.52	71.56	17.27	30.77	31.01	79.20
27	63.44	32.64	37.35	73.38	17.19	32.00	30.84	81.31
Dec. 7	63.27	33.96	37.14	74.76	17.10	33.11	30.62	82.98
17	63.09	34.86	36.91	75.67	17.00	34.07	30.36	84.18
27	62.90	35.34	36.65	76.05	16.89	34.83	30.07	84.86
37	62.72	35.37	36.38	75.91	16.77	35.36	29.75	84.99
Mean R.A.	0 <sup>h</sup> 21 <sup>m</sup> 50 <sup>s</sup> .227		0 <sup>h</sup> 35 <sup>m</sup> 33 <sup>s</sup> .725		0 <sup>h</sup> 39 <sup>m</sup> 13 <sup>s</sup> .394		0 <sup>h</sup> 51 <sup>m</sup> 26 <sup>s</sup> .840	
Mean Dec.	-42° 46' 42".40		+56° 3' 37".32		-18° 27' 50".02		+60° 14' 45".10	
Secδ, Tanδ	1.362, - 0.925		1.791, + 1.486		1.054, - 0.334		2.015, + 1.749	



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 9	1 20	59 46	1 34	57 40	1 49	20 23
	s	"	s	"	s	"	s	"
Jan. 1	51.05	46.53	6.27	79.99	29.86	57.73	49.97	8.06
11	50.90	46.11	5.97	80.21	29.54	58.04	49.86	7.70
21	50.74	45.39	5.65	79.88	29.22	57.77	49.73	7.20
31	50.59	44.39	5.32	79.05	28.90	56.96	49.60	6.55
Feb. 10	50.44	43.15	5.02	77.75	28.59	55.61	49.46	5.80
20	50.31	41.70	4.74	76.02	28.31	53.76	49.34	4.99
Mar. 2	50.21	40.16	4.51	73.99	28.06	51.46	49.22	4.16
12	50.14	38.56	4.34	71.71	27.86	48.76	49.13	3.36
Apr. 22	50.12	37.01	4.23	69.28	27.72	45.73	49.08	2.61
1	50.15	35.55	4.21	66.81	27.63	42.43	49.06	1.98
11	50.23	34.15	{4.27}	{64.42}	27.61	38.94	49.09	1.54
21	50.36	33.17	{4.28}	{64.18}	27.66	34.94	49.17	1.28
May 1	50.55	32.48	4.67	60.04	27.78	31.27	49.29	1.30
11	50.78	32.15	4.98	58.45	27.98	27.64	49.46	1.58
21	51.06	32.18	5.36	57.24	28.24	24.13	49.68	2.13
31	51.37	32.57	5.81	56.49	28.56	20.82	49.93	2.96
June 10	51.72	33.35	6.29	56.21	28.93	17.76	50.21	4.04
20	52.08	34.49	6.82	56.40	29.35	15.06	50.53	5.37
30	52.46	35.96	7.36	57.06	29.81	12.78	50.86	6.89
July 10	52.83	37.73	7.91	58.21	30.28	10.95	51.19	8.57
20	53.20	39.74	8.45	59.78	30.77	9.63	51.53	10.37
30	53.56	41.93	8.97	61.75	31.25	8.88	51.87	12.25
Aug. 9	53.89	44.28	9.47	64.05	31.71	8.69	52.19	14.14
19	54.18	46.73	9.93	66.67	32.15	9.09	52.49	16.04
Sept. 29	54.45	49.23	10.33	69.54	32.54	10.03	52.76	17.86
8	54.68	51.71	10.69	72.58	32.89	11.50	53.01	19.60
18	54.87	54.15	10.99	75.75	33.17	13.42	53.23	21.19
28	55.02	56.48	11.24	79.00	33.39	15.73	53.41	22.64
Oct. 8	55.14	58.68	11.42	82.23	33.54	18.34	53.56	23.92
18	55.21	60.73	11.54	85.42	33.62	21.17	53.69	25.04
28	55.25	62.56	11.59	88.48	33.63	24.06	53.77	25.98
Nov. 7	55.25	64.16	11.59	91.33	33.57	26.91	53.83	26.73
17	55.23	65.51	11.53	93.93	33.45	29.64	53.86	27.29
27	55.17	66.57	11.41	96.23	33.28	32.08	53.86	27.68
Dec. 7	55.08	67.33	11.24	98.13	33.05	34.18	53.83	27.90
17	54.98	67.77	11.02	99.58	32.79	35.85	53.77	27.93
27	54.85	67.86	10.76	100.55	32.50	37.00	53.69	27.81
37	54.71	67.63	10.47	101.02	32.18	37.61	53.59	27.52
Mean R.A.	1 <sup>h</sup> . 4 <sup>m</sup> 51 <sup>s</sup> . 359		1 <sup>h</sup> 20 <sup>m</sup> 6 <sup>s</sup> . 841		1 <sup>h</sup> 34 <sup>m</sup> 28 <sup>s</sup> . 506		1 <sup>h</sup> 49 <sup>m</sup> 49 <sup>s</sup> . 824	
Mean Dec.	+35° 9' 34" 34		+59° 47' 1" 10		-57° 40' 42" 96		+20° 22' 59" 36	
Secδ, Tanδ	1.223, + 0.704		1.987, + 1.717		1.870, - 1.581		1.067, + 0.372	

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 54	2 2	23 3	2 38	2 52	2 57	3 44
	s	"	s	"	s	"	s	"
Jan. 1	33.23	61.35	16.13	15.38	48.01	15.18	44.43	61.46
11	33.07	61.50	16.02	15.12	47.02	14.52	44.35	60.80
21	32.89	61.32	15.89	14.68	47.81	13.92	44.25	60.21
31	32.70	60.78	15.75	14.11	47.68	13.40	44.13	59.69
Feb. 10	32.51	59.80	15.61	13.40	47.55	12.98	43.99	59.25
20	32.33	58.74	15.48	12.60	47.41	12.67	43.85	58.92
Mar. 2	32.16	57.36	15.35	11.72	47.28	12.48	43.71	58.71
12	32.03	55.78	15.25	10.83	47.16	12.45	43.58	58.65
Apr. 22	31.93	54.13	15.18	10.00	47.07	12.59	43.47	58.73
1	31.89	52.46	15.15	9.25	47.01	12.91	43.40	58.99
11	31.90	50.86	15.17	8.63	46.98	13.43	43.35	59.45
21	31.97	49.39	15.22	8.20	47.00	14.16	43.35	60.10
May 1	32.12	48.02	15.35	8.01	47.06	15.11	43.40	60.94
11	32.31	47.07	15.51	8.11	47.18	16.39	43.50	62.13
21	32.55	46.44	15.71	8.46	47.33	17.76	43.64	63.41
31	32.85	46.14	15.96	9.09	47.53	19.31	43.82	64.85
June 10	33.19	46.22	16.25	10.00	47.77	20.99	44.04	66.45
20	33.56	46.64	16.56	11.13	48.03	22.79	44.29	68.15
30	33.95	47.43	16.89	12.50	48.32	24.64	44.57	69.94
July 10	34.35	48.55	17.23	14.05	48.62	26.50	44.87	71.73
20	34.76	49.98	17.57	15.74	48.94	28.33	45.18	73.49
30	35.16	51.67	17.91	17.55	49.25	30.05	45.49	75.17
Aug. 9	35.54	53.62	18.24	19.40	49.56	31.65	45.80	76.73
19	35.91	55.74	18.55	21.26	49.87	33.08	46.11	78.14
Sept. 29	36.25	57.99	18.84	23.08	50.15	34.28	46.40	79.32
8	36.55	60.34	19.11	24.85	50.41	35.25	46.68	80.27
18	36.82	62.73	19.34	26.51	50.66	35.97	46.93	80.99
28	37.06	65.14	19.54	28.05	50.87	36.40	47.16	81.45
Oct. 8	37.25	67.49	19.71	29.44	51.06	36.60	47.37	81.66
18	37.41	69.77	19.84	30.68	51.22	36.57	47.55	81.63
28	37.52	71.93	19.95	31.76	51.35	36.32	47.69	81.39
Nov. 7	37.60	73.94	20.02	32.66	51.45	35.90	47.81	80.96
17	37.63	75.76	20.06	33.38	51.52	35.34	47.90	80.41
27	37.63	77.35	20.07	33.92	51.56	34.67	47.96	79.77
Dec. 7	37.58	78.66	20.05	34.29	51.56	33.97	47.99	79.05
17	37.50	79.68	20.00	34.47	51.54	33.23	47.98	78.33
27	37.39	80.37	19.93	34.46	51.50	32.50	47.95	77.60
37	37.25	80.72	19.83	34.27	51.42	31.79	47.88	76.89
Mean R.A.	1 <sup>h</sup> 58 <sup>m</sup> 33 <sup>s</sup> . 178		2 <sup>h</sup> 2 <sup>m</sup> 15 <sup>s</sup> . 925		2 <sup>h</sup> 38 <sup>m</sup> 47 <sup>s</sup> . 453		2 <sup>h</sup> 57 <sup>m</sup> 43 <sup>s</sup> . 790	
Mean Dec.	+41° 54' 45" 99		+23° 3' 5" 55		+2° 52' 10" 89		+3° 44' 56" 39	
Secδ, Tanδ	1.344, + 0.898		1.087, + 0.426		1.001, + 0.050		1.002, + 0.066	



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 Aurigae. 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 37	3 18	49 33	4 30	16 20	4 51	33 1
	s	"	s	"	s	"	s	"
Jan. 1	30.73	31.66	7.02	25.59	56.62	15.95	20.75	57.11
11	30.61	32.27	6.89	26.64	56.61	15.73	20.75	57.79
21	30.46	32.57	6.71	27.33	56.55	15.51	20.69	58.36
31	30.29	32.56	6.50	27.66	56.45	15.30	20.60	58.83
Feb. 10	30.09	32.26	6.26	27.59	56.33	15.09	20.46	59.14
20	29.89	31.65	6.01	27.15	56.18	14.85	20.29	59.28
Mar. 2	29.70	30.80	5.77	26.35	56.02	14.63	20.11	59.24
12	29.52	29.71	5.54	25.23	55.85	14.39	19.92	59.03
Apr. 22	29.37	28.46	5.34	23.85	55.70	14.15	19.73	58.64
1	29.26	27.10	5.19	22.27	55.56	13.97	19.56	58.11
11	29.20	25.70	5.09	20.58	55.44	13.83	19.41	57.48
21	29.19	24.34	5.05	18.84	55.37	13.78	19.31	56.76
May 1	29.24	23.07	5.08	17.13	55.33	13.82	19.25	56.02
11	29.36	21.85	5.18	15.52	55.34	13.96	19.24	55.28
21	29.54	20.97	5.37	13.95	55.40	14.24	19.28	54.60
31	29.77	20.33	5.60	12.76	{55.50}	{14.66}	19.37	54.00
					{55.51}	{14.72}		
June 10	30.05	19.99	5.90	11.84	55.66	15.29	19.54	53.47
20	30.37	19.92	6.24	11.23	55.85	16.00	19.73	53.10
30	30.72	20.15	6.63	10.93	56.08	16.82	19.97	52.90
July 10	31.10	20.69	7.05	10.99	56.34	17.72	20.25	52.85
20	31.49	21.49	7.49	11.34	56.63	18.70	20.56	52.94
30	31.89	22.54	7.95	12.00	56.93	19.68	20.89	53.19
Aug. 9	32.29	23.83	8.40	12.98	57.24	20.67	21.23	53.53
19	32.68	25.31	8.85	14.23	57.56	21.62	21.59	53.99
Sept. 29	33.06	26.93	9.29	15.71	57.88	22.51	21.95	54.53
8	33.41	28.69	9.71	17.40	58.20	23.28	22.32	55.13
18	33.74	30.53	10.10	19.27	58.51	23.94	22.67	55.77
28	34.05	32.41	10.47	21.27	58.80	24.46	23.02	56.45
Oct. 8	34.32	34.33	10.80	23.37	59.09	24.82	23.36	57.17
18	34.55	36.22	11.09	25.55	59.35	25.05	23.68	57.89
28	34.76	38.07	11.35	27.76	59.60	25.16	23.98	58.62
Nov. 7	34.92	39.87	11.55	29.97	59.82	25.15	24.26	59.37
17	35.04	41.56	11.71	32.12	60.02	25.07	24.50	60.14
27	35.12	43.15	11.82	34.17	60.18	24.91	24.71	60.91
Dec. 7	35.16	44.56	11.88	36.08	60.30	24.70	24.87	61.69
17	35.15	45.77	11.88	37.80	60.39	24.47	25.00	62.46
27	35.10	46.76	11.82	39.28	60.44	24.22	25.07	63.20
37	35.01	47.49	11.72	40.48	60.44	23.99	25.09	63.90
Mean R. A.	3 <sup>h</sup> 2 <sup>m</sup> 30 <sup>s</sup> .150		3 <sup>h</sup> 18 <sup>m</sup> 6 <sup>s</sup> .259		4 <sup>h</sup> 30 <sup>m</sup> 55 <sup>s</sup> .598		4 <sup>h</sup> 51 <sup>m</sup> 19 <sup>s</sup> .541	
Mean Dec.	+40° 37' 16".39		+49° 33' 8".55		+16° 20' 6".72		+33° 1' 45".36	
Secδ, Tanδ	1.318, + 0.858		1.541, + 1.173		1.042, + 0.293		1.193, + 0.650	

AT UPPER TRANSIT AT GREENWICH.

Date.	β Eridani. Mag. 2.9		α Aurigae. (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	° /	h m	° /	h m	° /	h m	° /
	5 3	5 11	5 10	45 54	5 10	8 17	5 20	6 16
	s	"	s	"	s	"	s	"
Jan. 1	35.52	47.43	17.13	50.89	22.56	59.52	29.02	25.43
11	35.51	48.77	17.14	52.29	22.56	61.03	29.04	24.61
21	35.47	49.95	17.08	53.52	22.51	62.37	29.01	23.90
31	35.38	50.95	16.97	54.58	22.43	63.48	28.95	23.31
Feb. 10	35.27	51.73	16.81	55.41	22.31	64.38	28.85	22.83
20	35.12	52.29	16.61	55.96	22.17	65.02	28.71	22.46
Mar. 2	34.96	52.65	16.38	56.21	22.01	65.43	28.56	22.20
12	34.79	52.76	16.15	56.16	21.83	65.56	28.40	22.04
Apr. 22	34.62	52.67	15.91	55.80	21.66	65.44	28.23	22.04
1	34.47	52.33	15.69	55.16	21.50	65.07	28.08	22.12
11	34.33	51.77	15.49	54.27	21.36	64.45	27.94	22.32
21	34.22	50.99	15.34	53.20	21.24	63.58	27.83	22.66
May 1	34.15	50.00	15.25	51.96	21.17	62.48	27.75	23.14
11	34.12	48.80	15.20	50.63	21.13	61.17	27.72	23.74
21	34.13	47.43	15.22	49.25	21.13	59.67	27.72	24.49
31	34.19	45.89	15.30	47.90	21.17	58.00	27.77	25.36
June 10	34.30	44.03	15.46	46.49	21.27	55.99	27.86	26.36
20	34.44	42.25	15.66	45.33	21.41	54.07	28.01	27.57
30	34.62	40.43	15.91	44.30	21.58	52.12	28.19	28.73
July 10	34.83	38.63	16.21	43.44	21.78	50.20	28.39	29.94
20	35.07	36.87	16.56	42.76	22.01	48.33	28.63	31.13
30	35.33	35.24	16.92	42.27	22.27	46.59	28.89	32.27
Aug. 9	35.61	33.77	17.32	41.99	22.54	45.05	29.17	33.34
19	35.90	32.53	17.73	41.91	22.83	43.73	29.46	34.28
Sept. 29	36.19	31.57	18.16	42.02	23.12	42.71	29.75	35.05
8	36.49	30.88	18.59	42.31	23.42	42.03	30.06	35.63
18	36.79	30.53	19.02	42.76	23.72	41.71	30.36	35.97
28	37.08	30.52	19.44	43.39	24.01	41.75	30.66	36.10
Oct. 8	37.36	30.88	19.85	44.16	24.29	42.16	30.96	35.99
18	37.62	31.54	20.25	45.08	24.56	42.93	31.24	35.63
28	37.87	32.50	20.62	46.14	24.82	44.01	31.51	35.08
Nov. 7	38.10	33.72	20.96	47.32	25.05	45.37	31.76	34.35
17	38.30	35.12	21.27	48.60	25.26	46.94	31.98	33.48
27	38.48	36.66	21.54	49.99	25.43	48.65	32.18	32.53
Dec. 7	38.62	38.24	21.76	51.45	25.58	50.42	32.35	31.54
17	38.72	39.85	21.92	52.94	25.68	52.23	32.48	30.55
27	38.78	41.39	22.03	54.40	25.75	53.97	32.56	29.59
37	38.80	42.85	22.07	55.81	25.77	55.59	32.61	28.72
Mean R.A.	5 <sup>h</sup> 3 <sup>m</sup> 34 <sup>s</sup> .351		5 <sup>h</sup> 10 <sup>m</sup> 15 <sup>s</sup> .591		5 <sup>h</sup> 10 <sup>m</sup> 21 <sup>s</sup> .362		5 <sup>h</sup> 20 <sup>m</sup> 27 <sup>s</sup> .843	
Mean Dec.	- 5° 11' 53".24		+45° 54' 38".17		- 8° 18' 5".05		+ 6° 16' 17".91	
Secδ, Tanδ	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	° /	h m	° /	h m	° /	h m	° /
	5 20	28 32	5 27	0 21	5 28	17 52	5 31	1 15
	s	"	s	"	s	"	s	"
Jan. 1	48·75	15·86	34·87	39·20	54·87	57·10	49·11	17·31
11	48·78	16·31	34·90	40·39	54·88	59·13	49·13	18·56
21	48·76	16·74	34·87	41·43	54·83	60·95	49·11	19·67
31	48·69	17·11	34·81	42·32	54·75	62·49	49·05	20·60
Feb. 10	48·58	17·38	34·71	43·03	54·63	63·73	48·95	21·36
20	48·43	17·57	34·58	43·57	54·47	64·66	48·82	21·93
Mar. 2	48·26	17·65	34·42	43·93	54·30	65·24	48·66	22·32
12	48·08	17·60	34·26	44·10	54·11	65·49	48·50	22·51
Apr. 22	47·90	17·41	34·09	44·10	53·92	65·40	48·33	22·49
1	47·72	17·14	33·93	43·91	53·74	64·98	48·17	22·31
11	47·57	16·76	33·79	43·54	53·58	64·23	48·02	21·93
21	47·45	16·33	33·67	43·00	53·44	63·17	47·91	21·36
May 1	47·37	15·85	33·59	42·27	53·34	61·80	47·82	20·60
11	47·34	15·38	33·54	41·36	53·27	60·19	47·77	19·67
21	47·35	14·94	33·54	40·29	53·24	58·33	47·76	18·57
31	47·41	14·55	33·58	39·08	53·26	56·28	47·79	17·34
June 10	47·52	14·22	33·66	37·74	53·32	54·07	47·87	15·97
20	47·69	13·99	33·79	36·17	53·44	51·53	48·00	14·34
30	47·90	13·87	33·95	34·67	53·59	49·20	48·16	12·82
July 10	48·13	13·87	34·15	33·15	53·77	46·89	48·35	11·28
20	48·41	13·96	34·37	31·67	53·98	44·67	48·57	9·77
30	48·70	14·12	34·62	30·29	54·23	42·62	48·81	8·35
Aug. 9	49·02	14·37	34·89	29·01	54·49	40·80	49·08	7·05
19	49·36	14·69	35·17	27·91	54·77	39·28	49·36	5·94
Sept. 29	49·70	15·02	35·46	27·04	55·06	38·12	49·65	5·06
8	50·04	15·37	35·76	26·42	55·36	37·34	49·94	4·44
18	50·39	15·72	36·06	26·09	55·66	37·02	50·24	4·11
28	50·73	16·07	36·36	26·04	55·96	37·14	50·54	4·08
Oct. 8	51·07	16·39	36·65	26·31	56·25	37·71	50·83	4·37
18	51·39	16·69	36·93	26·88	56·53	38·73	51·11	4·97
28	51·70	17·00	37·20	27·70	56·80	40·13	51·38	5·83
Nov. 7	51·99	17·32	37·44	28·75	57·05	41·87	51·63	6·92
17	52·25	17·63	37·67	29·97	57·27	43·88	51·86	8·21
27	52·48	17·97	37·87	31·32	57·46	46·09	52·06	9·61
Dec. 7	52·68	18·34	38·04	32·70	57·61	48·41	52·23	11·06
17	52·83	18·75	38·16	34·12	57·72	50·76	52·37	12·54
27	52·93	19·17	38·25	35·49	57·80	53·05	52·46	13·98
37	52·99	19·58	38·30	36·76	57·82	55·19	52·51	15·31
Mean R.A.	5 <sup>h</sup> 20 <sup>m</sup> 47 <sup>s</sup> ·470		5 <sup>h</sup> 27 <sup>m</sup> 33 <sup>s</sup> ·680		5 <sup>h</sup> 28 <sup>m</sup> 53 <sup>s</sup> ·574		5 <sup>h</sup> 31 <sup>m</sup> 47 <sup>s</sup> ·901	
Mean Dec.	+28° 32' 5"·62		- 0° 21' 45"·96		-17° 53' 2"·07		- 1° 15' 24"·02	
Secδ, Tanδ	1·138, + 0·543		1·000, - 0·006		1·051, - 0·322		1·000, - 0·022	

AT UPPER TRANSIT AT GREENWICH.

Date.	ζ Orionis. (1st Star) Mag. 2·0		α Columbæ. 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 58	5 36	34 6	5 43	9 41	5 50	7 23
	s	"	s	"	s	"	s	"
Jan. 1	23·33	69·97	31·47	68·04	39·66	53·25	28·92	37·51
11	23·36	71·28	31·45	70·72	39·09	54·97	28·97	36·68
21	23·34	72·42	31·37	73·12	39·07	56·51	28·97	35·98
31	23·28	73·40	31·25	75·19	39·00	57·82	28·93	35·37
Feb. 10	23·19	74·20	31·09	76·87	38·90	58·92	28·85	34·91
20	23·06	74·80	30·90	78·13	38·77	59·74	28·73	34·54
Mar. 2	22·91	75·20	30·68	78·95	38·61	60·30	28·58	34·30
12	22·74	75·41	30·44	79·31	38·44	60·57	28·42	34·17
Apr. 22	22·57	75·41	30·21	79·20	38·26	60·59	28·26	34·14
1	22·41	75·23	29·98	78·66	38·09	60·33	28·10	34·21
11	22·26	74·84	29·76	77·70	37·94	59·83	27·95	34·38
21	22·14	74·26	29·58	76·32	37·80	59·06	27·82	34·67
May 1	22·05	73·50	29·43	74·57	37·70	58·05	27·73	35·06
11	21·99	72·56	29·32	72·48	37·64	56·81	27·67	35·59
21	21·98	71·46	29·25	70·11	37·61	55·37	27·65	36·20
31	22·01	70·18	29·24	67·49	37·62	53·77	27·68	36·94
June 10	22·08	68·78	29·27	64·70	37·68	52·00	27·74	37·77
20	22·21	67·13	29·35	61·51	37·79	49·93	27·86	38·80
30	22·36	65·57	29·48	58·56	37·93	48·02	28·01	39·80
July 10	22·55	64·00	29·65	55·68	38·10	46·10	28·20	40·84
20	22·76	62·47	29·86	52·95	38·31	44·22	28·41	41·86
30	23·00	61·03	30·10	50·41	38·54	42·47	28·65	42·84
Aug. 9	23·26	59·73	30·37	48·20	38·80	40·92	28·91	43·75
19	23·54	58·60	30·67	46·36	39·07	39·59	29·19	44·54
Sept. 29	23·83	57·72	30·98	44·95	39·35	38·55	29·48	45·19
8	24·12	57·10	31·30	44·06	39·64	37·84	29·77	45·63
18	24·42	56·78	31·62	43·70	39·94	37·51	30·08	45·86
28	24·72	56·77	31·95	43·88	40·24	37·55	30·38	45·88
Oct. 8	25·01	57·08	32·27	44·65	40·53	37·96	30·69	45·67
18	25·30	57·69	32·58	45·95	40·82	38·77	30·98	45·23
28	25·57	58·60	32·87	47·75	41·09	39·92	31·27	44·59
Nov. 7	25·82	59·72	33·13	49·96	41·35	41·36	31·54	43·81
17	26·06	61·06	33·37	52·55	41·58	43·04	31·79	42·87
27	26·26	62·52	33·56	55·39	41·79	44·90	32·02	41·87
Dec. 7	26·43	64·02	33·71	58·38	41·96	46·86	32·21	40·85
17	26·57	65·56	33·82	61·41	42·10	48·85	32·37	39·81
27	26·67	67·06	33·88	64·41	42·19	50·79	32·49	38·82
37	26·72	68·44	33·88	67·23	42·24	52·62	32·56	37·91
Mean R.A.	5 <sup>h</sup> 36 <sup>m</sup> 22 <sup>s</sup> ·119		5 <sup>h</sup> 36 <sup>m</sup> 29 <sup>s</sup> ·919		5 <sup>h</sup> 43 <sup>m</sup> 37 <sup>s</sup> ·807		5 <sup>h</sup> 50 <sup>m</sup> 27 <sup>s</sup> ·691	
Mean Dec.	- 1° 59' 16"·64		- 34° 7' 12"·02		- 9° 41' 59"·33		+ 7° 23' 29"·99	
Secδ, Tanδ	1·001, - 0·035		1·208, - 0·677		1·015, - 0·171		1·008, + 0·130	



AT UPPER TRANSIT AT GREENWICH.

Date.	β Aurigæ. Mag. 2.1		θ Aurigæ. Mag. 2.7		β Canis Majoris. Mag. 2.0		α Argūs. (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 53	44 56	5 53	37 12	6 18	17 54	6 21	52 38
	s	"	s	"	s	"	s	"
Jan. 1	10.58	33.23	48.85	36.56	53.41	36.59	63.36	46.07
11	10.65	34.63	48.91	37.51	53.46	38.87	63.33	49.47
21	10.65	35.98	48.92	38.42	53.46	40.95	63.24	52.65
31	10.58	37.22	48.87	39.29	53.42	42.78	63.07	55.50
Feb. 10	10.46	38.29	48.77	40.07	53.33	44.33	62.85	57.94
20	10.29	39.14	48.63	40.69	53.20	45.57	62.58	59.96
Mar. 2	10.09	39.75	48.45	41.13	53.04	46.50	62.26	61.48
12	9.86	40.10	48.25	41.37	52.87	47.07	61.92	62.51
Apr. 22	9.62	40.14	48.05	41.39	52.68	47.30	61.56	62.99
1	9.39	39.89	47.85	41.21	52.49	47.20	61.21	62.95
11	9.18	39.38	47.66	40.84	52.31	46.78	60.86	62.40
21	9.00	38.64	47.50	40.30	52.15	46.03	60.54	61.35
May 1	8.87	37.68	47.39	39.60	52.02	44.99	60.25	59.83
11	8.78	36.56	47.31	38.81	51.92	43.64	60.01	57.87
21	8.75	35.35	47.29	37.97	51.85	42.05	59.81	55.53
31	8.77	34.07	47.32	37.09	51.83	40.26	59.67	52.87
June 10	8.86	32.78	47.40	36.22	51.84	38.28	59.59	49.93
20	9.01	31.39	47.53	35.39	51.90	36.15	59.56	46.80
30	9.21	30.21	47.55	35.31	52.01	33.72	59.61	43.22
July 10	9.46	29.11	47.73	34.56	52.14	31.52	59.72	39.97
			47.96	33.87				
20	9.75	28.15	48.22	33.29	52.31	29.37	59.88	36.79
30	10.08	27.32	48.52	32.82	52.52	27.33	60.09	33.80
Aug. 9	10.44	26.64	48.84	32.44	52.74	25.51	60.36	31.07
19	10.82	26.11	49.18	32.18	52.99	23.91	60.67	28.71
Sept. 29	11.22	25.74	49.54	31.99	53.26	22.64	61.02	26.81
8	11.63	25.50	49.92	31.89	53.55	21.77	61.40	25.41
18	12.05	25.44	50.29	31.86	53.84	21.31	61.79	24.61
28	12.48	25.52	50.68	31.92	54.15	21.29	62.21	24.44
Oct. 8	12.90	25.77	51.06	32.07	54.45	21.73	62.62	24.89
18	13.32	26.16	51.43	32.30	54.75	22.62	63.02	26.01
28	13.72	26.72	51.79	32.60	55.04	23.95	63.41	27.72
Nov. 7	14.09	27.43	52.13	33.01	55.32	25.64	63.78	30.00
17	14.45	28.30	52.45	33.51	55.58	27.64	64.10	32.75
27	14.76	29.31	52.74	34.12	55.82	29.91	64.37	35.87
Dec. 7	15.03	30.47	52.98	34.83	56.02	32.31	64.59	39.28
17	15.25	31.74	53.19	35.62	56.18	34.80	64.74	42.84
27	15.42	33.08	53.34	36.49	56.30	37.27	64.83	46.45
37	15.51	34.43	53.44	37.40	56.38	39.64	64.84	49.95
Mean R.A.	5 <sup>h</sup> 53 <sup>m</sup> 8 <sup>s</sup> .857		5 <sup>h</sup> 53 <sup>m</sup> 47 <sup>s</sup> .318		6 <sup>h</sup> 18 <sup>m</sup> 52 <sup>s</sup> .089		6 <sup>h</sup> 22 <sup>m</sup> 18 <sup>s</sup> .238	
Mean Dec.	+ 44° 56' 22".89		+ 37° 12' 26".80		- 17° 54' 43".07		- 52° 38' 52".37	
Secδ, Tanδ	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 30	6 55	28 50
	s	"	s	"	s	"	s	"
Jan. 1	42.53	34.93	19.94	39.89	48.58	31.30	13.79	63.25
11	42.62	34.54	20.01	42.22	48.60	34.80	13.86	66.15
21	42.67	34.25	20.03	44.38	48.55	38.12	13.88	68.88
31	42.66	34.08	20.00	46.29	48.44	41.17	13.85	71.36
Feb. 10	42.61	34.00	19.92	47.94	48.26	43.86	13.76	73.54
20	42.52	33.97	19.81	49.26	48.03	46.14	13.64	75.37
Mar. 2	42.39	34.01	19.66	50.29	47.75	47.97	13.48	76.83
12	42.24	34.07	19.49	50.98	47.45	49.31	13.29	77.89
Apr. 22	42.07	34.15	19.31	51.35	47.12	50.14	13.08	78.54
1	41.91	34.25	19.12	51.38	46.79	50.46	12.87	78.78
11	41.75	34.34	18.94	51.10	46.46	50.25	12.66	78.60
21	41.60	34.44	18.78	50.51	46.15	49.56	12.46	78.02
May 1	41.49	34.54	18.64	49.63	45.87	48.39	12.29	77.08
11	41.40	34.68	18.53	48.48	45.62	46.75	12.14	75.75
21	41.36	34.85	18.45	47.08	45.41	44.70	12.03	74.11
31	41.35	35.07	18.42	45.46	45.26	42.30	11.95	72.18
June 10	41.38	35.30	18.42	43.66	45.15	39.60	11.92	70.00
20	41.46	35.59	18.46	41.73	45.10	36.66	11.93	67.65
30	41.59	35.95	18.54	39.71	45.11	33.55	11.97	65.14
July 10	41.74	36.30	18.67	37.44	45.19	30.07	12.07	62.33
20	41.93	36.65	18.82	35.43	45.31	26.94	12.20	59.79
30	42.14	36.99	19.01	33.52	45.49	23.91	12.37	57.36
Aug. 9	42.39	37.28	19.22	31.80	45.72	21.12	12.56	55.12
19	42.65	37.52	19.46	30.33	45.99	18.66	12.79	53.14
Sept. 29	42.93	37.67	19.71	29.16	46.31	16.62	13.05	51.49
8	43.23	37.71	19.99	28.33	46.65	15.04	13.33	50.27
18	43.54	37.63	20.28	27.89	47.03	14.02	13.62	49.51
28	43.85	37.41	20.58	27.90	47.42	13.60	13.93	49.24
Oct. 8	44.18	37.04	20.88	28.37	47.82	13.81	14.25	49.52
18	44.50	36.55	21.18	29.28	48.22	14.68	14.58	50.33
28	44.81	35.97	21.48	30.62	48.61	16.16	14.89	51.67
Nov. 7	45.12	35.29	21.77	32.32	48.98	18.21	15.20	53.48
17	45.42	34.55	22.04	34.32	49.32	20.77	15.50	55.70
27	45.69	33.82	22.29	36.59	49.63	23.77	15.77	58.27
Dec. 7	45.93	33.11	22.51	39.02	49.88	27.08	16.00	61.09
17	46.14	32.45	22.69	41.52	50.07	30.61	16.20	64.06
27	46.31	31.87	22.82	44.05	50.19	34.22	16.35	67.10
37	46.43	31.41	22.92	46.49	50.25	37.82	16.45	70.09
Mean R.A.	6 <sup>h</sup> 32 <sup>m</sup> 41 <sup>s</sup> .195		6 <sup>h</sup> 41 <sup>m</sup> 18 <sup>s</sup> .638		6 <sup>h</sup> 47 <sup>m</sup> 46 <sup>s</sup> .631		6 <sup>h</sup> 55 <sup>m</sup> 12 <sup>s</sup> .387	
Mean Dec.	+ 16° 28' 27".70		- 16° 35' 46".70		- 50° 30' 39".28		- 28° 51' 10".95	
Secδ, Tanδ	1.043, + 0.296		1.043, - 0.298		1.573, - 1.214		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		α <sup>2</sup> 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 14	36 56	7 20	29 7	7 29	32 4
	s	"	s	"	s	"	s	"
Jan. 1	52.53	68.04	5.69	18.59	40.62	49.39	4.65	54.34
11	52.62	70.88	5.77	21.86	40.73	52.38	4.82	54.76
21	52.65	73.54	5.80	24.96	40.77	55.24	4.93	55.34
31	52.63	76.00	5.76	27.84	40.77	57.88	4.99	56.02
Feb. 10	52.57	78.13	5.68	30.44	40.71	60.23	4.99	56.77
20	52.46	79.94	5.54	32.67	40.60	62.26	4.93	57.56
Mar. 2	52.31	81.41	5.37	34.51	40.46	63.93	4.83	58.33
12	52.13	82.50	5.16	35.91	40.28	65.23	4.68	59.04
Apr. 22	51.94	83.19	4.93	36.88	40.09	66.10	4.52	59.63
1	51.73	83.48	4.70	37.38	39.88	66.57	4.33	60.07
11	51.53	83.38	4.46	37.43	39.67	66.64	4.15	60.38
21	51.34	82.89	4.23	37.05	39.47	66.29	3.98	60.51
May 1	51.17	82.06	4.02	36.21	39.29	65.55	3.82	60.46
11	51.03	80.87	3.83	34.96	39.13	64.46	3.69	60.28
21	50.91	79.35	3.68	33.34	39.00	63.02	3.59	59.94
31	50.84	77.55	3.57	31.38	38.91	61.27	3.54	59.49
June 10	50.80	75.52	3.50	29.12	38.85	59.24	3.52	58.93
20	50.80	73.28	3.47	26.64	38.84	57.01	3.55	58.29
30	50.85	70.93	3.48	23.98	38.86	54.62	3.61	57.60
July 10	50.94	68.25	3.55	20.93	38.92	52.16	3.72	56.84
20	51.06	65.84	3.65	18.16	39.03	49.40	3.88	55.98
30	51.22	63.54	3.79	15.47	39.17	46.98	4.07	55.17
Aug. 9	51.41	61.37	3.98	12.96	39.35	44.72	4.29	54.35
19	51.62	59.47	4.19	10.70	39.55	42.69	4.54	53.52
Sept. 29	51.87	57.87	4.45	8.75	39.79	40.97	4.82	52.65
8	52.14	56.66	4.72	7.24	40.05	39.64	5.12	51.78
18	52.43	55.92	5.03	6.23	40.34	38.73	5.44	50.92
28	52.73	55.64	5.35	5.75	40.64	38.33	5.77	50.04
Oct. 8	53.04	55.89	5.69	5.84	40.96	38.47	6.13	49.18
18	53.36	56.64	6.03	6.52	41.28	39.15	6.49	48.34
28	53.68	57.92	6.38	7.76	41.61	40.35	6.86	47.56
Nov. 7	53.99	59.64	6.71	9.55	41.93	42.05	7.23	46.86
17	54.29	61.80	7.03	11.83	42.24	44.18	7.59	46.28
27	54.56	64.27	7.33	14.50	42.53	46.69	7.94	45.85
Dec. 7	54.81	67.00	7.59	17.51	42.79	49.48	8.27	45.57
17	55.01	69.89	7.81	20.70	43.01	52.46	8.55	45.48
27	55.18	72.83	7.97	24.04	43.19	55.54	8.80	45.59
37	55.29	75.75	8.09	27.36	43.32	58.60	9.00	45.89
Mean R.A.	7 <sup>h</sup> 4 <sup>m</sup> 51 <sup>s</sup> . 179		7 <sup>h</sup> 14 <sup>m</sup> 4 <sup>s</sup> . 205		7 <sup>h</sup> 20 <sup>m</sup> 39 <sup>s</sup> . 276		7 <sup>h</sup> 29 <sup>m</sup> 3 <sup>s</sup> . 069	
Mean Dec.	-26° 15' 15". 97		-36° 56' 27". 42		-29° 7' 57". 97		+32° 4' 49". 81	
Secδ, Tanδ	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	° /	h m	° /	h m	° /	h m	° /
	7 34	5 26	7 40	28 14	8 0	39 45	8 3	24 2
	s	"	s	"	s	"	s	"
Jan. 1	46.11	60.25	1.17	17.92	32.91	16.93	51.50	60.97
11	46.25	58.95	1.35	18.05	33.05	20.37	51.65	63.86
21	46.35	57.82	1.47	18.36	33.13	23.76	51.75	66.65
31	46.40	56.86	1.53	18.81	33.15	26.98	51.80	69.27
Feb. 10	46.39	56.09	1.54	19.35	33.11	29.96	51.80	71.64
20	46.34	55.51	1.49	19.96	33.01	32.64	51.74	73.74
Mar. 2	46.25	55.09	1.40	20.60	32.87	34.98	51.65	75.52
12	46.13	54.84	1.27	21.22	32.69	36.91	51.52	76.97
Apr. 22	45.99	54.74	1.12	21.78	32.48	38.39	51.36	78.06
1	45.83	54.77	0.95	22.24	32.25	39.46	51.18	78.78
11	45.68	54.90	0.77	22.57	32.01	40.05	51.00	79.12
21	45.52	55.14	0.60	22.79	31.77	40.18	50.82	79.11
May 1	45.39	55.48	0.45	22.87	31.54	39.86	50.65	78.75
11	45.27	55.92	0.32	22.83	31.33	39.08	50.49	78.03
21	45.19	56.45	0.22	22.67	31.14	37.91	50.36	76.99
31	45.13	57.04	0.16	22.40	30.99	36.34	50.25	75.66
June 10	45.11	57.70	0.14	22.04	30.87	34.41	50.17	74.08
20	45.13	58.42	0.15	21.62	30.79	32.20	50.13	72.27
30	45.18	59.16	0.21	21.13	30.75	29.76	50.13	70.28
July 10	45.26	59.92	0.30	20.58	30.75	27.13	50.15	68.17
20	45.38	60.74	0.44	19.94	{30.79}	{24.41}	50.21	66.02
30	45.53	61.43	0.61	19.30	{30.80}	{24.13}	50.32	63.67
Aug. 9	45.71	62.02	0.81	18.63	30.89	21.42	50.46	61.63
19	45.91	62.49	1.04	17.92	31.02	18.78	50.62	59.77
29	46.13	62.79	1.29	17.15	31.19	16.35	50.82	58.17
Sept. 8	46.38	62.90	1.58	16.34	31.41	14.19	51.04	56.87
18	46.65	62.78	1.87	15.50	31.65	12.38	51.29	55.96
28	46.93	62.41	2.19	14.61	31.93	11.00	51.57	55.49
Oct. 8	47.23	61.81	2.53	13.69	32.24	10.16	51.87	55.50
18	47.54	60.96	2.88	12.75	32.58	9.88	52.18	56.00
28	47.85	59.88	3.24	11.82	32.93	10.15	52.50	57.00
Nov. 7	48.16	58.60	3.59	10.95	33.29	11.03	52.83	58.47
17	48.47	57.18	3.95	10.15	33.65	12.49	53.15	60.38
27	48.77	55.64	4.29	9.46	34.01	14.50	53.47	62.66
Dec. 7	49.05	54.07	4.61	8.93	34.35	16.98	53.76	65.24
17	49.29	52.50	4.90	8.55	34.66	19.86	54.02	68.03
27	49.51	50.99	5.15	8.37	34.93	23.04	54.24	70.93
37	49.68	49.61	5.35	8.36	35.15	26.41	54.42	73.87
Mean R.A.	7 <sup>h</sup> 34 <sup>m</sup> 44 <sup>s</sup> . 859		7 <sup>h</sup> 39 <sup>m</sup> 59 <sup>s</sup> . 666		8 <sup>h</sup> 0 <sup>m</sup> 31 <sup>s</sup> . 546		8 <sup>h</sup> 3 <sup>m</sup> 50 <sup>s</sup> . 318	
Mean Dec.	+ 5° 26' 54". 19		+ 28° 14' 13". 77		- 39° 45' 27". 88		- 24° 3' 10". 13	
Secδ, Tanδ	1.005, + 0.095		1.135, + 0.537		1.301, - 0.832		1.095, - 0.446	



AT UPPER TRANSIT AT GREENWICH.

Date.	γ Argûs. Mag. 1·9		ε Argûs. Mag. 1·7		δ Argûs. Mag. 2·0		λ Argûs. Mag. 2·3	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m	° /	h m	° /	h m	° /	h m	° /
	8 6	47 4	8 20	59 13	8 42	54 23	9 4	43 4
	s	"	s	"	s	"	s	"
Jan. 1	52·63	35·55	45·60	31·43	19·34	7·53	48·78	38·48
11	52·77	39·18	45·77	35·23	19·55	11·27	49·01	41·97
21	52·85	42·77	45·86	39·06	19·68	15·06	49·17	45·54
31	52·87	46·23	45·86	42·82	19·74	18·81	49·28	49·06
Feb. 10	52·81	49·47	45·78	46·42	19·72	22·42	49·32	52·43
20	52·70	52·42	45·61	49·73	19·62	25·80	49·30	55·60
Mar. 2	52·53	55·02	45·38	52·72	19·47	28·88	49·22	58·51
12	52·32	57·20	45·09	55·31	19·25	31·59	49·10	61·09
	52·08	58·95	44·75	57·47	18·99	33·88	48·94	63·26
Apr. 1	51·81	60·22	44·38	59·14	18·70	35·73	48·74	65·04
11	51·53	61·02	43·99	60·31	18·38	37·11	48·53	66·38
21	51·25	61·30	43·59	60·97	18·06	37·97	48·30	67·27
May 1	50·98	61·12	43·20	61·10	17·73	38·32	48·07	67·71
11	50·72	60·44	42·82	60·70	17·42	38·17	47·84	67·66
21	50·49	59·32	42·47	59·81	17·12	37·52	47·63	67·17
31	50·30	57·76	42·16	58·43	16·85	36·38	47·43	66·26
June 10	50·14	55·82	41·89	56·60	16·61	34·81	47·26	64·93
20	50·02	53·56	41·66	54·38	16·41	32·83	47·12	63·25
30	49·94	51·01	41·50	51·84	16·26	30·51	47·01	61·22
July 10	49·92	48·27	41·39	49·03	16·16	27·90	46·94	58·94
	49·94	45·39	41·35	46·05	16·11	25·09	46·90	56·47
Aug. 30	50·02	42·20	41·38	42·65	16·11	22·16	46·91	53·87
9	50·14	39·37	41·48	39·59	16·18	18·89	46·97	50·96
19	50·31	36·72	41·64	36·65	16·31	16·01	47·06	48·39
Sept. 29	50·53	34·32	41·88	33·95	16·50	13·35	47·21	45·99
8	50·79	32·30	42·17	31·58	16·74	10·97	47·39	43·86
18	51·09	30·72	42·52	29·65	17·03	8·98	47·62	42·08
28	51·42	29·64	42·92	28·21	17·37	7·46	47·89	40·72
Oct. 8	51·78	29·15	43·37	27·37	17·76	6·51	48·21	39·84
18	52·16	29·27	43·84	27·16	18·18	6·15	48·55	39·54
28	52·56	30·01	44·34	27·60	18·62	6·44	48·91	39·84
Nov. 7	52·96	31·38	44·83	28·69	19·07	7·38	49·30	40·73
	53·34	33·34	45·32	30·44	19·53	8·95	49·69	42·21
Dec. 27	53·71	35·81	45·78	32·75	19·96	11·09	50·08	44·23
7	54·05	38·73	46·20	35·59	20·37	13·75	50·45	46·73
17	54·34	41·97	46·56	38·82	20·74	16·89	50·79	49·65
	54·58	45·49	46·85	42·42	21·05	20·32	51·10	52·88
37	54·76	49·11	47·07	46·17	21·29	23·99	51·35	56·31
Mean R.A.	8 <sup>h</sup> 6 <sup>m</sup> 51 <sup>s</sup> ·147		8 <sup>h</sup> 20 <sup>m</sup> 43 <sup>s</sup> ·779		8 <sup>h</sup> 42 <sup>m</sup> 17 <sup>s</sup> ·895		9 <sup>h</sup> 4 <sup>m</sup> 47 <sup>s</sup> ·725	
Mean Dec.	-47° 4' 47"·56		-59° 13' 45"·38		-54° 23' 21"·91		-43° 4' 51"·89	
Secδ, Tanδ	1·469, -1·075		1·955, -1·679		1·717, -1·396		1·369, -0·935	

AT UPPER TRANSIT AT GREENWICH.

Date.	β Argûs. Mag. 1·7		ι Argûs. Mag. 2·2		κ Argûs. 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 21	9 14	58 54	9 19	54 38	9 23	8 16
	s	"	s	"	s	"	s	"
Jan. 1	16·89	14·21	46·88	19·18	26·23	4·81	19·64	45·16
11	17·22	17·91	47·15	22·85	26·50	8·44	19·88	47·45
21	17·44	21·78	47·35	26·68	26·70	12·20	20·07	49·64
31	17·54	25·71	47·46	30·54	26·83	16·00	20·22	51·66
Feb. 10	17·52	29·62	47·49	34·35	26·87	19·73	20·31	53·48
20	17·39	33·39	47·44	37·98	26·85	23·31	20·36	55·07
Mar. 2	17·16	36·96	47·31	41·40	26·75	26·65	20·36	56·38
12	16·82	40·23	47·12	44·50	26·59	29·68	20·31	57·44
	16·41	43·14	46·87	47·22	26·39	32·33	20·24	58·27
Apr. 1	15·94	45·65	46·57	49·52	26·14	34·59	20·14	58·83
11	15·42	47·67	46·24	51·38	25·86	36·41	20·01	59·16
21	14·86	49·23	45·89	52·76	25·56	37·74	19·88	59·25
May 1	14·29	50·25	45·53	53·63	25·25	38·57	19·75	59·14
11	13·71	50·74	45·17	53·97	24·94	38·91	19·62	58·81
21	13·14	50·67	44·82	53·80	24·64	38·71	19·50	58·31
31	12·60	50·11	44·49	53·12	24·36	38·06	19·39	57·63
June 10	12·10	49·01	44·19	51·94	24·10	36·93	19·31	56·80
20	11·65	47·44	43·92	50·31	23·88	35·34	19·24	55·84
30	11·26	45·44	43·69	48·30	23·69	33·37	19·20	54·76
July 10	10·94	43·06	43·52	45·93	23·54	31·06	19·18	53·64
	10·71	40·36	43·40	43·29	23·44	28·49	19·19	52·48
Aug. 30	10·57	37·45	43·34	40·43	23·39	25·72	19·23	51·33
9	10·52	34·06	43·34	37·18	23·40	22·86	19·29	50·23
19	10·59	30·98	43·41	34·24	23·47	19·70	19·39	49·14
Sept. 29	10·76	28·00	43·55	31·39	23·60	16·97	19·52	48·32
8	11·03	25·22	43·76	28·77	23·79	14·43	19·67	47·73
18	11·40	22·73	44·04	26·49	24·04	12·21	19·86	47·41
28	11·86	20·68	44·37	24·62	24·34	10·40	20·07	47·39
Oct. 8	12·41	19·12	44·77	23·24	24·70	9·12	20·32	47·70
18	13·02	18·14	45·21	22·44	25·10	8·38	20·59	48·37
28	13·68	17·78	45·69	22·29	25·53	8·26	20·89	49·40
Nov. 7	14·36	18·11	46·19	22·77	25·99	8·79	21·20	50·78
	15·06	19·09	46·69	23·90	26·45	9·96	21·52	52·47
Dec. 27	15·73	20·73	47·20	25·67	26·92	11·73	21·86	54·42
7	16·37	22·95	47·67	28·00	27·36	14·07	22·18	56·58
17	16·94	25·73	48·11	30·85	27·77	16·90	22·49	58·89
	17·43	28·96	48·50	34·12	28·14	20·12	22·78	61·24
37	17·82	32·52	48·81	37·67	28·44	23·64	23·04	63·58
Mean R.A.	9 <sup>h</sup> 12 <sup>m</sup> 14 <sup>s</sup> ·984		9 <sup>h</sup> 14 <sup>m</sup> 45 <sup>s</sup> ·574		9 <sup>h</sup> 19 <sup>m</sup> 25 <sup>s</sup> ·095		9 <sup>h</sup> 23 <sup>m</sup> 18 <sup>s</sup> ·756	
Mean Dec.	-69° 21' 31"·56		-58° 54' 35"·35		-54° 38' 20"·50		-8° 16' 51"·39	
Secδ, Tanδ	2·837, -2·655		1·936, -1·658		1·728, -1·409		1·010, -0·146	



AT UPPER TRANSIT AT GREENWICH.

Date.	$\alpha$ Leonis. (Regulus) Mag. 1.3		$\gamma^1$ Leonis. Mag. 2.5		$\eta$ Argus. Mag. 1-7.4		$\mu$ Argus. 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 23	10 15	20 16	10 41	59 13	10 43	48 57
	s	"	s	"	s	"	s	"
Jan. 1	45.32	33.86	11.64	52.44	41.30	19.13	1.79	22.13
11	45.60	32.43	11.94	51.29	41.73	22.27	2.15	25.25
21	45.84	31.22	12.20	50.46	42.09	25.72	2.46	28.62
31	46.04	30.29	12.42	49.94	42.38	29.39	2.72	32.15
Feb. 10	46.19	29.62	12.59	49.71	42.59	33.17	2.91	35.73
20	46.28	29.21	12.70	49.78	42.73	36.97	3.04	39.30
Mar. 2	46.33	29.06	12.77	50.09	42.78	40.72	3.11	42.74
12	46.34	29.11	12.78	50.61	42.77	44.29	3.11	46.02
Apr. 22	46.30	29.35	12.76	51.27	42.68	47.65	3.07	49.03
1	46.23	29.73	12.70	52.03	42.54	50.73	2.98	51.75
11	46.14	30.19	12.61	52.84	42.35	53.44	2.84	54.12
21	46.03	30.71	12.50	53.65	42.11	55.78	2.68	56.12
May 1	45.91	31.27	12.38	54.42	41.84	57.68	2.49	57.70
11	45.79	31.82	12.26	55.12	41.55	59.11	2.28	58.84
21	45.68	32.34	12.14	55.71	41.24	60.04	2.07	59.54
31	45.57	32.83	12.02	56.19	40.92	60.48	1.85	59.77
June 10	45.48	33.28	11.92	56.52	40.61	60.41	1.63	59.55
20	45.40	33.66	11.84	56.72	40.30	59.85	1.42	58.89
30	45.35	33.96	11.77	56.76	40.02	58.82	1.23	57.79
July 10	45.31	34.17	11.73	56.64	39.76	57.33	1.05	56.31
20	45.30	34.28	11.71	56.39	39.53	55.45	0.90	54.49
30	45.31	34.26	11.71	55.95	39.35	53.23	0.78	52.40
Aug. 9	45.35	34.13	11.74	55.36	39.21	50.74	0.70	50.06
19	45.41	33.85	11.79	54.60	39.14	48.06	0.66	47.60
Sept. 29	45.51	33.35	11.89	53.55	39.12	45.28	0.67	45.10
8	45.63	32.69	12.00	52.42	39.18	42.25	0.74	42.38
18	45.79	31.83	12.15	51.09	39.32	39.63	0.86	40.08
28	45.98	30.78	12.34	49.60	39.53	37.24	1.04	38.05
Oct. 8	46.20	29.52	12.56	47.92	39.81	35.21	1.27	36.35
18	46.45	28.07	12.81	46.12	40.17	33.59	1.56	35.11
28	46.73	26.41	13.09	44.20	40.58	32.50	1.90	34.35
Nov. 7	47.04	24.62	13.40	42.19	41.05	32.00	2.29	34.17
17	47.37	22.72	13.74	40.17	41.55	32.12	2.70	34.57
27	47.71	20.76	14.09	38.16	42.08	32.88	3.14	35.56
Dec. 7	48.05	18.81	14.45	36.26	42.62	34.25	3.59	37.13
17	48.39	16.93	14.80	34.50	43.15	36.21	4.03	39.23
27	48.72	15.18	15.15	32.96	43.65	38.70	4.45	41.78
37	49.01	13.61	15.46	31.66	44.10	41.64	4.83	44.75
Mean R.A.	10 <sup>h</sup> 3 <sup>m</sup> 44 <sup>s</sup> .428		10 <sup>h</sup> 15 <sup>m</sup> 10 <sup>s</sup> .692		10 <sup>h</sup> 41 <sup>m</sup> 40 <sup>s</sup> .951		10 <sup>h</sup> 43 <sup>m</sup> 1 <sup>s</sup> .464	
Mean Dec.	+12° 23' 34".10		+20° 16' 55".27		-59° 13' 36".99		-48° 57' 37".90	
Sec $\delta$ , Tan $\delta$	1.024, + 0.220		1.066, + 0.369		1.954, - 1.679		1.523, - 1.148	

AT UPPER TRANSIT AT GREENWICH.

Date.	$\beta$ Ursæ Majoris. Mag. 2.4		$\alpha$ Ursæ Majoris. (Dubhe) Mag. 2.0		$\delta$ Leonis. Mag. 2.6		$\beta$ Leonis. (Denebola) Mag. 2.2	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	10 56	56 50	10 58	62 12	11 9	20 59	11 44	15 3
	s	"	s	"	s	"	s	"
Jan. 1	37.85	43.14	24.41	61.16	29.72	56.00	37.80	24.93
11	38.34	43.22	24.97	61.42	30.06	54.68	38.14	23.14
21	38.79	43.83	25.47	62.25	30.36	53.59	38.45	21.65
31	39.17	44.95	25.90	63.57	30.62	52.85	38.73	20.49
Feb. 10	39.48	46.52	26.25	65.34	30.84	52.48	38.97	19.66
20	39.70	48.45	26.51	67.49	31.01	52.44	39.17	19.18
Mar. 2	39.85	50.65	26.67	69.90	31.13	52.72	39.32	19.03
12	39.91	53.04	26.74	72.48	31.20	53.26	39.42	19.18
Apr. 22	39.90	55.47	26.72	75.06	31.23	54.02	39.49	19.58
1	39.82	57.85	26.61	77.59	31.22	54.91	39.51	20.19
11	39.67	60.09	26.43	79.96	31.18	55.90	39.50	20.95
21	39.48	62.09	26.19	82.04	31.11	56.93	39.47	21.81
May 1	39.25	63.78	25.91	83.77	31.02	57.94	39.41	22.72
11	39.00	65.10	25.60	85.11	30.91	58.88	39.33	23.63
21	38.74	66.01	25.28	86.01	30.80	59.71	39.24	24.49
31	38.47	66.48	24.94	86.44	30.69	60.42	39.14	25.29
June 10	38.21	66.50	24.62	86.38	30.58	60.99	39.04	25.99
20	37.97	66.09	24.32	85.85	30.48	61.37	38.94	26.57
30	37.75	65.21	24.04	84.84	30.39	61.57	38.85	27.00
July 10	37.57	63.93	23.80	83.39	30.31	61.57	38.76	27.27
20	37.41	62.26	23.60	81.52	30.25	61.37	38.68	27.39
30	37.30	60.24	23.45	79.28	30.20	60.99	38.61	27.31
Aug. 9	37.23	57.88	23.34	76.72	30.18	60.41	38.56	27.05
19	37.21	55.25	23.30	73.89	30.18	59.59	38.52	26.60
Sept. 29	37.24	52.39	23.32	70.82	30.20	58.57	38.51	25.92
8	37.33	49.05	23.41	67.26	30.26	57.33	38.53	25.04
18	37.47	45.87	23.56	63.90	30.36	55.74	{38.58}	{23.93}
28	37.67	42.64	23.78	60.50	30.49	54.07	{38.58}	{23.81}
Oct. 8	37.93	39.42	24.06	57.13	30.65	52.21	38.70	20.87
18	38.24	36.25	24.42	53.83	30.85	50.18	38.96	19.06
28	38.62	33.21	24.83	50.73	31.10	48.02	39.16	17.06
Nov. 7	39.04	30.40	25.32	47.87	31.37	45.77	39.40	14.90
17	39.51	27.85	25.85	45.32	31.68	43.46	39.69	12.64
27	40.02	25.67	26.42	43.16	32.02	41.17	40.00	10.31
Dec. 7	40.55	23.89	27.02	41.47	32.37	38.96	40.33	7.98
17	41.09	22.61	27.63	40.28	32.73	36.88	40.68	5.71
27	41.62	21.86	28.23	39.68	33.09	35.04	41.03	3.59
37	42.13	21.66	28.81	39.62	33.43	33.46	41.37	1.68
Mean R.A.	10 <sup>h</sup> 56 <sup>m</sup> 36 <sup>s</sup> .032		10 <sup>h</sup> 58 <sup>m</sup> 22 <sup>s</sup> .218		11 <sup>h</sup> 9 <sup>m</sup> 20 <sup>s</sup> .043		11 <sup>h</sup> 44 <sup>m</sup> 37 <sup>s</sup> .403	
Mean Dec.	+56° 50' 56".40		+62° 13' 15".30		+21° 0' 1".82		+15° 3' 30".40	
Sec $\delta$ , Tan $\delta$	1.829, + 1.531		2.145, + 1.898		1.071, + 0.384		1.036, + 0.269	



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	° /	h m	° /	h m	° /	h m	° /	
	11 49	54 10	12 3	50 14	12 11	17 3	12 21	62 36	
	s	"	s	"	s	"	s	"	
Jan.	1	16.88	26.54	50.17	1.96	19.69	27.20	43.99	44.31
	11	17.37	25.89	50.62	4.36	20.03	29.56	44.58	46.36
	21	17.83	25.85	51.03	7.11	20.36	31.95	45.13	48.87
	31	18.25	26.36	51.40	10.13	20.65	34.33	45.63	51.77
Feb.	10	18.61	27.40	51.72	13.37	20.90	36.61	46.06	54.96
	20	18.90	28.90	51.98	16.71	21.12	38.75	46.43	58.40
Mar.	2	19.12	30.82	52.18	20.07	21.29	40.74	46.72	61.96
	12	19.27	33.01	52.33	23.39	21.42	42.52	46.94	65.56
	22	19.34	35.39	52.42	26.59	21.52	44.06	47.09	69.16
Apr.	1	19.35	37.86	52.46	29.62	21.57	45.38	47.16	72.64
	11	19.29	40.30	52.45	32.42	21.59	46.45	47.16	75.95
	21	19.18	42.63	52.39	34.97	21.58	47.29	47.10	79.03
May	1	19.02	44.73	52.30	37.16	21.55	47.90	46.99	81.83
	11	18.83	46.55	52.18	39.01	21.50	48.31	46.82	84.27
	21	18.62	48.02	52.03	40.48	21.43	48.50	46.60	86.34
	31	18.39	49.11	51.86	41.56	21.35	48.47	46.34	88.00
June	10	18.15	49.74	51.67	42.20	21.26	48.28	46.06	89.19
	20	17.91	49.94	51.47	42.40	21.16	47.90	45.74	89.89
	30	17.68	49.68	51.26	42.18	21.06	47.35	45.41	90.11
July	10	17.46	48.98	51.05	41.55	20.96	46.66	45.08	89.84
	20	17.26	47.82	50.85	40.51	20.87	45.86	44.75	89.08
	30	17.09	46.27	50.66	39.09	20.78	44.94	44.44	87.86
Aug.	9	16.95	44.34	50.49	37.35	20.70	43.97	44.15	86.23
	19	16.85	42.04	50.36	35.37	20.63	42.98	43.90	84.22
	29	16.79	39.44	50.26	33.20	20.59	42.01	43.70	81.94
Sept.	8	16.77	36.56	50.21	30.88	20.58	41.11	43.57	79.43
	18	16.80	33.47	50.21	28.56	20.60	40.35	43.51	76.79
	28	16.90	29.88	50.28	26.08	20.66	39.71	43.53	74.14
Oct.	8	17.05	26.50	50.41	24.05	20.76	39.38	43.67	71.34
	18	17.26	23.11	50.61	22.28	20.90	39.33	43.88	69.01
	28	17.53	19.73	50.87	20.89	21.09	39.62	44.18	67.01
Nov.	7	17.86	16.49	51.19	19.95	21.32	40.25	44.57	65.43
	17	18.24	13.44	51.57	19.51	21.60	41.23	45.04	64.32
	27	18.67	10.65	51.99	19.60	21.90	42.54	45.57	63.78
Dec.	7	19.14	8.26	52.44	20.25	22.23	44.19	46.15	63.82
	17	19.63	6.28	52.91	21.45	22.58	46.11	46.75	64.44
	27	20.13	4.80	53.38	23.17	22.94	48.24	47.37	65.65
	37	20.63	3.88	53.84	25.36	23.29	50.55	47.97	67.43
Mean R.A.	11 <sup>h</sup> 49 <sup>m</sup> 15 <sup>s</sup> .673		12 <sup>h</sup> 3 <sup>m</sup> 50 <sup>s</sup> .606		12 <sup>h</sup> 11 <sup>m</sup> 19 <sup>s</sup> .778		12 <sup>h</sup> 21 <sup>m</sup> 44 <sup>s</sup> .933		
Mean Dec.	+54° 10' 42".55		-50° 14' 16".90		-17° 3' 31".82		-62° 37' 1".45		
Secδ, Tanδ	1.709, + 1.385		1.563, - 1.201		1.046, - 0.307		2.174, - 1.931		

AT UPPER TRANSIT AT GREENWICH.

Date.	γ Crucis. Mag. 1.6		α Muscæ. 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	° /	h m	° /	h m	° /	h m	° /	
	12 26	56 37	12 31	68 39	12 36	48 28	12 42	59 12	
	s	"	s	"	s	"	s	"	
Jan.	1	19.02	17.77	57.51	4.81	42.08	42.36	36.66	32.47
	11	19.53	19.87	58.23	6.60	42.53	44.43	37.21	34.30
	21	20.01	22.38	58.91	8.94	42.96	46.87	37.74	36.60
	31	20.45	25.24	59.53	11.68	43.35	49.62	38.22	39.29
Feb.	10	20.84	28.37	60.08	14.80	43.70	52.57	38.66	42.26
	20	21.17	31.70	60.55	18.10	44.01	55.65	39.04	45.49
Mar.	2	21.44	35.11	60.93	21.76	44.26	58.81	39.35	48.87
	12	21.64	38.56	61.22	25.45	44.45	61.96	39.60	52.30
	22	21.78	41.97	61.42	29.16	44.60	65.04	39.78	55.73
Apr.	1	21.86	45.26	61.52	32.81	44.69	67.99	39.90	59.08
	11	21.89	48.37	61.54	36.34	44.74	70.77	39.95	62.29
	21	21.86	51.25	61.48	39.65	44.74	73.32	39.95	65.30
May	1	21.78	53.84	61.34	42.69	44.71	75.58	39.90	68.06
	11	21.66	56.10	61.13	45.43	44.63	77.55	39.79	70.53
	21	21.50	58.00	60.85	47.78	44.53	79.17	39.64	72.63
	31	21.31	59.48	60.52	49.71	44.40	80.44	39.45	74.34
June	10	21.09	60.53	60.14	51.20	44.24	81.34	39.22	75.62
	20	20.85	61.15	59.73	52.19	44.07	81.82	38.97	76.47
	30	20.60	61.30	59.29	52.66	43.88	81.89	38.70	76.85
July	10	20.34	60.99	58.84	52.63	43.68	81.57	38.41	76.76
	20	20.08	60.22	58.39	52.07	43.49	80.86	38.12	76.21
	30	19.83	59.04	57.96	51.02	43.29	79.75	37.84	75.20
Aug.	9	19.60	57.47	57.56	49.50	43.12	78.33	37.58	73.79
	19	19.41	55.57	57.21	47.58	42.96	76.62	37.34	72.00
	29	19.25	53.40	56.92	45.30	42.83	74.69	37.15	69.91
Sept.	8	19.14	51.05	56.71	42.74	42.74	72.60	37.00	67.59
	18	19.10	48.60	56.59	40.02	42.70	70.41	36.92	65.12
	28	19.12	46.14	56.58	37.24	42.72	68.28	36.91	62.61
Oct.	8	19.23	43.57	56.70	34.24	42.81	66.05	37.00	59.91
	18	19.42	41.46	56.93	31.69	42.95	64.25	37.16	57.64
	28	19.68	39.68	57.27	29.41	43.17	62.76	37.41	55.65
Nov.	7	20.01	38.27	57.72	27.52	43.45	61.65	37.74	54.02
	17	20.41	37.37	58.27	26.11	43.78	61.00	38.14	52.85
	27	20.87	37.00	58.90	25.22	44.17	60.84	38.61	52.20
Dec.	7	21.37	37.18	59.59	24.93	44.59	61.21	39.12	52.10
	17	21.89	37.95	60.33	25.24	45.04	62.08	39.68	52.58
	27	22.42	39.26	61.07	26.17	45.50	63.46	40.24	53.60
	37	22.95	41.09	61.81	27.69	45.97	65.31	40.81	55.17
Mean R.A.	12 <sup>h</sup> 26 <sup>m</sup> 19 <sup>s</sup> .814		12 <sup>h</sup> 31 <sup>m</sup> 58 <sup>s</sup> .907		12 <sup>h</sup> 36 <sup>m</sup> 42 <sup>s</sup> .774		12 <sup>h</sup> 42 <sup>m</sup> 37 <sup>s</sup> .717		
Mean Dec.	-56° 37' 33".55		-68° 39' 22".66		-48° 28' 55".85		-59° 12' 48".21		
Secδ, Tanδ	1.818, - 1.518		2.748, - 2.559		1.509, - 1.130		1.954, - 1.678		



AT UPPER TRANSIT AT GREENWICH.

Date.	ε Urse Majoris. Mag. 1·8		α Canum Venat. Mag. 2·8		ζ <sup>1</sup> Urse 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	° /	h m	° /	h m	° /	h m	° /
	12 50	56 25	12 51	38 46	13 20	55 22	13 20	10 42
	s	"	s	"	s	"	s	"
Jan. 1	13·00	35·66	57·89	61·59	25·86	26·29	36·03	26·97
11	13·52	34·37	58·29	59·91	26·35	24·60	36·38	29·08
21	14·02	33·68	58·68	58·73	26·85	23·54	36·71	31·17
31	14·50	33·62	59·05	58·08	27·32	23·12	37·04	33·21
Feb. 10	14·93	34·18	59·38	57·96	27·77	23·32	37·33	35·12
20	15·32	35·30	59·68	58·37	28·17	24·11	37·60	36·88
Mar. 2	15·63	36·92	59·92	59·25	28·52	25·45	37·84	38·43
12	15·88	38·96	60·12	60·54	28·81	27·28	38·04	39·77
Apr. 22	16·05	41·32	60·27	62·19	29·02	29·49	38·20	40·88
1	16·15	43·89	60·36	64·07	29·17	31·98	38·33	41·74
11	16·19	46·58	60·41	66·13	29·25	34·66	38·42	42·41
21	16·16	49·24	60·41	68·24	29·27	37·41	38·49	42·86
May 1	16·07	51·80	60·38	70·35	29·23	40·09	38·52	43·13
11	15·92	54·15	60·32	72·36	29·14	42·63	38·53	43·24
21	15·74	56·20	60·22	74·18	28·99	44·95	38·52	43·20
31	15·53	57·90	60·10	75·77	28·81	46·94	38·49	43·04
June 10	15·28	59·21	59·97	77·05	28·60	48·57	38·43	42·79
20	15·03	60·08	59·82	78·02	28·36	49·81	38·36	42·43
30	14·76	60·47	59·67	78·65	28·10	50·56	38·28	41·98
July 10	14·48	60·37	59·51	78·90	27·83	50·82	38·19	41·49
20	14·22	59·79	59·35	78·75	27·56	50·63	38·08	40·94
30	13·96	58·75	59·20	78·23	27·29	49·94	37·98	40·35
Aug. 9	13·73	57·26	59·06	77·31	27·03	48·78	37·87	39·74
19	13·52	55·32	58·93	76·04	26·79	47·17	37·77	39·16
Sept. 29	13·34	52·99	58·82	74·41	26·58	45·14	37·68	38·62
8	13·20	50·30	58·74	72·45	26·40	42·70	37·61	38·14
18	13·12	47·31	58·70	70·18	26·26	39·91	37·57	37·79
28	13·08	44·04	58·69	67·64	26·17	36·80	37·55	37·59
Oct. 8	13·11	40·23	58·74	64·56	26·14	33·46	37·58	37·58
18	13·21	36·63	58·83	61·56	26·18	29·55	37·66	37·84
28	13·37	32·99	58·97	58·43	26·28	25·88	37·78	38·34
Nov. 7	13·61	29·36	59·17	55·23	26·46	22·17	37·94	39·11
17	13·92	25·84	59·41	52·04	26·71	18·53	38·15	40·17
27	14·28	22·54	59·71	48·94	27·02	15·05	38·41	41·49
Dec. 7	14·71	19·54	60·05	46·01	27·39	11·80	38·70	43·08
17	15·17	16·93	60·41	43·34	27·82	8·90	39·02	44·88
27	15·67	14·81	60·80	41·01	28·28	6·45	39·36	46·83
37	16·18	13·24	61·20	39·09	28·77	4·49	39·71	48·89
Mean R.A.	12 <sup>h</sup> 50 <sup>m</sup> 12 <sup>s</sup> . 343		12 <sup>h</sup> 51 <sup>m</sup> 57 <sup>s</sup> . 614		13 <sup>h</sup> 20 <sup>m</sup> 25 <sup>s</sup> . 561		13 <sup>h</sup> 20 <sup>m</sup> 36 <sup>s</sup> . 462	
Mean Dec.	+56° 25' 54"·77		+38° 47' 16"·91		+55° 22' 46"·08		-10° 42' 26"·80	
Secδ, Tanδ	1·809, + 1·507		1·283, + 0·804		1·760, + 1·448		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		γ Boötis. Mag. 2·8	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	13 34	53 1	13 44	49 44	13 50	46 51	13 50	18 49
	s	"	s	"	s	"	s	"
Jan. 1	20·68	16·22	6·83	30·50	5·68	28·30	32·20	49·23
11	21·19	17·54	7·27	28·49	5·54	29·55	32·54	46·99
21	21·68	19·27	7·72	27·03	5·99	31·21	32·89	45·05
31	22·16	21·38	8·16	26·20	6·43	33·19	33·22	43·49
Feb. 10	22·60	23·80	8·57	25·98	6·85	35·43	33·54	42·33
20	23·01	26·49	8·95	26·36	7·23	37·89	33·83	41·61
Mar. 2	23·37	29·34	9·29	27·32	7·57	40·46	34·09	41·32
12	23·67	32·28	9·57	28·79	7·87	43·12	34·32	41·44
Apr. 22	23·93	35·26	9·80	30·68	8·12	45·80	34·51	41·93
1	24·13	38·24	9·98	32·95	8·33	48·45	34·66	42·77
11	24·28	41·13	10·09	35·43	8·50	51·04	34·78	43·87
21	24·38	43·91	10·15	38·06	8·62	53·49	34·86	45·16
May 1	24·44	46·51	10·16	40·70	8·70	55·78	34·91	46·60
11	24·44	48·88	10·11	43·27	8·73	57·89	34·93	48·09
21	24·40	51·01	10·03	45·66	8·73	59·76	34·92	49·57
31	24·32	52·83	9·90	47·84	8·69	61·39	34·89	50·99
June 10	24·21	54·31	9·75	49·69	8·61	62·71	34·84	52·31
20	24·05	55·44	9·56	51·17	8·50	63·72	34·76	53·49
30	23·87	56·16	9·36	52·25	8·37	64·39	34·67	54·48
July 10	23·66	56·50	9·14	52·88	8·20	64·72	34·57	55·26
20	23·44	56·42	8·90	53·06	8·02	64·69	34·45	55·79
30	23·20	55·93	8·67	52·77	7·83	64·30	34·32	56·08
Aug. 9	22·97	55·05	8·43	52·02	7·63	63·56	34·19	56·09
19	22·74	53·78	8·21	50·81	7·43	62·49	34·07	55·83
Sept. 29	22·54	52·21	8·00	49·17	7·25	61·14	33·95	55·31
8	22·37	50·39	7·82	47·11	7·09	59·55	33·85	54·49
18	22·24	48·36	7·67	44·68	6·97	57·79	33·77	53·38
28	22·17	46·19	7·56	41·90	6·90	55·92	33·72	51·99
Oct. 8	22·16	44·02	7·51	38·81	6·88	54·02	33·70	50·33
18	{ 22·23 } { 22·24 }	{ 41·80 } { 41·69 }	7·50	35·50	6·92	52·19	33·72	48·40
28	22·38	39·77	7·57	31·65	7·04	50·35	33·80	46·00
Nov. 7	22·60	38·12	7·70	28·04	7·22	48·94	33·93	43·60
17	22·90	36·80	7·89	24·43	7·47	47·85	34·10	41·04
27	23·26	35·92	8·15	20·90	7·78	47·13	34·32	38·39
Dec. 7	23·67	35·50	8·47	17·54	8·15	46·83	34·58	35·68
17	24·14	35·58	8·83	14·45	8·55	46·98	34·87	33·00
27	24·63	36·14	9·23	11·73	8·99	47·58	35·20	30·43
37	25·13	37·20	9·66	9·47	9·45	48·64	35·54	28·08
Mean R.A.	13 <sup>h</sup> 34 <sup>m</sup> 22 <sup>s</sup> . 008		13 <sup>h</sup> 44 <sup>m</sup> 6 <sup>s</sup> . 869		13 <sup>h</sup> 50 <sup>m</sup> 6 <sup>s</sup> . 321		13 <sup>h</sup> 50 <sup>m</sup> 32 <sup>s</sup> . 541	
Mean Dec.	-53° 1' 28"·29		+49° 44' 49"·70		-46° 51' 38"·05		+18° 50' 0"·44	
Secδ, Tanδ	1·663, - 1·328		1·548, + 1·181		1·462, - 1·067		1·057, + 0·341	



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	° /	h m	° /	h m	° /	h m	° /
	13 57	59 57	14 1	35 56	14 11	19 37	14 29	41 46
	s	"	s	"	s	"	s	"
Jan. 1	38.54	1.32	32.40	26.41	41.09	53.74	57.29	28.00
11	39.12	2.15	32.80	27.85	41.43	51.36	57.71	28.94
21	39.71	3.46	33.20	29.54	41.77	49.31	58.14	30.24
31	40.28	5.22	33.59	31.46	42.10	47.63	58.56	31.81
Feb. 10	40.82	7.36	33.95	33.55	42.43	46.37	58.97	33.61
20	41.32	9.81	34.30	35.76	42.73	45.55	59.35	35.60
Mar. 2	41.78	12.54	34.60	38.02	43.00	45.17	59.71	37.71
12	42.17	15.44	34.88	40.26	43.24	45.21	60.03	39.91
Apr. 22	42.51	18.47	35.11	42.47	43.45	45.67	60.32	42.13
1	42.79	21.55	35.31	44.58	43.62	46.48	60.57	44.33
11	43.02	24.62	35.47	46.59	43.75	47.58	60.78	46.49
21	43.18	27.63	35.59	48.48	43.86	48.90	60.95	48.56
May 1	43.28	30.52	35.68	50.21	43.92	50.37	61.08	50.54
11	43.31	33.26	35.74	51.74	43.96	51.91	61.18	52.37
21	43.30	35.75	35.76	53.08	43.97	53.47	61.23	54.03
31	43.23	37.98	35.75	54.22	43.95	54.96	61.25	55.51
June 10	43.10	39.89	35.70	55.13	43.91	56.38	61.23	56.77
20	42.93	41.45	35.63	55.78	43.84	57.64	61.17	57.79
30	42.71	42.60	35.54	56.19	43.75	58.72	61.08	58.54
July 10	42.46	43.34	35.42	56.33	43.65	59.57	60.97	59.02
20	42.18	43.64	35.28	56.22	43.53	60.19	60.82	59.21
30	41.88	43.50	35.13	55.83	43.40	60.52	60.65	59.09
Aug. 9	41.57	42.89	34.97	55.19	43.26	60.59	60.47	58.68
19	41.27	41.88	34.81	54.32	43.12	60.38	60.29	57.98
Sept. 29	40.99	40.45	34.66	53.25	42.99	59.87	60.11	57.04
8	40.74	38.68	34.53	52.02	42.87	59.07	59.94	55.84
18	40.55	36.64	34.43	50.70	42.76	57.98	59.80	54.48
28	40.41	34.38	34.36	49.32	42.69	56.56	59.70	52.98
Oct. 8	40.35	32.02	34.33	47.96	42.65	54.88	59.63	51.42
18	40.37	29.65	34.36	46.70	42.65	52.92	59.62	49.88
28	40.49	27.13	34.46	45.49	{42.69}	{50.71}	59.68	48.43
Nov. 7	40.71	25.07	34.61	44.65	{42.70}	{50.47}	59.81	47.01
17	41.01	23.29	34.81	44.11	42.94	45.38	60.00	45.99
27	41.39	21.88	35.07	43.90	43.14	42.63	60.25	45.27
Dec. 7	41.85	20.91	35.39	44.06	43.38	39.83	60.55	44.89
17	42.36	20.44	35.74	44.60	43.66	37.06	60.90	44.89
27	42.92	20.48	36.12	45.50	43.97	34.39	61.30	45.28
37	43.50	21.03	36.51	46.74	44.30	31.92	61.71	46.05
Mean R.A.	13 <sup>h</sup> 57 <sup>m</sup> 40 <sup>s</sup> .409		14 <sup>h</sup> 1 <sup>m</sup> 33 <sup>s</sup> .449		14 <sup>h</sup> 11 <sup>m</sup> 41 <sup>s</sup> .559		14 <sup>h</sup> 29 <sup>m</sup> 58 <sup>s</sup> .636	
Mean Dec.	-59° 57' 13".57		-35° 56' 32".60		+19° 38' 5".69		-41° 46' 34".20	
Secδ, Tanδ	1.997, - 1.729		1.235, - 0.725		1.062, + 0.357		1.341, - 0.893	

AT UPPER TRANSIT AT GREENWICH.

Date.	α <sup>2</sup> Centauri. Mag. 0.3		α Lupi. Mag. 2.5		ε <sup>2</sup> Boötis. Mag. 2.6		α Libræ. Mag. 2.9	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m	° /	h m	° /	h m	° /	h m	° /
	14 33	60 28	14 36	47 0	14 41	27 25	14 46	15 40
	s	"	s	"	s	"	s	"
Jan. 1	39.38	19.61	6.60	48.34	10.63	71.06	2.80	52.90
11	39.96	20.03	7.05	49.06	10.97	68.56	3.14	54.52
21	40.55	20.91	7.51	50.16	11.32	66.45	3.49	56.21
31	41.14	22.23	7.97	51.59	11.67	64.77	3.83	57.91
Feb. 10	41.70	23.97	8.41	53.32	12.01	63.55	4.16	59.58
20	42.23	26.04	8.83	55.26	12.34	62.85	4.48	61.15
Mar. 2	42.72	28.41	9.22	57.38	12.64	62.65	4.78	62.59
12	43.16	30.99	9.57	59.66	12.91	62.96	5.05	63.86
Apr. 22	43.55	33.73	9.89	62.00	13.15	63.74	5.30	64.96
1	43.88	36.57	10.16	64.36	13.35	64.91	5.51	65.90
11	44.15	39.45	10.40	66.72	13.52	66.44	5.69	66.64
21	44.36	42.34	10.59	69.02	13.65	68.21	5.85	67.21
May 1	44.51	45.15	10.74	71.24	13.75	70.15	5.97	67.63
11	44.60	47.84	10.85	73.33	13.81	72.18	6.07	67.92
21	44.62	50.38	10.91	75.27	13.84	74.24	6.14	68.09
31	44.59	52.69	10.93	77.03	13.84	76.24	6.18	68.14
June 10	44.49	54.73	10.91	78.56	13.80	78.10	6.18	68.10
20	44.34	56.45	10.85	79.86	13.74	79.80	6.17	67.98
30	44.14	57.83	10.75	80.85	13.65	81.25	6.12	67.79
July 10	43.90	58.82	10.61	81.55	13.54	82.43	6.05	67.52
20	43.61	59.40	10.45	81.91	13.41	83.30	5.96	67.18
30	43.30	59.54	10.26	81.93	13.26	83.86	5.85	66.78
Aug. 9	42.98	59.25	10.06	81.62	13.10	84.08	5.72	66.36
19	42.65	58.52	9.85	80.97	12.94	83.95	5.59	65.89
Sept. 29	42.33	57.38	9.64	80.00	12.78	83.46	5.46	65.40
8	42.04	55.88	9.45	78.77	12.62	82.59	5.33	64.91
18	41.79	54.05	9.28	77.32	12.49	81.38	5.22	64.47
28	41.59	51.96	9.16	75.68	12.37	79.83	5.13	64.10
Oct. 8	41.47	49.69	9.08	73.92	12.29	77.96	5.07	63.81
18	41.43	47.34	9.06	72.13	12.25	75.77	5.06	63.66
28	41.47	45.01	9.10	70.41	12.26	73.31	5.09	63.70
Nov. 7	41.63	42.59	9.23	68.69	12.32	70.31	5.18	63.97
17	41.88	40.63	9.42	67.35	12.44	67.42	5.31	64.47
27	42.21	38.98	9.68	66.30	12.60	64.42	5.50	65.22
Dec. 7	42.63	37.71	10.00	65.62	12.82	61.38	5.74	66.20
17	43.11	36.87	10.38	65.29	13.08	58.39	6.01	67.41
27	43.65	36.51	10.79	65.40	13.38	55.54	6.31	68.81
37	44.22	36.65	11.23	65.91	13.70	52.91	6.65	70.35
Mean R.A.	14 <sup>h</sup> 33 <sup>m</sup> 41 <sup>s</sup> .520		14 <sup>h</sup> 36 <sup>m</sup> 8 <sup>s</sup> .150		14 <sup>h</sup> 41 <sup>m</sup> 11 <sup>s</sup> .253		14 <sup>h</sup> 46 <sup>m</sup> 3 <sup>s</sup> .753	
Mean Dec.	-60° 28' 29".81		-47° 0' 55".46		+27° 26' 25".67		-15° 40' 50".89	
Secδ, Tanδ	2.029, - 1.766		1.467, - 1.073		1.127, + 0.519		1.039, - 0.281	



AT UPPER TRANSIT AT GREENWICH.

Date.	β Ursæ Minoris. Mag. 2.2		β Lupi. Mag. 2.7		β Libræ. 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	° /	h m	° /	h m	° /	h m	° /
	14 50	74 29	14 52	42 46	15 12	9 3	15 30	26 59
	s	"	s	"	s	"	s	"
Jan. 1	55.67	77.31	48.02	58.30	18.39	50.06	59.30	70.01
11	56.44	74.95	48.44	58.98	18.71	51.75	59.61	67.35
21	57.28	73.16	48.87	59.98	19.04	53.46	59.94	64.98
31	58.16	72.01	49.30	61.30	19.38	55.12	60.27	63.03
Feb. 10	59.05	71.56	49.72	62.85	19.71	56.65	60.61	61.54
20	59.92	71.78	50.13	64.60	20.03	58.02	60.95	60.56
Mar. 2	60.74	72.66	50.51	66.49	20.33	59.20	61.27	60.09
12	61.47	74.16	50.86	68.50	20.61	60.16	61.57	60.13
Apr. 22	62.10	76.19	51.17	70.57	20.86	60.91	61.84	60.69
1	62.61	78.66	51.45	72.65	21.09	61.42	62.09	61.71
11	62.98	81.46	51.69	74.71	21.29	61.74	62.30	63.11
21	63.22	84.48	51.90	76.73	21.47	61.85	62.48	64.82
May 1	63.32	87.61	52.07	78.68	21.61	61.80	62.63	66.80
11	63.27	90.73	52.19	80.52	21.73	61.62	62.74	68.91
21	63.09	93.72	52.28	82.22	21.82	61.34	62.82	71.12
31	62.78	96.51	52.33	83.79	21.88	60.97	62.87	73.31
June 10	62.36	98.99	52.33	85.17	21.91	60.56	62.88	75.45
20	61.83	101.09	52.30	86.32	21.91	60.12	62.85	77.43
30	61.22	102.76	52.23	87.23	21.88	59.66	62.80	79.21
July 10	60.54	103.94	52.12	87.89	21.83	59.19	62.71	80.75
20	59.81	104.61	51.98	88.27	21.74	58.72	62.59	82.00
30	59.03	104.78	51.82	88.37	21.64	58.27	62.45	82.95
Aug. 9	58.25	104.38	51.64	88.16	21.52	57.84	62.29	83.55
19	57.46	103.48	51.44	87.65	21.39	57.45	62.12	83.80
Sept. 29	56.69	102.06	51.25	86.87	21.25	57.12	61.94	83.69
8	55.96	100.15	51.06	85.83	21.11	56.86	61.76	83.21
18	55.29	97.77	50.90	84.59	20.99	56.68	61.59	82.36
28	54.69	95.00	50.77	83.18	20.89	56.58	61.44	81.15
Oct. 8	54.19	91.85	50.68	81.68	20.81	56.63	61.32	79.58
18	53.80	88.40	50.65	80.13	20.77	56.85	61.22	77.66
28	53.53	84.72	50.67	78.63	20.77	57.24	61.17	75.43
Nov. 7	{53.41 53.40}	{80.87 80.49}	50.76	77.23	20.82	57.84	61.18	72.92
17	53.44	76.57	50.93	75.95	20.93	58.75	{61.23 61.24}	{70.19 69.91}
27	53.63	72.71	51.16	75.05	21.09	59.79	61.35	66.98
Dec. 7	53.97	69.02	51.44	74.45	21.29	61.05	61.51	63.96
17	54.45	65.56	51.78	74.21	21.54	62.47	61.73	60.91
27	55.06	62.45	52.16	74.32	21.82	64.03	61.98	57.97
37	55.78	59.82	52.57	74.81	22.13	65.69	62.27	55.22
Mean R.A.	14 <sup>h</sup> 50 <sup>m</sup> 56 <sup>s</sup> . 879		14 <sup>h</sup> 52 <sup>m</sup> 49 <sup>s</sup> . 527		15 <sup>h</sup> 12 <sup>m</sup> 19 <sup>s</sup> . 394		15 <sup>h</sup> 31 <sup>m</sup> 0 <sup>s</sup> . 234	
Mean Dec.	+74° 30' 39". 70		-42° 47' 3". 39		-9° 3' 45". 09		+27° 0' 24". 71	
Secδ, Tanδ	3.745, + 3.609		1.363, - 0.925		1.013, - 0.159		1.122, + 0.510	

AT UPPER TRANSIT AT GREENWICH.

Date.	α Serpentis. Mag. 2.8		δ Scorpïi. Mag. 2.5		β <sup>1</sup> Scorpïi. Mag. 2.7		γ Draconis. Mag. 2.9	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	° /	h m	° /	h m	° /	h m	° /
	15 39	6 41	15 55	22 22	16 0	19 34	16 22	61 42
	s	"	s	"	s	"	s	"
Jan. 1	57.88	45.37	9.83	32.85	21.20	9.12	46.71	20.67
11	58.17	43.22	10.15	33.78	21.51	10.14	47.06	17.41
21	58.48	41.22	10.49	34.84	21.83	11.28	47.48	14.56
31	58.80	39.42	10.83	35.99	22.17	12.46	47.95	12.21
Feb. 10	59.12	37.88	11.18	37.16	22.52	13.64	48.46	10.45
20	59.44	36.69	11.53	38.34	22.86	14.79	48.98	9.35
Mar. 2	59.74	35.84	11.87	39.46	23.19	15.86	49.50	8.93
12	60.03	35.35	12.19	40.52	23.51	16.83	50.01	9.17
Apr. 22	60.30	35.22	12.49	41.49	23.81	17.70	50.49	10.06
1	60.54	35.45	12.77	42.34	24.08	18.41	50.93	11.59
11	60.76	35.96	13.03	43.09	24.34	19.01	51.32	13.64
21	60.94	36.74	13.25	43.73	24.57	19.49	51.65	16.12
May 1	61.11	37.74	13.46	44.28	24.77	19.86	51.92	18.94
11	61.24	38.89	13.63	44.74	24.95	20.15	52.11	22.03
21	61.34	40.15	13.77	45.13	25.09	20.35	52.22	25.22
31	61.42	41.45	13.88	45.45	25.21	20.48	52.26	28.45
June 10	61.46	42.74	13.96	45.71	25.28	20.58	52.23	31.59
20	61.47	43.99	14.00	45.91	25.33	20.61	52.13	34.56
30	61.45	45.16	14.00	46.04	25.34	20.60	51.95	37.28
July 10	61.40	46.22	13.97	46.12	25.31	20.56	51.71	39.68
20	61.33	47.14	13.91	46.11	25.25	20.47	51.41	41.69
30	61.22	47.89	13.82	46.04	25.16	20.33	51.06	43.27
Aug. 9	61.10	48.48	13.70	45.89	25.05	20.13	50.67	44.40
19	60.96	48.88	13.56	45.65	24.91	19.88	50.24	45.03
Sept. 29	60.82	49.06	13.40	45.33	24.76	19.58	49.80	45.15
8	60.67	49.03	13.24	44.96	24.61	19.24	49.34	44.73
18	60.52	48.78	13.09	44.53	24.45	18.88	48.89	43.80
28	60.40	48.30	12.96	44.06	24.32	18.52	48.47	42.35
Oct. 8	60.30	47.58	12.84	43.59	24.20	18.15	48.07	40.44
18	60.22	46.63	12.76	43.14	24.12	17.85	47.72	38.06
28	60.19	45.43	12.73	42.78	24.08	17.64	47.43	35.27
Nov. 7	60.21	43.99	12.74	42.52	24.09	17.53	47.21	32.12
17	60.27	42.31	12.81	42.42	24.15	17.59	47.07	28.68
27	60.39	40.24	12.94	42.51	24.28	17.87	47.02	25.03
Dec. 7	60.56	38.20	13.12	42.77	24.44	18.29	47.07	20.87
17	60.77	36.04	13.35	43.25	24.66	18.91	47.22	17.12
27	61.01	33.84	13.62	43.92	24.92	19.70	47.45	13.48
37	61.30	31.67	13.92	44.76	25.22	20.63	47.76	10.05
Mean R.A.	15 <sup>h</sup> 39 <sup>m</sup> 58 <sup>s</sup> . 890		15 <sup>h</sup> 55 <sup>m</sup> 11 <sup>s</sup> . 162		16 <sup>h</sup> 0 <sup>m</sup> 22 <sup>s</sup> . 506		16 <sup>h</sup> 22 <sup>m</sup> 48 <sup>s</sup> . 659	
Mean Dec.	+ 6° 41' 55". 29		- 22° 22' 29". 55		- 19° 34' 4". 95		+ 61° 42' 39". 21	
Secδ, Tanδ	1.007, + 0.117		1.081, - 0.412		1.061, - 0.355		2.110, + 1.858	



AT UPPER TRANSIT AT GREENWICH.									
Date.	α Scorpii. (Antares) Mag. 1.3		β Herculis. Mag. 2.8		τ Scorpii. Mag. 2.9		ζ Ophiuchi. Mag. 2.7		
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.	
	h m	° /	h m	° /	h m	° /	h m	° /	
	16 24	26 14	16 26	21 40	16 30	28 2	16 32	10 23	
	s	"	s	"	s	"	s	"	
Jan. 1	2.75	26.99	27.52	29.11	26.30	14.87	20.68	37.18	
11	3.05	27.53	27.78	26.48	26.60	15.30	20.96	38.48	
21	3.38	28.22	28.06	24.08	26.94	15.86	21.25	39.77	
31	3.73	29.02	28.37	21.97	27.28	16.56	21.56	41.04	
Feb. 10	4.09	29.91	28.69	20.26	27.64	17.33	21.88	42.22	
20	4.44	30.81	29.01	18.99	28.00	18.15	22.21	43.25	
Mar. 2	4.79	31.70	29.33	18.19	28.36	19.00	22.53	44.13	
12	5.13	32.59	29.63	17.88	28.71	19.84	22.84	44.79	
Apr. 22	5.46	33.43	29.93	18.08	29.04	20.66	23.14	45.27	
1	5.77	34.20	30.20	18.75	29.36	21.43	23.42	45.53	
11	6.05	34.92	30.46	19.83	29.65	22.17	23.69	45.59	
21	6.32	35.58	30.69	21.26	29.92	22.85	23.93	45.48	
May 1	6.55	36.17	30.89	23.00	30.17	23.50	24.15	45.23	
11	6.76	36.72	31.06	24.95	30.39	24.10	24.34	44.87	
21	6.94	37.22	31.19	27.06	30.58	24.69	24.51	44.42	
31	7.08	37.68	31.30	29.23	30.73	25.25	24.64	43.92	
June 10	7.19	38.12	31.36	31.37	30.84	25.76	24.75	43.39	
20	7.26	38.52	31.39	33.47	30.92	26.24	24.82	42.86	
30	7.29	38.85	31.39	35.42	30.96	26.67	24.85	42.34	
July 10	7.28	39.12	31.35	37.19	30.95	27.04	24.85	41.86	
20	7.23	39.33	31.28	38.73	30.91	27.34	24.81	41.40	
30	7.15	39.46	31.17	40.01	30.83	27.56	24.74	40.99	
Aug. 9	7.04	39.49	31.03	41.00	30.72	27.67	24.64	40.61	
19	6.90	39.43	30.88	41.68	30.58	27.66	24.51	40.30	
Sept. 29	6.74	39.26	30.70	42.04	30.42	27.53	24.37	40.02	
8	6.58	38.98	30.52	42.06	30.25	27.28	24.22	39.81	
18	6.41	38.60	30.34	41.72	30.08	26.92	24.06	39.66	
28	6.25	38.14	30.17	41.05	29.91	26.47	23.91	39.57	
Oct. 8	6.12	37.63	30.01	40.04	29.77	25.92	23.79	39.58	
18	6.02	37.09	29.89	38.66	29.66	25.33	23.68	39.71	
28	5.95	36.57	29.79	36.96	29.59	24.74	23.62	39.94	
Nov. 7	5.94	36.11	29.74	34.97	29.57	24.18	23.59	40.33	
17	5.97	35.73	29.74	32.71	29.60	23.69	23.62	40.87	
27	6.07	35.48	29.79	30.22	29.69	23.31	23.69	41.58	
Dec. 7 <sup>30</sup>	6.23	35.39	29.90	27.27	29.85	23.08	23.83	42.56	
17	6.44	35.49	30.06	24.53	30.05	23.03	24.01	43.59	
27	6.69	35.76	30.26	21.76	30.30	23.16	24.22	44.73	
37	6.98	36.20	30.50	19.07	30.59	23.47	24.48	45.97	
Mean R.A.	16 <sup>h</sup> 24 <sup>m</sup> 4 <sup>s</sup> .226		16 <sup>h</sup> 26 <sup>m</sup> .28 <sup>s</sup> .722		16 <sup>h</sup> 30 <sup>m</sup> 27 <sup>s</sup> .824		16 <sup>h</sup> 32 <sup>m</sup> 21 <sup>s</sup> .991		
Mean Dec.	-26° 14' 23".10		+21° 40' 42".39		-28° 2' 11".01		-10° 23' 29".88		
Secδ, Tanδ	1.115, - 0.493		1.076, + 0.398		1.133, - 0.533		1.017, - 0.183		

AT UPPER TRANSIT AT GREENWICH.									
Date.	α Triang. Aust. Mag. 1.9		ε Scorpii. Mag. 2.3		η Ophiuchi. Mag. 2.6		β Arct. 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 39	68 52	16 44	34 8	17 5	15 37	17 18	55 26	
	s	"	s	"	s	"	s	"	
Jan. 1	22.52	8.42	29.83	14.36	21.77	12.17	1.36	58.32	
11	23.13	6.81	30.14	14.37	22.02	13.03	1.73	56.93	
21	23.82	5.61	30.48	14.55	22.30	13.92	2.16	55.79	
31	24.56	4.80	30.84	14.89	22.61	14.82	2.63	54.94	
Feb. 10	25.35	4.43	31.21	15.38	22.92	15.67	3.13	54.37	
20	26.14	4.46	31.59	15.98	23.25	16.45	3.65	54.09	
Mar. 2	26.94	4.90	31.97	16.65	23.57	17.12	4.18	54.09	
12	27.73	5.74	32.34	17.39	23.90	17.63	4.71	54.37	
Apr. 22	28.49	6.92	32.70	18.18	24.21	18.02	5.23	54.91	
1	29.21	8.45	33.04	18.99	24.51	18.24	5.73	55.70	
11	29.89	10.25	33.36	19.81	24.80	18.32	6.22	56.71	
21	30.51	12.31	33.66	20.67	25.08	18.26	6.68	57.93	
May 1	31.06	14.60	33.94	21.52	25.33	18.11	7.10	59.34	
11	31.53	17.04	34.18	22.37	25.56	17.89	7.48	60.91	
21	31.93	19.60	34.39	23.25	25.77	17.60	7.82	62.61	
31	32.23	22.21	34.57	24.11	25.94	17.27	8.10	64.43	
June 10	32.43	24.85	34.70	24.95	26.08	16.95	8.33	66.30	
20	32.53	27.42	34.80	25.74	26.18	16.62	8.49	68.20	
30	32.54	29.86	34.85	26.52	26.24	16.32	8.59	70.08	
July 10	32.44	32.14	34.85	27.22	26.27	16.05	8.62	71.89	
20	32.24	34.14	34.81	27.84	26.26	15.80	8.58	73.57	
30	31.97	35.84	34.74	28.32	26.21	15.58	8.48	75.06	
Aug. 9	31.61	37.15	34.62	28.68	26.12	15.37	8.32	76.31	
19	31.19	38.06	34.47	28.89	26.01	15.19	8.10	77.31	
Sept. 29	30.73	38.49	34.30	28.91	25.87	15.03	7.85	77.94	
8	30.24	38.47	34.11	28.78	25.71	14.87	7.57	78.24	
18	29.75	37.98	33.93	28.46	25.55	14.72	7.27	78.17	
28	29.28	37.01	33.75	27.95	25.39	14.59	6.98	77.72	
Oct. 8	28.86	35.59	33.59	27.31	25.24	14.49	6.70	76.88	
18	28.51	33.78	33.45	26.57	25.12	14.44	6.46	75.74	
28	28.26	31.65	33.36	25.74	25.03	14.45	6.27	74.29	
Nov. 7	28.10	29.27	33.32	24.89	24.98	14.55	6.15	72.61	
17	28.07	26.77	33.34	24.06	24.97	14.73	6.10	70.78	
27	28.17	24.21	33.41	23.31	25.02	15.05	6.12	68.85	
Dec. 7	28.43	21.46	33.56	22.62	25.12	15.50	6.23	66.92	
17	28.79	19.11	33.76	22.12	25.28	16.13	6.45	64.85	
27	29.26	17.02	34.00	21.81	25.47	16.83	6.73	63.12	
37	29.84	15.23	34.29	21.71	25.71	17.63	7.07	61.58	
Mean R.A.	16 <sup>h</sup> 39 <sup>m</sup> 26 <sup>s</sup> .462		16 <sup>h</sup> 44 <sup>m</sup> 31 <sup>s</sup> .509		17 <sup>h</sup> 5 <sup>m</sup> 23 <sup>s</sup> .200		17 <sup>h</sup> 18 <sup>m</sup> 3 <sup>s</sup> .901		
Mean Dec.	-68° 52' 9".73		-34° 8' 10".77		-15° 37' 4".72		-55° 26' 55".15		
Secδ, Tanδ	2.774, - 2.588		1.208, - 0.678		1.038, - 0.280		1.763, - 1.452		



AT UPPER TRANSIT AT GREENWICH.

Date.	ν 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 25	49 48	17 27	37 2	17 30	12 36
	s	"	s	"	s	"	s	"
Jan. 1	48.92	43.88	4.61	34.02	40.15	34.01	52.33	69.86
11	49.20	43.40	4.94	32.84	40.43	33.52	52.53	67.63
21	49.52	43.08	5.32	31.89	40.74	33.18	52.77	65.53
31	49.86	42.91	5.73	31.18	41.09	32.98	53.03	63.61
Feb. 10	50.23	42.87	6.17	30.72	41.45	32.93	53.31	61.94
20	50.61	42.96	6.63	30.48	41.83	33.00	53.61	60.63
Mar. 2	51.00	43.15	7.10	30.46	42.22	33.17	53.91	59.68
12	51.39	43.45	7.57	30.68	42.60	33.44	54.22	59.15
Apr. 22	51.77	43.84	8.04	31.11	42.99	33.78	54.52	59.06
1	52.15	44.29	8.49	31.73	43.36	34.20	54.81	59.38
11	52.50	44.80	8.93	32.53	43.72	34.68	55.10	60.11
21	52.85	45.39	9.34	33.51	44.07	35.23	55.37	61.18
May 1	53.17	46.03	9.73	34.63	44.39	35.85	55.61	62.56
11	53.47	46.74	10.08	35.90	44.69	36.52	55.84	64.17
21	53.73	47.51	10.39	37.30	44.95	37.25	56.04	65.94
31	53.95	48.34	10.66	38.78	45.18	38.05	56.21	67.85
June 10	54.14	49.21	10.87	40.36	45.37	38.90	56.35	69.79
20	54.29	50.12	11.04	41.96	45.52	39.78	56.45	71.72
30	54.38	51.01	11.14	43.54	45.62	40.67	56.52	73.58
July 10	54.43	51.88	11.19	45.07	45.67	41.53	56.54	75.33
20	54.43	52.73	11.17	46.52	45.67	42.36	56.53	76.90
30	54.38	53.49	11.10	47.82	45.63	43.12	56.47	78.29
Aug. 9	54.29	54.13	10.97	48.93	45.54	43.77	56.39	79.48
19	54.16	54.62	10.80	49.80	45.41	44.28	56.27	80.40
Sept. 29	53.99	54.95	10.58	50.40	45.25	44.61	56.12	81.08
8	53.80	55.10	10.34	50.71	45.06	44.79	55.96	81.50
18	53.61	55.04	10.09	50.68	44.86	44.74	55.78	81.62
28	53.41	54.78	9.83	50.34	44.66	44.51	55.61	81.48
Oct. 8	53.22	54.32	9.59	49.67	44.47	44.07	55.44	81.03
18	53.06	53.69	9.38	48.73	44.31	43.45	55.29	80.30
28	52.93	52.91	9.22	47.51	44.18	42.69	55.17	79.29
Nov. 7	52.85	52.01	9.10	46.10	44.10	41.82	55.08	78.00
17	52.82	51.06	9.06	44.54	44.07	40.88	55.03	76.46
27	52.85	50.09	9.08	42.91	44.09	39.94	55.03	74.67
Dec. 7	52.94	49.17	9.18	41.27	44.18	39.04	55.08	72.68
17 <sup>14</sup>	53.11	48.25	9.37	39.53	44.34	38.13	55.19	70.32
27	53.32	47.53	9.61	38.07	44.55	37.39	55.33	68.09
37	53.58	46.96	9.91	36.78	44.80	36.79	55.51	65.85
Mean R.A.	17 <sup>h</sup> 24 <sup>m</sup> 50 <sup>s</sup> .719		17 <sup>h</sup> 25 <sup>m</sup> 6 <sup>s</sup> .842		17 <sup>h</sup> 27 <sup>m</sup> 41 <sup>s</sup> .949		17 <sup>h</sup> 30 <sup>m</sup> 53 <sup>s</sup> .722	
Mean Dec.	-37° 13' 38".34		-49° 48' 29".77		-37° 2' 28".28		+12° 37' 21".20	
Secδ, Tanδ	1.256, - 0.760		1.550, - 1.184		1.253, - 0.755		1.025, + 0.224	

AT UPPER TRANSIT AT GREENWICH.

Date.	θ Scorpii. Mag. 2.0		κ Scorpii. 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	° /	h m	° /	h m	° /	h m	° /
	17 31	42 56	17 36	38 59	17 39	4 35	17 54	51 29
	s	"	s	"	s	"	s	"
Jan. 1	1.90	41.62	26.29	14.98	9.06	59.92	32.98	42.51
11	2.19	40.77	26.56	14.31	9.26	58.12	33.16	39.04
21	2.53	40.10	26.88	13.80	9.50	56.38	33.39	35.77
31	2.90	39.63	27.22	13.44	9.76	54.79	33.67	32.80
Feb. 10	3.29	39.32	27.59	13.23	10.03	53.41	34.00	30.25
20	3.70	39.18	27.97	13.14	10.33	52.27	34.37	28.23
Mar. 2	4.11	39.21	28.37	13.17	10.63	51.45	34.76	26.80
12	4.53	39.39	28.76	13.31	10.93	50.98	35.16	25.99
Apr. 22	4.95	39.71	29.16	13.58	11.23	50.86	35.57	25.82
1	5.36	40.16	29.54	13.92	11.53	51.09	35.98	26.33
11	5.75	40.75	29.92	14.35	11.81	51.65	36.37	27.46
21	6.12	41.44	30.28	14.87	12.09	52.51	36.73	29.15
May 1	6.47	42.24	30.61	15.48	12.34	53.61	37.06	31.35
11	6.80	43.17	30.93	16.18	12.58	54.93	37.36	33.93
21	7.09	44.19	31.21	16.96	12.79	56.38	37.60	36.86
31	7.34	45.28	31.45	17.81	12.97	57.92	37.80	39.99
June 10	7.54	46.44	31.66	18.73	13.12	59.49	37.94	43.26
20	7.70	47.64	31.82	19.69	13.24	61.06	38.02	46.56
30	7.81	48.86	31.93	20.66	13.32	62.57	38.04	49.77
July 10	7.86	50.05	31.99	21.63	13.36	63.97	38.00	52.85
20	7.87	51.18	32.00	22.57	13.36	65.25	37.90	55.71
30	7.81	52.21	31.96	23.44	13.32	66.38	37.75	58.29
Aug. 9	7.71	53.09	31.87	24.20	13.25	67.34	37.54	60.51
19	7.57	53.80	31.74	24.81	13.14	68.10	37.29	62.33
Sept. 29	7.39	54.30	31.58	25.26	13.01	68.67	37.00	63.72
8	7.19	54.57	31.39	25.51	12.86	69.03	36.68	64.65
18	6.97	54.57	31.18	25.53	12.69	69.20	36.35	65.09
28	6.75	54.32	30.98	25.36	12.52	69.14	36.01	65.01
Oct. 8	6.54	53.82	30.78	24.94	12.36	68.87	35.67	64.42
18	6.35	53.07	30.61	24.32	12.22	68.38	35.35	63.33
28	6.21	52.12	30.47	23.55	12.10	67.66	35.06	61.75
Nov. 7	6.11	51.02	30.37	22.64	12.02	66.71	34.81	59.69
17	6.07	49.79	30.33	21.63	11.97	65.58	34.61	57.19
27	6.09	48.54	30.35	20.57	11.97	64.24	34.47	54.32
Dec. 7	6.17	47.26	30.42	19.54	12.02	62.71	34.40	51.16
17	6.34	45.94	30.58	18.48	{12.11}	{61.04}	34.39	47.78
					{12.12}	{60.86}		
27	6.55	44.84	30.78	17.58	12.26	59.10	34.47	43.91
37	6.82	43.90	31.03	16.82	12.45	57.31	34.60	40.41
Mean R.A.	17 <sup>h</sup> 31 <sup>m</sup> 3 <sup>s</sup> .869		17 <sup>h</sup> 36 <sup>m</sup> 28 <sup>s</sup> .141		17 <sup>h</sup> 39 <sup>m</sup> 10 <sup>s</sup> .462		17 <sup>h</sup> 54 <sup>m</sup> 35 <sup>s</sup> .147	
Mean Dec.	-42° 56' 36".29		-38° 59' 8".93		+4° 36' 10".42		+51° 29' 55".33	
Secδ, Tanδ	1.366, - 0.931		1.287, - 0.809		1.003, + 0.080		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	° /	h m	° /	h m	° /	h m	° /
	18 15	29 52	18 18	34 25	18 22	25 28	18 33	38 41
	s	"	s	"	s	"	s	"
Jan. 1	23.81	6.42	22.10	44.23	34.52	24.04	57.70	57.38
11	24.02	6.06	22.31	43.58	34.71	23.04	57.82	54.22
21	24.27	5.77	22.57	43.02	34.94	23.86	57.99	51.18
31	24.55	5.53	22.86	42.52	35.20	23.81	58.21	48.35
Feb. 10	24.85	5.33	23.18	42.09	35.49	23.76	58.46	45.84
20	25.18	5.16	23.52	41.73	35.80	23.70	58.75	43.76
Mar. 2	25.52	5.01	23.88	41.42	36.13	23.61	59.06	42.18
12	25.87	4.87	24.24	41.16	36.46	23.48	59.39	41.15
Apr. 22	26.23	4.72	24.61	40.96	36.80	23.32	59.73	40.70
1	26.58	4.58	24.98	40.82	37.14	23.11	60.08	40.87
11	26.93	4.44	25.35	40.72	37.48	22.86	60.42	41.63
21	27.27	4.33	25.71	40.69	37.81	22.59	60.75	42.93
May 1	27.60	4.26	26.06	40.74	38.14	22.32	61.07	44.72
11	27.91	4.23	26.39	40.87	38.44	22.07	61.36	46.96
21	28.20	4.27	26.69	41.10	38.72	21.86	61.63	49.54
31	28.46	4.38	26.96	41.44	38.98	21.70	61.86	52.38
June 10	28.69	4.57	27.20	41.87	39.20	21.62	62.05	55.38
20	28.88	4.86	27.40	42.39	39.39	21.61	62.19	58.48
30	29.02	5.22	27.55	43.00	39.54	21.68	62.29	61.57
July 10	29.12	5.63	27.66	43.69	39.64	21.82	62.34	64.58
20	29.17	6.10	27.72	44.41	39.70	22.04	62.33	67.44
30	29.17	6.58	27.72	45.13	39.71	22.31	62.28	70.09
Aug. 9	29.13	7.07	27.68	45.82	39.67	22.61	62.18	72.46
19	29.05	7.52	27.59	46.48	39.60	22.91	62.03	74.50
Sept. 29	28.92	7.92	27.46	47.04	39.48	23.19	61.85	76.18
8	28.77	8.22	27.30	47.48	39.34	23.43	61.64	77.44
18	28.60	8.43	27.11	47.77	39.17	23.61	61.40	78.30
28	28.41	8.51	26.92	47.88	39.00	23.71	61.15	78.70
Oct. 8	28.23	8.46	26.73	47.81	38.82	23.73	60.90	78.63
18	28.06	8.27	26.55	47.58	38.66	23.65	60.65	78.10
28	27.92	7.98	26.39	47.18	38.52	23.50	60.42	77.12
Nov. 7	27.80	7.58	26.27	46.63	38.41	23.28	60.23	75.65
Dec. 17	27.74	7.11	26.19	45.97	38.33	23.04	60.06	73.77
27	27.72	6.60	26.17	45.22	38.31	22.78	59.95	71.49
7	27.75	6.07	26.20	44.44	38.34	22.50	59.88	68.91
17	27.83	5.56	26.28	43.66	38.41	22.25	59.87	66.05
27	27.98	5.06	26.43	42.84	{38.53}	{22.03}	59.91	62.99
37	28.17	4.66	26.62	42.12	{38.55}	{22.03}	60.01	59.55
Mean R.A.	18h 15m 25s.460		18h 18m 23s.829		18h 22m 36s.101		18h 33m 59s.569	
Mean Dec.	-29° 51' 57".64		-34° 25' 35".54		-25° 28' 14".78		+38° 42' 7".62	
Secδ, Tanδ	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 Aquilae. Mag. 2.8		α Aquilae. (Altair) 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 57	30 0	19 42	10 23	19 46	8 37
	s	"	s	"	s	"	s	"
Jan. 1	{50.65}	{30.95}	3.00	30.52	5.94	53.46	30.86	67.60
11	50.83	30.62	3.17	29.92	6.01	51.73	30.94	65.99
21	51.04	30.35	3.38	29.37	6.14	49.84	31.06	64.22
31	51.28	30.07	3.62	28.84	6.29	48.23	31.21	62.70
Feb. 10	51.55	29.78	3.89	28.32	6.47	46.77	31.38	61.37
20	51.84	29.47	4.19	27.80	6.67	45.54	31.59	60.25
Mar. 2	52.15	29.13	4.50	27.27	6.91	44.63	31.82	59.43
12	52.48	28.76	4.83	26.74	7.16	44.05	32.08	58.93
Apr. 22	52.81	28.34	5.18	26.20	7.44	43.84	32.35	58.77
1	53.15	27.89	5.53	25.67	7.73	44.03	32.63	58.99
11	53.50	27.42	5.89	25.15	8.02	44.62	32.93	59.60
21	53.84	26.93	6.24	24.66	8.33	45.56	33.24	60.57
May 1	54.18	26.46	6.59	24.21	8.63	46.83	33.54	61.87
11	54.50	26.04	6.93	23.85	8.93	48.42	33.85	63.43
21	54.80	25.66	7.24	23.57	9.22	50.23	34.14	65.21
31	55.08	25.38	7.54	23.40	9.50	52.23	34.42	67.17
June 10	55.33	25.18	7.80	23.35	9.75	54.33	34.67	69.23
20	55.55	25.08	8.03	23.41	9.97	56.51	34.90	71.35
30	55.72	25.11	8.22	23.60	10.15	58.67	35.09	73.44
July 10	55.85	25.24	8.36	23.93	10.30	60.77	35.24	75.47
20	55.94	25.47	8.45	24.35	10.40	62.75	35.35	77.40
30	55.97	25.77	8.50	24.85	10.46	64.59	35.42	79.17
Aug. 9	55.96	26.13	8.49	25.39	10.48	66.27	35.44	80.78
19	55.91	26.52	8.44	25.96	10.45	67.72	35.42	82.17
Sept. 29	55.81	26.90	8.34	26.50	10.38	68.94	35.36	83.34
8	55.68	27.26	8.21	27.01	10.28	69.92	35.26	84.28
18	55.52	27.58	8.05	27.43	10.15	70.63	35.14	84.97
28	55.35	27.81	7.87	27.75	10.00	71.10	34.99	85.40
Oct. 8	55.17	27.96	7.69	27.93	9.84	71.30	34.83	85.60
18	55.00	28.00	7.51	27.98	9.67	71.22	34.67	85.54
28	54.85	27.94	7.35	27.89	9.51	70.90	34.51	85.25
Nov. 7	54.72	27.78	7.21	27.66	9.36	70.32	34.37	84.70
17	54.63	27.56	7.11	27.32	9.24	69.49	34.25	83.94
27	54.58	27.28	7.06	26.87	9.15	68.41	34.16	82.93
Dec. 7	54.58	26.96	7.05	26.36	9.09	67.13	34.10	81.73
17	54.62	26.62	7.09	25.82	9.07	65.66	34.08	80.37
27	54.72	26.28	7.18	25.24	9.08	64.05	34.09	78.88
37	54.87	25.93	7.33	24.62	9.14	62.35	34.15	77.32
Mean R.A.	18h 49m 52s.234		18h 57m 4s.612		19h 42m 7s.410		19h 46m 32s.316	
Mean Dec.	-26° 24' 20".71		-30° 0' 19".99		+10° 24' 1".91		+8° 38' 16".10	
Secδ, Tanδ	1.116, - 0.497		1.155, - 0.578		1.017, + 0.184		1.012, + 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 0	20 19	39 58	20 38	44 57	20 42	33 38
	s	//	s	//	s	//	s	//
Jan. 1	44.35	68.62	4.38	36.73	25.84	67.40	39.73	35.56
11	44.42	66.35	4.37	33.98	25.79	64.63	39.71	33.14
21	44.55	63.95	4.41	31.11	25.80	61.72	39.73	30.60
31	44.77	61.26	4.51	27.94	25.86	58.45	39.81	27.76
Feb. 10	45.03	58.82	4.64	25.22	25.97	55.57	39.92	25.30
20	45.35	56.41	4.82	22.74	26.13	52.89	40.07	23.05
Mar. 2	45.72	54.10	5.04	20.59	26.33	50.53	40.25	21.08
12	46.13	51.92	5.30	18.89	26.58	48.56	40.48	19.49
Apr. 22	46.58	49.94	5.59	17.69	26.87	47.10	40.74	18.36
1	47.07	48.17	5.91	17.04	27.20	46.19	41.03	17.75
11	47.57	46.65	6.25	16.96	27.55	45.85	41.34	17.66
21	48.10	45.41	6.60	17.46	27.92	46.09	41.67	18.10
May 1	48.63	44.47	6.96	18.52	28.30	46.93	42.01	19.08
11	49.17	43.87	7.31	20.10	28.68	48.32	42.35	20.54
21	49.69	43.61	7.66	22.12	29.05	50.22	42.69	22.43
31	50.19	43.70	7.98	24.57	29.40	52.55	43.01	24.70
June 10	50.66	44.16	8.27	27.33	29.73	55.25	43.32	27.30
20	51.09	44.94	8.54	30.35	30.02	58.25	43.59	30.15
30	51.47	46.05	8.75	33.51	30.26	61.48	43.83	33.14
July 10	51.78	47.44	8.93	36.77	30.46	64.82	44.03	36.22
20	52.03	49.06	9.05	40.03	30.60	68.22	44.18	39.32
30	52.19	50.88	9.11	43.23	30.69	71.60	44.29	42.37
Aug. 9	52.28	52.81	9.13	46.28	30.72	74.87	44.34	45.29
19	52.30	54.79	9.09	49.11	30.70	77.96	44.34	48.05
Sept. 29	52.23	56.75	9.00	51.71	30.62	80.83	44.30	50.54
8	52.09	58.60	8.87	53.97	30.49	83.41	44.21	52.76
18	51.90	60.27	8.70	55.89	30.31	85.66	44.08	54.68
28	51.65	61.66	8.49	57.43	30.11	87.50	43.92	56.24
Oct. 8	51.36	62.74	8.27	58.52	29.87	88.91	43.74	57.40
18	51.06	63.46	8.03	59.17	29.62	89.88	43.54	58.16
28	50.75	63.76	7.79	59.35	29.36	90.36	43.34	58.50
Nov. 7	50.45	63.63	7.56	59.05	29.10	90.34	43.14	58.39
17	50.19	63.06	7.35	58.28	28.86	89.82	42.95	57.85
27	49.96	62.08	7.16	57.05	28.63	88.78	42.78	56.87
Dec. 7	49.79	60.74	7.00	55.37	28.44	87.28	42.64	55.48
17	49.68	59.05	6.88	53.30	28.28	85.35	42.53	53.75
27	49.64	57.06	6.80	50.90	28.16	83.03	42.45	51.69
37	49.67	54.87	6.77	48.25	28.09	80.42	42.42	49.38
Mean R.A.	20 <sup>h</sup> 18 <sup>m</sup> 46 <sup>s</sup> .281		20 <sup>h</sup> 19 <sup>m</sup> 6 <sup>s</sup> .337		20 <sup>h</sup> 38 <sup>m</sup> 27 <sup>s</sup> .940		20 <sup>h</sup> 42 <sup>m</sup> 41 <sup>s</sup> .459	
Mean Dec.	-57° 0' 53".18		+39° 58' 39".71		+44° 58' 8".26		+33° 38' 37".90	
Secδ, Tanδ	1.837, - 1.541		1.305, + 0.838		1.413, + 0.999		1.201, + 0.666	

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 12	21 39	9 28	22 2	47 22	22 12	60 41
	s	//	s	//	s	//	s	//
Jan. 1	27.17	64.76	53.62	27.77	44.45	76.10	32.06	55.93
11	26.96	62.12	53.59	26.51	44.37	74.66	31.90	53.95
21	26.82	59.17	53.59	25.25	44.34	72.89	31.80	51.60
31	26.75	56.03	53.62	24.01	44.35	70.85	31.77	48.95
Feb. 10	26.78	52.50	53.69	22.84	44.40	68.60	31.80	46.06
20	26.80	49.39	53.79	21.72	44.52	65.94	31.90	42.69
Mar. 2	27.08	46.46	53.92	20.94	44.67	63.40	32.07	39.52
12	27.35	43.86	54.08	20.41	44.87	60.77	32.30	36.33
Apr. 22	27.70	41.70	54.27	20.19	45.11	58.12	32.59	33.17
1	28.10	40.04	54.49	20.32	45.39	55.50	32.93	30.10
11	28.56	38.95	54.75	20.80	45.72	52.98	33.34	27.22
21	29.05	38.47	55.02	21.62	46.08	50.57	33.80	24.55
May 1	29.57	38.62	55.32	22.78	46.47	48.34	34.29	22.15
11	30.11	39.37	55.63	24.26	46.88	46.34	34.83	20.07
21	30.63	40.72	55.94	25.99	47.31	44.62	35.38	18.39
31	31.14	42.62	56.26	27.95	47.75	43.22	35.94	17.10
June 10	31.61	45.00	56.57	30.07	48.19	42.16	36.51	16.25
20	32.03	47.80	56.87	32.29	48.61	41.48	37.06	15.86
30	32.40	50.95	57.15	34.55	49.01	41.19	37.58	15.95
July 10	32.70	54.35	57.39	36.80	49.38	41.28	38.07	16.48
20	32.92	57.94	57.60	39.00	49.71	41.76	38.50	17.45
30	33.07	61.62	57.78	41.08	49.98	42.60	38.86	18.82
Aug. 9	33.14	65.32	57.90	43.01	50.20	43.77	39.14	20.54
19	33.12	68.94	57.99	44.76	50.36	45.21	39.35	22.55
Sept. 29	33.03	72.44	58.03	46.30	50.45	46.87	39.47	24.77
8	32.86	75.73	58.03	47.60	50.48	48.68	39.51	27.12
18	32.62	78.73	57.99	48.67	50.44	50.54	39.46	29.51
28	32.33	81.40	57.92	49.49	50.36	52.40	39.33	31.83
Oct. 8	31.98	83.66	57.82	50.08	50.22	54.15	39.13	33.97
18	31.60	85.46	57.70	50.42	50.05	55.73	38.88	35.86
28	31.19	86.77	57.58	50.51	49.85	57.06	38.58	37.41
Nov. 7	30.77	87.53	57.44	50.39	49.64	58.09	38.26	38.56
17	30.35	87.74	57.31	50.04	49.42	58.74	37.93	39.25
27	29.94	87.38	57.19	49.47	49.21	59.02	37.59	39.42
Dec. 7	29.55	86.45	57.08	48.71	49.02	58.90	37.28	39.09
17	29.20	84.96	56.99	47.75	48.85	58.35	37.00	38.24
27	28.90	82.96	56.92	46.68	48.71	57.43	36.76	36.90
37	28.66	80.53	56.88	45.51	48.62	56.14	36.57	35.13
Mean R.A.	21 <sup>h</sup> 16 <sup>m</sup> 30 <sup>s</sup> .283		21 <sup>h</sup> 30 <sup>m</sup> 54 <sup>s</sup> .768		22 <sup>h</sup> 2 <sup>m</sup> 45 <sup>s</sup> .301		22 <sup>h</sup> 12 <sup>m</sup> 32 <sup>s</sup> .956	
Mean Dec.	+62° 13' 0".09		+ 9° 28' 32".30		-47° 22' 58".67		-60° 41' 36".46	
Secδ, Tanδ	2.145, + 1.898		1.014, + 0.167		1.477, - 1.087		2.043, - 1.782	



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 20	22 52	30 4	22 59	27 36	23 0	14 44	
	s	"	s	"	s	"	s	"	
Jan. 1	28.10	41.51	50.27	74.63	32.26	42.65	24.73	13.49	
11	27.98	40.27	50.18	74.21	32.15	41.30	24.64	12.41	
21	27.90	38.67	50.12	73.48	32.06	39.74	24.58	11.23	
31	27.86	36.73	50.09	72.48	32.00	38.04	24.53	10.01	
Feb. 10	27.86	34.51	50.09	71.25	31.97	36.27	24.51	8.80	
20	27.91	32.08	50.12	69.77	31.97	34.48	24.52	7.65	
Mar. 2	28.01	29.19	{50.18}	{68.07}	32.00	32.78	24.56	6.64	
12	28.16	26.44	{50.10}	{67.91}	32.00	31.13	24.65	5.77	
Apr. 22	28.34	23.61	50.43	63.94	32.21	29.90	24.77	5.23	
1	28.58	20.77	50.61	61.73	32.37	28.97	24.92	5.00	
11	28.86	17.97	50.83	59.43	32.58	28.43	25.12	5.12	
21	29.18	15.25	51.08	57.09	32.82	28.31	25.34	5.58	
May 1	29.54	12.69	51.37	54.75	33.10	28.59	25.60	6.40	
11	29.93	10.33	51.69	52.44	33.40	29.31	25.89	7.55	
21	30.34	8.24	52.02	50.25	33.73	30.45	26.20	9.01	
31	30.77	6.45	52.38	48.19	34.07	31.99	26.52	10.76	
June 10	31.21	5.00	52.74	46.33	34.42	33.86	26.85	12.74	
20	31.64	3.93	53.10	44.73	34.76	36.02	27.18	14.92	
30	32.05	3.28	53.45	43.41	35.09	38.43	27.50	17.20	
July 10	32.44	3.06	53.78	42.40	35.41	41.00	27.79	19.59	
20	32.80	3.25	54.09	41.73	35.69	43.71	28.06	21.95	
30	33.11	3.84	54.36	41.40	35.93	46.46	28.30	24.28	
Aug. 9	33.36	4.82	54.59	41.42	36.14	49.21	28.51	26.51	
19	33.56	6.11	54.77	41.77	36.31	51.91	28.67	28.62	
Sept. 29	33.70	7.71	54.91	42.42	36.43	54.49	28.79	30.55	
8	33.77	9.51	54.99	43.32	36.50	56.91	28.87	32.29	
18	33.79	11.44	55.03	44.44	36.54	59.14	28.91	33.81	
28	33.75	13.43	55.03	45.70	36.53	61.13	28.92	35.09	
Oct. 8	33.65	15.38	54.98	47.04	36.49	62.83	28.89	36.11	
18	33.51	17.23	54.90	48.39	36.42	64.25	28.83	36.89	
28	33.33	18.84	54.79	49.69	36.32	65.36	28.74	37.41	
Nov. 7	33.14	20.18	54.67	50.88	36.21	66.14	28.65	37.68	
17	32.93	21.17	54.53	51.90	36.08	66.58	28.54	37.69	
27	32.72	21.80	54.39	52.71	35.95	66.68	28.43	37.47	
Dec. 7	32.51	22.00	54.25	53.26	35.81	66.44	28.31	37.04	
17	32.33	21.79	54.12	53.54	35.68	65.84	28.20	36.40	
27	32.16	21.14	54.01	53.53	35.55	64.92	28.10	35.54	
37	32.03	20.10	53.91	53.23	35.44	63.73	28.01	34.54	
Mean R.A.	22 <sup>h</sup> 37 <sup>m</sup> 28 <sup>s</sup> .656		22 <sup>h</sup> 52 <sup>m</sup> 50 <sup>s</sup> .766		22 <sup>h</sup> 59 <sup>m</sup> 33 <sup>s</sup> .287		23 <sup>h</sup> 0 <sup>m</sup> 25 <sup>s</sup> .557		
Mean Dec.	-47° 20' 23".92		-30° 5' 1".07		+27° 36' 38".27		+14° 44' 13".07		
Secδ, Tanδ	1.476, - 1.085		1.156, - 0.579		1.129, + 0.523		1.034, + 0.263		

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

TABLE I.  
Containing the First Correction.  
Argument :- Local Sidereal Time of Observation.

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



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

TABLE I.--continued.  
Containing the *First* Correction.  
*Argument* :--Local Sidereal Time of Observation.

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

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

TABLE I.--continued.  
Containing the *First* Correction.  
*Argument* :--Local Sidereal Time of Observation.

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



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 2	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 1	0 2	0 2	30
3 0	0 0	0 1	0 1	0 2	0 2	0 3	0 4	0 4	15 0
30	0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 7	30
4 0	0 0	0 1	0 3	0 4	0 6	0 7	0 9	0 11	16 0
30	0 0	0 2	0 4	0 6	0 8	0 10	0 12	0 15	30
5 0	0 0	0 2	0 5	0 7	0 10	0 12	0 15	0 19	17 0
30	0 0	0 3	0 5	0 8	0 11	0 15	0 18	0 22	30
6 0	0 0	0 3	0 6	0 9	0 13	0 17	0 21	0 25	18 0
30	0 0	0 3	0 7	0 10	0 14	0 18	0 22	0 27	30
7 0	0 0	0 4	0 7	0 11	0 15	0 19	0 24	0 29	19 0
30	0 0	0 4	0 7	0 11	0 15	0 19	0 24	0 29	30
8 0	0 0	0 4	0 7	0 11	0 15	0 19	0 24	0 29	20 0
30	0 0	0 3	0 7	0 10	0 14	0 18	0 22	0 27	30
9 0	0 0	0 3	0 6	0 9	0 13	0 16	0 20	0 25	21 0
30	0 0	0 3	0 5	0 8	0 11	0 14	0 18	0 22	30
10 0	0 0	0 2	0 5	0 7	0 9	0 12	0 15	0 18	22 0
30	0 0	0 2	0 4	0 5	0 7	0 10	0 12	0 14	30
11 0	0 0	0 1	0 3	0 4	0 5	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 1	0 1	0 2	0 2	0 3	0 3	0 4	24 0

TABLE III (for 1913).

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	0 53	0 50	0 44	0 34	0 26	0 23	0 24
2	0 51	0 54	0 51	0 43	0 34	0 26	0 23
4	0 52	0 59	1 1	0 56	0 49	0 39	0 32
6	0 55	1 5	1 10	1 11	1 6	0 58	0 48
8	1 0	1 9	1 17	1 22	1 22	1 17	1 8
10	1 4	1 11	1 19	1 28	1 32	1 31	1 25
12	1 7	1 10	1 16	1 26	1 34	1 37	1 36
14	1 9	1 6	1 9	1 17	1 26	1 34	1 37
16	1 8	1 1	0 59	1 4	1 11	1 21	1 28
18	1 5	0 55	0 50	0 49	0 54	1 2	1 12
20	1 0	0 51	0 43	0 38	0 38	0 43	0 52
22	0 56	0 49	0 41	0 32	0 28	0 29	0 35
24	0 53	0 50	0 44	0 34	0 26	0 23	0 24

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

TABLE III (for 1913).

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 24	0 31	0 41	0 53	1 4	1 13	1 16
2	0 23	0 25	0 31	0 40	0 52	1 3	1 11
4	0 32	0 28	0 29	0 33	0 42	0 52	1 3
6	0 48	0 40	0 35	0 34	0 37	0 44	0 54
8	1 8	0 57	0 48	0 41	0 38	0 40	0 47
10	1 25	1 15	1 4	0 53	0 45	0 41	0 43
12	1 36	1 29	1 19	1 7	0 56	0 47	0 44
14	1 37	1 35	1 29	1 20	1 8	0 57	0 49
16	1 28	1 32	1 31	1 27	1 18	1 8	0 57
18	1 12	1 20	1 25	1 26	1 23	1 16	1 6
20	0 52	1 3	1 12	1 19	1 22	1 20	1 13
22	0 35	0 45	0 56	1 7	1 15	1 19	1 17
24	0 24	0 31	0 41	0 53	1 4	1 13	1 16



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

HOURS.		MINUTES.				SECONDS.			
Hours of Mean Time.	Equivalents in Sidereal Time.	Minutes of Mean Time.	Equivalents in Sidereal Time.	Minutes of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds 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	1	1.0027	31	31.0849
2	2 0 19.7130	2	2 0.3286	32	32 5.2568	2	2.0055	32	32.0876
3	3 0 29.5694	3	3 0.4928	33	33 5.4211	3	3.0082	33	33.0904
4	4 0 39.4259	4	4 0.6571	34	34 5.5853	4	4.0110	34	34.0931
5	5 0 49.2824	5	5 0.8214	35	35 5.7496	5	5.0137	35	35.0958
6	6 0 59.1388	6	6 0.9857	36	36 5.9139	6	6.0164	36	36.0986
7	7 1 8.9953	7	7 1.1499	37	37 6.0782	7	7.0192	37	37.1013
8	8 1 18.8518	8	8 1.3142	38	38 6.2424	8	8.0219	38	38.1040
9	9 1 28.7083	9	9 1.4785	39	39 6.4067	9	9.0246	39	39.1068
10	10 1 38.5647	10	10 1.6428	40	40 6.5710	10	10.0274	40	40.1095
11	11 1 48.4212	11	11 1.8070	41	41 6.7353	11	11.0301	41	41.1123
12	12 1 58.2777	12	12 1.9713	42	42 6.8995	12	12.0329	42	42.1150
13	13 2 8.1342	13	13 2.1356	43	43 7.0638	13	13.0356	43	43.1177
14	14 2 17.9906	14	14 2.2998	44	44 7.2281	14	14.0383	44	44.1205
15	15 2 27.8471	15	15 2.4641	45	45 7.3924	15	15.0411	45	45.1232
16	16 2 37.7036	16	16 2.6284	46	46 7.5566	16	16.0438	46	46.1259
17	17 2 47.5600	17	17 2.7927	47	47 7.7209	17	17.0465	47	47.1287
18	18 2 57.4165	18	18 2.9569	48	48 7.8852	18	18.0493	48	48.1314
19	19 3 7.2730	19	19 3.1212	49	49 8.0495	19	19.0520	49	49.1342
20	20 3 17.1295	20	20 3.2855	50	50 8.2137	20	20.0548	50	50.1369
21	21 3 26.9859	21	21 3.4498	51	51 8.3780	21	21.0575	51	51.1396
22	22 3 36.8424	22	22 3.6140	52	52 8.5423	22	22.0602	52	52.1424
23	23 3 46.6989	23	23 3.7783	53	53 8.7066	23	23.0630	53	53.1451
24	24 3 56.5554	24	24 3.9426	54	54 8.8708	24	24.0657	54	54.1479
		25	25 4.1069	55	55 9.0351	25	25.0685	55	55.1506
		26	26 4.2711	56	56 9.1994	26	26.0712	56	56.1533
		27	27 4.4354	57	57 9.3637	27	27.0739	57	57.1561
		28	28 4.5997	58	58 9.5279	28	28.0767	58	58.1588
		29	29 4.7640	59	59 9.6922	29	29.0794	59	59.1615
		30	30 4.9282	60	60 9.8565	30	30.0821	60	60.1643

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

FRACTIONS OF A SECOND.

Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.
	s		s		s		s		s
0.01	0.01003	0.21	0.21057	0.41	0.41112	0.61	0.61167	0.81	0.81222
0.02	0.02006	0.22	0.22060	0.42	0.42115	0.62	0.62170	0.82	0.82225
0.03	0.03008	0.23	0.23063	0.43	0.43118	0.63	0.63173	0.83	0.83227
0.04	0.04011	0.24	0.24066	0.44	0.44120	0.64	0.64175	0.84	0.84230
0.05	0.05014	0.25	0.25068	0.45	0.45123	0.65	0.65178	0.85	0.85233
0.06	0.06016	0.26	0.26071	0.46	0.46126	0.66	0.66181	0.86	0.86235
0.07	0.07019	0.27	0.27074	0.47	0.47129	0.67	0.67183	0.87	0.87238
0.08	0.08022	0.28	0.28077	0.48	0.48131	0.68	0.68186	0.88	0.88241
0.09	0.09025	0.29	0.29079	0.49	0.49134	0.69	0.69189	0.89	0.89244
0.10	0.10027	0.30	0.30082	0.50	0.50137	0.70	0.70192	0.90	0.90246
0.11	0.11030	0.31	0.31085	0.51	0.51140	0.71	0.71194	0.91	0.91249
0.12	0.12033	0.32	0.32088	0.52	0.52142	0.72	0.72197	0.92	0.92252
0.13	0.13036	0.33	0.33090	0.53	0.53145	0.73	0.73200	0.93	0.93255
0.14	0.14038	0.34	0.34093	0.54	0.54148	0.74	0.74203	0.94	0.94257
0.15	0.15041	0.35	0.35096	0.55	0.55151	0.75	0.75205	0.95	0.95260
0.16	0.16044	0.36	0.36099	0.56	0.56153	0.76	0.76208	0.96	0.96263
0.17	0.17047	0.37	0.37101	0.57	0.57156	0.77	0.77211	0.97	0.97266
0.18	0.18049	0.38	0.38104	0.58	0.58159	0.78	0.78214	0.98	0.98268
0.19	0.19052	0.39	0.39107	0.59	0.59162	0.79	0.79216	0.99	0.99271
0.20	0.20055	0.40	0.40110	0.60	0.60164	0.80	0.80219	1.00	1.00274

Sidereal Time required = Sidereal Time at the preceding Mean Noon + the Equivalent to the given Mean Time.

EXAMPLE.—To convert 2<sup>h</sup> 25<sup>m</sup> 18<sup>s</sup>.96 Mean Time at Greenwich, Jan. 20, 1913, into Sidereal Time.

		h m s
		19 57 1.75
For Mean	2 <sup>h</sup> 25 <sup>m</sup> 18 <sup>s</sup> .96	2 0 19.713
Intervals	{	25 4.107
	18	18.049
	0.96	0.963
	}	-----
		22 22 44.58

The Sum is the Sidereal Time required.....22 22 44.58



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

HOURS.		MINUTES.			SECONDS.				
Hours of Sidereal Time.	Equivalents in Mean Time.	Minutes of Sidereal Time.	Equivalents in Mean Time.	Minutes of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.
	h m s		m s		m s		s		s
1	0 59 50.1704	1	0 59.8362	31	30 54.9214	1	0.9973	31	30.9154
2	1 59 40.3409	2	1 59.6723	32	31 54.7576	2	1.9945	32	31.9126
3	2 59 30.5113	3	2 59.5085	33	32 54.5937	3	2.9918	33	32.9099
4	3 59 20.6818	4	3 59.3447	34	33 54.4299	4	3.9891	34	33.9072
5	4 59 10.8522	5	4 59.1809	35	34 54.2661	5	4.9864	35	34.9045
6	5 59 1.0226	6	5 59.0170	36	35 54.1023	6	5.9836	36	35.9017
7	6 58 51.1931	7	6 58.8532	37	36 53.9384	7	6.9809	37	36.8990
8	7 58 41.3635	8	7 58.6894	38	37 53.7746	8	7.9782	38	37.8963
9	8 58 31.5340	9	8 58.5256	39	38 53.6108	9	8.9754	39	38.8935
10	9 58 21.7044	10	9 58.3617	40	39 53.4470	10	9.9727	40	39.8908
11	10 58 11.8748	11	10 58.1979	41	40 53.2831	11	10.9700	41	40.8881
12	11 58 2.0453	12	11 58.0341	42	41 53.1193	12	11.9672	42	41.8853
13	12 57 52.2157	13	12 57.8703	43	42 52.9555	13	12.9645	43	42.8826
14	13 57 42.3862	14	13 57.7064	44	43 52.7917	14	13.9618	44	43.8799
15	14 57 32.5566	15	14 57.5426	45	44 52.6278	15	14.9591	45	44.8772
16	15 57 22.7270	16	15 57.3788	46	45 52.4640	16	15.9563	46	45.8744
17	16 57 12.8975	17	16 57.2150	47	46 52.3002	17	16.9536	47	46.8717
18	17 57 3.0679	18	17 57.0511	48	47 52.1364	18	17.9509	48	47.8690
19	18 56 53.2384	19	18 56.8873	49	48 51.9725	19	18.9481	49	48.8662
20	19 56 43.4088	20	19 56.7235	50	49 51.8087	20	19.9454	50	49.8635
21	20 56 33.5792	21	20 56.5597	51	50 51.6449	21	20.9427	51	50.8608
22	21 56 23.7497	22	21 56.3958	52	51 51.4810	22	21.9399	52	51.8580
23	22 56 13.9201	23	22 56.2320	53	52 51.3172	23	22.9372	53	52.8553
24	23 56 4.0906	24	23 56.0682	54	53 51.1534	24	23.9345	54	53.8526
		25	24 55.9044	55	54 50.9896	25	24.9318	55	54.8499
		26	25 55.7405	56	55 50.8257	26	25.9290	56	55.8471
		27	26 55.5767	57	56 50.6619	27	26.9263	57	56.8444
		28	27 55.4129	58	57 50.4981	28	27.9236	58	57.8417
		29	28 55.2490	59	58 50.3343	29	28.9208	59	58.8389
		30	29 55.0852	60	59 50.1704	30	29.9181	60	59.8362

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
0.01	0.00997	0.21	0.20943	0.41	0.40888	0.61	0.60833	0.81	0.80779
0.02	0.01995	0.22	0.21940	0.42	0.41885	0.62	0.61831	0.82	0.81776
0.03	0.02992	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> 22<sup>m</sup> 44<sup>s</sup>.58 Sidereal Time at Greenwich, Jan. 20, 1913, into Mean Time.

	h m s
Mean Time at the preceding Sidereal Noon, viz., January 19.....	4 6 14.36
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	
{ 22 0 } { 21 56.396	
{ 44 } { 43.880	
{ 0.58 } { 0.578	
The Sum is the Mean Time required, Jan. 20.....2 25 18.96	



凡例

本表ニ掲載セル高低潮時及潮高ハ調和分解法ノ算式ニ基キ下ニ表記セル諸根數ヲ用ヒテ推算セリ

表中ノ\*印ハ其欄ニ記スヘキ潮候ナキモノ即チ日潮不等大ナル場合ニ於テ其日ニ唯一回潮ヲナスモノ或ハ午前潮カ午後潮トナリ午後潮カ翌日ノ午前潮トナルモノ等ヲ示ス

潮高欄内ニ(一)ヲ附記スルモノハ基本水準面以下ナルヲ示ス

太陰曆日附, 太陰盈虚及位置ハ中央標準時ニ據ル

太陰盈虚及位置欄内ニ記セシ ●ハ朔, )ハ上弦, ○ハ望, (ハ下弦又 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

時刻ハ帝國中央標準時ヲ用フ 但シ馬公ハ西部標準時ヲ用フ

表中各所ノ基本水準面ハ下ノ如シ

横須賀	平均水準面以下	三呎四九
吳	”	六呎六一
竹敷	”	三呎八六
佐世保	”	五呎二三
馬公	”	四呎九九
舞鶴	”	零呎六一
大湊	”	一呎二四
鎮海灣	”	三呎五〇

推算ニ使用セル調和根數

地名	根數	H <sub>m</sub>	H <sub>s</sub>	H'	H''	H <sub>0</sub>	K <sub>m</sub>	K <sub>s</sub>	K'	K''	K <sub>0</sub>
横須賀	ft.	1'38	0'63	0'81	0'17	0'67	153'9	180'3	179'0	180'3	164'4
吳		3'44	1'40	1'00	0'38	0'77	277'1	308'4	219'3	308'4	199'7
竹敷		2'15	1'02	0'39	0'28	0'30	259'9	289'2	211'9	289'2	205'4
佐世保		2'68	1'23	0'74	0'33	0'58	240'7	265'5	215'3	265'5	202'4
馬公		2'89	0'57	0'80	0'16	0'73	337'3	26'2	276'5	26'2	247'4
舞鶴		0'21	0'07	0'17	0'02	0'16	68'9	88'7	344'3	88'7	308'7
大湊		0'64	0'30	0'17	0'08	0'13	104'5	146'3	161'7	146'3	149'6
鎮海灣		2'10	1'02	0'24	0'28	0'14	242'2	272'5	165'4	272'5	133'1



潮時及潮高表

明治四十六年 一月

地名	橫 須 賀								吳								太陰盈虛及位置
	高 潮				低 潮				高 潮				低 潮				
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後		
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	
1	10 59	5.4	**	**	4 34	3'3	7 8	1'6	4 1	8'8	4 26	9'4	10 9	4'3	10 58	3'5	
2	{ <sup>1 35</sup> <sub>11 50</sub>	{ <sup>3'6</sup> <sub>5'2</sub>	**	**	6 1	3'6	8 9	1'3	5 29	8'9	5 26	9'2	11 28	5'0	**	**	
3	2 58	3'9	0 57	5'0	7 34	3'8	8 49	0'9	6 46	9'3	6 23	9'0	0 3	3'2	0 40	5'2	
4	3 59	4'4	1 59	4'9	8 48	3'8	9 25	0'7	7 50	9'9	7 15	9'1	0 58	2'5	1 43	5'2	
5	4 43	4'8	2 44	4'9	9 47	3'7	10 4	0'4	8 43	10'5	8 0	9'3	1 48	1'8	2 36	5'1	
6	5 26	5'0	3 25	5'0	10 29	3'7	10 43	0'1	9 26	11'0	8 40	9'5	2 29	1'2	3 17	5'0	S.
7	6 4	5'1	4 2	5'1	11 4	3'8	11 50	0'1	10 6	11'3	9 19	9'6	3 10	0'8	3 57	4'8	●
8	6 35	5'1	4 34	5'2	11 34	3'7	11 52	0'0	10 39	11'5	9 52	9'8	3 46	0'6	4 28	4'7	
9	7 2	5'1	5 11	5'3	**	**	0 10	3'6	11 11	11'3	10 29	9'9	4 21	0'6	5 0	4'6	
10	7 28	5'0	5 48	5'3	0 25	0'2	0 29	3'4	11 40	11'2	11 4	9'9	4 55	0'7	5 31	4'4	
11	7 51	5'0	6 26	5'2	0 56	0'5	1 0	3'2	**	**	{ <sup>0 9</sup> <sub>11 39</sub>	{ <sup>10'0</sup> <sub>9'8</sub>	5 28	1'1	6 1	4'3	A.
12	8 19	4'9	7 10	5'0	1 26	0'9	1 34	3'0	**	**	0 37	10'6	6 2	1'8	6 37	4'1	
13	8 35	4'9	7 57	4'7	1 56	1'4	2 16	2'7	0 19	9'7	1 5	10'2	6 36	2'5	7 11	4'0	
14	8 55	4'8	8 57	4'3	2 23	1'9	3 4	2'6	1 4	9'2	1 36	9'9	7 13	3'4	7 52	3'9	E.
15	9 19	4'9	10 13	3'9	2 53	2'5	4 7	2'4	1 56	8'8	2 10	9'5	7 56	4'3	8 43	3'8	
16	9 44	4'9	**	**	3 28	3'1	5 31	2'1	3 1	8'4	2 51	9'1	8 48	5'2	9 45	3'6	D.
17	{ <sup>0 4</sup> <sub>10 25</sub>	{ <sup>3'6</sup> <sub>4'8</sub>	**	**	**	**	6 50	1'7	4 25	8'2	3 47	8'8	10 1	5'9	10 56	3'2	
18	{ <sup>1 57</sup> <sub>11 25</sub>	{ <sup>3'7</sup> <sub>4'7</sub>	**	**	**	**	8 4	1'2	5 57	8'4	5 2	8'6	11 30	6'3	**	**	
19	3 39	4'0	0 52	4'8	**	**	8 58	0'7	7 16	9'2	6 21	8'9	0 6	2'5	0 55	6'1	
20	4 29	4'5	2 7	5'0	9 5	4'0	9 46	0'2	8 16	10'1	7 26	9'4	1 10	1'7	2 0	5'5	N.
21	5 6	5'0	3 14	5'3	10 5	3'7	10 32	-'2	9 4	11'1	8 26	10'0	2 5	0'8	2 55	4'8	
22	5 42	5'3	4 9	5'5	10 52	3'4	11 16	-'3	9 47	11'9	9 18	10'6	2 58	0'2	3 43	4'0	
23	6 16	5'6	5 1	5'6	11 37	3'1	11 59	-'3	10 31	12'5	10 9	11'0	3 45	-'3	4 28	3'4	O.P.
24	6 52	5'7	5 52	5'6	**	**	0 21	2'8	11 13	12'6	10 58	11'1	4 33	-'4	5 13	2'9	
25	7 25	5'7	6 42	5'5	0 40	0'0	1 4	2'5	11 52	12'5	11 47	11'0	5 17	0'0	5 55	2'7	
26	7 59	5'6	7 34	5'3	1 17	0'4	1 48	2'3	**	**	0 32	12'2	6 2	0'6	6 40	2'6	E.
27	8 32	5'5	8 25	4'9	2 0	1'0	2 34	2'2	0 34	10'7	1 9	11'6	6 46	1'5	7 22	2'6	
28	9 3	5'3	9 28	4'5	2 37	1'7	3 24	2'1	1 25	10'2	1 47	10'7	7 31	2'7	8 8	2'8	
29	9 31	5'0	10 48	4'1	3 19	2'5	4 24	1'9	2 21	9'6	2 27	9'9	8 20	3'9	9 1	3'0	C.
30	9 53	4'8	**	**	4 8	3'3	5 42	1'8	3 31	9'1	3 11	9'0	9 22	5'1	10 1	3'2	
31	{ <sup>0 55</sup> <sub>10 31</sub>	{ <sup>3'9</sup> <sub>4'4</sub>	**	**	5 31	3'9	7 1	1'5	4 56	8'7	4 15	8'3	10 43	6'0	11 16	3'1	

潮時及潮高表

明治四十六年 一月

地名	竹 敷								佐 世 保								太陰曆日附
	高 潮				低 潮				高 潮				低 潮				
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後		
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	
1	3 45	5'3	4 9	5'4	9 54	2'6	10 41	2'1	3 2	6'8	3 29	7'3	9 10	3'6	10 7	3'0	24
2	5 10	5'3	5 20	5'4	11 14	2'8	11 52	1'9	4 34	6'8	4 23	7'3	10 23	4'0	11 11	2'5	25
3	6 28	5'5	6 18	5'4	**	**	0 26	2'8	5 55	7'1	5 29	7'4	11 41	4'1	**	**	26
4	7 29	5'9	7 14	5'6	0 50	1'5	1 28	2'7	6 58	7'6	6 20	7'6	0 13	1'9	0 42	4'1	27
5	8 18	6'2	7 59	5'8	1 41	1'1	2 17	2'5	7 26	8'0	7 2	7'8	1 2	1'3	1 31	4'0	28
6	9 1	6'4	8 37	6'0	2 23	0'8	2 55	2'3	8 28	8'3	7 41	8'1	1 42	0'9	1 38	3'9	29
7	9 38	6'6	9 11	6'2	2 59	0'6	3 32	2'2	9 3	8'5	8 44	8'6	2 19	0'5	2 43	3'8	1
8	10 7	6'7	9 47	6'3	3 33	0'5	4 1	2'1	9 34	8'6	8 58	8'4	2 53	0'4	3 13	3'7	2
9	10 38	6'7	10 17	6'3	4 8	0'5	4 31	2'0	10 0	8'5	9 21	8'4	3 25	0'4	3 43	3'5	3
10	11 5	6'6	10 52	6'3	4 41	0'5	5 1	1'9	10 31	8'4	9 56	8'3	3 57	0'6	4 13	3'4	4
11	11 31	6'4	11 24	6'1	5 9	0'8	5 29	1'9	10 59	8'3	10 30	8'2	4 28	0'9	4 43	3'3	5
12	**	**	0 2	6'3	5 41	1'1	6 3	2'0	11 26	8'1	11 9	7'8	4 59	1'4	5 17	3'3	6
13	0 0	5'9	0 31	6'1	6 13	1'5	6 38	2'0	11 49	7'9	11 53	7'4	5 28	2'0	5 53	3'2	7
14	0 38	5'7	1 2	5'8	6 46	2'0	7 19	2'1	**	**	0 26	7'7	6 5	2'7	6 35	3'2	8
15	1 28	5'3	1 38	5'6	7 27	2'5	8 10	2'2	0 44	6'9	1 2	7'5	6 44	3'4	7 38	3'2	9
16	2 32	4'9	2 29	5'3	8 21	3'0	9 19	2'3	1 52	6'4	1 47	7'2	7 35	4'2	8 53	3'1	10
17	3 55	4'8	3 32	5'2	9 35	3'3	10 49	2'1	3 26	6'1	2 52	7'1	8 52	4'7	10 15	2'7	11
18	5 43	4'7	4 59	5'2	11 7	3'6	**	**	5 8	6'3	4 11	7'1	10 28	5'7	11 27	2'1	12
19	6 59	5'2	6 21	5'5	0 6	1'7	0 53	3'2	6 26	6'9	5 27	7'5	11 49	4'8	**	**	13
20	7 52	5'8	7 26	6'0	1 8	1'2	1 38	2'7	7 20	7'7	6 31	8'0	0 28	1'3	0 54	4'3	14
21	8 37	6'4	8 22	6'6	2 3	0'7	2 29	2'1	8 5	8'4	7 26	8'6	1 19	0'6	1 46	3'6	15
22	9 19	6'9	9 13	6'9	2 50	0'2	3 17	1'6	8 46	9'0	8 17	9'0	2 6	0'0	2 32	3'1	16
23	10 0	7'2	9 57	7'2	3 35	0'0	4 2	1'2	9 26	9'5	9 5	9'3	2 50	-'3	3 17	2'6	17
24	10 41	7'4	10 45	7'2	4 18	-'1	4 44	0'9	10 6	9'6	9 52	9'3	3 35	-'4	4 1	2'2	18
25	10 20	7'4	11 31	7'0	5 2	0'1	5 27	0'8	10 44	9'6	10 38	9'1	4 17	-'1	4 43	2'1	19
26	11 59	7'2	**	**	5 44	0'4	6 10	0'9	11 24	9'3	11 25	8'6	4 59	0'5	5 37	2'1	20
27	0 17	6'7	0 34	6'9	6 23	1'0	6 55	1'1	**	**	0 1	8'9	5 41	1'3	6 11	2'2	21
28	1 2	6'2	1 16	6'4	7 5	1'7	7 44	1'4	0 14	8'1	0 40	8'4	6 23	2'2	7 1	2'5	22
29	2 3	5'7	1 58	5'9	7 56	2'3	8 35	1'7	1 11	7'4	1 21	7'6	7 10	3'3	7 59	2'7	23
30	3 3	5'2	2 55	5'4	8 50	3'0	9 45	1'9	2 25	6'7	2 7	7'1	8 10	4'2	9 12	2'8	24
31	4 8	5'0	4 4	5'4	10 17	3'4	11 10	1'9	4 8	6'4	3 16	6'6	9 40	5'0	10 37	2'6	25



明治四十六年 一月

地名	馬 公								舞 鶴								太陰盈虛及位置
	高 潮				低 潮				高 潮				低 潮				
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後		
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	
1	5 53	7'5	6 22	7'9	11 59	2'3	* *	..	8 55	0'8	9 51	0'8	3 5	0'5	3 19	0'4	
2	6 58	7'3	7 8	7'8	0 46	2'2	1 1	2'9	10 36	0'7	10 20	0'9	4 19	0'4	4 15	0'5	
3	8 8	7'3	7 56	7'8	1 44	1'8	2 0	3'4	* *	..	{ <sup>0 9</sup> <sub>10 40</sub> 0'7}	5 31	0'3	5 11	0'6		
4	9 20	7'3	8 48	7'8	2 42	1'3	3 1	3'8	* *	..	{ <sup>1 31</sup> <sub>11 10</sub> 0'7}	6 34	0'2	6 3	0'7		
5	10 24	7'6	9 36	7'8	3 38	0'9	3 59	4'0	* *	..	{ <sup>2 33</sup> <sub>11 58</sub> 0'7}	7 26	0'1	6 48	0'7		
6	11 17	7'7	10 25	7'9	4 29	0'5	4 52	4'1	* *	..	3 24	0'7	8 10	0'0	* *	..	S.
7	* *	..	{ <sup>0 7</sup> <sub>11 7</sub> 7'9}	5 17	0'2	5 37	4'0	0 33	1'0	4 3	0'7	8 52	0'0	* *	..		
8	* *	..	{ <sup>0 50</sup> <sub>11 52</sub> 7'9}	6 1	0'1	6 21	4'0	1 6	1'0	4 42	0'7	9 33	0'0	* *	..		
9	* *	..	1 28	7'9	6 41	0'1	6 57	3'9	1 47	1'0	5 11	0'7	10 15	0'0	9 1	0'7	
10	0 32	8'1	2 2	7'8	7 20	0'3	7 34	3'8	2 21	1'0	5 37	0'7	10 48	0'0	9 33	0'7	
11	1 13	8'0	2 34	7'7	7 58	0'6	8 8	3'6	3 3	1'0	6 1	0'7	11 22	0'1	10 9	0'7	A.
12	1 52	7'9	3 1	7'6	8 32	1'0	8 44	3'3	3 49	1'0	6 21	0'7	11 47	0'2	10 53	0'6	
13	2 36	7'7	3 32	7'6	9 1	1'5	9 25	3'1	4 39	0'9	6 48	0'7	* *	..	{ <sup>0 17</sup> <sub>11 45</sub> 0'3}		
14	3 22	7'5	4 3	7'6	9 42	2'1	10 10	2'8	5 36	0'8	7 9	0'8	* *	..	0 43	0'4	E.
15	4 14	7'2	4 34	7'6	10 20	2'6	10 58	2'6	6 50	0'7	7 33	0'8	0 52	0'5	1 7	0'4	
16	5 8	6'8	5 13	7'5	11 2	3'2	11 51	2'3	8 8	0'7	8 4	0'9	2 15	0'4	1 33	0'5	D.
17	6 13	6'6	5 59	7'6	11 56	3'7	* *	..	10 6	0'6	8 34	0'9	3 49	0'4	2 21	0'6	
18	7 25	6'5	6 52	7'6	0 55	2'0	0 55	4'1	11 56	0'6	9 22	0'9	5 16	0'3	* *	..	
19	8 44	6'6	7 58	7'8	2 2	1'6	2 8	4'2	* *	..	{ <sup>1 19</sup> <sub>10 31</sub> 1'6}	6 23	0'2	* *	..		
20	9 52	7'0	9 8	8'1	3 8	1'1	3 20	4'1	* *	..	{ <sup>2 9</sup> <sub>11 31</sub> 1'7}	7 10	0'1	6 5	0'7	N.	
21	10 53	7'5	10 10	8'4	4 8	0'4	4 24	3'9	* *	..	2 55	0'7	7 58	0'0	7 6	0'7	
22	11 49	8'1	11 11	8'7	5 5	-1 5	25 3'5	0 30	1'1	3 42	0'7	8 41	-1 8	1 0'7			
23	* *	..	0 38	8'4	5 59	-3 6	19 3'0	1 29	1'1	4 22	0'8	9 29	-1 8	52 0'7		O,P.	
24	0 8	8'9	1 23	8'7	6 49	-5 7	9 2'6	2 23	1'1	5 4	0'8	10 12	0'0	9 42	0'6		
25	1 1	9'0	2 8	8'8	7 38	-3 7	59 2'4	3 16	1'0	5 38	0'8	10 53	0'0	10 30	0'6		
26	1 54	9'0	2 49	8'8	8 24	0'1	8 46	2'1	4 8	1'0	6 12	0'8	11 32	0'1	11 22	0'5	E.
27	2 44	8'8	3 33	8'7	9 11	0'6	9 34	1'9	5 4	0'9	6 40	0'8	* *	..	0 6	0'2	
28	3 36	8'5	4 10	8'4	9 53	-1 3	10 21	1'9	6 10	0'8	7 13	0'8	0 19	0'5	0 46	0'3	
29	4 32	8'0	4 54	8'1	10 43	2'0	11 16	1'8	7 26	0'8	7 38	0'8	1 21	0'4	1 23	0'5	C.
30	5 35	7'6	5 35	7'9	11 33	2'8	* *	..	9 3	0'7	7 59	0'8	2 37	0'4	2 7	0'6	
31	6 42	7'3	6 28	7'6	0 11	1'7	0 32	3'5	11 11	0'6	8 43	0'9	4 10	0'3	* *	..	

明治四十六年 一月

地名	大 湊								鎮 海 灣								太陰曆日附
	高 潮				低 潮				高 潮				低 潮				
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後		
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	
1	9 43	1'8	10 34	1'6	3 17	0'8	4 18	0'8	3 9	4'8	3 34	4'9	9 32	2'2	10 3	1'8	24
2	10 48	1'8	* *	..	4 33	0'9	5 39	0'7	4 30	4'9	4 51	4'9	10 43	2'3	11 13	1'8	25
3	{ <sup>0 6</sup> <sub>11 52</sub> 1'8}	* *	..	5 49	1'0	6 49	0'5	5 43	5'1	5 59	4'9	11 58	2'2	* *	..		26
4	1 25	1'7	0 51	1'8	7 0	1'0	7 45	0'4	6 44	5'5	6 55	5'1	0 13	1'6	0 59	1'9	27
5	2 23	1'8	1 42	1'9	7 52	1'0	8 30	0'2	7 31	5'9	7 39	5'3	1 3	1'3	1 45	1'6	28
6	3 10	1'9	2 30	2'0	8 43	0'9	9 10	0'2	8 10	6'2	8 18	5'4	1 44	1'1	2 25	1'4	29
7	3 48	1'9	3 1	2'0	9 20	0'9	9 45	0'1	8 46	6'4	8 53	5'6	2 21	0'9	3 1	1'2	1
8	4 19	2'0	3 34	2'1	9 53	0'9	10 16	0'1	9 18	6'5	9 25	5'6	2 55	0'8	3 32	1'2	2
9	4 48	2'0	4 7	2'1	10 22	0'8	10 45	0'1	9 49	6'5	9 54	5'6	3 26	0'7	4 2	1'2	3
10	5 13	2'0	4 39	2'1	10 52	0'8	11 15	0'2	10 19	6'4	10 25	5'6	3 56	0'8	4 31	1'2	4
11	5 38	2'0	5 12	2'0	11 21	0'7	11 42	0'3	10 49	6'3	10 55	5'5	4 28	0'9	5 1	1'3	5
12	6 5	2'0	5 47	2'0	11 53	0'7	* *	..	11 19	6'1	11 29	5'4	4 59	1'1	5 32	1'4	6
13	6 32	1'9	6 24	1'9	0 11	0'4	0 28	0'7	11 50	5'8	* *	..	5 33	1'4	6 8	1'6	7
14	7 0	1'9	7 6	1'7	0 40	0'5	1 9	0'7	0 7	5'2	0 23	5'4	6 10	1'7	6 42	1'8	8
15	7 33	1'9	7 59	1'6	1 11	0'7	1 58	0'8	0 50	4'9	1 5	5'1	6 53	2'1	7 26	2'0	9
16	8 13	1'8	9 12	1'4	1 49	0'9	3 6	0'8	1 40	4'7	1 59	4'7	7 49	2'5	8 31	2'2	10
17	9 8	1'8	10 55	1'4	2 43	1'0	4 33	0'7	3 4	4'6	3 17	4'4	9 14	2'7	9 52	2'2	11
18	10 22	1'8	* *	..	4 9	1'1	5 58	0'6	4 40	4'7	4 56	4'4	10 57	2'7	11 18	2'0	12
19	{ <sup>0 45</sup> <sub>11 48</sub> 1'8}	* *	..	5 55	1'2	7 12	0'5	6 1	5'1	6 14	4'7	* *	..	0 19	2'3	13	
20	1 58	1'6	1 0	1'9	7 18	1'1	8 6	0'3	7 2	5'7	7 14	5'2	0 28	1'6	1 19	1'8	14
21	2 47	1'8	2 5	2'0	8 19	1'0	8 54	0'1	7 51	6'3	8 3	5'7	1 22	1'0	2 7	1'2	15
22	3 30	2'0	2 57	2'2	9 8	0'8	9 38	0'0	8 35	6'8	8 47	6'1	2 10	0'5	2 50	0'8	16
23	4 9	2'1	3 45	2'2	9 54	0'6	10 18	-1	9 17	7'2	9 31	6'4	2 55	0'2	3 32	0'4	17
24	4 46	2'2	4 30	2'3	10 37	0'5	10 58	-1	9 58	7'3	10 16	6'5	3 38	0'0	4 14	0'2	18
25	5 22	2'3	5 15	2'3	11 18	0'5	11 38	0'0	10 40	7'2	10 57	6'5	4 22	0'0	4 55	0'3	19
26	6 0	2'3	6 0	2'2	* *	..	0 1	0'4	11 20	6'9	11 41	6'2	5 4	0'2	5 36	0'5	20
27	6 38	2'2	6 47	2'0	0 18	0'2	0 46	0'4	* *	..	0 2	6'5	5 47	0'6	6 18	0'9	21
28	7 16	2'1	7 40	1'9	0 57	0'4	1 33	0'5	0 25	5'8	0 43	5'9	6 30	1'2	6 59	1'3	22
29	7 57	2'0	8 39	1'7	1 40	0'6	2 27	0'6	1 10	5'4	1 29	5'3	7 19	1'8	7 49	1'8	23
30	8 37	1'9	9 55	1'5	2 26	0'8	3 32	0'6	2 8	5'0	2 31	4'7	8 21	2'3	8 58	2'2	24
31	9 36	1'8	11 43	1'5	3 32	1'0	4 54	0'6	3 34	4'7	3 58	4'3	9 55	2'7	10 25	2'3	25



潮時及潮高表

明治四十六年 二月

地名	橫 須 賀								吳								太陰盈虛及位置											
	高 潮				低 潮				高 潮				低 潮															
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後													
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	
1	{ <sup>3 16</sup> <sub>11 42</sub>	4 1	4 2	* *	..	* *	..	8 2	1 1	6 37	8 9	5 31	7 9	* *	..	0 23	6 4								S.			
2	4 27	4 5	1 22	4 2	9 7	4 2	8 32	0 9	7 50	9 9	6 59	8 1	0 21	2 7	1 47	5 9												
3	5 1	4 5	2 32	4 4	9 59	3 9	9 52	0 7	8 43	10 2	7 56	8 5	1 32	2 5	2 40	5 4												
4	5 28	5 0	3 20	4 7	10 30	3 8	10 32	0 4	9 22	10 8	8 37	9 1	2 22	1 9	3 17	5 0												
5	5 49	5 1	4 1	5 0	10 56	3 5	11 7	0 4	9 53	11 1	9 15	9 7	3 1	1 4	3 46	4 6												
6	6 8	5 1	4 38	5 3	11 19	3 3	11 40	0 4	10 23	11 2	9 49	10 1	3 38	1 0	4 14	4 2										●		
7	6 26	5 1	5 17	5 5	11 44	2 9	* *	..	10 47	11 3	10 21	10 5	4 11	0 9	4 39	3 8										A.		
8	6 41	5 1	5 53	5 5	0 8	0 6	0 8	2 6	11 13	11 2	10 52	10 7	4 43	1 0	5 5	3 4												
9	6 59	5 1	6 32	5 5	0 35	0 9	0 37	2 3	11 35	11 1	11 28	10 7	5 11	1 3	5 32	3 0												
10	7 16	5 2	7 11	5 2	1 1	1 3	1 8	2 0	11 57	10 9	* *	..	5 42	1 9	6 1	2 8										E.		
11	7 31	5 2	7 52	4 9	1 23	1 7	1 31	1 8	0 3	10 5	0 20	10 6	6 11	2 5	6 31	2 7												
12	7 50	5 2	8 39	4 5	1 47	2 2	2 24	1 7	0 24	10 1	0 44	10 3	6 41	3 4	7 5	2 7												
13	8 8	5 2	9 37	4 0	2 8	2 7	3 16	1 7	1 23	9 5	1 12	9 9	7 14	4 3	7 49	2 8												
14	8 31	5 1	11 11	3 6	2 34	3 3	4 32	1 8	2 16	8 9	1 49	9 4	7 57	5 2	8 45	3 1										D		
15	8 53	4 8	* *	..	* *	..	6 19	1 6	3 31	8 3	2 36	8 7	8 58	6 2	10 2	3 2												
16	{ <sup>2 12</sup> <sub>10 9</sub>	{ <sup>3 5</sup> <sub>4 5</sub>	* *	..	* *	..	7 38	1 3	5 21	8 1	4 11	8 2	10 46	6 7	11 33	2 9												
17	3 45	3 9	0 26	4 5	* *	..	8 41	0 9	6 55	8 9	6 2	8 3	* *	..	0 41	6 4										N.		
18	4 23	4 5	2 5	4 8	9 4	3 9	9 33	0 5	8 5	10 2	7 28	9 2	0 51	2 3	1 57	5 4												
19	4 47	5 0	3 16	5 2	9 56	3 5	10 22	0 2	8 55	11 0	8 28	10 0	2 3	1 3	2 49	4 3												
20	5 16	5 4	4 11	5 6	10 38	2 9	11 3	0 1	9 34	12 0	9 18	11 1	2 53	0 5	3 32	3 2												
21	5 46	5 6	5 4	5 9	11 20	2 4	11 47	0 1	10 11	12 6	10 3	11 8	3 39	-1	4 11	2 4										O,P.		
22	6 22	5 8	5 51	6 0	* *	..	0 4	2 0	10 47	12 8	10 49	12 2	4 22	-2	4 50	1 7												
23	6 46	5 8	6 38	5 9	0 22	0 4	0 38	1 6	11 23	12 7	11 31	12 1	5 3	0 0	5 28	1 5										E.		
24	7 14	5 7	7 25	5 6	0 59	0 9	1 16	1 4	11 57	12 2	* *	..	5 43	0 7	6 5	1 4												
25	7 39	5 6	8 17	5 1	1 33	1 5	1 59	1 4	0 13	11 7	0 28	11 5	6 21	1 7	6 42	1 7												
26	8 4	5 3	9 8	4 6	2 8	2 2	2 42	1 4	0 57	10 9	0 59	10 6	6 59	3 0	7 20	2 1												
27	8 37	5 6	10 28	4 0	2 38	2 9	3 39	1 5	1 44	10 0	1 31	9 6	7 40	4 3	8 6	2 7												
28	8 33	4 7	* *	..	3 14	3 7	4 58	1 6	2 47	9 1	2 6	8 6	8 33	5 7	9 6	3 3										C		

潮時及潮高表

明治四十六年 二月

地名	竹 敷								佐 世 保								太陰曆日附											
	高 潮				低 潮				高 潮				低 潮															
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後													
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	d
1	6 18	5 0	5 39	5 0	* *	..	0 4	3 5	5 58	6 7	4 50	6 5	11 31	5 1	11 48	2 3									26			
2	7 34	5 4	6 59	5 2	0 36	1 9	1 23	3 2	7 6	7 2	6 2	6 7	* *	..	0 44	4 8									27			
3	8 20	5 8	7 51	5 6	1 35	1 5	2 10	2 8	7 52	7 7	6 57	7 3	0 51	1 9	1 32	4 4									28			
4	8 56	6 1	8 33	6 0	2 20	1 2	2 47	2 4	8 23	8 1	7 36	7 8	1 34	1 3	2 5	4 0									29			
5	9 23	6 4	9 7	6 3	2 57	0 8	3 16	2 0	8 50	8 4	8 11	8 2	2 9	0 9	2 34	3 6									30			
6	9 48	6 6	9 39	6 6	3 28	0 7	3 43	1 7	9 9	8 6	8 44	8 6	2 41	0 7	2 59	3 2									1			
7	10 13	6 7	10 9	6 8	3 57	0 6	4 10	1 4	9 38	8 7	9 16	8 8	3 11	0 7	3 26	2 8									2			
8	10 35	6 8	10 40	6 8	4 23	0 7	4 37	1 2	10 0	8 7	9 47	8 8	3 40	0 8	3 51	2 5									3			
9	10 59	6 8	11 11	6 7	4 50	0 8	5 5	1 0	10 25	8 7	10 19	8 7	4 8	1 0	4 20	2 2									4			
10	11 23	6 7	11 41	6 5	5 16	1 1	5 34	1 0	10 46	8 6	10 53	8 5	4 34	1 5	4 49	2 1									5			
11	11 46	6 6	* *	..	5 41	1 4	6 4	1 1	11 8	8 4	11 28	8 0	5 1	2 0	5 20	2 1									6			
12	0 13	6 1	0 13	6 4	6 8	1 9	6 38	1 4	11 32	8 2	* *	..	5 27	2 7	5 55	2 2									7			
13	0 50	5 6	0 41	6 1	6 37	2 3	7 21	1 7	{ <sup>0 9</sup> <sub>11 59</sub>	{ <sup>7 3</sup> <sub>7 9</sub>	* *	..	5 56	3 4	6 41	2 5									8			
14	1 37	5 1	1 19	5 7	7 14	2 9	8 20	2 1	1 4	6 6	0 35	7 5	6 35	4 2	7 50	2 8									9			
15	2 47	4 6	2 17	5 2	8 14	3 5	9 52	2 3	2 24	6 0	1 32	7 0	7 38	5 0	9 22	2 9									10			
16	4 52	4 4	4 13	4 9	10 16	3 7	11 41	2 1	4 35	6 0	3 22	6 7	9 43	5 4	10 59	2 4									11			
17	6 46	4 8	6 14	5 1	* *	..	0 23	3 4	6 17	6 7	5 11	7 0	11 38	5 0	* *	..									12			
18	7 48	5 6	7 26	5 9	1 14	1 7	1 31	2 7	7 8	7 6	6 21	7 8	0 13	1 7	0 47	4 2									13			
19	8 27	6 3	8 19	6 5	1 57	1 0	2 22	1 9	7 50	8 4	7 23	8 6	1 9	0 9	1 37	3 3									14			
20	9 4	6 9	9 7	7 0	2 42	0 5	3 5	1 2	8 28	9 2	8 13	9 3	1 56	0 3	2 21	2 5									15			
21	9 41	7 4	9 49	7 4	3 24	0 1	3 45	0 7	9 4	9 7	8 58	9 7	2 39	-1	3 1	1 7									16			
22	10 17	7 7	10 31	7 6	4 3	0 0	4 24	0 3	9 40	9 9	9 42	9 9	3 19	-2	3 41	1 3									17			
23	10 53	7 7	11 11	7 5	4 43	0 0	5 3	0 1	10 15	9 9	10 23	9 7	3 59	0 0	4 13	1 1									18			
24	11 27	7 5	11 50	7 1	5 19	0 3	5 40	0 2	10 49	9 6	11 4																	



潮時及潮高表

明治四十六年 二月

地名	馬 公 舞 鶴																太陰盈虛及位置															
	高 潮				低 潮				高 潮				低 潮																			
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後																	
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高																
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.					
1	7	56	7'0	7	20	7'5	1	15	1'6	1	35	4'1	* * *	..	{ 1 9 34 } 0'6	5	24	0'2	* * *	..							S.					
2	9	6	7'2	8	14	7'2	2	16	1'4	2	44	4'4	* * *	..	{ 2 10 41 } 0'7	6	17	0'2	* * *	..												
3	10	14	7'4	9	13	7'2	3	12	1'0	3	47	4'4	* * *	..	{ 3 11 55 } 0'7	7	7	0'1	* * *	..												
4	11	5	7'6	10	4	7'4	4	6	0'8	4	38	4'3	* * *	..	3 16	0'7	7	52	0'1	* * *	..											
5	11	46	7'8	10	52	7'6	4	53	0'7	5	20	4'1	0	14	0'9	3	45	0'7	8	37	0'0	7	44	0'7								
6	* * *	..	{ 0 24 } 7'8	5	37	0'6	5	59	3'7	1	0	1'0	4	2	0'7	9	11	0'0	8	15	0'7									●		
7	* * *	..	{ 11 35 } 7'8	6	14	0'7	6	35	3'4	1	47	1'0	4	18	0'7	9	43	0'1	8	49	0'6									A.		
8	0	20	8'0	1	20	7'9	6	53	0'9	7	6	3'0	2	33	1'1	4	35	0'7	10	14	0'1	9	16	0'6								
9	0	58	8'0	1	47	7'9	7	26	1'2	7	40	2'7	3	16	1'0	4	47	0'7	10	40	0'2	9	53	0'5								
10	1	39	8'0	2	13	7'9	7	59	1'6	8	13	2'3	4	4	1'0	5	2	0'8	11	2	0'3	10	34	0'4								
11	2	24	7'9	2	38	7'9	8	31	2'1	8	50	2'0	4	49	0'9	5	20	0'8	11	19	0'4	11	23	0'4								
12	3	3	7'7	3	6	7'9	9	4	2'6	9	31	1'8	5	42	0'8	5	40	0'8	11	40	0'5	* * *	..									
13	3	50	7'3	3	35	7'8	9	38	3'2	10	16	1'7	6	39	0'7	6	6	0'9	{ 0 25 } 0'4	* * *	..											
14	4	41	7'0	4	20	7'8	10	22	3'6	11	14	1'6	8	0	0'6	6	35	0'9	1	41	0'3	0	24	0'6								
15	5	47	6'7	5	7	7'7	11	16	4'1	* * *	..	9	53	0'6	7	19	0'9	3	22	0'3	* * *	..										
16	7	4	6'6	6	16	7'6	0	19	1'5	0	28	4'4	11	56	0'6	8	36	0'9	4	55	0'2	* * *	..									
17	8	25	6'8	7	37	7'6	1	32	1'3	1	41	4'4	* * *	..	{ 1 9 } 0'6	6	4	0'2	* * *	..												
18	9	35	7'2	8	53	7'7	2	43	1'0	3	9	4'1	* * *	..	{ 10 10 } 1'0	7	0	0'1	6	1	0'7											
19	10	34	7'8	10	0	8'1	3	48	0'8	4	14	3'7	* * *	..	{ 11 28 } 0'7	7	39	0'0	6	59	0'7											
20	11	26	8'2	11	2	8'5	4	46	0'3	5	11	3'0	0	33	1'0	3	9	0'8	8	25	0'0	7	52	0'6								
21	* * *	..	{ 0 8 } 8'6	5	37	0'1	5	59	2'4	1	36	1'1	3	42	0'8	9	5	0'0	8	38	0'5									O,P.		
22	* * *	..	{ 11 55 } 8'9	6	26	0'1	6	47	1'8	2	30	1'1	4	11	0'8	9	44	0'1	9	23	0'5											
23	0	49	9'2	1	31	9'0	7	13	0'3	7	32	1'4	3	20	1'0	4	39	0'8	10	21	0'1	10	8	0'4								
24	1	39	9'2	2	7	8'9	7	56	0'7	8	15	1'0	4	13	1'0	5	8	0'9	10	56	0'2	10	54	0'4								
25	2	30	9'1	2	47	8'7	8	42	1'3	9	1	0'9	5	10	0'9	5	32	0'9	11	27	0'3	11	46	0'3								
26	3	22	8'8	3	26	8'4	9	27	2'0	9	47	0'9	6	6	0'8	6	2	0'9	* * *	..	0	1	0'5									
27	4	14	8'3	4	6	8'0	10	13	2'7	10	38	1'1	7	22	0'7	6	20	0'9	0	52	0'3	0	32	0'6								
28	5	17	7'8	4	52	7'6	11	7	3'5	11	35	1'3	9	10	0'6	6	39	0'8	2	12	0'3	* * *	..									

潮時及潮高表

明治四十六年 二月

地名	大 湊 鎮 海 灣																太陰曆日附											
	高 潮				低 潮				高 潮				低 潮															
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後													
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	d
1	10	45	1'7	* * *	..	5	1	1'2	6	14	0'6	5	15	4'7	5	38	4'3	11	41	2'7	11	50	2'2				26	
2	1	24	1'5	0	13	1'7	6	41	1'2	7	29	0'5	6	34	4'9	6	54	4'7	* * *	..	0	55	2'2				27	
3	2	27	1'7	1	26	1'7	7	55	1'1	8	20	0'4	7	24	5'3	7	44	5'1	1	4	2'0	1	42	1'8				28
4	3	8	1'8	2	16	1'8	8	41	1'0	8	59	0'4	8	0	5'8	8	20	5'3	1	44	1'6	2	18	1'4				29
5	3	40	1'9	2	53	1'9	9	14	0'9	9	32	0'2	8	32	6'1	8	50	5'6	2	17	1'3	2	50	1'1				30
6	4	4	1'9	3	28	2'0	9	43	0'8	10	1	0'2	8	57	6'5	9	19	5'7	2	44	1'1	3	18	0'8				1
7	4	26	2'0	3	59	2'1	10	9	0'7	10	28	0'2	9	28	6'6	9	45	5'8	3	14	0'9	3	47	0'7				2
8	4	47	2'0	4	32	2'1	10	42	0'6	10	56	0'2	9	56	6'8	10	11	5'9	3	41	0'8	4	13	0'6				3
9	5	11	2'1	5	5	2'1	11	5	0'5	11	22	0'3	10	23	6'7	10	37	5'9	4	7	0'7	4	39	0'7				4
10	5	34	2'1	5	40	2'1	11	34	0'5	11	46	0'4	10	51	6'6	11	3	5'8	4	35	0'8	5	6	0'8				5
11	5	56	2'1	6	9	2'0	* * *	..	0	5	0'5	11	19	6'3	11	32	5'6	5	3	1'0	5	33	1'1				6	
12	6	23	2'1	6	46	1'8	0	10	0'5	0	41	0'5	11	48	6'0	* * *	..	5	33	1'2	6	4	1'4				7	
13	6	49	2'0	7	26	1'7	0	38	0'7	1	21	0'5	0	6	5'3	0	23	5'5	6	9	1'6	6	39	1'7				8
14	7	22	1'9	8	26	1'5	1	7	0'8	2	15	0'6	0	46	5'0	1	5	5'0	6	51	2'1	7	21	2'2				9
15	8	8	1'8	9	59	1'4	1	34	1'0	3	33	0'7	1	43	4'6	2	15	4'4	7	59	2'6	8	47	2'5				10
16	9	18	1'7	* * *	..	3	6	1'2	5	19	0'7	3	27	4'4	4	19	4'2	10	0	2'8	10	43	2'5				11	
17	{ 0 20 } 1'4	* * *	..	5	20	1'3	6	53	0'6	5	27	4'7	6	7	4'6	11	58	2'4	* * *	..								
18	1	53	1'6	0	55	1'8	7	8	1'1	7	54	0'4	6	41	5'4	7	14	5'2	0	14	2'0	1	7	1'7				12
19	2	36	1'8	2	1	2'0	8	11	0'9	8	42	0'2	7	35	6'1	8	0	5'8	1	13	1'4	1	57	1'0				13
20	3	13	2'0	2	52	2'1	8	59	0'7	9	23	0'1	8	18	6'8	8	42	6'3	2	2	0'8	2	38	0'4				14
21	3	48	2'2	3	38	2'3	9	41	0'5	10	4	0'0	9	0	7'3	9	21	6'7	2	44	0'3	3	17	-1				15
22	4	24	2'3	4	23	2'3	10	22	0'4	10	42	0'0	9	39	7'6	10	0	6'8	3	24	0'0	3	56	-3				16
23	4	58	2'4	5	6	2'3	11	2	0'2	11	19	0'1	10	17	7'6													



潮時及潮高表

明治四十六年 三月

地名	橫 須 賀								吳								太陰盈虛及位置											
	高 潮				低 潮				高 潮				低 潮															
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後													
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	
1	{ <sup>0 41</sup> <sub>8 35</sub> <sup>37</sup> 4.7}	*	*	..	*	*	..	6 23	1.6	4 26	8.4	3 6	7.7	10 2	6.7	10 29	3.6								S			
2	{ <sup>3 56</sup> <sub>10 37</sub> <sup>3.0</sup> 3.7}	*	*	..	*	*	..	7 31	1.5	6 35	8.5	5 2	7.6	*	*	..	{ <sup>0 16</sup> <sub>11 33</sub> <sup>7.0</sup> 3.7}								S			
3	4 38	4.5	1 5	3.9	*	*	..	8 41	1.2	7 40	9.4	6 46	7.6	*	*	..	1 45	6.1										
4	4 54	4.8	2 19	4.3	9 50	3.9	9 33	1.0	8 25	9.9	7 45	8.3	1 11	3.1	2 27	5.4												
5	5 5	4.9	3 13	4.7	10 15	3.6	10 13	0.8	8 57	10.4	8 26	9.0	2 4	2.5	2 56	4.8												
6	5 16	5.1	3 57	5.0	10 36	3.2	10 47	0.8	9 24	10.7	9 2	9.8	2 44	2.1	3 22	4.1									A.			
7	5 29	5.1	4 37	5.3	10 57	2.7	11 16	0.9	9 49	11.0	9 36	10.5	3 20	1.7	3 46	3.4												
8	5 41	5.2	5 14	5.5	11 20	2.2	11 42	1.1	10 10	11.1	10 8	11.0	3 51	1.5	4 10	2.8												
9	5 56	5.3	5 54	5.6	11 47	1.8	11 8	1.5	10 32	11.2	10 40	11.3	4 20	1.6	4 34	2.3												
10	6 8	5.3	6 30	5.5	*	*	..	0 13	1.4	10 54	11.1	11 11	11.3	4 49	1.9	5 0	1.9											
11	6 22	5.4	7 5	5.3	0 30	1.9	0 43	1.2	11 16	11.0	11 44	11.2	5 17	2.4	5 27	1.6												
12	6 40	5.5	7 44	4.9	0 51	2.3	1 17	0.5	11 38	10.7	*	*	..	5 45	3.0	5 57	1.5											
13	7 0	5.4	8 29	4.5	1 13	2.7	1 59	1.1	0 21	10.7	0 5	10.4	6 15	3.8	6 30	1.7												
14	7 21	5.4	9 26	4.0	1 35	3.1	2 49	1.2	0 57	10.1	0 35	9.9	6 47	4.6	7 15	2.1												
15	7 41	5.2	10 55	3.6	2 1	3.6	3 59	1.5	1 55	9.3	1 13	9.3	7 34	5.5	8 10	2.7												
16	8 5	4.8	*	*	..	*	*	..	5 41	1.6	3 9	8.6	2 8	8.4	8 41	6.3	9 29	3.2							D.N.			
17	{ <sup>1 38</sup> <sub>9 40</sub> <sup>3.6</sup> 4.3}	*	*	..	*	*	..	7 4	1.5	5 2	8.4	3 58	7.8	10 38	6.7	11 10	3.2											
18	3 23	4.1	0 35	4.2	7 44	4.1	8 19	1.3	6 41	9.0	6 0	8.3	*	*	..	0 32	6.0											
19	3 40	4.5	2 23	5.0	8 46	3.3	9 22	1.2	7 42	10.0	7 19	9.3	0 40	2.7	1 40	4.8												
20	4 3	4.9	3 20	5.3	9 37	2.7	10 2	0.8	8 25	11.0	8 16	10.5	1 44	1.8	2 26	3.6												
21	4 35	5.4	4 14	5.7	10 19	2.1	10 44	0.8	9 5	11.7	9 5	11.5	2 38	1.1	3 7	2.4									P.			
22	5 2	5.6	5 1	6.0	10 56	1.5	11 22	0.9	9 41	12.2	9 50	12.2	3 22	0.6	3 46	1.5									O,E.			
23	5 31	5.8	5 49	6.1	11 34	1.1	11 59	1.2	10 15	12.5	10 32	12.7	4 4	0.5	4 22	0.8												
24	5 58	5.8	6 32	6.0	*	*	..	0 9	0.8	10 49	12.3	11 13	12.6	4 43	0.7	4 58	0.6											
25	6 25	5.7	7 16	5.7	0 35	1.6	0 46	0.7	11 22	11.8	11 53	12.1	5 21	1.4	5 34	0.7												
26	6 49	5.5	8 5	5.2	1 7	2.2	1 25	0.7	11 52	11.1	*	*	..	5 58	2.4	6 8	1.1											
27	7 12	5.3	8 58	4.6	1 37	2.8	2 10	1.0	0 36	11.2	0 22	10.2	6 36	3.6	6 46	1.6												
28	7 19	5.0	10 13	4.0	2 6	3.4	3 3	1.2	1 23	10.3	1 20	9.3	7 16	4.8	7 29	2.4									C.S.			
29	7 34	4.6	*	*	..	*	*	..	4 17	1.5	2 25	9.3	1 28	8.3	8 10	6.0	8 25	3.2										
30	{ <sup>0 23</sup> <sub>7 38</sub> <sup>2.7</sup> 4.1}	*	*	..	*	*	..	5 44	1.6	3 55	8.6	2 25	7.4	9 34	6.8	9 40	3.8											
31	{ <sup>3 43</sup> <sub>9 41</sub> <sup>3.8</sup> 3.7}	*	*	..	*	*	..	6 56	1.6	5 56	8.4	4 25	7.0	11 43	6.9	11 20	3.9											

潮時及潮高表

明治四十六年 三月

地名	竹 敷								佐 世 保								太陰曆日附											
	高 潮				低 潮				高 潮				低 潮															
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後													
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	d
1	3 44	4.6	3 1	4.8	9 20	3.7	10 28	2.4	3 36	6.1	2 3	6.2	8 53	5.5	9 58	3.0									24			
2	6 4	4.6	5 13	4.5	11 38	3.9	*	*	..	6 6	6.3	4 21	5.9	11 26	5.6	11 29	2.8								25			
3	7 30	5.1	6 50	4.9	0 19	2.3	1 17	3.4	7 7	7.1	5 53	6.4	*	*	..	0 46	5.0								26			
4	8 8	5.5	7 40	5.3	1 29	1.9	1 59	2.9	7 38	7.6	6 44	7.0	0 34	2.2	1 21	4.4									27			
5	8 36	6.0	8 21	5.9	2 6	1.5	2 30	2.3	8 2	8.1	7 24	8.2	1 16	1.7	1 49	3.8									28			
6	8 59	6.3	8 55	6.3	2 40	1.2	2 57	1.8	8 24	8.4	7 58	8.3	1 51	1.3	2 13	3.1									29			
7	9 21	6.5	9 24	6.7	3 8	1.0	3 22	1.4	8 44	8.7	8 30	8.7	2 21	1.1	2 36	2.6									30			
8	9 42	6.8	9 52	6.9	3 35	0.9	3 46	1.0	9 3	8.9	9 1	9.0	2 48	1.0	3 0	2.0									1			
9	10 5	6.9	10 21	7.0	4 0	0.9	4 11	0.7	9 20	9.0	9 33	9.2	3 15	1.1	3 25	1.5									2			
10	10 28	7.0	10 49	6.9	4 26	1.0	4 38	1.5	9 45	9.0	10 4	9.2	3 41	1.4	3 52	1.2									3			
11	10 49	6.9	11 19	6.7	4 49	1.2	5 5	0.5	10 6	8.9	10 35	8.7	4 7	1.8	4 20	1.1									4			
12	11 13	6.8	11 49	6.3	5 14	1.5	5 34	0.7	10 28	8.8	11 8	8.3	4 31	2.3	4 50	1.2									5			
13	11 38	6.6	*	*	..	5 39	1.9	6 7	1.0	10 52	8.5	11 47	7.5	4 56	2.9	5 26	1.5								6			
14	0 23	5.8	0 8	6.2	6 8	2.3	6 46	1.4	11 20	8.1	*	*	..	5 26	3.7	6 10	2.0								7			
15	1 3	5.3	0 46	5.5	6 43	2.8	7 40	2.0	{ <sup>0 38</sup> <sub>11 56</sub> <sup>6.8</sup> 7.5}	*	*	..	6 4	4.4	7 11	2.5									8			
16	2 8	4.7	1 47	5.1	7 43	3.4	9 15	2.4	1 56	6.2	0 54	6.8	7 11	5.1	8 50	2.9									9			
17	4 12	4.3	4 0	4.7	9 44	3.7	11 17	2.4	4 16	6.0	3 10	6.3	9 33	5.4	10 36	2.7									10			
18	6 19	4.9	6 6	5.1	*	*	..	0 8	3.2	5 55	6.8	5 8	6.9	11 21	4.7	11 55	2.1								11			
19	7 18	5.6	7 17	6.0	0 56	1.9	1 17	2.4	6 43	7.7	6 22	7.8	*	*	..	0 34	3.7								12			
20	7 59	6.3	8 10	6.6	1 40	1.3	2 10	1.6	7 23	8.6	7 18	8.7	0 52	1.3	1 20	2.6									13			
21	8 40	6.9	8 53	7.3	2 25	0.8	2 45	0.8	7 58	9.2	8 8	9.5	1 38	0.8	2 2	1.7												



潮時及潮高表

明治四十六年 三 月																														
地名	馬				公				舞				鶴				太陰盈虛及位置													
	高 潮		低 潮		高 潮		低 潮		高 潮		低 潮		高 潮		低 潮															
	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														
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高														
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.			
1	6	23	7.4	5	45	7.2	* * *	0	7	4.0	11	34	0.6	7	23	0.8	3	46	0.3	* * *	..									
2	7	38	7.1	6	46	7.0	0	39	1.4	1	13	4.4	* * *	..	{ 1 31 8 42 } 0.7	4	41	0.2	* * *	..							S.			
3	8	50	7.1	7	51	7.0	1	47	1.5	2	23	4.5	* * *	..	{ 2 11 10 11 } 0.8	5	45	0.2	* * *	..										
4	9	49	7.1	8	51	7.1	2	49	1.4	3	21	4.4	* * *	..	{ 2 44 11 14 } 0.7	6	43	0.1	* * *	..										
5	10	38	7.3	9	46	7.4	3	45	1.3	4	11	4.1	* * *	..	2	56	0.7	7	26	0.1	7	8	0.7							
6	11	14	7.4	10	31	7.7	4	34	1.3	4	49	3.7	0	14	0.9	3	1	0.7	8	4	0.1	7	34	0.6					A.	
7	11	43	7.5	11	16	8.0	5	12	1.3	5	23	3.3	1	4	0.9	3	7	0.8	8	33	0.1	7	59	0.6						
8	* * *	..	{ 0 10 11 59 } 7.6	5	50	7.6	1	4	0.9	3	7	0.8	8	33	0.1	7	59	0.6												
9	* * *	..	0	36	7.7	6	25	1.6	6	31	2.3	2	41	1.0	3	29	0.8	9	28	0.3	9	5	0.4						E.	
10	0	39	8.3	0	59	7.8	6	56	1.9	7	4	1.9	3	25	1.0	3	40	0.8	9	50	0.3	9	44	0.3						
11	1	20	8.3	1	23	7.9	7	27	2.2	7	38	1.5	4	12	0.9	3	58	0.9	10	13	0.4	10	28	0.3						
12	2	0	8.1	1	53	8.0	7	59	2.6	8	17	1.3	4	55	0.8	4	10	0.9	10	28	0.5	11	17	0.2						
13	2	42	7.9	2	28	8.0	8	34	3.0	9	3	1.2	5	46	0.7	4	34	0.9	10	46	0.6	* * *	..							
14	3	31	7.5	3	5	8.0	9	13	3.4	9	52	1.2	6	48	0.7	4	59	0.9	{ 0 16 11 11 } 0.2	* * *	..									
15	4	25	7.1	3	50	7.9	9	59	3.8	10	49	1.3	8	20	0.6	5	37	0.9	1	31	0.2	* * *	..							
16	5	30	6.9	4	50	7.6	11	0	4.2	11	58	1.4	10	13	0.6	6	43	0.9	3	4	0.2	* * *	..					D,N.		
17	6	44	6.7	6	4	7.5	* * *	..	0	15	4.3	* * *	..	{ 0 13 8 10 } 0.6	4	26	0.2	* * *	..											
18	8	2	6.9	7	22	7.6	1	14	1.4	1	34	4.1	* * *	..	{ 1 5 10 6 } 0.7	5	32	0.2	4	48	0.7									
19	9	8	7.3	8	39	7.8	2	22	1.2	2	48	3.7	* * *	..	{ 1 34 11 20 } 0.7	6	26	0.1	5	59	0.7									
20	10	1	7.8	9	47	8.2	3	25	1.1	3	50	3.1	* * *	..	1	57	0.8	7	10	0.1	6	51	0.6							
21	10	47	8.1	10	43	8.6	4	22	0.9	4	42	2.4	0	38	1.0	2	22	0.8	7	53	0.1	7	39	0.5					P.	
22	11	31	8.5	11	40	9.0	5	13	0.8	5	31	1.7	1	38	1.0	2	49	0.9	8	32	0.1	8	22	0.4					O,E.	
23	* * *	..	0	10	8.7	6	0	0.9	6	16	1.1	2	32	1.0	3	12	0.9	9	8	0.2	9	2	0.3							
24	0	31	9.2	0	50	8.8	6	46	1.0	7	2	0.7	3	23	1.0	3	39	0.9	9	44	0.3	9	46	0.2						
25	1	23	9.3	1	28	8.8	7	26	1.4	7	47	0.5	4	17	0.9	4	4	0.9	10	16	0.4	10	37	0.2						
26	2	12	9.1	2	12	8.5	8	17	2.0	8	34	0.4	5	14	0.9	4	26	0.9	10	47	0.5	11	28	0.2						
27	3	7	8.8	2	53	8.2	9	5	2.6	9	24	0.5	6	17	0.8	4	41	0.9	11	17	0.6	* * *	..							
28	4	4	8.3	3	35	7.9	9	54	3.2	10	14	0.8	7	36	0.7	5	1	0.9	{ 0 31 11 55 } 0.2	* * *	..						C,S.			
29	5	2	7.9	4	23	7.4	10	47	3.8	11	10	1.1	9	29	0.6	5	0	0.8	1	50	0.2	* * *	..							
30	6	4	7.5	5	17	7.1	11	45	4.2	* * *	..	9	1	0.6	6	17	0.8	3	11	0.2	* * *	..								
31	7	12	7.2	6	14	6.8	0	10	1.4	0	47	4.5	* * *	..	{ 1 28 7 55 } 0.7	4	26	0.2	* * *	..										

潮時及潮高表

明治四十六年 三 月																												
地名	大				湊				鎮				海 灣				太陰曆日附											
	高 潮		低 潮		高 潮		低 潮		高 潮		低 潮		高 潮		低 潮													
	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												
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	d
1	8	27	1.7	11	6	1.4	2	32	1.1	4	6	0.7	2	23	4.5	3	11	4.1	8	52	2.8	9	41	2.8				24
2	9	47	1.6	* * *	..	4	8	1.3	5	37	0.7	4	45	4.4	5	30	3.9	11	33	2.9	11	33	2.6				25	
3	{ 1 20 11 52 }	{ 1.5 1.5 }	* * *	..	6	33	1.3	7	10	0.7	6	24	4.8	6	50	4.3	* * *	..	0	57	2.5				26			
4	2	19	1.6	1	11	1.6	7	48	1.2	7	59	0.5	7	14	5.3	7	29	4.8	0	44	2.2	1	36	2.0				27
5	2	49	1.8	2	5	1.7	8	29	1.0	8	40	0.5	7	49	5.7	8	2	5.2	1	26	1.7	2	6	1.6				28
6	3	13	1.9	2	45	1.9	8	58	0.8	9	11	0.4	8	17	6.1	8	27	5.7	2	0	1.3	2	30	1.2				29
7	3	31	1.9	3	18	2.0	9	22	0.7	9	38	0.3	8	42	6.4	8	52	6.0	2	27	0.9	2	53	0.9				30
8	3	52	2.0	3	50	2.1	9	47	0.5	10	4	0.3	9	7	6.6	9	18	6.3	2	55	0.6	3	17	0.7				1
9	4	14	2.1	4	20	2.2	10	14	0.4	10	29	0.3	9	32	6.7	9	44	6.4	3	23	0.5	3	41	0.5				2
10	4	35	2.1	4	51	2.1	10	42	0.3	10	53	0.4	9	57	6.6	10	9	6.5	3	49	0.5	4	3	0.4				3
11	5	6	2.2	5	21	2.1	11	10	0.3	11	17	0.5	10	21	6.5	10	36	6.4	4	15	0.5	4	28	0.5				4
12	5	19	2.2	5	52	2.0	11	40	0.2	11	42	0.6	10	46	6.2	11	6	6.2	4	43	0.8	4	54	0.7				5
13	5	44	2.2	6	26	1.9	* * *	..	0	14	0.3	11	13	5.9	11	38	5.8	5	12	1.1	5	27	1.0				6	
14	6	11	2.1	7	8	1.7	0	9	0.7	0	52	0.4	11	44	5.4	* * *	..	5	45	1.5	5	57	1.5				7	
15	6	44	2.0	7	59	1.5	0	40	0.9	1	42	0.5	0	20	5.4	0	21	4.8	6	26	2.0	6	41	1.9				8
16	7	28	1.8	9	29	1.4	1	22	1.0	2	54	0.7	1	17	4.9	1	28	4.2	7	36	2.7	8	2	2.4				9
17	8	40	1.6	11	52	1.4	2	38	1.2	4	44	0.7	3	6	4.5	3	52	4.0	9	50	2.9	10	17	2.5				10
18	11	2	1.6	* * *	..	5	9	1.2	6	25	0.6	5	22	4.7	5	54	4.5	11	53	2.5	* * *	..						
19	1	22	1.6	0	46	1.7	6	56	1.1	7	32	0.5	6	32	5.4	6	54	5.2	0	0	2.0	0	53	1.8				12
20	2	7	1.8	1	52	2.0	7	55	0.8	8	20	0.3	7	20	6.1	7	39	5.9	0	59	1.3	1	36	1.0				13



潮時及潮高表

明治四十六年 四月																太陰盈虛及位置											
地名	橫 須 賀								吳																		
	高 潮				低 潮				高 潮				低 潮														
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後												
時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.
1	4	20	4.3	0	34	3.9	*	*	..	8	14	1.5	7	15	9.0	6	15	7.5	*	*	..	1	15	6.2			
2	4	11	4.7	2	7	4.2	9	19	3.7	9	4	1.5	7	55	9.6	7	19	8.3	0	43	3.4	1	55	5.4			
3	4	10	4.8	3	7	4.7	9	40	3.1	9	45	1.5	8	17	10.0	8	4	9.2	1	35	3.3	2	20	4.4			
4	4	20	4.9	3	53	5.1	10	3	2.5	10	19	1.6	8	41	10.3	8	40	10.0	2	16	2.8	2	43	3.5			
5	4	32	5.1	4	32	5.4	10	26	2.0	10	47	1.7	9	6	10.6	9	16	10.8	2	52	2.5	3	10	2.7			
6	4	46	5.2	5	11	5.5	10	51	1.4	11	13	1.9	9	29	10.8	9	49	11.3	3	26	2.4	3	35	2.0			
7	5	2	5.3	5	46	5.6	11	19	1.0	11	37	2.2	9	51	10.9	10	22	11.6	3	55	2.5	4	1	1.4			
8	5	19	5.4	6	21	5.4	11	47	0.6	11	59	2.5	10	15	10.9	10	55	11.6	4	25	2.7	4	29	1.0			
9	5	38	5.5	6	59	5.2	*	*	..	0	22	0.5	10	41	10.8	11	31	11.4	4	54	3.1	5	0	0.8			
10	5	59	5.6	7	40	4.8	0	25	2.8	0	59	0.5	11	7	10.6	*	*	..	5	25	3.6	5	32	0.9			
11	6	24	5.6	8	25	4.4	0	49	3.1	1	41	0.7	{ <sup>0 9</sup> <sub>11 35</sub> 10.9}	*	*	..	5	58	4.4	6	10	1.2					
12	6	52	5.4	9	23	4.1	1	17	3.4	2	31	0.9	0	55	10.4	0	11	9.7	6	39	5.0	6	55	1.8			
13	7	22	5.0	10	56	3.8	1	58	3.8	3	38	1.3	1	47	9.7	0	58	8.9	7	31	5.7	7	50	2.6			
14	8	8	4.6	*	*	..	*	*	..	5	6	1.6	3	2	9.1	2	9	8.2	8	48	6.2	9	11	3.3			
15	{ <sup>1 9</sup> <sub>10 17</sub> 3.8}	4.2	*	*	..	*	*	..	6	35	1.7	4	40	8.9	4	7	7.9	10	38	6.1	10	51	3.5				
16	2	25	4.3	0	44	4.4	7	25	3.6	7	54	1.6	6	5	9.4	5	54	8.5	*	*	..	0	12	5.2			
17	2	52	4.7	2	18	4.7	8	31	2.9	8	52	1.6	7	2	10.1	7	8	9.6	0	18	3.1	1	12	4.0			
18	3	25	5.2	3	20	5.2	9	21	2.1	9	37	1.5	7	49	10.7	8	2	10.7	1	24	2.5	1	57	2.8			
19	3	49	5.4	4	11	5.6	9	56	1.4	10	19	1.6	8	25	11.3	8	49	11.6	2	12	2.1	2	36	1.7			
20	4	18	5.6	4	58	5.9	10	32	0.8	10	58	1.8	9	2	11.6	9	33	12.3	2	59	1.8	3	14	0.8			
21	4	47	5.7	5	42	6.0	11	9	0.4	11	34	2.1	9	38	11.6	10	16	12.6	3	40	1.9	3	50	0.3			
22	5	14	5.7	6	26	5.8	11	46	0.2	*	*	..	10	12	11.3	10	58	12.5	4	22	2.2	4	27	0.2			
23	5	40	5.5	7	11	5.5	0	8	2.5	0	22	0.1	10	47	10.9	11	41	12.1	5	2	2.7	5	4	0.3			
24	6	4	5.4	8	0	5.1	0	40	2.9	1	0	0.3	11	19	10.3	*	*	..	5	41	3.5	5	41	0.7			
25	6	26	5.2	8	53	4.7	1	13	3.4	1	41	0.5	{ <sup>0 26</sup> <sub>11 51</sub> 11.4}	*	*	..	6	21	4.4	6	18	1.4					
26	6	42	4.8	9	57	4.2	1	44	3.8	2	27	0.9	1	13	10.6	0	26	8.8	7	5	5.3	7	0	2.2			
27	6	58	4.5	11	29	4.0	2	20	4.0	3	21	1.3	2	10	9.8	1	2	8.0	7	56	6.1	7	43	3.0			
28	7	20	4.1	*	*	..	*	*	..	4	32	1.7	3	17	9.1	2	4	7.4	9	10	6.5	8	51	3.7			
29	{ <sup>1 50</sup> <sub>9 23</sub> 4.0}	3.7	*	*	..	*	*	..	5	51	2.0	4	42	8.9	3	51	7.1	10	50	6.4	10	20	4.2				
30	2	41	4.2	0	17	3.8	7	40	3.8	7	23	2.2	5	50	9.0	5	54	7.5	*	*	..	{ <sup>0 19</sup> <sub>11 56</sub> 5.7}	4.3				

潮時及潮高表

明治四十六年 四月																太陰曆日附												
地名	竹 敷								佐 世 保																			
	高 潮				低 潮				高 潮				低 潮															
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後													
時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高													
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	d
1	6	48	5.0	6	26	4.8	*	*	..	0	44	3.3	6	29	6.9	5	29	6.2	*	*	..	0	15	4.9	25			
2	7	23	5.5	7	17	5.3	0	47	2.2	1	26	2.7	6	56	7.5	6	26	6.9	0	1	2.7	0	50	4.1	26			
3	7	53	5.8	7	56	5.9	1	35	1.9	1	56	2.1	7	19	7.9	7	6	7.7	0	47	2.3	1	16	3.3	27			
4	8	18	6.2	8	30	6.4	2	8	1.6	2	22	1.5	7	41	8.2	7	41	8.3	1	22	2.0	1	40	2.6	28			
5	8	41	6.4	8	59	6.7	2	38	1.3	2	48	1.1	8	2	8.5	8	14	8.8	1	53	1.8	2	5	1.9	29			
6	9	5	6.8	9	30	7.0	3	5	1.2	3	16	0.6	8	23	8.8	8	44	9.1	2	22	1.7	2	31	1.3	30			
7	9	28	6.9	9	59	7.1	3	32	1.1	3	41	0.4	8	44	8.9	9	14	9.2	2	47	1.8	2	56	0.8	1			
8	9	52	7.0	10	28	7.0	3	58	1.2	4	10	0.2	9	7	9.0	9	46	9.1	3	13	2.0	3	25	0.6	2			
9	10	18	6.9	11	1	6.7	4	24	1.4	4	39	0.3	9	29	9.0	10	19	8.7	3	39	2.4	3	55	0.5	3			
10	10	45	6.8	11	33	6.4	4	52	1.7	5	10	0.5	9	56	8.8	10	56	8.3	4	6	2.9	4	28	0.7	4			
11	11	15	6.5	*	*	..	5	19	2.0	5	43	0.8	10	25	8.5	11	38	7.6	4	38	3.4	5	6	1.1	5			
12	{ <sup>0 10</sup> <sub>11 52</sub> 5.9}	6.0	*	*	..	5	57	2.4	6	28	1.3	10	59	8.0	*	*	..	5	13	4.0	5	53	1.7	6				
13	0	58	5.5	0	39	5.5	6	44	2.9	7	28	1.9	{ <sup>0 34</sup> <sub>11 43</sub> 7.0}	7.3	*	*	..	6	1	4.6	6	55	2.4	7				
14	2	8	5.0	1	53	4.9	7	56	3.3	8	53	2.4	1	56	6.5	0	58	6.6	7	24	5.1	8	28	2.9	8			
15	3	59	4.8	4	7	4.8	10	3	3.4	10	54	2.4	3	56	6.5	3	17	6.4	9	39	5.0	10	15	2.8	9			
16	5	48	5.1	5	56	5.2	11	50	2.9	*	*	..	5	19	7.2	5	5	7.0	11	16	4.1	11	34	2.4	10			
17	6	46	5.7	7	2	5.9	0	20	2.0	0	53	2.0	6	9	7.9	6	13	7.9	*	*	..	0	13	3.1	11			
18	7	28	6.4	7	51	6.6	1	15	1.6	1	38	1.2	6	49	8.6	7	3	8.7	0	29	1.9	0	56	2.0	12			
19	8	7	6.8	8	33	7.2	2	1	1.1	2	19	0.5	7	23	9.1	7	47	9.4	1	14	1.5	1	34	1.1	13			
20	8	43	7.2	9	14	7.5	2	39	0.8	2	56	0.0	7	58	9.4	8	29	9.8	1	55	1.3	2	11	0.4	14			
21	9	18	7.3	9	52	7.6	3	19	0.7	3	32	-2	8	31	9.5	9	10	9.9	2	34	1.4	2	47	0.1	15			
22	9	53	7.3	10	31	7.5	3	53	0.8	4	8	-3	9	4	9.4	9	49	9.6	3	11	1.7	3	23	0.0	16			
23	10	24	7.1	11	7	7.1	4	29	1.1	4	43	0.0	9	36	9.0	10	31	9.1	3	47	2.3	3	59	0.2	17			
24	10	58	6.7	11	48	6.6	5	5	1.5	5	20	0.4	10	8	8.5	11	14	8.4	4	22	2.9	4	37	0.6	18			
25	11	31	6.3	*	*	..	5	42	2.1	5	58	0.9	10	34	8.2	11	38	7.7	4	57	3.7	5	4	1.1	19			
26	0	31	6.0	0	5	5.7	6	20	2.7	6	39	1.5	11	4	7.3	*	*	..	5	24	4.5	5	57	1.8	20			
27	1	17	5.4	0	50	5.2	7	6	3.1	7	29	2.1	{ <sup>0 59</sup> <sub>11 41</sub> 7.0}	6.6	*	*	..	6	26	5.0	6	52	2.6	21				
28	2	22	5.0	1	52	4.6	8	13	3.5	8	47	2.6	2	21	6.6	0	46	6.0	7	50	5.4	8	9	3.2	22			
29	3	59	4.8	3	56	4.4	10	7	3.5	10	37	2.8	4	9	6.5	2	58	5.7	9	52	5.3	9	48	3.4	23			
30	5	31	4.9	5	43	4.7	11	44	3.1	11	58	2.7	5	14	6.8	4	47	6.2	11	14	4.6	11	9	3.2	24			



明治四十六年 四月																				
地名	馬				公				舞				鶴				太陰盈虛及位置			
	高潮		低潮		高潮		低潮		高潮		低潮		高潮		低潮					
	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				
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高		時刻	潮高	
日	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.		
1	8 14	7'9	7 22	6'8	1 10	1'7	1 50	4'4	* *	..	{ 1 49 9 36 0'7 0'8 }	5 25	0'2	* *	..					
2	9 8	7'1	8 24	6'9	2 14	1'8	2 49	4'2	* *	..	{ 1 54 10 58 0'8 0'8 }	6 7	0'2	6 16	0'7					
3	9 52	7'2	9 25	7'2	3 10	1'8	3 34	3'7	* *	..	1 53	0'8	6 38	0'2	6 43	0'6				
4	10 24	7'3	10 13	7'6	3 58	2'0	4 15	3'2	0 6	0'9	1 56	0'8	7 16	0'2	7 13	0'5				
5	10 54	7'4	11 0	7'9	4 39	2'1	4 53	2'6	1 2	0'9	2 1	0'8	7 49	0'3	7 44	0'4				
6	11 19	7'6	11 43	8'1	5 16	2'2	5 25	2'0	1 56	0'9	2 11	0'8	8 16	0'4	8 18	0'3				
7	11 45	7'8	* *	..	5 50	2'4	5 58	1'5	2 43	0'9	2 23	0'9	8 40	0'4	8 55	0'2				
8	0 22	8'2	0 14	8'0	6 17	2'6	6 35	1'0	3 32	0'9	2 37	0'9	9 2	0'5	9 36	0'2				
9	1 4	8'3	0 46	8'2	6 58	2'8	7 16	0'7	4 19	0'8	2 59	1'0	9 23	0'6	10 23	0'1				
10	1 49	8'2	1 18	8'2	7 35	3'1	7 57	0'5	5 10	0'7	3 19	1'0	9 47	0'6	11 14	0'1				
11	2 34	8'0	1 57	8'2	8 14	3'4	8 43	0'5	6 5	0'7	3 44	1'0	10 13	0'7	* *	..				
12	3 22	7'7	2 41	8'0	8 58	3'7	9 37	0'7	7 8	0'6	4 19	1'0	0 15	0'1	* *	..				
13	4 23	7'4	3 37	7'7	9 56	4'0	10 35	1'0	8 47	0'6	5 3	0'9	1 28	0'2	* *	..				
14	5 23	7'2	4 40	7'5	10 57	4'0	11 40	1'3	10 27	0'6	6 23	0'8	2 38	0'2	* *	..				
15	6 34	7'1	5 57	7'3	* *	..	0 13	4'1	11 39	0'7	8 20	0'8	3 47	0'2	* *	..				
16	7 40	7'3	7 19	7'4	0 53	1'5	1 26	3'8	* *	..	{ 0 19 10 12 0'9 0'9 }	4 48	0'2	4 50	0'7					
17	8 38	7'5	8 30	7'7	2 1	1'6	2 31	3'2	* *	..	{ 0 40 11 31 0'8 0'9 }	5 43	0'2	5 49	0'6					
18	9 25	7'9	9 30	8'1	3 0	1'6	3 25	2'4	* *	..	1 4	0'8	6 33	0'2	6 37	0'4				
19	10 7	8'2	10 28	8'5	3 51	1'6	4 15	1'7	0 38	0'9	1 27	0'9	7 13	0'3	7 23	0'3				
20	10 48	8'4	11 20	8'8	4 41	1'6	5 0	1'1	1 39	0'9	1 49	0'9	7 55	0'3	8 5	0'2				
21	11 27	8'6	* *	..	5 29	1'9	5 47	0'5	2 34	1'0	2 13	0'9	8 31	0'4	8 49	0'2				
22	0 12	9'0	0 10	8'6	6 17	2'1	6 32	0'2	3 30	0'9	2 38	0'9	9 7	0'5	9 35	0'1				
23	1 4	9'0	0 52	8'5	7 4	2'3	7 22	0'0	4 25	0'9	3 5	0'9	9 41	0'6	10 21	0'1				
24	1 58	8'9	1 35	8'3	7 52	2'8	8 10	0'1	5 26	0'8	3 24	0'9	10 13	0'7	11 14	0'1				
25	2 52	8'6	2 18	8'0	8 42	3'3	8 58	0'3	6 29	0'8	3 47	0'9	10 50	0'7	* *	..				
26	3 48	8'2	3 5	7'6	9 31	3'7	9 49	0'7	7 47	0'7	3 55	0'9	0 13	0'1	* *	..				
27	4 44	7'9	3 48	7'4	10 23	4'1	10 38	1'0	9 28	0'6	4 41	0'8	1 16	0'1	* *	..				
28	5 40	7'5	4 41	6'9	11 17	4'3	11 32	1'5	11 23	0'6	5 35	0'8	2 29	0'2	* *	..				
29	6 33	7'3	5 38	6'9	* *	..	0 13	4'3	11 59	0'7	7 41	0'8	3 28	0'2	* *	..				
30	7 21	7'2	6 44	6'8	0 27	1'8	1 6	4'0	* *	..	{ 0 41 9 26 0'7 0'8 }	4 23	0'2	4 30	0'7					

明治四十六年 四月																			
地名	大				湊				鎮				海				太陰曆日附		
	高潮		低潮		高潮		低潮		高潮		低潮		高潮		低潮				
	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			
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高		時刻	潮高
日	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	d
1	{ 0 43 11 2 }	{ 1'4 1'5 }	* *	..	5 44	1'3	6 29	0'7	5 51	4'6	6 24	4'2	* *	..	{ 0 30 11 50 2'6 2'4 }				25
2	1 41	1'5	0 44	1'6	7 15	1'2	7 18	0'7	6 41	5'0	7 2	4'7	* *	..	1 4	2'1			26
3	2 0	1'7	1 39	1'7	7 54	0'9	8 1	0'6	7 15	5'5	7 31	5'3	0 59	1'9	1 31	1'6			27
4	2 25	1'8	2 12	1'8	8 18	0'7	8 29	0'6	7 45	5'8	8 10	5'8	1 33	1'5	1 57	1'2			28
5	2 46	1'9	2 59	2'0	8 52	0'5	9 5	0'5	8 10	6'2	8 25	6'2	2 3	1'0	2 20	0'8			29
6	3 15	2'0	3 32	2'1	9 20	0'4	9 33	0'5	8 44	6'4	8 43	6'5	2 34	0'8	2 48	0'6			30
7	3 32	2'1	4 4	2'1	9 49	0'2	10 0	0'5	9 2	6'5	9 17	6'7	2 57	0'6	3 8	0'4			1
8	3 56	2'2	4 36	2'1	10 18	0'1	10 26	0'6	9 27	6'5	9 44	6'7	3 24	0'5	3 33	0'3			2
9	4 22	2'2	5 7	2'1	10 49	0'1	10 53	0'6	9 54	6'3	10 14	6'6	3 53	0'6	4 0	0'4			3
10	4 49	2'2	5 41	2'0	11 20	0'1	11 23	0'7	10 21	6'1	10 47	6'4	4 23	0'8	4 29	0'6			4
11	5 18	2'2	6 19	1'9	11 57	0'2	11 55	0'8	10 53	5'9	11 22	6'0	4 56	1'2	5 0	0'9			5
12	5 50	2'1	7 3	1'7	* *	..	0 38	0'3	11 26	5'7	* *	..	5 32	1'7	5 38	1'4			6
13	6 28	1'9	7 58	1'6	0 33	0'9	1 27	0'5	0 8	5'5	0 14	4'7	6 22	2'2	6 29	1'9			7
14	7 19	1'8	9 7	1'5	1 26	1'1	2 36	0'6	1 11	5'0	1 30	4'2	7 36	2'6	7 56	2'4			8
15	8 46	1'6	11 16	1'5	2 55	1'2	4 9	0'7	2 57	4'7	3 47	4'1	9 41	2'7	10 5	2'4			9
16	10 56	1'6	* *	..	5 1	1'1	5 47	0'7	4 53	4'9	5 33	4'6	11 25	2'3	11 38	2'0			10
17	0 33	1'7	0 31	1'7	6 31	0'9	6 58	0'6	6 3	5'5	6 31	5'4	* *	..	0 24	1'6			11
18	1 23	1'9	1 39	1'9	7 31	0'6	7 52	0'5	6 54	6'0	7 16	6'1	0 38	1'3	1 8	0'9			12
19	2 4	2'0	2 29	2'1	8 16	0'4	8 37	0'4	7 34	6'5	7 57	6'7	1 23	0'8	1 44	0'4			13
20	2 42	2'2	3 14	2'2	8 58	0'2	9 17	0'3	8 11	6'8	8 35	7'1	2 5	0'3	2 22	0'0			14
21	3 19	2'3	3 55	2'3	9 36	0'0	9 54	0'3	8 50	6'9	9 11	7'2	2 44	0'1	2 58	-'2			15
22	3 53	2'3	4 35	2'3	10 14	-'1	10 31	0'4	9 10	6'8	9 47	7'1	3 14	0'1	3 25	-'1			16
23	4 28	2'3	5 14	2'2	10 52	0'0	11 6	0'5	9 59	6'5	10 22	6'8	3 58	0'3	4 5	0'2			17
24	4 59	2'2	5 55	2'1	11 28	0'0	11 40	0'7	10 32	6'0	10 57	6'4	4 33	0'7	4 38	0'6			18
25	5 29	2'1	6 34	1'9	* *	..	0 5	0'2	11 6	5'5	11 35	5'9	5 11	1'2	5 11	1'1			19
26	5 59	2'0	7 16	1'8	0 12	0'8	0 42	0'3	11 41	4'9	* *	..	5 50	1'8	5 45	1'7			20
27	6 30	1'8	8 5	1'6	0 46	1'0	1 26	0'5	0 17	5'3	0 23	4'4	6 37	2'4	6 28	2'2			21
28	7 14	1'7	9 17	1'5	1 31	1'1	2 24	0'7	1 13	4'8	1 31	3'8	7 47	2'8	7 39	2'7			22
29	8 13	1'5	10 53	1'5	2 38	1'2	3 36	0'8	2 44	4'5	3 44	3'8	9 42	2'9	9 42	2'8			



明治四十六年 五月																太陰盈虛及位置	
地名	橫須賀								吳								
	高潮				低潮				高潮				低潮				
	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
時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高		
日	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	E. ● N. D E,P. O S. C,A. E.
1	2 50	4'5	1 54	4'2	8 28	3'2	8 27	2'2	6 37	9'3	6 44	8'4	* *	..	0 56	4'6	
2	2 56	4'7	2 55	4'6	8 58	2'6	8 58	2'3	7 17	9'5	7 34	9'3	0 53	4'0	1 30	3'9	
3	3 6	4'9	3 42	4'8	9 25	1'9	9 34	2'5	7 46	9'8	8 16	10'1	1 41	3'9	1 59	3'0	
4	3 23	5'0	4 23	5'1	9 52	1'3	10 6	2'6	8 13	10'1	8 52	10'8	2 17	3'6	2 28	2'1	
5	3 44	5'2	5 6	5'2	10 24	0'8	10 37	2'8	8 41	10'2	9 29	11'3	2 53	3'5	2 58	1'4	
6	4 7	5'3	5 45	5'3	10 56	0'4	11 6	3'0	9 10	10'4	10 4	11'6	3 26	3'6	3 29	0'8	
7	4 32	5'5	6 23	5'0	11 30	0'1	11 23	3'2	9 39	10'5	10 42	11'7	4 0	3'7	4 2	0'4	
8	4 34	5'6	7 2	5'0	11 58	0'0	* *	..	10 13	10'5	11 22	11'5	4 36	3'9	4 39	0'3	
9	5 28	5'6	7 47	4'9	0 7	3'4	0 47	0'1	10 47	10'3	* *	..	5 13	4'3	5 17	0'5	
10	6 3	5'4	8 35	4'6	0 44	3'6	1 31	0'3	{ <sup>0 4</sup> <sub>11 25</sub>	{ <sup>11'2</sup> <sub>9'9</sub>	* *	..	5 55	4'6	5 59	0'9	
11	6 40	5'1	9 35	4'4	1 26	3'7	2 19	0'7	0 53	10'7	0 9	9'3	6 41	5'1	6 47	1'6	
12	7 30	4'7	10 47	4'4	2 26	3'8	3 16	1'1	1 47	10'2	1 7	8'7	7 40	5'4	7 46	2'5	
13	8 47	4'3	* *	..	3 45	3'8	4 26	1'6	2 53	9'8	2 26	8'2	8 56	5'5	9 1	3'2	
14	{ <sup>0 5</sup> <sub>10 46</sub>	{ <sup>4'4</sup> <sub>4'2</sub>	* *	..	5 29	3'5	5 47	2'0	4 8	9'6	4 7	8'2	10 23	5'1	10 28	3'6	
15	1 1	4'7	0 46	4'3	7 0	2'9	7 11	2'1	5 17	9'7	5 40	8'8	11 40	4'3	11 52	3'6	
16	1 46	4'9	2 10	4'7	8 1	2'2	8 16	2'2	6 16	10'0	6 50	9'8	* *	..	0 37	3'3	
17	2 25	5'1	3 13	5'0	8 49	1'7	9 2	2'4	7 2	10'4	7 46	10'7	0 55	3'4	1 22	2'3	
18	2 55	5'4	4 7	5'3	9 31	0'9	9 48	2'6	7 49	10'6	8 34	11'5	1 51	3'2	2 5	1'4	
19	3 28	5'5	4 58	5'5	10 11	0'4	10 32	2'8	8 26	10'7	9 19	12'0	2 37	3'1	2 46	0'6	
20	3 59	5'5	5 45	5'5	10 49	0'0	11 13	3'1	9 4	10'7	10 3	12'2	3 21	3'2	3 24	0'2	
21	4 32	5'4	6 32	5'4	11 28	-'1	11 49	3'3	9 43	10'5	10 47	12'2	4 4	3'4	4 2	0'0	
22	5 1	5'4	7 18	5'3	* *	..	0 7	-'2	10 19	10'2	11 31	11'9	4 46	3'9	4 41	0'2	
23	5 27	5'2	8 3	5'0	0 24	3'6	0 44	0'0	10 53	9'8	* *	..	5 27	4'3	5 17	0'6	
24	5 56	5'0	8 49	4'8	0 59	3'8	1 23	0'3	{ <sup>0 13</sup> <sub>11 28</sub>	{ <sup>11'5</sup> <sub>9'2</sub>	* *	..	6 7	4'8	5 54	1'2	
25	6 23	4'7	9 42	4'5	1 37	4'0	2 2	0'7	0 55	10'9	0 4	8'7	6 47	5'3	6 35	2'0	
26	7 1	4'5	10 32	4'4	2 19	4'0	2 47	1'2	1 40	10'2	0 49	8'3	7 34	5'6	7 19	2'8	
27	7 56	4'2	11 28	4'4	3 17	3'0	3 34	1'7	2 31	9'7	1 42	7'9	8 29	5'8	8 10	3'6	
28	9 25	3'9	* *	..	4 38	3'7	4 35	2'2	3 25	9'3	3 2	7'6	9 37	5'7	9 20	4'3	
29	{ <sup>0 14</sup> <sub>11 32</sub>	{ <sup>4'4</sup> <sub>3'8</sub>	* *	..	6 8	3'3	5 52	2'6	4 21	9'0	4 36	7'8	10 47	5'2	10 41	4'7	
30	0 44	4'5	1 20	4'0	7 16	2'7	7 8	2'9	5 14	9'0	6 0	8'3	11 46	4'4	11 58	4'9	
31	1 14	4'6	2 38	4'3	8 2	2'1	8 7	3'1	6 2	9'0	6 57	9'1	* *	..	0 31	3'5	

明治四十六年 五月																太陰曆日附	
地名	竹 敷								佐 世 保								
	高潮				低潮				高潮				低潮				
	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
時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高		
日	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	d
1	6 17	5'2	6 42	5'2	* *	..	0 32	2'5	5 53	7'2	5 52	6'9	* *	..	0 0	3'8	25
2	6 56	5'5	7 27	5'7	0 50	2'4	1 8	1'9	6 20	7'6	6 37	7'6	0 3	3'0	0 31	3'0	26
3	7 24	5'9	8 2	6'2	1 28	2'2	1 41	1'4	6 46	7'9	7 14	8'1	0 40	2'8	0 59	2'2	27
4	7 54	6'2	8 36	6'5	2 1	2'0	2 13	0'9	7 11	8'3	7 50	8'6	1 14	2'7	1 29	1'5	28
5	8 23	6'5	9 7	6'7	2 32	1'8	2 43	0'5	7 38	8'5	8 25	8'8	1 46	2'7	1 59	0'9	29
6	8 52	6'7	9 38	6'8	3 1	1'7	3 14	0'2	8 4	8'8	8 59	8'9	2 17	2'7	2 30	0'4	1
7	9 20	6'8	10 11	6'8	3 29	1'7	3 46	0'1	8 33	8'9	9 34	8'9	2 47	2'9	3 2	0'2	2
8	9 53	6'8	10 46	6'7	4 3	1'8	4 22	0'2	9 4	8'9	10 11	8'7	3 20	3'1	3 37	0'2	3
9	10 29	6'7	11 24	6'4	4 37	1'9	4 58	0'4	9 36	8'7	10 54	8'3	3 54	3'3	4 17	0'4	4
10	11 7	6'4	* *	..	5 14	2'1	5 38	0'8	10 13	8'3	11 40	7'9	4 31	3'7	4 59	0'8	5
11	{ <sup>0 7</sup> <sub>11 52</sub>	{ <sup>6'1</sup> <sub>5'9</sub>	* *	..	5 57	2'4	6 26	1'3	10 56	7'8	* *	..	5 17	4'1	5 49	1'5	6
12	0 59	5'7	0 49	5'5	6 55	2'7	7 25	1'9	{ <sup>0 38</sup> <sub>11 47</sub>	{ <sup>7'4</sup> <sub>7'2</sub>	* *	..	6 17	4'5	6 39	2'2	7
13	2 3	5'4	2 16	5'1	8 12	2'9	8 49	2'3	1 50	7'2	1 20	6'6	7 41	4'6	8 11	2'7	8
14	3 28	5'3	3 53	5'0	9 44	2'8	10 20	2'4	3 14	7'2	3 11	6'6	9 22	4'3	9 41	2'9	9
15	4 53	5'4	5 31	5'4	11 14	2'3	11 44	2'3	4 26	7'5	4 44	7'1	10 41	3'5	10 59	2'8	10
16	5 58	5'8	6 40	6'0	* *	..	0 20	1'6	5 22	7'9	5 52	7'8	11 40	2'5	11 59	2'6	11
17	6 46	6'3	7 29	6'5	0 43	2'0	1 7	0'9	6 8	8'4	6 46	8'4	* *	..	0 28	1'6	12
18	7 30	6'6	8 16	6'9	1 31	1'6	1 52	0'4	6 47	8'8	7 31	8'9	0 47	2'2	1 8	0'9	13
19	8 9	6'8	8 57	7'1	2 15	1'5	2 31	0'1	7 22	8'9	8 15	9'2	1 29	2'4	1 46	0'4	14
20	8 47	7'0	9 38	7'2	2 55	1'5	3 10	-'1	7 59	8'9	8 59	9'3	2 11	2'6	2 25	0'0	15
21	9 25	6'9	10 17	7'1	3 34	1'6	3 49	-'1	8 34	8'8	9 41	9'1	2 51	2'8	3 4	0'0	16
22	9 59	6'7	10 55	6'9	4 11	1'7	4 26	0'1	9 8	8'6	10 22	8'8	3 29	3'2	3 41	0'1	17
23	10 37	6'5	11 33	6'5	4 49	1'9	5 3	0'5	9 41	8'2	11 3	8'4	4 7	3'6	4 17	0'5	18
24	11 13	6'2	* *	..	5 25	2'2	5 40	0'9	10 14	7'8	11 45	7'9	4 44	4'0	4 56	1'0	19
25	{ <sup>0 14</sup> <sub>11 50</sub>	{ <sup>6'1</sup> <sub>5'7</sub>	* *	..	6 5	2'5	6 16	1'4	10 48	7'4	* *	..	5 22	4'3	5 37	1'6	20
26	0 52	5'7	0 36	5'3	6 47	2'8	7 5	1'9	{ <sup>0 35</sup> <sub>11 32</sub>	{ <sup>7'4</sup> <sub>6'9</sub>	* *	..	6 10	4'7	6 23	2'2	21
27	1 41	5'4	1 37	5'0	7 42	2'9	8 2	2'4	1 28	7'1	0 31	6'4	7 9	4'8	7 20	2'9	22
28	2 38	5'1	2 56	4'8	8 53	3'0	9 13	2'8	2 30	6'9	1 58	6'1	8 27	4'7	8 32	3'4	23
29	3 41	5'1	4 35	4'8	10 14	2'8	10 37	2'9	3 32	6'9	3 43	6'2	9 50	4'2	9 53	3'7	24
30	4 50	5'1	5 52	5'1	11 25	2'4	11 47	2'9	4 23	7'0	5 3	6'6	10 51	3'5	11 0	3'8	25
31	5 46	5'4	6 47	5'5	* *	..	0 17	1'9	5 8	7'3	6 2	7'2	11 38	2'8	11 53	3'7	26



明治四十六年 五月

地名	馬				公				舞				鶴				太陰盈虛及位置												
	高潮		低潮		高潮		低潮		高潮		低潮		高潮		低潮														
	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													
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高													
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.		
1	8	3	7.1	7	49	6.9	1	20	2.2	1	56	3.7	* * *	..	{ <sup>0.33</sup> <sub>10.47</sub>	0.7	5	21	0.3	5	21	0.6							
2	8	45	7.2	8	51	7.1	2	16	2.5	2	48	3.2	* * *	..	0	33	0.8	5	57	0.3	6	4	0.5						
3	9	20	7.2	9	45	7.3	3	8	2.8	3	31	2.7	0	1	0.8	0	36	0.8	6	25	0.4	6	42	0.4					E.
4	9	51	7.4	10	36	7.6	3	50	2.9	4	11	2.0	0	58	0.8	0	50	0.9	6	57	0.4	7	21	0.3					
5	10	24	7.7	11	22	7.8	4	32	3.1	4	51	1.4	1	55	0.8	1	4	0.9	7	27	0.5	8	1	0.2					
6	10	58	7.9	* * *	..	5	12	3.2	5	31	0.8	2	48	0.8	1	25	0.9	7	55	0.6	8	43	0.1					●	
7	{ <sup>0.7</sup> <sub>11.34</sub>	{ <sup>8.0</sup> <sub>8.1</sub>	* * *	..	5	53	3.3	6	13	0.4	3	36	0.8	1	49	1.0	8	22	0.6	9	33	0.1							
8	0	53	8.1	0	13	8.2	6	34	3.4	6	56	0.1	4	24	0.8	2	18	1.0	8	55	0.7	10	18	0.0					
9	1	38	8.1	0	56	8.2	7	17	3.6	7	43	0.1	5	18	0.7	2	52	1.0	9	26	0.7	11	13	0.0					N.
10	2	28	8.1	1	44	8.1	8	5	3.6	8	34	0.2	6	18	0.7	3	18	1.0	* * *	..	* * *	..							
11	3	22	7.9	2	37	7.9	8	59	3.9	9	27	0.5	7	27	0.6	4	6	0.9	0	11	0.1	* * *	..						
12	4	17	7.8	3	34	7.7	9	56	3.9	10	24	0.8	8	38	0.7	5	10	0.9	1	12	0.1	* * *	..					D	
13	5	14	7.7	4	40	7.4	10	59	3.8	11	24	1.3	9	55	0.7	6	45	0.8	2	10	0.1	* * *	..						
14	6	11	7.7	5	50	7.3	* * *	..	0	3	3.6	10	40	0.7	8	25	0.8	3	3	0.2	3	18	0.7						
15	7	4	7.7	7	4	7.4	0	25	1.7	1	5	3.1	11	18	0.8	10	8	0.8	4	4	0.2	4	34	0.6					
16	7	52	7.9	8	11	7.7	1	28	2.0	2	4	2.5	11	36	0.8	11	29	0.8	4	57	0.3	5	32	0.5					E.P.
17	8	40	8.0	9	17	8.0	2	26	2.2	2	58	1.8	* * *	..	0	12	0.9	5	52	0.4	6	26	0.3						
18	9	26	8.2	10	17	8.3	3	23	2.3	3	49	1.1	0	42	0.8	0	27	0.9	6	30	0.4	7	13	0.2					
19	10	13	8.4	11	11	8.5	4	16	2.5	4	40	0.4	1	45	0.8	0	54	1.0	7	13	0.5	7	55	0.1					
20	10	52	8.4	* * *	..	5	5	2.7	5	26	0.1	2	43	0.8	1	21	1.0	7	54	0.6	8	44	0.1					○	
21	{ <sup>0.4</sup> <sub>11.41</sub>	{ <sup>8.7</sup> <sub>8.5</sub>	* * *	..	5	56	2.9	6	16	-3	3	46	0.8	1	48	1.0	8	32	0.7	9	31	0.0							
22	0	57	8.8	0	23	8.3	6	46	3.2	7	1	-3	4	43	0.8	2	18	1.0	9	10	0.7	10	20	0.0					
23	1	50	8.6	1	3	8.0	7	32	3.5	7	46	-1	5	38	0.7	2	37	0.9	* * *	..	11	8	0.0					S.	
24	2	38	8.4	1	49	7.8	8	19	3.7	8	31	0.2	6	38	0.7	3	1	0.9	* * *	..	11	54	0.0						
25	3	25	8.2	2	31	7.5	9	4	4.0	9	16	0.6	7	41	0.7	3	45	0.9	* * *	..	* * *	..							
26	4	10	7.8	3	17	7.3	9	49	4.1	10	1	1.0	8	57	0.7	4	22	0.9	0	45	0.1	* * *	..						
27	4	56	7.5	4	6	7.0	10	35	4.2	10	48	1.6	9	48	0.7	5	33	0.8	1	36	0.1	* * *	..						
28	5	38	7.3	5	2	6.8	11	25	4.0	11	35	2.2	10	27	0.7	6	54	0.8	2	25	0.2	2	18	0.7					(A.
29	6	19	7.2	6	5	6.7	* * *	..	0	17	3.7	10	43	0.7	8	49	0.7	3	10	0.3	3	35	0.6						
30	6	58	7.1	7	14	6.7	0	28	2.6	1	9	3.3	10	52	0.8	10	31	0.7	3	55	0.4	4	45	0.5					E.
31	7	37	7.2	8	16	6.9	1	22	3.1	2	0	2.7	11	7	0.8	11	51	0.7	4	43	0.4	5	36	0.4					

明治四十六年 五月

地名	大				湊				鎮				海				灣				太陰曆日附										
	高潮		低潮		高潮		低潮		高潮		低潮		高潮		低潮		高潮		低潮												
	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											
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高		時刻	潮高	時刻	潮高						
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	d
1	0	13	1.5	0	6	1.5	6	10	1.1	6	33	0.8	5	43	4.8	6	15	4.7	* * *	..	0	9	2.2	25					25		
2	0	53	1.7	1	9	1.6	7	5	0.9	7	15	0.8	6	26	5.2	6	51	5.2	0	15	2.1	0	43	1.7					26		
3	1	26	1.8	1	56	1.8	7	43	0.7	7	55	0.7	7	0	5.5	7	23	5.7	0	53	1.7	1	12	1.3					27		
4	1	57	1.9	2	37	1.9	8	17	0.5	8	30	0.7	7	31	5.8	7	52	6.1	1	27	1.4	1	40	1.0					28		
5	2	26	2.0	3	12	2.0	8	50	0.3	9	1	0.7	8	1	6.0	8	23	6.4	2	0	1.1	2	8	0.7					29		
6	2	54	2.1	3	46	2.0	9	23	0.2	9	31	0.7	8	30	6.2	8	53	6.6	2	31	0.9	2	37	0.5					1		
7	3	23	2.2	4	15	2.1	9	53	0.1	10	1	0.7	8	59	6.1	9	26	6.7	3	8	0.8	3	6	0.4					2		
8	3	55	2.2	4	55	2.1	10	31	0.0	10	37	0.7	9	32	6.1	9	59	6.7	3	35	0.8	3	39	0.4					3		
9	4	28	2.2	5	32	2.0	11	7	0.1	11	11	0.8	10	6	5.9	10	37	6.4	4	10	1.0	4	14	0.6					4		
10	5	2	2.2	6	14	1.9	11	47	0.1	11	50	0.8	10	44	5.6	11	17	6.1	4	50	1.3	4	51	0.9					5		
11	5	42	2.1	7	1	1.8	* * *	..	0	29	0.3	11	29	5.2	* * *	..	5	33	1.6	5	37	1.3					6				
12	6	25	1.9	7	55	1.7	0	36	0.9	1	18	0.4	0	9	5.7	0	24	4.8	6	30	2.0	6	36	1.8					7		
13	7	27	1.8	9	4	1.7	1	35	1.0	2	19	0.6	1	14	5.3	1	45	4.4	7	44	2.3	7	58	2.2					8		
14	8	52	1.6	10	28	1.7	2	58	1.0	3	37	0.7	2	40	5.0	3	30	4.5	9	18	2.3	9	41	2.3					9		
15	10	43	1.6	11	41	1.8	4	38	1.0	5	7	0.7	4	12	5.1	4	59	4.9	10	44	2.0	11	7	1.9					10		
16	* * *	..	0	14	1.7	6	2	0.8	6	23	0.7	5	26	5.4	6	2	5.5	11	47	1.5	* * *	..					11				
17	0	40	1.9	1	22	1.9	7	4	0.5	7	22	0.6	6	20	5.8	6	50	6.1	0	10	1.5	0	35	1.0					12		
18	1	27	2.0	2	11	2.0	7	51	0.3	8	8	0.6	7	6	6.1	7	33	6.5	1	0	1.0	1	17	0.6					13		
19	2	8	2.2	3	1	2.1	8	35	0.1	8	52	0.6	7	40	6.3	8	12	6.8	1	44	0.8	1	55	0.3					14		
20	2	47	2.2	3	43	2.2	9	16	0.0	9	32	0.6	8	25	6.3	8	53	6.9	2	23	0.6										



明治四十六年 六月

地名	橫 須 賀								吳								太陰盈虛及位置												
	高 潮				低 潮				高 潮				低 潮																
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後														
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高													
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.		
1	1	46	4'7	3	35	4'6	8	43	1'5	8	55	3'3	6	44	9'2	7	48	9'8	0	53	4'8	1	11	2'7					
2	2	21	5'1	4	16	4'9	9	21	0'8	9	29	3'2	7	21	9'4	8	31	10'3	1	43	4'8	1	48	1'9					
3	2	55	5'3	5	22	5'2	10	9	0'3	10	21	3'4	7	57	9'8	9	13	11'0	2	22	4'7	2	27	1'1					
4	3	23	5'4	5	41	5'0	10	37	0'0	10	43	3'6	8	34	10'0	9	54	11'4	3	2	4'6	3	5	0'5					
5	3	55	5'4	6	29	4'9	11	17	-1	11	23	3'8	9	13	10'2	10	34	11'7	3	43	4'5	3	44	0'1					
6	4	29	5'3	7	16	4'8	* * *	0	0	0'0	9	55	10'3	11	17	11'7	4	24	4'4	4	26	0'0							
7	5	8	5'2	8	0	4'8	0	2	3'9	0	41	0'2	10	38	10'2	* * *	5	8	4'4	5	10	0'2							
8	5	50	5'0	8	45	4'7	0	48	3'9	1	24	0'5	{ <sup>0 1</sup> <sub>11 26</sub> 11'6 9'9}	* * *	5	54	4'5	5	56	0'7									
9	6	39	4'8	9	36	4'6	1	38	3'8	2	9	0'9	0	48	11'2	0	18	9'5	6	41	4'6	6	46	1'5					
10	7	35	4'6	10	29	4'5	2	34	3'8	3	6	1'2	1	37	10'8	1	19	9'1	7	41	4'5	7	43	2'3					
11	8	55	4'1	11	13	4'6	3	47	3'6	3	53	1'9	2	32	10'4	2	29	8'8	8	44	4'5	8	47	3'0					
12	10	42	3'9	11	53	4'6	5	14	3'2	4	59	2'5	3	31	10'1	3	50	8'7	9	52	4'2	10	1	3'8					
13	* * *	0	36	3'9	6	33	2'7	6	14	3'0	4	31	9'9	5	12	9'0	10	59	3'6	11	14	4'2							
14	0	26	4'6	2	17	4'1	7	33	2'2	7	31	3'4	5	26	9'8	6	25	9'6	11	58	2'9	* * *							
15	1	2	4'5	3	34	4'4	8	23	1'6	8	37	3'6	6	20	9'8	7	30	10'3	0	25	4'4	0	51	2'1					
16	1	48	4'6	4	44	4'2	9	10	1'1	9	3	3'9	7	11	9'8	8	25	10'9	1	27	4'4	1	39	1'4					
17	2	15	5'3	5	21	4'4	10	13	0'3	9	53	4'0	7	56	9'8	9	16	11'3	2	20	4'4	2	24	0'9					
18	3	1	5'3	6	7	4'4	11	1	0'3	10	35	3'9	8	40	9'8	9	58	11'7	3	11	4'5	3	5	0'5					
19	3	53	5'5	6	35	4'6	11	37	0'1	11	17	3'7	9	19	9'9	10	39	11'8	3	53	4'4	3	46	0'3					
20	4	41	5'7	7	2	4'8	* * *	{ <sup>0 12</sup> <sub>11 55</sub> 0'0 3'4}	9	58	9'8	11	18	11'7	4	33	4'6	4	23	0'4									
21	5	26	5'7	7	26	4'9	* * *	0	44	0'2	10	35	9'6	11	55	11'4	5	11	4'7	5	1	0'6							
22	6	11	5'7	7	51	5'0	0	33	3'1	1	14	0'4	11	11	9'4	* * *	5	47	4'8	5	37	1'1							
23	6	56	5'5	8	18	5'1	1	12	2'8	1	46	0'8	{ <sup>0 31</sup> <sub>11 51</sub> 11'0 9'1}	* * *	6	24	4'9	6	15	1'8									
24	7	43	5'2	8	45	5'2	1	56	2'6	2	15	1'3	1	5	10'6	0	32	8'9	7	3	4'9	6	53	2'6					
25	8	36	4'7	9	18	5'3	2	45	2'4	2	48	1'8	1	40	10'1	1	21	8'6	7	43	4'8	7	37	3'4					
26	9	40	4'3	9	53	5'3	3	44	2'2	3	24	2'4	2	16	9'7	2	22	8'3	8	32	4'7	8	26	4'2					
27	11	3	3'9	10	35	5'4	4	58	1'9	4	13	2'9	2	56	9'3	3	32	8'1	9	26	4'4	9	28	4'9					
28	* * *	{ <sup>0 37</sup> <sub>11 22</sub> 3'7 5'4}	6	16	1'6	5	17	3'4	3	44	9'0	4	55	8'2	10	27	4'0	10	40	5'5									
29	* * *	2	13	3'7	7	31	1'2	* * *	4	38	8'9	6	14	8'6	11	28	3'5	11	55	5'8									
30	0	15	5'5	3	22	3'9	8	29	0'8	7	40	3'9	5	31	8'8	7	22	9'2	* * *	0	22	2'7							

明治四十六年 六月

地名	竹 敷								佐 世 保								太陰曆日附												
	高 潮				低 潮				高 潮				低 潮																
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後														
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高													
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	d	
1	6	30	5'6	7	31	5'9	0	39	2'8	1	1	1'4	5	47	7'6	6	49	7'7	* * *	0	18	2'0					27		
2	7	9	6'0	8	11	5'1	1	20	2'6	1	40	1'0	6	21	7'9	7	30	8'1	0	37	3'7	0	55	1'3					28
3	7	47	6'2	8	46	6'4	2	0	2'4	2	17	0'6	6	55	8'2	8	9	8'4	1	13	3'6	1	32	0'7					29
4	8	26	6'5	9	21	6'6	2	37	2'2	2	53	0'3	7	32	8'5	8	48	8'6	1	50	3'5	2	10	0'3					30
5	9	6	6'7	10	0	6'8	3	12	2'0	3	32	0'1	8	8	8'7	9	28	8'8	2	29	3'5	2	48	0'0					1
6	9	45	6'7	10	38	6'8	3	52	1'9	4	12	0'1	8	48	8'7	10	8	8'7	3	8	3'4	3	28	0'0					2
7	10	28	6'7	11	20	6'7	4	32	1'8	4	53	0'3	9	31	8'6	10	52	8'6	3	50	3'5	4	11	0'3					3
8	11	10	6'4	* * *	5	16	1'9	5	36	0'7	10	17	8'3	11	39	8'4	4	35	3'6	4	57	0'7					4		
9	{ <sup>0 3</sup> <sub>11 57</sub> 6'4 6'0}	* * *	6	2	2'1	6	23	1'2	11	7	8'0	* * *	5	26	3'7	5	47	1'2									5		
10	0	52	6'2	0	59	5'7	6	58	2'2	7	20	1'7	0	32	8'0	0	8	7'5	6	23	3'8	6	44	1'9					6
11	1	48	5'9	2	12	5'4	8	4	2'2	8	28	2'1	1	28	7'8	1	22	7'1	7	32	3'8	7	50	2'5					7
12	2	53	5'7	3	38	5'3	9	20	2'2	9	46	2'5	2	31	7'7	2	50	6'9	8	49	3'5	9	4	3'1					8
13	4	2	5'7	5	2	5'4	10	35	1'9	11	3	2'5	3	33	7'7	4	15	7'1	10	1	2'9	10	18	3'3					9
14	5	8	5'8	6	13	5'7	11	42	1'5	* * *	4	31	7'8	5	29	7'5	11	4	2'4	11	25	3'5					10		
15	6	7	5'9	7	13	6'1	0	10	2'5	0	38	1'1	5	23	7'9	6	32	7'9	11	58	1'7	* * *					11		
16	6	59	6'1	8	2	6'5	1	8	2'3	1	28	0'7	6	11	8'1	7	25	8'4	0	23	3'5	0	46	1'1					12
17	7	45	6'4	8	47	6'6	1	57	2'2	2	13	0'4	6	55	8'2	8	13	8'6	1	14	3'5	1	31	0'6					13
18	8	29	6'5	9	29	6'8	2	40	2'1	2	56	0'2	7	37	8'4	8	55	8'8	1	58	3'5	2	12	0'3					14
19	9	9	6'5	10	6	6'9	3	22	2'0	3	37	0'2	8	14	8'3	9	35	8'8	2	40	3'6	2	50	0'1					15
20	9	46	6'5	10	42	6'7	3	59	2'0	4	11	0'3	8	50	8'3	10	12	8'7	3	17	3'6	3	27	0'2					16
21	10	22	6'4	11	15	6'5	4	34	2'0	4	46	0'5	9	25	8'2	10	47	8'4	3	52	3'8	4	2	0'5					17
22	11	1	6'2	11	47	6'3	5	10	2'1	5	22	0'9	10	1	7'9														



明治四十六年 六月

地名	馬 公								舞 鶴								太陰盈虛及位置									
	高 潮				低 潮				高 潮				低 潮													
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後											
日	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高										
	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.								
1	8	13	7.4	9	16	7.1	2	12	3.4	2	47	2.1	11	16	0.9	*	*	..	5	22	0.5	6	24	0.3		
2	8	54	7.6	10	15	7.3	3	1	3.6	3	38	1.4	{ <sup>0 57</sup> <sub>11 30</sub> }	*	*	..	5	59	0.6	7	13	0.2				
3	9	35	7.8	11	7	7.5	3	53	3.8	4	26	0.9	1	56	0.7	0	4	1.0	6	33	0.6	7	57	0.1		
4	10	18	8.1	11	55	7.8	4	38	3.8	5	10	0.3	2	50	0.7	0	37	1.0	7	10	0.7	8	46	0.0		
5	11	5	8.3	*	*	..	5	27	3.8	5	57	-1	3	42	0.7	1	16	1.0	7	52	0.7	9	31	0.0	●	
6	{ <sup>0 43</sup> <sub>11 53</sub> }	{ <sup>8.0</sup> <sub>8.4</sub> }	*	*	..	6	14	3.7	6	45	-3	4	31	0.7	1	58	1.1	8	34	0.7	10	22	0.0	N.		
7	1	32	8.2	0	44	8.4	7	7	3.7	7	33	-3	5	30	0.7	2	42	1.0	*	*	..	11	6	0.0		
8	2	20	8.3	1	37	8.3	7	57	3.6	8	22	-1	6	18	0.7	3	27	1.0	*	*	..	11	57	0.0		
9	3	7	8.2	2	32	8.1	8	50	3.5	9	14	0.4	7	13	0.7	4	23	0.9	*	*	..	*	*	..	P.	
10	3	56	8.2	3	29	7.9	9	45	3.4	10	6	0.8	8	9	0.7	5	24	0.9	0	48	0.1	0	12	0.7		
11	4	46	8.1	4	28	7.6	10	38	3.2	10	58	1.4	9	0	0.7	6	45	0.8	1	37	0.1	1	33	0.7		
12	5	33	8.0	5	35	7.4	11	38	2.8	11	55	2.0	9	35	0.8	8	22	0.8	2	25	0.2	2	55	0.6	D,E.	
13	6	22	7.9	6	46	7.4	*	*	..	0	38	2.5	10	13	0.8	10	1	0.8	3	14	0.3	4	11	0.5		
14	7	10	7.9	7	55	7.4	0	56	2.2	1	37	2.0	10	34	0.9	11	29	0.8	4	4	0.4	5	15	0.4		
15	7	57	8.0	9	2	7.6	1	53	2.8	2	32	1.4	11	0	0.9	*	*	..	5	1	0.5	6	16	0.2		
16	8	47	8.1	10	4	7.9	2	53	3.2	3	27	0.8	{ <sup>0 55</sup> <sub>11 32</sub> }	*	*	..	5	54	0.6	7	8	0.1				
17	9	37	8.1	11	4	8.2	3	51	3.4	4	19	0.3	2	2	0.8	0	7	1.0	6	44	0.7	7	54	0.1		
18	10	24	8.2	11	58	8.3	4	46	3.5	5	7	-1	3	*	0.8	0	37	1.0	7	23	0.7	8	45	0.0		
19	11	10	8.2	*	*	..	5	37	3.7	5	58	-2	3	58	0.7	1	12	1.0	*	*	..	9	28	0.0	O,S.	
20	{ <sup>0 47</sup> <sub>11 57</sub> }	{ <sup>8.4</sup> <sub>8.1</sub> }	*	*	..	6	26	3.8	6	43	-2	4	49	0.7	1	42	1.0	*	*	..	10	12	0.0			
21	1	35	8.4	0	41	8.0	7	10	3.8	7	26	0.0	5	37	0.7	2	19	1.0	*	*	..	10	54	0.0		
22	2	16	8.2	1	22	7.8	7	52	3.9	8	8	0.3	6	18	0.7	2	49	1.0	*	*	..	11	36	0.0		
23	2	58	8.0	2	5	7.6	8	34	3.9	8	47	0.8	6	53	0.7	3	34	0.9	*	*	..	*	*	..		
24	3	32	7.8	2	45	7.4	9	12	3.8	9	27	1.3	7	25	0.7	4	16	0.9	{ <sup>0 14</sup> <sub>11 19</sub> }	*	*	..	*	*	..	
25	4	7	7.6	3	38	7.2	9	55	3.6	10	7	1.8	8	8	0.7	5	28	0.8	0	50	0.2	0	12	0.7	A.	
26	4	40	7.5	4	31	7.0	10	38	3.3	10	49	2.5	8	35	0.7	6	47	0.8	1	25	0.3	1	18	0.6	E.	
27	5	14	7.4	5	27	6.8	11	26	3.1	11	32	3.0	8	48	0.8	8	17	0.7	1	52	0.4	2	39	0.6	☾	
28	5	51	7.4	6	31	6.6	*	*	..	0	16	2.7	9	9	0.8	9	58	0.7	2	33	0.5	4	0	0.5		
29	6	26	7.3	7	41	6.6	0	21	3.4	1	14	2.2	9	33	0.9	11	37	0.6	3	13	0.5	5	15	0.3		
30	7	18	7.5	8	46	6.8	1	17	3.9	2	10	1.7	10	0	0.9	*	*	..	4	6	0.6	6	15	0.2		

明治四十六年 六月

地名	大 湊								鎮 海 灣								太陰曆日附								
	高 潮				低 潮				高 潮				低 潮												
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後										
日	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高									
	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.							
1	0	21	1.7	1	28	1.7	7	2	0.6	7	8	0.9	6	12	5.1	6	45	5.5	0	9	2.1	0	25	1.5	27
2	0	59	1.9	2	11	1.7	7	42	0.4	7	47	0.9	6	51	5.4	7	23	5.9	0	47	1.8	1	1	1.2	28
3	1	39	2.0	2	53	1.8	8	23	0.3	8	28	0.9	7	29	5.6	7	58	6.3	1	24	1.5	1	36	0.9	29
4	2	17	2.1	3	31	1.9	9	2	0.1	9	8	0.8	8	5	5.7	8	35	6.5	2	6	1.3	2	12	0.6	30
5	2	56	2.1	4	11	2.0	9	40	0.1	9	47	0.8	8	43	5.9	9	13	6.7	2	47	1.1	2	50	0.5	1
6	3	37	2.2	4	51	2.0	10	19	0.0	10	28	0.8	9	18	5.9	9	52	6.7	3	24	1.0	3	27	0.4	2
7	4	17	2.2	5	31	2.0	10	59	0.0	11	10	0.8	10	2	5.8	10	35	6.6	4	6	1.0	4	9	0.5	3
8	4	58	2.1	6	11	2.0	11	40	0.1	11	53	0.8	10	45	5.6	11	19	6.4	4	50	1.1	4	59	0.8	4
9	5	45	2.0	6	55	1.9	*	*	..	0	23	0.2	11	33	5.4	*	*	..	5	36	1.3	5	40	1.2	5
10	6	33	1.9	7	44	1.9	0	43	0.8	1	11	0.4	0	8	6.0	0	29	5.1	6	29	1.6	6	36	1.5	6
11	7	33	1.8	8	39	1.8	1	39	0.8	2	5	0.5	1	5	5.7	1	36	4.9	7	32	1.8	7	45	1.9	7
12	8	52	1.7	9	44	1.8	2	49	0.8	3	12	0.7	2	12	5.4	2	59	4.8	8	45	1.9	8	8	2.1	8
13	10	16	1.6	10	48	1.9	4	8	0.8	4	25	0.8	3	29	5.2	4	18	5.0	9	58	1.8	10	28	2.0	9
14	11	43	1.7	11	51	1.9	5	25	0.6	5	40	0.8	4	41	5.2	5	27	5.4	11	5	1.6	11	38	1.8	10
15	*	*	..	0	58	1.8	6	31	0.5	6	47	0.8	5	45	5.3	6	27	5.8	*	*	..	0	3	1.3	11
16	0	45	2.0	2	0	1.9	7	26	0.3	7	44	0.8	6	39	5.5	7	15	6.1	0	39	1.5	0	51	1.0	12
17	1	35	2.0	2	50	2.0	8	14	0.2	8	33	0.8	7	26	5.7	7	58	6.4	1	28	1.3	1	35	0.8	13
18	2	20	2.1	3	35	2.0	9	1	0.1	9	15	0.8	8	9	5.8	8	40	6.6	2	12	1.1	2	15	0.7	14
19	2	59	2.1	4	16	2.0	9	41	0.0	9	51	0.8	8	51	5.8	9	18	6.6	2	55	1.1	2	55	0.6	15
20	3	31	2.1	4	53	2.0	10	14	0.0	10	30	0.8	9	27	5.7	9	54	6.5	3	33	1.1	3	29	0.7	16
21	4	12	2.1	5	26	2.0	10	52	0.0	11	4	0.8	10	1	5.6	10	28	6.4	4	8	1.2	4	4	0.8	17
22	4	46	2.0	5	58	2.0	11	25	0.1	11	37	0.8	10	35	5.4	11	2	6.2	4	43	1.3	4	38	1.0	18
23	5	21	2.0	6	28	1.9	11	57	0.3	*	*	..	11	9	5.2	11	38	5.9	5	19	1.5	5	13	1.3	19
24	5	58	1.9	7	0	1.8	0	11	0.9	0	31	0.4	11	49	5.0	*	*	..	5	55	1.7	5	50	1.6	20
25	6	38	1.8	7	35	1.8	0	49	0.9	1	7	0.5	0	15	5.6	0	32	4.8	6	35	1.9	6	35	2.0	21
26	7	26	1.7	8	14	1.7	1	32	0.9	1	46	0.7	0	57	5.2	1	26	4.6	7	21	2.1	7	29	2.3	22
27	8	27	1.6	9	1	1.7	2	28	0.9	2	34	0.8	1	48	4.9	2	32	4.5	8	18	2.2	8	37	2.5	23
28	9	47	1.5	9	55	1.7	3	46	0.8	3	33	1.0	2	53	4.7	3	48	4.6	9	23	2.2	10	27	2.6	24
29	11	22	1.4	10	56	1.7	4	59	0.8	4	51	1.1	4	3	4.6	5	4	4.8	11	0	2.1	11	14	2.5	25
30	*	*	..	0	49	1.5	6	10	0.6	6	10	1.1	5	13	4.7	6	6	5.2	11	32	1.9	*	*	..	26



明治四十六年 七月

地名	橫 須 賀								吳								太陰盈虛及位置			
	高 潮				低 潮				高 潮				低 潮							
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後					
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高				
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.		
1	1 11	5'5	4 16	4'1	9 18	0'4	8 40	3'9	6 29	8'9	8 14	10'0	1 1	5'8	1 14	1'9				
2	2 6	5'4	4 59	4'5	9 54	0'3	9 46	3'8	7 22	9'3	9 1	10'8	1 57	5'5	2 2	1'1				
3	2 56	5'3	5 37	4'9	10 28	0'0	10 32	3'7	8 11	9'8	9 44	11'3	2 44	5'1	2 49	0'5				N.
4	3 47	5'5	6 14	5'1	11 10	-2	11 16	3'5	9 1	10'1	10 25	11'8	3 32	4'7	3 34	0'1				●
5	4 35	5'6	6 44	5'2	11 49	-2	11 57	3'3	9 51	10'4	11 5	12'0	4 17	4'3	4 19	-1				
6	5 25	5'6	7 29	5'3	* *	..	0 32	-1	10 38	10'5	11 48	12'0	5 1	3'9	5 5	0'1				
7	6 16	5'5	8 7	5'3	0 47	3'1	1 14	0'2	11 27	10'5	* *	..	5 46	3'7	5 50	0'6				P.
8	7 8	5'3	8 45	5'3	1 35	2'9	1 58	0'7	0 31	11'8	0 20	10'3	6 34	3'5	6 38	1'3				E.
9	8 5	5'0	9 23	5'2	2 27	2'7	2 44	1'3	1 14	11'4	1 14	9'9	7 23	3'4	7 28	2'2				
10	9 11	4'6	10 2	5'1	3 24	2'5	3 28	1'9	1 58	10'9	2 13	9'5	8 14	3'4	8 21	3'2				
11	10 32	4'3	10 44	4'9	4 29	2'3	4 25	2'6	2 43	10'3	3 23	9'1	9 10	3'3	9 25	4'2				D
12	* *	..	{ <sup>0 12</sup> <sub>11 27</sub>	{ <sup>4'1</sup> <sub>4'8</sub>	5 43	2'0	5 35	3'2	3 37	9'8	4 43	9'0	10 14	3'2	10 38	5'0				
13	* *	..	2 2	4'2	6 57	1'6	7 3	3'7	4 35	9'3	6 9	9'3	11 20	2'8	* *	..				
14	0 20	4'7	3 29	4'5	8 0	1'1	8 23	3'9	5 39	8'9	7 25	9'8	0 1	5'4	0 22	2'3				
15	1 19	4'6	4 33	4'8	8 54	0'7	9 28	4'0	6 41	8'9	8 23	10'5	1 15	5'5	1 19	1'8				
16	2 15	4'7	5 17	5'1	9 44	0'3	10 14	3'9	7 38	9'0	9 11	11'0	2 16	5'4	2 8	1'3				S.
17	3 3	4'9	5 50	5'1	10 27	0'1	10 55	3'8	8 25	9'2	9 53	11'4	3 5	5'1	2 52	0'9				
18	3 49	5'1	6 20	5'1	11 6	0'0	11 22	3'6	9 8	9'4	10 28	11'7	3 47	4'8	3 32	0'6				○
19	4 29	5'2	6 49	5'1	11 43	0'1	11 53	3'5	9 47	9'7	10 59	11'5	4 22	4'6	4 11	0'6				
20	5 7	5'3	7 12	5'1	* *	..	0 15	0'2	10 23	10'0	11 30	11'4	4 52	4'4	4 47	0'8				
21	5 46	5'3	7 34	5'0	0 22	3'3	0 47	0'5	10 58	10'2	11 59	11'1	5 23	4'1	5 21	1'1				
22	6 25	5'2	7 54	5'0	0 52	3'0	1 16	1'0	11 35	10'0	* *	..	5 55	4'0	5 54	1'7				
23	7 8	5'0	8 16	4'9	1 26	2'8	1 45	1'4	0 25	10'8	0 13	9'7	6 25	3'8	6 26	2'5				E.,A.
24	7 52	4'7	8 34	4'9	2 3	2'6	2 11	2'0	0 50	10'4	0 54	9'4	6 58	3'7	7 0	3'4				
25	8 49	4'3	8 53	4'9	2 50	2'4	2 36	2'5	1 16	10'0	1 41	9'0	7 35	3'6	7 37	4'3				
26	9 54	3'9	9 16	4'9	3 45	2'2	3 7	3'1	1 45	9'6	2 39	8'5	8 20	3'5	8 22	5'2				☾
27	11 32	3'6	9 42	4'9	5 2	2'1	3 54	3'6	2 20	9'1	3 58	8'2	9 18	3'5	9 30	6'0				
28	* *	..	{ <sup>1 41</sup> <sub>10 41</sub>	{ <sup>3'5</sup> <sub>4'7</sub>	6 31	1'7	* *	..	3 14	8'7	5 32	8'3	10 27	3'2	10 59	6'5				
29	* *	..	3 26	3'8	7 44	1'3	* *	..	4 28	8'4	7 0	8'8	11 40	2'8	* *	..				
30	0 11	4'7	4 20	4'3	8 41	0'8	8 41	4'2	5 52	8'5	8 1	9'6	0 31	6'4	0 46	2'2				
31	1 34	4'8	4 54	4'7	9 27	0'4	9 40	3'9	7 6	9'0	8 47	10'6	1 39	5'9	1 45	1'4				N.

明治四十六年 七月

地名	竹 敷								佐 世 保								太陰曆日附								
	高 潮				低 潮				高 潮				低 潮												
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後										
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高									
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	d
1	6 25	5'6	7 51	5'7	0 41	3'1	1 10	1'2	5 34	7'5	7 16	7'6	* *	..	0 27	1'4						27			
2	7 18	5'9	8 33	6'1	1 31	2'8	1 58	0'8	6 26	8'0	7 58	8'1	0 49	4'3	1 13	0'8						28			
3	8 7	6'3	9 13	6'4	2 18	2'5	2 41	0'5	7 12	8'3	8 40	8'5	1 34	4'0	1 58	0'3						29			
4	8 56	6'5	9 51	6'8	3 4	2'1	3 24	0'2	8 0	8'6	9 20	8'8	2 19	3'6	2 40	0'0						1			
5	9 40	6'8	10 31	6'9	3 45	1'8	4 5	0'2	8 45	8'9	10 0	9'0	3 2	3'3	3 22	0'1						2			
6	10 26	6'8	11 12	6'9	4 29	1'5	4 49	0'3	9 32	8'9	10 41	9'0	3 47	3'1	4 6	0'1						3			
7	11 13	6'7	11 54	6'8	5 14	1'4	5 32	0'5	10 21	8'7	11 23	8'9	4 32	2'9	4 51	0'5						4			
8	* *	..	0 2	6'5	6 1	1'4	6 17	0'9	11 10	8'4	* *	..	5 19	2'9	5 35	1'1						5			
9	0 37	6'7	0 58	6'2	6 51	1'5	7 8	1'4	0 7	8'7	0 5	8'0	6 11	2'8	6 26	1'8						6			
10	1 25	6'4	1 56	5'9	7 42	1'5	8 1	2'0	0 53	8'3	1 6	7'5	7 5	2'9	7 19	2'6						7			
11	2 14	6'1	3 6	5'5	8 43	1'7	9 5	2'5	1 42	8'0	2 19	7'1	8 7	2'8	8 22	3'4						8			
12	3 12	5'8	4 22	5'3	9 51	1'7	10 16	2'9	2 37	7'6	3 44	6'9	9 17	2'7	9 36	4'0						9			
13	4 17	5'6	5 46	5'4	11 4	1'6	11 37	3'0	3 38	7'4	5 14	7'0	10 29	2'4	10 58	4'4						10			
14	5 29	5'5	6 59	5'7	* *	..	0 13	1'4	4 44	7'3	6 30	7'4	11 36	1'9	* *	..						11			
15	6 35	5'6	7 55	6'0	0 49	2'9	1 13	1'1	5 46	7'4	7 27	7'9	0 11	4'4	0 32	1'4						12			
16	7 30	5'9	8 41	6'3	1 44	2'7	2 2	0'8	6 38	7'6	8 11	8'3	1 8	4'3	1 19	0'9						13			
17	8 18	6'1	9 21	6'5	2 33	2'4	2 46	0'6	7 23	7'8	8 50	8'5	1 53	4'1	2 1	0'6						14			
18	9 1	6'3	9 54	6'6	3 13	2'2	3 25	0'5	8 4	8'0	9 22	8'7	2 32	3'8	2 39	0'4						15			
19	9 35	6'4	10 23	6'7	3 47	2'0	3 59	0'5	8 41	8'3	9 52	8'7	3 5	3'6	3 14	0'4						16			
20	10 11	6'5	10 51	6'6	4 18	1'8	4 30	0'6	9 16	8'4	10 21	8'6	3 36	3'4	3 47	0'6						17			
21	10 45	6'4	11 19	6'6	4 49	1'7	5 1	0'8	9 50	8'4	10 47	8'5	4 7	3'2	4 18	0'9						18			
22	11 20	6'3	11 46	6'4	5 21	1'6	5 32	1'2	10 25	8'2	11 14	8'3	4 37	3'1	4 49	1'4						19			
23	11 55	6'1	* *	..	5 53	1'7	6 2	1'6	11 4	7'9	11 40	8'1	5 10	3'0	5 20	2'0						20			
24	0 14	6'2	0 34	5'8	6 28	1'7	6 33	2'0	11 44	7'5	* *	..	5 45	3'0	5 52	2'7						21			
25	0 43	6'0	1 18	5'4	7 7	1'8	7 8	2'5	0 7	7'8	0 32	7'0	6 26	2'9	6 28	3'4						22			
26	1 17	5'8	2 9	5'0	7 53	2'0	7 52	2'9	0 29	7'5	1 29	6'5	7 14	3'0	7 11	4'1						23			
27	2 0	5'6	3 27	4'7	8 55	2'1	8 58	3'4	1 19	7'3	2 52														



潮時及潮高表

明治四十六年 七月

地名	馬 公 舞 鶴																太陰盈虛及位置														
	高 潮				低 潮				高 潮				低 潮																		
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後																
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高															
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.				
1	8	2	77	9	50	7'0	2	15	4'1	3	5	1'1	{ 1 1 10 34 11 22 }	0'6	* * *	* * *	* * *	7	4	0'1											
2	8	56	79	10	47	7'3	3	14	4'2	3	59	0'6	{ 1 56 11 22 }	1'0	* * *	* * *	5	55	0'7	7	58	0'1									
3	9	53	8'2	11	38	7'7	4	13	4'1	4	52	0'2	2	49	0'7	0	16	1'0	6	45	0'7	8	39	0'0							
4	10	49	8'4	* * *	* * *	5	7	3'9	5	44	-'2	3	37	0'7	1	3	1'1	7	40	0'7	9	27	0'0								
5	{ 0 32 11 56 }	8'5	* * *	* * *	6	11	3'6	6	41	-'5	4	23	0'7	1	54	1'1	8	27	0'7	10	11	-'1									
6	1	22	8'5	0	49	8'6	7	4	3'3	7	31	-'4	5	6	0'7	2	44	1'0	9	19	0'7	10	52	0'0							
7	2	12	8'7	1	44	8'5	7	58	3'0	8	21	-'1	5	49	0'7	3	37	1'0	10	11	0'7	11	33	0'0							
8	2	56	8'7	2	36	8'4	8	47	2'8	9	5	0'4	6	26	0'8	4	37	1'0	11	3	0'7	* * *	* * *								
9	3	37	8'6	3	28	8'2	9	34	2'5	9	52	0'9	7	6	0'8	5	43	0'9	0	15	0'1	0	6	0'6							
10	4	18	8'4	4	19	7'9	10	20	2'4	10	37	1'6	7	46	0'8	6	52	0'8	0	58	0'2	1	9	0'5							
11	4	57	8'2	5	18	7'6	11	11	2'2	11	28	2'2	8	20	0'8	8	19	0'7	1	40	0'3	2	24	0'5							
12	5	42	8'0	6	20	7'3	* * *	0	5	2'0	8	51	0'8	10	5	0'7	2	29	0'4	3	44	0'4									
13	6	28	7'9	7	33	7'2	0	19	3'0	1	3	1'7	9	27	0'9	11	46	0'7	3	23	0'5	5	5	0'3							
14	7	17	7'8	8	49	7'3	1	19	3'5	2	6	1'3	10	7	0'9	* * *	* * *	4	28	0'6	6	8	0'2								
15	8	11	7'8	9	52	7'7	2	26	3'8	3	6	0'8	{ 1 23 10 41 }	0'7	* * *	* * *	5	28	0'7	7	2	0'1									
16	9	9	7'8	10	57	7'8	3	29	4'0	4	3	0'5	{ 2 24 11 30 }	0'7	* * *	* * *	* * *	7	51	0'0											
17	10	3	7'8	11	50	8'0	4	31	4'1	4	55	0'1	3	17	0'7	0	6	0'9	* * *	* * *	8	36	0'0								
18	10	55	8'0	* * *	* * *	5	23	3'9	5	44	-'1	4	0	0'7	0	54	1'0	* * *	* * *	9	16	0'0									
19	{ 0 35 11 44 }	8'1	* * *	* * *	6	9	3'8	6	29	0'0	4	37	0'7	1	28	1'0	* * *	* * *	9	57	0'0										
20	1	14	8'2	0	30	8'1	6	52	3'6	7	11	0'2	5	3	0'7	2	14	1'0	8	58	0'7	10	30	0'0							
21	1	51	8'1	1	7	8'2	7	27	3'4	7	46	0'5	5	27	0'7	2	56	1'0	9	33	0'7	11	2	0'1							
22	2	20	8'0	1	49	8'0	8	2	3'2	8	20	1'0	5	50	0'7	3	41	0'9	10	6	0'7	11	30	0'2							
23	2	47	7'9	2	26	7'8	8	35	3'1	8	52	1'6	6	5	0'7	4	31	0'9	10	51	0'6	11	52	0'3							
24	3	13	7'7	3	5	7'5	9	8	2'9	9	22	2'2	6	24	0'8	5	32	0'8	11	40	0'5	* * *	* * *								
25	3	38	7'5	3	54	7'2	9	49	2'6	9	55	2'8	6	44	0'8	6	37	0'7	0	16	0'4	0	42	0'5							
26	4	4	7'5	4	42	6'8	10	29	2'5	10	31	3'4	7	4	0'8	8	0	0'7	0	40	0'5	1	49	0'4							
27	4	37	7'5	5	43	6'5	11	23	2'3	11	19	3'9	7	27	0'9	9	43	0'6	1	15	0'5	3	21	0'4							
28	5	20	7'5	6	56	6'3	* * *	0	23	2'1	8	0	0'9	11	35	0'6	1	56	0'6	4	48	0'3									
29	6	14	7'5	8	14	6'5	0	18	4'3	1	30	1'7	8	40	0'9	* * *	* * *	* * *	6	5	0'2										
30	7	19	7'5	9	28	6'8	1	31	4'6	2	37	1'0	{ 1 1 10 0 11 10 }	0'6	* * *	* * *	* * *	6	53	0'1											
31	8	32	7'8	10	33	7'3	2	49	4'4	3	43	0'7	{ 1 51 11 10 }	0'6	* * *	* * *	* * *	7	39	0'0											

潮時及潮高表

明治四十六年 七月

地名	大 湊 鎮 海 灣																太陰曆日附											
	高 潮				低 潮				高 潮				低 潮															
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後													
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	d
1	0	4	1'8	1	52	1'6	7	11	0'5	7	14	1'1	6	12	4'9	6	56	5'6	0	18	2'2	0	25	1'5	27			
2	1	1	1'9	2	41	1'8	8	3	0'3	8	7	1'0	7	5	5'2	7	42	6'0	1	12	1'9	1	14	1'1	28			
3	1	55	2'0	3	22	1'9	8	47	0'2	8	55	0'9	7	49	5'4	8	24	6'4	1	56	1'5	1	57	0'8	29			
4	2	44	2'1	4	2	2'0	9	30	0'1	9	40	0'8	8	33	5'8	9	5	6'7	2	38	1'2	2	40	0'5	1			
5	3	30	2'2	4	39	2'1	10	10	0'0	10	22	0'7	9	15	6'0	9	46	6'9	3	19	0'9	3	22	0'3	2			
6	4	13	2'2	5	17	2'1	10	49	0'0	11	4	0'6	9	59	6'1	10	28	6'9	4	1	0'7	4	5	0'3	3			
7	4	58	2'2	5	56	2'1	11	29	0'1	11	48	0'6	10	44	6'0	11	12	6'7	4	44	0'7	4	51	0'5	4			
8	5	43	2'1	6	35	2'1	* * *	0	10	0'2	11	30	5'9	11	56	6'4	5	29	0'8	5	36	0'8	5					
9	6	34	2'0	7	19	2'0	0	35	0'6	0	55	0'3	* * *	0	19	5'6	6	15	1'1	6	26	1'2	6					
10	7	26	1'9	8	7	2'0	1	26	0'6	1	43	0'5	0	45	6'0	1	14	5'3	7	6	1'3	7	21	1'6	7			
11	8	31	1'8	9	0	1'9	2	23	0'6	2	38	0'7	1	39	5'6	2	19	5'1	8	3	1'6	8	28	2'0	8			
12	9	48	1'6	9	59	1'8	3	32	0'7	3	44	0'9	2	43	5'2	3	35	5'0	9	10	1'8	9	48	2'2	9			
13	11	19	1'6	11	6	1'8	4	50	0'6	5	1	1'0	3	58	4'9	4	57	5'1	10	24	1'8	11	15	2'2	10			
14	* * *	* * *	0	47	1'6	6	7	0'5	6	23	1'0	5	17	4'8	6	8	5'4	11	34	1'7	* * *	* * *						
15	0	14	1'8	1	58	1'7	7	12	0'4	7	30	1'0	6	24	4'9	7	5	5'7	0	26	2'0	0	33	1'5	12			
16	1	14	1'9	2	47	1'9	7	59	0'3	8	22	1'0	7	18	5'1	7	51	6'1	1	23	1'8	1	23	1'2	13			
17	2	2	1'9	3	29	1'9	8	49	0'2	9	5	0'9	8	2	5'3	8	31	6'3	2	8	1'5	2	5	1'0	14			
18	2	46	2'0	4	4	2'0	9	29	0'1	9	42	0'8	8	41	5'5	9	6	6'5	2	47	1'3	2	42	0'8	15			
19	3	26	2'1	4	35	2'0	10	4	0'1	10	12	0'8	9	14	5'7	9	39	6'5	3	20	1'1	3	17	0'7	16			
20	4	0	2'1	5	2	2'0	10	35	0'1	10	44	0'7	9	47	5'7	10	9	6'5	3	53	1'1	3	48	0'7	17			
21	4	33	2'1	5	26	2'0	11	4	0'2	11	13	0'7	10	18	5'7	10	38	6'4	4	23	1'1	4	20	0'8	18			
22	5	7	2'1	5	53	2'0	11	34	0'3																			



明治四十六年 八月																太陰盈虛及位置								
地名	橫 須 賀								吳															
	高 潮				低 潮				高 潮				低 潮											
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後									
時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高									
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.									
1	2	45	5'2	5	24	5'1	10	13	0'1	10	28	3'5	8	2	9'7	9	29	11'4	2	34	5'1	2	37	0'7
2	3	47	5'5	5	52	5'3	10	59	0'0	11	10	3'0	8	58	10'3	10	7	12'0	3	22	4'3	3	26	0'2
3	4	42	5'7	6	23	5'5	11	40	0'0	11	53	2'6	9	47	11'0	10	48	12'3	4	3	3'4	4	12	0'1
4	5	34	5'8	6	56	5'6	*	*	..	0	22	0'2	10	35	11'4	11	25	12'3	4	46	2'9	4	56	0'1
5	6	22	5'8	7	29	5'5	0	34	2'3	1	0	0'5	11	22	11'4	*	*	..	5	28	2'4	5	39	0'6
6	7	14	5'6	7	59	5'5	1	17	2'1	1	40	1'0	0	3	12'1	0	11	11'2	6	10	2'2	6	23	1'4
7	8	4	5'2	8	32	5'3	2	1	1'9	2	17	1'7	0	40	11'6	0	56	10'7	6	50	2'2	7	7	2'4
8	9	2	4'8	9	1	5'1	2	49	1'8	2	57	2'4	1	20	10'9	1	50	10'1	7	37	2'4	7	53	3'6
9	10	16	4'3	9	34	4'8	3	46	1'8	3	46	3'1	1	56	10'1	2	53	9'4	8	25	2'7	8	49	4'8
10	*	*	..	{ <sup>0</sup> / <sub>10</sub> 7 15 45}	5	1	1'7	4	59	3'7	2	44	9'2	4	28	8'9	9	28	3'1	10	11	5'8		
11	*	*	..	{ <sup>2</sup> / <sub>11</sub> 23 3 43}	6	26	1'5	6	52	4'1	3	51	8'4	5	59	9'0	10	40	3'2	11	52	6'2		
12	*	*	..	3 55 4'5	7	41	1'2	8	33	4'2	5	10	8'0	7	23	9'5	11	58	2'9	*	*	..		
13	0	56	4'2	4	39	4'8	8	40	0'9	9	32	4'0	6	30	8'0	8	21	10'2	1	18	6'0	1	4	2'4
14	2	5	4'4	5	10	5'0	9	29	0'6	10	11	3'8	7	31	8'5	9	2	10'7	2	16	5'6	1	58	1'9
15	2	58	4'7	5	33	5'1	10	13	0'4	10	40	3'6	8	19	9'0	9	39	11'1	2	58	5'1	2	42	1'4
16	3	43	5'0	5	52	5'2	10	48	0'3	11	7	3'2	8	58	9'6	10	4	11'3	3	30	4'6	3	20	1'1
17	4	25	5'2	6	7	5'2	11	20	0'4	11	31	2'8	9	34	10'1	10	29	11'4	3	58	4'1	3	55	1'0
18	5	9	5'5	6	23	5'2	11	53	0'7	11	58	2'4	10	8	10'4	10	54	11'3	4	25	3'6	4	32	1'1
19	5	47	5'5	6	40	5'6	*	*	..	0	34	1'1	10	43	10'8	11	18	11'1	4	51	3'1	4	59	1'5
20	6	25	5'4	6	55	5'1	0	25	2'1	0	47	1'5	11	15	10'7	11	38	10'9	5	17	2'9	5	27	2'0
21	7	3	5'2	7	12	5'2	0	55	1'9	1	10	1'9	11	46	10'6	*	*	..	5	42	2'6	5	55	2'7
22	7	43	4'9	7	27	5'2	1	29	1'7	1	31	2'4	0	2	10'6	0	27	10'2	6	14	2'5	6	25	3'5
23	8	29	4'5	7	44	5'2	2	8	1'6	1	50	2'9	0	25	10'4	1	8	9'6	6	47	2'6	6	58	4'5
24	9	27	4'0	8	5	5'1	2	59	1'6	2	14	3'4	0	51	9'8	2	0	8'9	7	28	2'7	7	37	5'4
25	10	54	3'6	8	26	4'8	4	8	1'7	*	*	..	1	23	9'2	3	11	8'3	8	22	3'0	8	36	6'3
26	*	*	..	{ <sup>1</sup> / <sub>9</sub> 21 32 45}	5	44	1'7	*	*	..	2	11	8'7	4	57	8'1	9	37	3'2	10	18	6'8		
27	*	*	..	{ <sup>3</sup> / <sub>11</sub> 27 48 45}	7	11	1'4	*	*	..	3	41	8'1	6	40	8'7	11	5	3'2	*	*	..		
28	*	*	..	4 2 4'3	8	17	1'1	8	36	4'0	5	33	8'1	7	43	9'6	0	15	5'6	0	28	2'6		
29	1	36	4'7	4	23	4'9	9	9	0'7	9	30	3'4	6	56	9'0	8	25	10'6	1	28	5'6	1	32	1'8
30	2	51	5'2	4	50	5'2	9	56	0'4	10	13	2'9	7	59	9'9	9	4	11'4	2	20	4'5	2	25	1'1
31	3	49	5'5	5	16	5'5	10	39	0'3	10	53	2'3	8	52	10'9	9	43	12'1	3	2	3'5	3	14	0'5

明治四十六年 八月																太陰曆日附									
地名	竹 敷								佐 世 保																
	高 潮				低 潮				高 潮				低 潮												
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後										
時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高										
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.										
1	8	5	6'2	8	58	6'5	2	8	2'4	2	33	0'6	7	4	8'2	8	26	8'7	1	24	3'9	1	46	0'4	29
2	8	50	6'6	9	37	7'0	2	55	1'7	3	15	0'3	7	57	8'9	9	3	8'2	2	11	3'3	2	31	0'0	1
3	9	36	7'2	10	14	7'2	3	36	1'2	3	56	0'0	8	44	9'3	9	40	9'4	2	53	2'6	3	13	-1	2
4	10	20	7'3	10	53	7'4	4	16	0'9	4	37	0'1	9	29	9'5	10	18	9'5	3	34	2'1	3	55	0'0	3
5	11	4	7'2	11	30	7'3	4	59	0'7	5	17	0'4	10	14	9'4	10	55	9'4	4	16	1'9	4	35	0'4	4
6	11	50	7'0	*	*	..	5	41	0'7	5	59	0'8	11	0	9'0	11	31	9'0	4	58	1'8	5	15	1'1	5
7	0	8	7'0	0	35	6'6	6	25	0'8	6	40	1'4	11	48	8'5	*	*	..	5	41	1'9	5	57	2'0	6
8	0	47	6'6	1	26	6'0	7	10	1'1	7	23	2'1	0	10	8'5	0	41	7'7	6	28	2'1	6	42	3'0	7
9	1	30	6'2	2	26	5'5	8	2	1'5	8	20	2'7	0	50	8'0	1	47	7'0	7	23	2'4	7	38	4'0	8
10	2	20	5'6	3	50	5'1	9	8	1'9	9	37	3'3	1	38	7'3	3	20	6'6	8	32	2'7	9	4	4'8	9
11	3	34	5'2	5	35	5'0	10	35	2'0	11	23	3'4	2	49	6'7	5	17	6'7	9	59	2'7	10	52	5'0	10
12	5	11	5'0	7	0	5'3	*	*	..	0	3	1'8	4	19	6'5	6	38	7'2	11	20	2'4	*	*	..	11
13	6	32	5'3	7	55	5'7	0	49	3'2	1	8	1'5	5	37	6'8	7	28	7'7	0	16	4'8	0	23	1'8	12
14	7	28	5'6	8	34	6'1	1	45	2'8	1	57	1'2	6	28	7'2	8	2	8'2	1	5	4'4	1	9	1'3	13
15	8	14	6'0	9	5	6'4	2	26	2'4	2	37	0'9	7	17	7'7	8	33	8'4	1	47	4'0	1	51	1'0	14
16	8	50	6'3	9	32	6'6	2	59	2'0	3	10	0'7	7	55	8'1	8	59	8'7	2	18	3'6	2	25	0'7	15
17	9	25	6'5	9	58	6'7	3	28	1'7	3	41	0'7	8	29	8'5	9	22	8'7	2	46	3'1	2	55	0'7	16
18	9	58	6'8	10	23	6'8	3	57	1'3	4	11	0'7	9	6	8'7	9	45	8'8	3	14	2'7	3	27	0'9	17
19	10	28	6'8	10	44	6'8	4	25	1'1	4	37	0'9	9	37	8'9	10	8	8'7	3	39	2'3	3	54	1'2	18
20	10	57	6'7	11	7	6'8	4	51	1'0	5	2	1'1	10	7	8'7	10	28	8'6	4	6	2'1	4	20	1'6	19
21	11	30	6'4	11	31	6'6	5	20	1'0	5	29	1'5	10	41	8'4	10	50	8'5	4	34	2'0	4	46	2'1	20
22	*	*	..	{ <sup>0</sup> / <sub>11</sub> 50 64}	5	49	1'1	5	54	1'9	11	16	7'9	11	14	8'2	5	5	1'9	5	12	2'8	21		
23	*	*	..	0 35 5'6	6	22	1'3	6	21	2'4	11	54	7'3	11	40	7'9	5	40	2'2	5	40	3'5	22		
24	0	25	6'0	1	19	5'1	7	2	1'7	6	55	2'9	*	*	..	0	44	6'6	6	23	2'4	6	14	4'3	23
25	0	57	5'7	2	23	4'6	7	56	2'0	7	50	3'4	0	12	7'4	2	2	6'0	7	25	2'8	7	16	5'0	24
26	1	53	5'2	4	5	4'4	9	21	2'4	9	38	3'7	1	2	6'8	4	6	5'9	8	50	2'9	9	12	5'4	25
27	3	40	4'9	6	17	4'8	11	13	2'3	11	52	3'5	2	49	6'6	5	52	6'6	10	32	2'6	11	13	5'1	26
28	5	43	5'1	7	16	5'4	*	*	..	0	34	1'9	4	44	6'9	6	46	7'3	11	47	2'0	*	*	..	27
29	6	59	5'7	8	2	6'0	1	6	2'8	1	32	1'3	6	2	7'6	7	26	8'2	0	23	4'3	0	44	1'3	28
30	7	55	6'4	8	38	6'7	1	58	2'1	2	18	0'8	6	59	8'4	8	3	8'9	1	13	3'4	1	32	0'7	29
31	8	42	6'9	9	15	7'2	2	38	1'4	2	58	0'4	7	50	9'1										







明治四十六年 九月

地名	橫 須 賀								吳								太陰盈虛及位置											
	高 潮				低 潮				高 潮				低 潮															
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後													
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	
1	4	35	5.8	5	44	5.7	11	19	0.4	11	32	1.8	9	38	11.6	10	19	12.4	3	44	2.5	3	57	0.2	●,P.			
2	5	33	6.0	6	12	5.7	11	59	0.7	* * *	10	26	12.2	10	55	12.4	4	23	1.7	4	40	0.3	E.					
3	6	22	6.0	6	41	5.7	0	10	1.3	0	38	1.1	11	8	12.3	11	29	12.0	5	1	1.2	5	20	0.9				
4	7	9	5.8	7	10	5.5	0	55	1.1	1	14	1.7	11	51	12.0	* * *	5	38	1.1	6	1	1.7						
5	7	58	5.4	7	35	5.2	1	31	1.1	1	49	2.3	0	5	11.5	0	37	11.4	6	17	1.3	6	43	2.9				
6	8	53	4.8	7	58	5.0	2	14	1.1	2	24	3.0	0	40	10.6	1	27	10.5	6	59	1.8	7	26	4.2	D			
7	10	10	4.3	8	19	4.6	3	8	1.3	3	9	3.7	1	14	9.6	2	32	9.5	7	46	2.5	8	25	5.5				
8	* * *			{ 0 13 4.0 } { 8 53 4.1 }	4	17	1.5	* * *		1	56	8.6	4	1	8.8	8	44	3.1	9	50	6.4	S.						
9	* * *			{ 10 59 4.1 } { 10 46 3.8 }	5	45	1.6	* * *		2	59	7.7	5	55	8.8	10	4	3.5	11	49	6.6							
10	* * *			4	1	4.6	7	4	1.5	* * *		4	49	7.4	7	12	9.4	11	33	3.5	* * *							
11	0	52	3.9	4	21	4.9	8	20	1.2	9	29	3.8	6	25	7.6	8	1	10.0	1	16	6.0	0	47	3.1				
12	2	7	4.2	4	37	5.0	9	11	1.0	9	55	3.4	7	24	8.4	8	36	10.5	2	4	5.3	1	44	2.5				
13	2	59	4.7	4	52	5.1	9	52	0.9	10	17	2.0	8	7	9.1	9	3	10.8	2	34	4.6	2	25	2.0				
14	3	44	5.0	5	3	5.2	10	28	1.0	10	39	2.5	8	45	9.9	9	27	11.0	3	3	3.9	3	1	1.7				
15	4	25	5.4	5	17	5.2	10	58	1.1	11	2	2.1	9	19	10.6	9	50	11.1	3	26	3.3	3	34	1.6	○,A.			
16	5	1	5.5	5	32	5.3	11	22	1.3	11	28	1.7	9	50	11.1	10	13	11.1	3	50	2.7	4	3	1.8	E.			
17	5	38	5.6	5	49	5.3	11	49	1.6	11	53	1.4	10	22	11.3	10	35	11.0	4	16	2.2	4	32	2.1				
18	6	10	5.6	6	8	5.2	* * *	0	16	1.8	10	56	11.4	10	55	10.8	4	40	1.7	5	0	2.7						
19	6	46	5.4	6	22	5.1	0	29	1.3	0	40	2.3	11	28	11.1	11	17	10.5	5	7	1.5	5	27	3.3				
20	7	26	5.1	6	38	5.1	0	50	1.1	1	4	2.7	* * *	{ 0 4 10.6 } { 11 41 10.2 }	5	37	1.5	5	56	4.1								
21	8	11	4.8	6	53	5.0	1	25	1.1	1	29	3.2	* * *	0	43	10.0	6	10	1.7	6	28	4.9						
22	9	11	4.3	7	11	4.8	2	8	1.2	2	1	3.7	0	9	9.7	1	32	9.2	6	49	2.1	7	8	5.7				
23	10	39	3.9	7	29	4.4	3	7	1.3	* * *	0	43	9.1	2	41	8.5	7	43	2.7	8	14	6.4	○,N.					
24	* * *			{ 1 17 3.9 } { 9 5 3.9 }	4	24	1.5	* * *		1	40	8.3	4	32	8.3	8	58	3.3	10	8	6.7							
25	* * *			{ 2 59 4.4 } { 11 55 3.9 }	5	57	1.5	* * *		3	25	7.7	6	16	8.9	10	38	3.4	* * *									
26	* * *			3	22	4.1	7	26	1.3	8	44	3.6	5	31	7.9	7	11	9.8	0	7	6.1	0	8	3.1				
27	1	40	4.3	3	44	5.3	8	32	1.0	9	23	2.9	6	54	9.1	7	56	10.7	1	13	4.9	1	17	2.3				
28	2	49	4.9	4	13	5.6	9	27	0.8	9	59	2.3	7	52	10.3	8	33	11.4	1	59	3.6	2	10	1.6				
29	3	43	5.5	4	40	5.8	10	12	0.7	10	34	1.7	8	41	11.4	9	10	12.0	2	39	2.4	2	55	1.1				
30	4	31	5.9	5	9	5.8	10	53	0.7	11	9	1.3	9	25	12.2	9	46	12.2	3	16	1.4	3	37	0.9	●,E.,P.			

明治四十六年 九月

地名	竹 敷								佐 世 保								太陰曆日附											
	高 潮				低 潮				高 潮				低 潮															
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後													
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	d
1	9	21	7.2	9	49	7.5	3	17	0.8	3	38	0.1	8	34	9.6	9	12	9.8	2	35	1.7	2	55	0.1	1			
2	10	7	7.7	10	26	7.7	3	57	0.2	4	18	0.1	9	18	9.9	9	47	9.8	3	14	1.2	3	34	0.2	2			
3	10	48	7.6	11	0	7.5	4	36	0.0	4	55	0.4	10	1	10.0	10	20	9.6	3	52	0.7	4	13	0.7	3			
4	11	29	7.3	11	34	7.1	5	14	0.1	5	32	0.9	10	43	9.4	10	53	9.1	4	30	0.8	4	49	1.5	4			
5	* * *			0	8	6.8	5	52	0.4	6	9	1.5	11	26	8.7	11	26	8.4	5	8	1.1	5	27	2.5	5			
6	0	9	6.6	0	53	6.0	6	34	0.9	6	49	2.3	* * *	{ 0 16 7.8 } { 11 59 7.7 }	5	50	1.6	6	8	3.5	6							
7	0	46	6.0	1	55	5.4	7	22	1.5	7	44	3.0	* * *	1	23	6.9	6	41	2.2	7	3	4.6	7					
8	1	34	5.3	3	26	4.8	8	31	2.0	9	19	3.6	0	42	6.9	3	11	6.4	7	53	2.7	8	41	5.3	8			
9	3	8	4.8	5	31	4.8	10	20	2.4	11	20	3.7	1	55	6.1	5	26	6.5	9	28	3.0	11	1	5.3	9			
10	5	17	4.7	6	57	5.2	11	53	2.2	* * *		4	6	6.0	6	35	7.2	11	5	2.8	* * *							
11	6	33	5.0	7	39	5.7	0	52	3.2	1	1	1.8	5	35	6.4	7	11	7.7	0	21	4.8	0	32	2.3	11			
12	7	24	5.5	8	11	6.0	1	35	2.6	1	46	1.5	6	28	7.1	7	39	8.1	1	1	4.2	0	56	1.8	12			
13	8	2	6.0	8	36	6.3	2	9	2.2	2	19	1.2	7	8	7.7	8	1	8.4	1	29	3.6	1	32	1.4	13			
14	8	37	6.5	9	0	6.6	2	37	1.5	2	49	1.0	7	44	8.3	8	24	8.6	1	54	3.0	2	4	1.2	14			
15	9	8	6.8	9	23	6.8	3	2	1.2	3	16	0.9	8	16	8.8	8	44	8.8	2	19	2.4	2	32	1.2	15			
16	9	36	6.9	9	45	6.9	3	27	0.9	3	43	0.9	8	46	9.0	9	5	8.9	2	43	1.9	2	58	1.3	16			
17	10	6	6.9	10	4	6.9	3	53	0.7	4	7	1.0	9	16	9.1	9	24	8.9	3	8	1.5	3	23	1.6	17			
18	10	34	6.9	10	30	6.9	4	19	0.5	4	32	1.3	9	47	9.0	9	45	8.8	3	33	1.2	3	49	2.1	18			
19	11	1	6.6	10	52	6.7	4	46	0.5	4	55	1.6	10	19	8.7	10	7	8.6	4	1	1.1	4	13	2.6	19			
20	11	32	6.2	11	19	6.4	5	15	0.7	5	21	2.0	10	52	8.1	10	31	8.3	4	30	1.2	4	39	3.2	20			
21	* * *			{ 0 4 5.8 } { 11 41 6.1 }	5	46	1.0	5	49	2.4	11	29	7.5	10	55	8.0	5	5	1.5	5	5	3.8	21					
22	* * *			0	38	5.2	6	25	1.5	6	23	2.9	* * *	{ 0 16 6.7 } { 11 29 7.4 }	5	46	2.0	5	40	4.5	22							
23	0	23	5.6	1	45	4.7	7	18	2.0	7	20	3.4	* * *	1	32	6.1	6	45	2.6	6	44	5.2	23					
24	1	20	5.0	3	42	4.3	8	46	2.5	9	25	3.7	0	22	6.7	3	44	6.0	8	16	3.0	8	58	5.4	24			
25	3	27	4.7	5	49	4.9	10	43	2.5	11	46	3.3	2	34	6.3	5	28	6.7	10	8	2.9	11	7	4.8	25			
26	5	44	5.0	6	48	5.5	* * *	0	15	2.2	4	42	6.7	6	16	7.6	11	27	2.3	* * *								
27	6	53	5.7	7	30	6.2	0	52	2.4	1	11	1.6	5	58	7.6	6	55	8.4	0	9	3.8	0	26	1.7				



明治四十六年 九月

地名	馬				公				舞				鶴				太陰盈虛及位置
	高潮		低潮		高潮		低潮		高潮		低潮		高潮		低潮		
	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	
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	
日	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	
1	11 28	8.8	* *	..	5 28	2.5	5 59	0.4	3 7	0.8	2 10	1.1	8 11	0.5	9 18	0.1	●,P.
2	0 20	8.7	0 20	9.2	6 15	1.8	6 45	0.5	3 34	0.8	3 6	1.0	8 57	0.4	9 54	0.2	E.
3	0 58	8.8	1 13	9.3	7 2	1.3	7 31	0.8	4 0	0.9	3 58	1.0	9 40	0.3	10 30	0.3	
4	1 40	8.9	2 3	9.2	7 47	0.9	8 16	1.3	4 27	0.9	4 54	0.9	10 27	0.3	11 3	0.4	
5	2 20	8.8	2 53	8.9	8 34	0.8	9 1	1.9	4 54	0.9	5 57	0.9	11 18	0.3	11 37	0.5	
6	3 1	8.4	3 50	8.3	9 23	0.8	9 50	2.6	5 16	0.9	7 12	0.8	* *	..	0 20	0.3	
7	3 45	8.1	4 53	7.9	10 17	1.0	10 45	3.3	5 39	0.8	8 57	0.7	0 19	0.6	1 37	0.3	D
8	4 34	7.7	6 2	7.5	11 17	1.2	11 48	3.9	6 6	0.8	11 2	0.7	1 14	0.7	3 4	0.2	
9	5 31	7.3	7 17	7.3	* *	..	0 22	1.3	7 0	0.8	* *	..	* *	..	4 23	0.2	S.
10	6 29	7.0	8 29	7.2	0 57	4.3	1 24	1.4	{ 1 13 8 21 }	0.7 0.8	* *	..	* *	..	5 27	0.2	
11	7 35	7.0	9 29	7.3	2 5	4.4	2 28	1.4	{ 1 55 9 55 }	0.7 0.8	* *	..	* *	..	6 18	0.1	
12	8 35	7.1	10 14	7.4	3 5	4.2	3 23	1.3	{ 2 15 11 2 }	0.8 0.8	* *	..	6 19	0.8	7 3	0.1	
13	9 30	7.4	10 51	7.5	3 52	3.9	4 11	1.3	{ 1 25 11 58 }	0.8 0.9	* *	..	6 52	0.7	7 45	0.1	
14	10 20	7.7	11 21	7.6	4 34	3.6	4 54	1.3	2 42	0.8	0 53	0.9	7 21	0.6	8 21	0.2	
15	11 2	7.9	11 48	7.7	5 7	3.1	5 31	1.5	2 51	0.8	1 39	1.0	7 46	0.5	8 46	0.2	○,A.
16	11 42	8.1	* *	..	5 39	2.7	6 5	1.7	2 57	0.8	2 24	1.0	8 16	0.5	9 10	0.3	E.
17	0 13	7.8	0 21	8.2	6 11	2.2	6 38	2.0	3 7	0.8	3 12	0.9	8 49	0.4	9 30	0.4	
18	0 41	7.9	1 7	8.2	6 49	1.7	7 9	2.5	3 17	0.8	3 59	0.9	9 26	0.3	9 49	0.5	
19	1 4	7.9	1 46	8.1	7 21	1.4	7 41	2.8	3 26	0.9	4 46	0.8	10 7	0.2	10 6	0.5	
20	1 33	7.9	2 28	7.8	7 59	1.2	8 16	3.2	3 43	0.9	5 36	0.7	10 55	0.2	10 26	0.6	
21	2 5	8.0	3 14	7.4	8 42	1.1	8 52	3.6	4 3	0.9	6 36	0.7	11 55	0.2	10 44	0.7	
22	2 41	7.9	4 7	7.1	9 36	1.2	9 38	4.0	4 19	0.9	7 52	0.6	* *	..	1 12	0.2	
23	3 24	7.7	5 8	6.8	10 23	1.3	10 36	4.3	4 59	0.9	9 52	0.6	* *	..	2 34	0.2	○,N.
24	4 23	7.5	6 22	6.7	11 34	1.5	11 48	4.4	5 50	0.9	11 55	0.6	* *	..	4 6	0.2	
25	5 35	7.3	7 37	6.8	* *	..	0 44	1.6	7 52	0.9	* *	..	* *	..	5 4	0.2	
26	6 57	7.3	8 44	7.2	1 9	4.3	1 56	1.5	{ 0 40 9 37 }	0.7 0.9	* *	..	4 25	0.7	5 51	0.1	
27	8 16	7.5	9 36	7.6	2 26	3.8	2 59	1.3	{ 1 10 11 4 }	0.7 0.9	* *	..	5 40	0.7	6 40	0.1	
28	9 25	8.0	10 20	8.1	3 26	3.1	3 56	1.2	1 25	0.8	0 16	1.0	6 27	0.5	7 23	0.2	
29	10 22	8.5	11 1	8.4	4 17	2.3	4 46	1.0	1 48	0.8	1 16	1.0	7 15	0.4	8 1	0.2	
30	11 16	9.0	11 40	8.8	5 5	1.6	5 33	1.0	2 13	0.9	2 12	1.0	7 58	0.3	8 40	0.3	●,E.,P.

明治四十六年 九月

地名	大				湊				鎮				海				太陰曆日附
	高潮		低潮		高潮		低潮		高潮		低潮		高潮		低潮		
	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	
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	
日	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	d
1	3 14	2.2	3 54	2.2	9 37	0.1	9 54	0.3	8 53	6.7	9 15	7.2	2 49	0.3	3 0	-1	1
2	4 1	2.4	4 29	2.3	10 18	0.1	10 35	0.2	9 33	7.0	9 53	7.4	3 27	-1	3 41	-2	2
3	4 44	2.4	5 4	2.3	10 56	0.1	11 14	0.1	10 12	7.1	10 29	7.1	4 4	-2	4 20	-1	3
4	5 26	2.3	5 40	2.3	11 33	0.2	11 55	0.1	10 49	6.8	11 5	6.6	4 39	0.0	4 57	0.3	4
5	6 8	2.2	6 14	2.2	* *	..	0 10	0.4	11 27	6.4	11 42	6.0	5 15	0.4	5 36	0.9	5
6	6 53	2.0	6 49	2.1	0 36	0.2	0 47	0.6	* *	..	0 5	5.9	5 51	1.0	6 17	1.6	6
7	7 45	1.8	7 26	1.9	1 22	0.4	1 28	0.9	0 21	5.3	0 57	5.2	6 33	1.6	7 12	2.3	7
8	8 52	1.6	8 14	1.7	2 19	0.5	2 23	1.1	1 11	4.6	2 15	4.7	7 30	2.2	8 45	2.8	8
9	10 39	1.5	9 35	1.6	3 36	0.7	3 55	1.2	2 41	4.0	4 17	4.5	9 6	2.6	11 3	2.9	9
10	* *	..	{ 0 44 11 29 }	1.5	5 15	0.7	6 3	1.2	5 2	4.0	5 54	4.9	11 8	2.5	* *	..	10
11	* *	..	1 50	1.6	6 37	0.6	7 22	1.1	6 23	4.4	6 50	5.3	0 27	2.4	0 21	2.1	11
12	0 51	1.6	2 24	1.8	7 37	0.5	8 6	1.0	7 8	4.8	7 24	5.8	1 12	1.9	1 5	1.6	12
13	1 46	1.8	2 50	1.9	8 18	0.4	8 37	0.8	7 39	5.3	7 55	6.1	1 42	1.5	1 39	1.2	13
14	2 26	1.9	3 10	2.0	8 50	0.4	9 4	0.6	8 4	5.7	8 24	6.4	2 8	1.1	2 11	0.9	14
15	3 2	2.0	3 32	2.0	9 20	0.3	9 31	0.5	8 35	6.1	8 50	6.5	2 35	0.8	2 39	0.7	15
16	3 35	2.1	3 53	2.1	9 47	0.3	9 58	0.4	9 1	6.3	9 14	6.6	2 59	0.6	3 5	0.5	16
17	4 5	2.1	4 14	2.1	10 11	0.4	10 24	0.3	9 26	6.5	9 39	6.5	3 22	0.5	3 32	0.5	17
18	4 36	2.1	4 36	2.2	10 37	0.4	10 52	0.2	9 52	6.5	10 2	6.3	3 45	0.5	3 58	0.6	18
19	5 6	2.1	4 59	2.2	11 0	0.5	11 22	0.2	10 19	6.4	10 27	6.1	4 9	0.6	4 26	0.9	19
20	5 37	2.0	5 23	2.1	11 25	0.6	11 54	0.3	10 47	6.2	10 52	5.7	4 33	0.7	4 53	1.2	20
21	6 10	1.9	5 49	2.1	11 50	0.7	* *	..	11 18	5.8	11 20	5.3	5 1	1.0	5 24	1.7	21
22	6 47	1.7	6 22	2.0	0 30	0.4	0 19	0.9	11 55	5.3	11 56	4.7	5 31	1.5	6 3	2.3	22
23	7 36	1.5	7 2	1.8	1 17	0.5	0 57	1.0	* *	..	0 49	4.8	6 13	2.0	7 2	2.8	23
24	8 58	1.4	8 13	1.6	2 25	0.7	2 10	1.2	0 57	4.2	2 32	4.5	7 26	2.4	9 11	3.0	24
25	11 14	1.4	10 21	1.5	4 6	0.8	4 25	1.2	3 16	3.9	4 48	4.6	9 43	2.6	11 25	2.6	25
26	* *	..	0 51	1.6	5 48	0.7	6 29	1.1	5 26	4.3	6 5	5.2	11 33	2.2	* *	..	26
27	0 19	1.7	1 35	1.8	7 1	0.6	7 28	0.8	6 29	5.0	6 54	5.9	0 28	1.9	0 35	1.5	27
28	1 27	1.9	2 11	2.0	7 51	0.4	8 12	0.5	7 15	5.8	7 34	6.5	1 11	1.2	1 20	0.8	28
29	2 17	2.1	2 47	2.2	8 35	0.3	8 54	0.3	7 54	6.5	8 13	7.0	1 47	0.5	2 2	0.3	29
30	3 4	2.3	3 23	2.3	9 16	0.2	9 34	0.1	8 31	7.0	8 50	7.3	2 24	0.0	2 40	-1	1



明治四十六年 十月

地名	橫 須 賀								吳								太陰盈虛及位置											
	高 潮				低 潮				高 潮				低 潮															
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後													
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	
1	5	18	6.1	5	41	5.8	11	35	1.0	11	47	0.7	10	7	12.7	10	21	12.1	3	53	0.7	4	18	1.1				
2	6	13	6.1	5	56	5.7	* * *	0	12	1.9	10	52	12.7	10	53	11.7	4	32	0.3	4	58	1.7						
3	7	2	5.8	6	22	5.5	0	25	0.3	0	46	2.4	11	35	12.3	11	26	11.0	5	8	0.3	5	38	2.6				
4	7	53	5.3	6	46	5.2	1	4	0.4	1	23	3.0	* * *	0	20	11.6	5	45	0.7	6	20	3.7						
5	8	52	4.8	7	4	4.8	1	46	0.6	1	59	3.6	0	0	10.1	1	10	10.6	6	25	1.4	7	5	4.9				
6	10	8	4.3	7	14	4.4	2	35	1.0	2	42	4.1	0	35	9.1	2	11	9.7	7	9	2.2	8	2	5.9	S.			
7	* * *			{ 0 15 4.0 } { 7 38 3.9 }	3	36	1.3	* * *		1	16	8.1	3	40	8.9	8	5	3.1	9	34	6.6	D.						
8	* * *			{ 2 49 4.2 } { 10 11 3.6 }	4	46	1.6	* * *		2	28	7.3	5	26	8.9	9	19	3.8	11	32	6.5							
9	* * *			3	23	4.6	6	16	1.8	* * *		4	24	7.0	6	41	9.3	11	0	3.9	* * *							
10	0	41	3.8	3	31	4.8	7	44	1.7	9	2	3.4	6	7	7.5	7	23	9.8	0	52	5.8	0	20	3.7				
11	2	2	4.2	3	42	4.9	8	42	1.6	9	23	2.9	7	8	8.4	7	55	10.1	1	35	4.9	1	18	3.2				
12	2	56	4.7	3	53	5.0	9	26	1.6	9	45	2.3	7	53	9.3	8	22	10.4	2	4	4.1	2	2	2.9	E.,A.			
13	3	40	5.1	4	7	5.1	9	58	1.7	10	7	1.8	8	28	10.1	8	47	10.6	2	28	3.3	2	37	2.6	○			
14	4	20	5.4	4	21	5.2	10	28	1.9	10	33	1.3	9	1	10.9	9	8	10.7	2	52	2.5	3	8	2.6				
15	4	58	5.5	4	38	5.3	10	55	2.1	11	1	0.9	9	33	11.4	9	31	10.8	3	16	1.8	3	37	2.7				
16	5	34	5.5	4	55	5.4	11	19	2.4	11	30	0.6	10	5	11.6	9	52	10.8	3	42	1.3	4	5	3.0				
17	6	10	5.4	5	11	5.5	11	42	2.7	* * *		10	37	11.6	10	17	10.7	4	8	0.9	4	34	3.4					
18	6	46	5.3	5	37	5.3	0	0	0.4	0	14	3.0	11	13	11.3	10	42	10.4	4	38	0.7	5	4	4.0				
19	7	26	5.1	5	53	5.1	0	29	0.4	0	40	2.4	11	50	10.9	11	11	10.0	5	10	0.8	5	37	4.6				
20	8	17	4.8	6	14	4.9	1	6	0.5	1	13	3.7	* * *		{ 0 32 10.3 } { 11 43 9.5 }	5	46	1.2	6	14	5.2							
21	9	17	4.5	6	38	4.6	1	48	0.7	1	54	4.1	* * *		1	24	9.5	6	27	1.8	7	2	5.8	N.				
22	10	47	4.2	7	19	4.2	2	44	1.0	* * *		0	28	8.8	2	34	9.0	7	22	2.6	8	16	6.2					
23	* * *			{ 0 45 4.3 } { 9 19 3.8 }	3	50	1.3	* * *		1	36	8.1	4	4	8.9	8	35	3.3	10	2	6.1	C.						
24	* * *			{ 1 59 4.7 } { 11 58 3.9 }	5	17	1.6	7	20	3.8	3	28	7.7	5	28	9.2	10	14	3.7	11	40	5.3						
25	* * *			2	28	5.1	6	53	1.6	8	19	3.1	5	23	8.3	6	30	9.8	11	46	3.5	* * *						
26	1	36	4.4	2	54	5.3	8	4	1.5	8	56	2.4	6	40	9.2	7	16	10.6	0	44	4.1	0	52	3.0				
27	2	44	4.9	3	24	5.5	9	1	1.4	9	32	1.7	7	36	10.5	7	56	11.1	1	29	2.8	1	46	2.4	E.			
28	3	38	5.5	3	55	5.7	9	48	1.4	10	7	1.1	8	25	11.6	8	34	11.6	2	10	1.6	2	32	2.1	P.			
29	4	11	5.9	4	26	5.7	10	32	1.6	10	43	0.6	9	11	12.4	9	11	11.7	2	48	0.6	3	16	2.0	●			
30	5	13	6.0	4	56	5.6	11	13	1.9	11	19	0.3	9	52	12.8	9	47	11.6	3	26	0.0	3	57	2.2				
31	6	2	6.1	5	24	5.4	* * *		{ 1 2 2.3 } { 11 56 0.2 }		10	37	12.7	10	25	11.1	4	4	-3	4	40	2.7						

明治四十六年 十月

地名	竹 敷								佐 世 保								太陰曆日附											
	高 潮				低 潮				高 潮				低 潮															
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後													
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高												
日	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	h	m	ft.	d
1	9	45	7.8	9	55	7.6	3	33	-3	3	55	0.4	9	2	10.1	9	12	9.8	2	48	0.3	3	10	0.8		2		
2	10	26	7.7	10	29	7.5	4	10	-4	4	31	0.7	9	44	10.0	9	44	9.5	3	25	0.0	3	47	1.4		3		
3	11	7	7.4	11	3	7.0	4	47	-2	5	6	1.2	10	25	9.5	10	16	9.0	4	2	0.2	4	23	2.2		4		
4	11	48	6.7	11	38	6.5	5	25	0.2	5	44	1.8	11	9	8.7	10	48	8.3	4	40	0.6	5	1	3.1		5		
5	* * *			0	33	6.0	6	5	0.5	6	25	2.5	* * *		{ 0 18 7.8 } { 11 18 7.4 }	5	22	1.2	5	42	4.1		6					
6	0	14	5.8	1	28	5.4	6	52	1.5	7	15	3.2	* * *		{ 1 4 7.0 } { 11 56 6.6 }	6	8	2.0	6	37	5.0		7					
7	1	1	5.2	2	53	4.8	7	56	2.2	8	41	3.6	* * *		2	49	6.4	7	14	2.7	8	23	5.5		8			
8	2	20	4.6	4	55	4.7	9	31	2.6	10	50	3.6	1	23	5.8	5	0	6.6	8	52	3.2	10	41	5.3		9		
9	4	38	4.5	6	17	5.1	11	20	2.6	* * *		3	41	5.8	6	1	7.1	10	32	3.1	11	57	4.6		10			
10	6	11	4.9	7	1	5.5	0	22	3.1	0	32	2.3	5	17	6.3	6	33	7.6	11	41	2.7	* * *		11				
11	7	5	5.5	7	30	5.9	1	5	2.5	1	17	1.9	6	12	7.0	6	58	8.0	0	32	3.9	0	28	2.4		12		
12	7	40	6.0	7	58	6.2	1	32	1.9	1	49	1.6	6	51	7.8	7	20	8.3	0	58	3.1	1	4	2.1		13		
13	8	14	6.4	8	22	6.5	2	16	1.4	2	21	1.4	7	26	8.3	7	41	8.5	1	23	2.4	1	35	1.9		14		
14	8	46	6.4	8	44	6.7	2	31	0.8	2	47	1.3	7	56	8.8	8	3	8.7	1	47	1.7	2	4	1.9		15		
15	9	14	7.0	9	8	6.8	2	57	0.5	3	13	1.3	8	29	9.1	8	23	8.9	2	13	1.2	2	29	2.1		16		
16	9	40	7.0	9	32	6.9	3	23	0.3	3	38	0.8	8	59	9.1	8	46	8.9	2	38	0.7	2	55	2.3		17		
17	10	12	6.9	9	56	6.9	3	51	0.2	4	4	1.6	9	29	9.0	9	7	8.9	3	6	0.6	3	20	2.7		18		
18	10	41	6.7	10	23	6.7	4	20	0.2	4	30	1.8	10	4	8.6	9	32	8.7	3	35	0.5	3	46	3.2		19		
19	11	11	6.3	10	52	6.4	4	50	0.5	4	59	2.1	10	38	8.1	10	0	8.4	4	8	0.7	4	16	3.6		20		
20	11	46	5.9	11	26	6.0	5	23	0.9	5	31	2.5	11	19	7.6	10	31	7.9	4	43	1.1	4	49	4.1		21		
21	* * *			0	31	5.4	6	4	1.4	6	15	2.9	* * *		{ 0 10 7.0 } { 11 14 7.3 }	5	27	1.7	5	35	4.6		22					
22	0	10	5.5	1	31	5.0	6	56	2.0	7	23	3.3	* * *		1	24	6.5	6	26	2.3	6	51	5.1		23			
23	1	20	4.9	3	13	4.8	8	20	2.5	9	22	3.3	0	25	6.6	3	12	6.5	7	49	2.9	8	55	5.0		24		
24	3	31	4.7	5	1	5.0	10	16	2.6	11	14	2.9	2	34	6.7	4	40	7.0	9	34	3.0	10	40	4.2		25		
25	5	26	5.1	6	8	5.6	11	47	2.3	* * *		4	31	6.9	5	35	7.7	10	59	2.6								



明治四十六年 十月

地名	馬		公		舞		鶴		太陰盈虛及位置
	高潮		低潮		高潮		低潮		
	午 前	午 後	午 前	午 後	午 前	午 後	午 前	午 後	
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	
日	h m	ft.	h m	ft.	h m	ft.	h m	ft.	
1	* * ..	0 7 9.3	5 49 0.9	6 20 1.2	2 39 0.9	3 8 1.0	8 42 0.3	9 16 0.3	
2	0 23 8.9	1 0 9.4	6 36 0.4	7 4 1.5	3 5 0.9	4 3 0.9	9 27 0.2	9 51 0.5	
3	0 59 9.0	1 49 9.2	7 20 0.1	7 51 2.0	3 32 0.9	5 3 0.9	10 16 0.1	10 27 0.5	
4	1 45 8.7	2 43 8.9	8 10 0.1	8 39 2.6	3 55 0.9	6 12 0.8	11 9 0.1	11 3 0.7	
5	2 26 8.4	3 40 8.5	8 58 0.3	9 31 3.2	4 15 0.9	7 33 0.7	* * ..	{ <sub>11 45 0.7</sub>	
6	3 12 7.9	4 40 7.9	9 52 0.6	10 26 3.8	4 39 0.9	9 37 0.7	* * ..	1 21 0.2	S.
7	4 2 7.5	5 46 7.5	10 49 1.0	11 28 4.2	4 49 0.8	11 13 0.7	* * ..	2 36 0.2	D
8	4 59 7.0	6 54 7.3	11 51 1.4	* * ..	6 13 0.7	* * ..	* * ..	3 45 0.2	
9	6 2 6.8	7 55 7.2	0 34 4.4	0 55 1.7	{ <sub>0 49 0.7</sub>	* * ..	* * ..	4 52 0.2	
10	7 9 6.8	8 49 7.2	1 38 4.3	1 54 1.9	{ <sub>1 18 0.8</sub>	* * ..	5 13 0.8	5 39 0.2	
11	8 14 6.9	9 27 7.3	2 34 4.0	2 49 2.0	{ <sub>1 25 0.8</sub>	* * ..	5 56 0.7	6 28 0.2	
12	9 9 7.3	9 59 7.3	3 17 3.5	3 35 2.1	1 28 0.8	0 2 0.9	6 27 0.6	7 3 0.3	E., A.
13	10 0 7.6	10 28 7.5	3 56 3.0	4 19 2.2	1 30 0.8	0 55 0.9	6 57 0.5	7 33 0.3	
14	10 42 7.9	10 54 7.6	4 31 2.4	4 55 2.4	1 37 0.8	1 43 0.9	7 26 0.4	7 58 0.4	O
15	11 25 8.1	11 22 7.7	5 4 1.9	5 30 2.6	1 46 0.8	2 31 0.9	8 1 0.3	8 22 0.5	
16	* * ..	{ <sub>0 8 8.2</sub>	5 40 1.4	6 7 2.8	2 0 0.9	3 20 0.8	8 37 0.2	8 42 0.5	
17	* * ..	0 54 8.2	6 19 1.0	6 38 3.1	2 13 0.9	4 3 0.8	9 16 0.2	9 0 0.6	
18	0 22 8.0	1 32 8.0	6 55 0.7	7 10 3.4	2 29 1.0	4 54 0.7	10 4 0.1	9 18 0.7	
19	0 50 8.2	2 16 7.8	7 34 0.4	7 52 3.7	2 46 1.0	5 45 0.7	10 57 0.1	9 46 0.7	
20	1 32 8.1	3 5 7.6	8 22 0.5	8 38 3.9	3 16 1.0	6 52 0.6	11 55 0.1	* * ..	
21	2 17 7.9	3 59 7.3	9 13 0.7	9 29 4.2	3 40 1.0	8 7 0.6	* * ..	1 0 0.1	N.
22	3 8 7.6	4 58 7.2	10 8 1.1	10 30 4.2	4 19 0.9	9 48 0.6	* * ..	2 17 0.2	
23	4 11 7.4	6 1 7.1	11 10 1.4	11 39 4.2	5 52 0.9	11 10 0.7	* * ..	3 20 0.2	C
24	5 23 7.1	7 5 7.2	* * ..	0 16 1.7	7 34 0.8	11 45 0.7	* * ..	4 17 0.2	
25	6 43 7.2	8 4 7.4	0 53 3.8	1 26 1.8	9 38 0.8	* * ..	4 17 0.7	5 10 0.2	
26	8 1 7.5	8 52 7.8	2 1 3.2	2 28 1.9	{ <sub>0 6 0.8</sub>	* * ..	5 23 0.6	5 57 0.2	
27	9 7 7.9	9 37 8.2	2 59 2.5	3 23 1.9	0 29 0.9	0 18 0.9	6 13 0.4	6 42 0.3	E.
28	10 7 8.4	10 20 8.5	3 49 1.6	4 16 1.8	0 51 0.9	1 19 0.9	6 59 0.3	7 22 0.4	P.
29	11 0 8.9	11 2 8.8	4 38 0.9	5 4 1.9	1 16 0.9	2 15 0.9	7 45 0.2	8 1 0.4	●
30	11 53 9.1	11 46 8.9	5 25 0.2	5 53 1.9	1 45 0.9	3 12 0.9	8 28 0.1	8 40 0.5	
31	* * ..	0 44 9.3	6 12 -2	6 40 2.3	2 9 1.0	4 12 0.9	9 16 0.1	9 20 0.6	

明治四十六年 十月

地名	大		湊		鎮		海		灣		太陰曆日附						
	高潮		低潮		高潮		低潮										
	午 前	午 後	午 前	午 後	午 前	午 後	午 前	午 後									
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高									
日	h m	ft.	h m	ft.	h m	ft.	h m	ft.	h m	ft.	d						
1	3 47	2.4	3 59	2.4	9 54	0.2	10 14	0.0	9 9	7.3	9 26	7.2	3 0	-3	3 18	-2	2
2	4 31	2.4	4 34	2.4	10 32	0.2	10 52	0.0	9 47	7.3	10 0	6.9	3 35	-3	3 56	0.0	3
3	5 11	2.3	5 8	2.3	11 11	0.4	11 31	0.0	10 24	7.0	10 37	6.4	4 9	-1	4 33	0.4	4
4	5 53	2.2	5 41	2.2	11 46	0.5	* * ..	11 0	6.6	11 11	5.8	4 44	0.4	5 12	1.0	5	
5	6 37	2.0	6 13	2.0	0 11	0.1	0 23	0.8	11 41	5.9	11 49	5.1	5 20	1.0	5 54	1.7	6
6	7 26	1.8	6 46	1.8	0 55	0.3	1 1	1.0	* * ..	0 28	5.3	5 57	1.6	6 47	2.4	7	
7	8 29	1.6	7 28	1.6	1 43	0.5	1 52	1.1	0 37	4.4	1 38	4.7	6 48	2.3	8 17	2.9	8
8	10 5	1.5	8 54	1.5	2 52	0.7	3 23	1.3	2 6	3.8	3 36	4.5	8 21	2.8	10 36	2.9	9
9	* * ..	{ <sub>0 8 1.5</sub>	4 27	0.8	5 31	1.2	4 35	3.8	5 21	4.7	10 35	2.7	11 59	2.5	10		
10	* * ..	1 7	1.6	5 57	0.7	6 49	1.1	6 0	4.3	6 23	5.1	11 54	2.3	* * ..	11		
11	0 31	1.6	1 38	1.7	7 1	0.7	7 33	0.9	6 38	4.9	6 55	5.5	0 41	2.0	0 41	1.9	12
12	1 26	1.7	2 4	1.8	7 44	0.6	8 6	0.7	7 12	5.4	7 26	5.9	1 10	1.5	1 15	1.4	13
13	2 9	1.9	2 29	1.9	8 20	0.6	8 35	0.5	7 40	5.8	7 52	6.1	1 36	1.1	1 44	1.1	14
14	2 44	2.0	2 52	2.0	8 49	0.5	9 2	0.4	8 7	6.2	8 18	6.3	2 1	0.8	2 13	0.8	15
15	3 16	2.1	3 14	2.1	9 16	0.5	9 30	0.2	8 34	6.5	8 42	6.4	2 25	0.6	2 40	0.7	16
16	3 47	2.1	3 38	2.2	9 43	0.5	9 58	0.1	8 59	6.6	9 7	6.3	2 48	0.4	3 6	0.6	17
17	4 17	2.1	4 0	2.2	10 8	0.6	10 29	0.1	9 26	6.7	9 32	6.2	3 13	0.4	3 34	0.7	18
18	4 49	2.0	4 26	2.2	10 34	0.7	11 0	0.1	9 54	6.6	9 58	5.9	3 38	0.5	4 2	1.0	19
19	5 22	2.0	4 53	2.1	11 0	0.7	11 34	0.2	10 24	6.3	10 28	5.6	4 5	0.6	4 33	1.3	20
20	5 56	1.8	5 26	2.1	11 31	0.8	* * ..	10 57	6.0	11 0	5.2	4 35	0.9	5 8	1.7	21	
21	6 36	1.7	6 0	1.9	0 13	0.3	0 6	0.9	11 38	5.5	11 42	4.7	5 10	1.4	5 52	2.2	22
22	7 29	1.6	6 47	1.8	0 59	0.4	0 55	1.0	* * ..	0 33	5.0	5 54	1.9	6 59	2.6	23	
23	8 38	1.5	8 5	1.6	1 56	0.6	2 10	1.1	0 52	4.2	2 12	4.6	7 12	2.4	8 53	2.8	24
24	10 29	1.5	10 10	1.5	3 22	0.7	4 16	1.1	3 0	4.0	3 51	4.7	9 17	2.6	10 53	2.4	25
25	* * ..	{ <sub>0 2 1.6</sub>	5 7	0.8	5 59	1.0	5 3	4.5	5 35	5.3	11 9	2.2	11 57	1.7	26		
26	* * ..	0 50	1.8	6 24	0.7	7 1	0.7	6 6	5.2	6 26	5.8	* * ..	0 12	1.1	27		
27	1 11	1.9	1 34	2.0	7 22	0.6	7 50	0.4	6 53	6.0	7 7	6.4	0 42	1.0	0 59	0.8	28
28	2 7	2.1	2 14	2.2	8 10	0.5	8 32	0.2	7 33	6.6	7 55	6.8	1 21	0.4	1 45	0.4	29
29	2 50	2.2	2 53	2.3	8 52	0.4	9 13	0.0	8 11	7.1	8 26	7.0	2 2	0.0	2 21	0.1	1
30	3 32	2.3	3 29	2.4	9 31	0.4	9 53	-1	8 48	7.3	9 3	6.9	2 35	-3	2 59	0.0	2
31	4 15	2.3	4 5	2.4	10 10	0.4	10 32	0.0	9 26	7.3	9 40	6.7	3 11	-2	3 38	0.2	3



明治四十六年 十一月

地名	橫 須 賀								吳								太陰盈虛及位置
	高 潮				低 潮				高 潮				低 潮				
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後		
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	
1	6 50	5'9	5 48	5'3	* *	..	0 34	2'8	11 21	12'3	10 59	10'4	4 42	0'0	5 21	3'5	S.
2	7 49	5'4	6 7	5'1	0 41	0'1	1 2	3'6	* *	..	{ <sup>0 6</sup> <sub>11 34</sub> 11'7	9'6	5 20	0'4	6 5	4'4	
3	8 50	4'8	6 28	4'8	1 27	0'2	1 40	3'9	* *	..	0 56	10'8	6 0	1'1	6 49	5'3	
4	9 56	4'4	6 52	4'4	2 13	0'6	2 31	4'2	0 9	8'8	1 53	10'0	6 43	2'0	7 46	5'9	
5	11 23	4'3	8 41	4'0	2 59	1'1	* *	..	0 54	8'0	3 1	9'3	7 32	2'9	8 59	6'3	
6	* *	..	{ <sup>1 6</sup> <sub>9 33</sub> 4'3	3'7	3 56	1'6	* *	..	2 1	7'5	4 19	9'0	8 40	3'7	10 31	6'1	D
7	* *	..	1 54	4'5	5 14	2'0	7 28	3'6	3 41	7'2	5 28	9'0	10 8	4'2	11 48	5'5	
8	0 6	3'7	2 12	4'7	6 47	2'2	8 13	3'0	5 22	7'7	6 19	9'3	11 33	4'3	* *	..	A. E.
9	1 41	4'1	2 28	4'8	7 55	2'3	8 41	2'4	6 33	8'5	6 58	9'4	0 37	4'7	0 39	4'1	
10	2 45	4'5	2 44	4'9	8 43	2'5	9 10	1'8	7 22	9'2	7 28	9'8	1 12	3'8	1 24	4'0	O
11	3 34	4'8	3 4	5'0	9 21	2'6	9 38	1'2	8 4	10'1	7 56	10'0	1 44	2'9	2 4	3'8	
12	4 17	5'1	3 25	5'1	9 53	2'8	10 8	0'7	8 40	10'7	8 23	10'1	2 13	2'1	2 38	3'8	
13	4 56	5'2	3 47	5'3	10 23	3'0	10 34	0'3	9 16	11'2	8 50	10'3	2 43	1'3	3 12	3'9	
14	5 22	5'3	4 10	5'4	10 46	3'1	11 12	0'1	9 50	11'5	9 18	10'4	3 12	0'8	3 43	4'0	
15	6 9	5'2	4 37	5'5	11 19	3'3	11 49	0'0	10 26	11'6	9 51	10'4	3 43	0'4	4 17	4'2	N.
16	6 48	5'0	5 8	5'5	11 50	3'5	* *	..	11 3	11'5	10 24	10'2	4 18	0'2	4 53	4'4	
17	7 28	4'9	5 37	5'5	0 26	0'0	0 25	3'6	11 43	11'2	10 59	9'9	4 54	0'4	5 29	4'8	
18	8 18	4'7	6 12	5'1	1 9	0'2	1 28	3'8	* *	..	{ <sup>0 29</sup> <sub>11 43</sub> 10'7	9'4	5 35	0'8	6 15	5'2	
19	9 7	4'4	6 58	4'9	1 51	0'5	1 50	3'9	* *	..	1 17	10'2	6 20	1'5	7 7	5'4	
20	10 9	4'3	8 4	4'4	2 44	1'0	2 59	3'8	0 34	8'9	2 16	9'8	7 13	2'3	8 15	5'5	E.
21	11 22	4'5	9 52	4'1	3 43	1'5	4 42	3'6	1 46	8'3	3 24	9'6	8 20	3'2	9 37	5'2	
22	* *	..	0 22	4'7	4 58	1'9	6 24	3'0	3 19	8'2	4 32	9'6	9 42	3'7	10 56	4'5	
23	0 4	4'1	1 5	4'9	6 23	2'2	7 32	2'3	4 58	8'6	5 35	9'8	11 9	3'9	* *	..	
24	1 39	4'4	1 45	5'1	7 35	2'4	8 23	1'6	6 17	9'5	6 29	10'1	0 1	3'4	0 22	3'8	
25	2 50	4'8	2 24	5'3	8 35	2'6	9 7	0'9	7 16	10'4	7 18	10'5	0 52	2'4	1 21	3'5	P.
26	3 48	5'2	2 59	5'4	9 24	2'7	9 47	0'3	8 10	11'2	7 59	10'8	1 40	1'4	2 10	3'4	
27	4 37	5'5	3 37	5'5	10 9	2'9	10 29	-1	8 58	11'9	8 41	10'9	2 22	0'5	2 58	3'4	
28	5 26	5'6	4 11	5'5	10 51	3'1	11 9	-5	9 44	12'3	9 21	10'8	3 4	-1	3 43	3'4	
29	6 4	6'1	4 46	5'4	11 33	3'0	11 49	-3	10 29	12'4	10 1	10'5	3 44	-3	4 27	3'7	
30	7 0	5'5	5 19	5'3	* *	..	0 14	3'5	11 12	12'2	10 38	10'1	4 24	-2	5 9	4'1	S.

明治四十六年 十一月

地名	竹 敷								佐 世 保								太陰曆日附
	高 潮				低 潮				高 潮				低 潮				
	午 前		午 後		午 前		午 後		午 前		午 後		午 前		午 後		
	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	時刻	潮高	
1	10 47	7'2	10 38	6'9	4 24	-2	4 46	1'6	10 13	9'3	9 46	8'7	3 40	-1	4 4	2'9	4
2	11 31	6'7	11 14	6'3	5 2	0'2	5 25	2'0	10 59	8'6	10 19	8'1	4 19	0'3	4 43	3'7	5
3	* *	..	{ <sup>0 5</sup> <sub>11 53</sub> 6'1	5'8	5 43	0'7	6 6	2'5	11 47	7'9	10 53	7'4	4 59	1'0	5 24	4'4	6
4	* *	..	1 5	5'6	6 28	1'4	6 56	3'0	* *	..	{ <sup>0 44</sup> <sub>11 37</sub> 7'2	6'7	5 43	1'7	6 17	4'9	7
5	0 40	5'2	2 10	5'1	7 21	2'0	8 7	3'3	* *	..	2 3	6'7	6 40	2'5	7 40	5'2	8
6	1 51	4'7	3 36	4'8	8 39	2'5	9 46	3'3	0 47	6'1	4 18	6'7	7 55	3'1	9 30	5'1	9
7	3 45	4'6	5 2	5'0	10 18	2'8	11 19	3'0	2 47	5'9	4 40	6'9	9 32	3'4	10 53	4'4	10
8	5 26	4'9	5 57	5'2	11 39	2'7	* *	..	4 32	6'3	5 29	7'2	10 51	3'3	11 41	3'7	11
9	6 29	5'3	6 35	5'6	0 13	2'4	0 37	2'5	5 38	6'9	6 2	7'6	11 47	3'1	* *	..	12
10	7 13	5'8	7 8	5'9	0 53	1'8	1 13	2'3	6 25	7'5	6 29	7'9	0 16	2'8	0 26	3'0	13
11	7 50	6'2	7 40	6'2	1 29	1'3	1 47	2'0	7 3	8'0	6 55	8'2	0 46	2'1	1 1	2'9	14
12	8 23	6'5	8 8	6'5	1 59	0'8	2 17	1'9	7 40	8'4	7 20	8'5	1 16	1'4	1 32	2'8	15
13	8 53	6'7	8 35	6'6	2 29	0'5	2 47	1'8	8 13	8'7	7 46	8'7	1 44	0'8	2 2	3'0	16
14	9 22	6'8	9 4	6'8	2 58	0'3	3 14	1'8	8 44	8'8	8 13	8'8	2 13	0'4	2 30	3'1	17
15	9 55	6'8	9 32	6'7	3 29	0'1	3 43	1'8	9 19	8'8	8 43	8'8	2 46	0'2	3 1	3'2	18
16	10 28	6'8	10 7	6'6	3 58	0'2	4 17	1'9	9 54	8'6	9 15	8'7	3 19	0'2	3 33	3'5	19
17	11 4	6'4	10 43	6'4	4 36	0'4	4 52	2'2	10 31	8'3	9 49	8'4	3 55	0'4	4 8	3'7	20
18	11 43	6'1	11 27	6'0	5 14	0'8	5 34	2'4	11 17	7'8	10 30	7'9	4 36	0'8	4 50	4'1	21
19	* *	..	0 23	5'8	5 55	1'2	6 22	2'6	* *	..	{ <sup>0 7</sup> <sub>11 24</sub> 7'5	7'3	5 20	1'4	5 44	4'4	22
20	0 20	5'5	1 26	5'5	6 52	1'8	7 32	2'8	* *	..	0 10	7'0	6 16	2'0	6 56	4'5	23
21	1 32	5'2	2 42	5'3	8 4	2'3	9 3	2'8	0 38	6'8	2 27	7'1	7 28	2'7	8 32	4'3	24
22	3 24	5'0	4 6	5'3	9 37	2'6	10 35	2'4	2 23	6'5	3 41	7'4	8 55	3'1	10 1	3'6	25
23	4 56	5'2	5 17	5'7	11 4	2'5	11 44	2'3	4 5	6'9	4 43	7'8	10 19	3'1	11 5	2'7	26
24	6 8	5'8	6 13	6'1	* *	..	0 11	2'2	5 19	7'6	5 31	8'2	11 23	2'9	11 56	1'8	27
25	7 4	6'3	7 7	6'6	0 37	1'1	1 4	1'9	6 18	8'2	6 16	8'6	* *	..	0 18	2'7	28
26	7 49	6'6	7 47	7'0	1 30	0'7	1 46	1'5	7 9	8'8	6 58	8'9	0 43	0'9	1 4	2'6	29
27	8 33	6'9	8 28	7'2	2 14	0'2	2 29	1'4	7 55	9'2	7 37	9'1	1 24	0'3	1 49	2'6	30
28	9 17	7'0	9 7	7'3	2 54	-1	3 10	1'4	8 40	9'4	8 16	9'0	2 6	-2	2 31	2'8	1
29	9 57	7'0	9 45	7'2	3 35	-2	3 49	1'6	9 23	9'4	8 52	8'8	2 46	-3	3 11	3'0	2
30	10 38	6'8	10 28	6'8	4 14	-1	4 27	1'8	10 6	9'1	9 28	8'5	3 25	-2	3 51	3'4	3



