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THE
NAUTICAL ALMANAC

AND

ASTRONOMICAL EPHEMERIS

FOR THE YEAR

1924

FOR THE MERIDIAN

OF THE

ROYAL OBSERVATORY AT GREENWICH.

(WITH TWO INSET ECLIPSE MAPS.)

PUBLISHED BY ORDER OF
THE LORDS COMMISSIONERS OF THE ADMIRALTY.

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MCMXXI.

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ALPHABETICALLY ARRANGED.

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ECLIPSE MAPS.

To face page 462. Map of the Partial Eclipse of the Sun, March 5, 1924.

To face page 467. Map of the Partial Eclipse of the Sun, August 29, 1924.

P R E F A C E.

THE contents and the arrangement of the NAUTICAL ALMANAC for the year 1924 are the same generally as those of the preceding year.

The following sections have been supplied from abroad :—

Apparent Places of Polar Stars from Paris.

Apparent Places of Stars marked A. N. or A. E. at the foot of the column from San Fernando and Washington respectively.

Eclipses from Washington and Paris.

Elements of Occultations from Washington.

Jupiter's Fifth Satellite from Washington ; Jupiter's four principal Satellites from Paris ; Saturn's Satellites and Rings from Washington ; Satellites of Uranus and Neptune from Washington ; Transit of Mercury from Washington.

Physical Ephemerides of Sun, Moon (defective illumination excepted), Mercury, Venus, Mars, and Jupiter from Washington.

The places of the Sun are from NEWCOMB'S TABLES (*Astronomical Papers of the American Ephemeris and Nautical Almanac*, vol. vi., part I.).

The places of the Moon are from BROWN'S *Tables of the Motion of the Moon*.

The heliocentric places of the planets are from the Tables in the *Astronomical Papers of the American Ephemeris and Nautical Almanac*.

The mean places and proper motions and precessions of the Standard Stars have ordinarily been supplied by the office furnishing the apparent places. For the 83 stars whose apparent places have been calculated in this office, mean places and proper motions have been derived from NEWCOMB'S Catalogue of Fundamental Stars (*Astronomical Papers of the American Ephemeris and Nautical Almanac*, vol. viii., part II.). The names of the stars have in all cases been taken from this Catalogue.

The stellar magnitudes have been taken, with a few exceptions, from *Revised Harvard Photometry*. The magnitude of the variable star ϵ Aurigæ has been taken from "A Second Catalogue of Variable Stars" (*Harvard Annals*, vol. lv.), and that of the star α Orionis as variable between the limits 0.3 and 1.1. The spectral types have been taken from a manuscript list forwarded by Professor Pickering in 1916.

Since the date of the Preface of the last Almanac, no changes of staff have occurred.

The staff at present consists of:—

Chief Assistant.—Bernard Francis Bawtree.

Assistants.—John Abner Sprigge, William Fraser Doak, M.A. (Glas.), F.R.A.S., F.R.G.S., Thomas Charlton Hudson, B.A. (Cantab.), F.R.A.S.

P. H. COWELL,
Superintendent.

H.M. Nautical Almanac Office,
86 Lee Road, London, S.E. 3.
Sept. 5, 1921.

EXPLANATION OF
ASTRONOMICAL SYMBOLS AND ABBREVIATIONS.

<p>☉ The Sun. ☾ The Moon. ☿ Mercury. ♀ Venus. ⊕ or ♂ The Earth.</p>	<p>♂ Mars. ♃ Jupiter. ♄ Saturn. ♅ Uranus. ♆ Neptune.</p>	<p>♋ Conjunction. ☐ Quadrature. ♁ Opposition. ♊ Ascending Node. ♋ Descending Node.</p>
<p>^h Hours. ^m Minutes of Time. ^s Seconds of Time.</p>	<p>° Degrees. ' Minutes of Arc. " Seconds of Arc.</p>	<p>N. North. S. South. E. East. W. West.</p>

SIGNS OF THE ZODIAC.

<p>♈ Aries - - 0° I. ♉ Taurus - - 30 II. ♊ Gemini - - 60 III. ♋ Cancer - - 90</p>	<p>IV. ♌ Leo - - 120° V. ♍ Virgo - - 150 VI. ♎ Libra - - 180 VII. ♏ Scorpio - 210</p>	<p>VIII. ♐ Sagittarius 240° IX. ♑ Capricornus 270 X. ♒ Aquarius - 300 XI. ♓ Pisces - - 330</p>
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PRINCIPAL ARTICLES OF THE CALENDAR,
For the Year 1924.

Golden Number - - - - - 6		Dominical Letters - - - - - F, E
Epact - - - - - 24	||	Julian Period (Year of) - - - - 6637

FIXED AND MOVABLE FESTIVALS, ANNIVERSARIES,
&c. &c.

Epiphany - - - - - Jan. 6	||	Rogation Sunday - - - - - May 25
Septuagesima Sunday - - Feb. 17	||	Birthday of Queen Mary - - - - 26
St. David - - - - - Mar. 1	||	Ascension Day—Holy Thursday 29
Quinquagesima—Shrove Sunday - 2	||	Birthday of King George V. - June 3
Ash Wednesday - - - - - 5	||	Whit Sunday - - - - - 8
Quadragesima—1st Sun. in Lent - 9	||	Trinity Sunday - - - - - 15
St. Patrick - - - - - 17	||	Corpus Christi - - - - - 19
Annunciation—Lady Day - - - 25	||	Birthday of the Prince of Wales 23
Palm Sunday - - - - - April 13	||	St. John Bapt.—Midsum. Day - 24
Good Friday - - - - - 18	||	St. Michael—Michaelmas Day Sept. 29
EASTER DAY - - - - - 20	||	1st Sunday in Advent - - - Nov. 30
St. George - - - - - 23	||	St. Andrew - - - - - 30
Low Sunday - - - - - 27	||	Birthday of Queen Alexandra Dec. 1
Accession of King George V. - May 6	||	St. Thomas - - - - - 21
Proclamation of King George V. 9	||	Christmas Day - - - - - 25

The Year 5685 of the Jewish Era begins on September 29.

The Year 1343 of the Mohammedan Era begins on August 2.

Ramadân (Month of Abstinence observed by the Turks) begins on April 6.

ERRATA.

(Continued from p. ix of the Nautical Almanac for 1923.)

ABRIDGED NAUTICAL ALMANAC FOR THE YEAR 1923.

Page 153. (Declination of α Cygni.) *For 44° read 45°.*

NAUTICAL ALMANAC FOR THE YEAR 1924.

Page 17. (Moon's Longitude at Midnight on Feb. 2.) *For 286° 2' 26".8 read 286° 2' 25".8.*

1924.

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	— 0.43	8.95	20.82	279.8812	214.7304	154.9893	230.8971
11	— 0.41	8.95	20.82	289.7377	346.4944	154.4598	232.0112
21	— 0.40	8.94	20.80	299.5942	118.2584	153.9302	233.1252
31	— 0.40	8.93	20.78	309.4507	250.0223	153.4007	234.2392
Feb. 10	— 0.41	8.92	20.74	319.3071	21.7863	152.8712	235.3533
20	— 0.43	8.90	20.70	329.1636	153.5503	152.3416	236.4673
Mar. 1	— 0.45	8.88	20.65	339.0201	285.3142	151.8121	237.5813
11	— 0.48	8.86	20.60	348.8765	57.0782	151.2825	238.6954
21	— 0.52	8.83	20.54	358.7330	188.8422	150.7530	239.8094
31	— 0.55	8.81	20.48	8.5895	320.6061	150.2235	240.9235
Apr. 10	— 0.59	8.78	20.42	18.4460	92.3701	149.6939	242.0375
20	— 0.61	8.76	20.37	28.3024	224.1341	149.1644	243.1515
30	— 0.63	8.73	20.31	38.1589	355.8980	148.6348	244.2656
May 10	— 0.64	8.71	20.26	48.0154	127.6620	148.1053	245.3796
20	— 0.64	8.69	20.22	57.8719	259.4260	147.5758	246.4937
30	— 0.63	8.68	20.19	67.7283	31.1900	147.0462	247.6077
June 9	— 0.62	8.67	20.16	77.5848	162.9539	146.5167	248.7218
19	— 0.60	8.66	20.14	87.4413	294.7179	145.9872	249.8358
29	— 0.59	8.65	20.13	97.2978	66.4819	145.4576	250.9498
July 9	— 0.58	8.66	20.13	107.1542	198.2458	144.9281	252.0639
19	— 0.57	8.66	20.14	117.0107	330.0098	144.3985	253.1779
29	— 0.56	8.67	20.16	126.8672	101.7738	143.8690	254.2920
Aug. 8	— 0.57	8.68	20.19	136.7237	233.5377	143.3395	255.4060
18	— 0.58	8.70	20.23	146.5801	5.3017	142.8099	256.5200
28	— 0.60	8.71	20.27	156.4366	137.0657	142.2804	257.6341
Sept. 7	— 0.63	8.74	20.32	166.2931	268.8296	141.7508	258.7481
17	— 0.67	8.76	20.37	176.1495	40.5936	141.2213	259.8622
27	— 0.70	8.78	20.43	186.0060	172.3576	140.6918	260.9762
Oct. 7	— 0.73	8.81	20.49	195.8625	304.1215	140.1622	262.0903
17	— 0.76	8.83	20.55	205.7190	75.8855	139.6327	263.2043
27	— 0.78	8.86	20.60	215.5754	207.6495	139.1031	264.3183
Nov. 6	— 0.80	8.88	20.66	225.4319	339.4134	138.5736	265.4323
16	— 0.80	8.90	20.71	235.2884	111.1774	138.0441	266.5464
26	— 0.79	8.92	20.75	245.1449	242.9414	137.5145	267.6604
Dec. 6	— 0.78	8.93	20.78	255.0013	14.7053	136.9850	268.7745
16	— 0.76	8.94	20.80	264.8578	146.4693	136.4554	269.8885
26	— 0.73	8.95	20.82	274.7143	278.2333	135.9259	271.0025
36	— 0.71	8.95	20.82	284.5708	49.9972	135.3964	272.1166

Daily Motion.

Mean Obliquity, 1924.0 - - 23° 26' 57".02	+	+	-	+
Precession for the Year 1924 - - 50".2619				
Precession for 1 Day - - 0".1376	0".98565	13".17640	0".05295	0".11140

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi-diameter passing the Meridian.*	Equation of Time, to be added to Apparent Time.	Var. in hour.	
	Apparent Right Ascension.	Var. in hour.	Apparent Declination.	Var. in hour.				
Tues.	1	h m s	s	° ' "	"	m s	m s	s
Wed.	2	18 42 42.74	11.056	S. 23 5 0.1	11 28	1 11.06	3 12.51	1.196
Thur.	3	18 47 7.96	11.044	23 0 15.5	12 43	1 11.02	3 41.09	1.185
Frid.	4	18 51 32.87	11.030	22 55 3.4	13 58	1 10.97	4 9.37	1.171
Sat.	5	18 55 57.41	11.016	22 49 23.8	14.72	1 10.92	4 37.31	1.156
Sun.	6	19 0 21.64	11.000	22 43 17.0	15.85	1 10.87	5 4.87	1.140
Mon.	7	19 4 45.43	10.982	22 36 43.2	16.97	1 10.81	5 32.03	1.122
Tues.	8	19 9 8.77	10.963	22 29 42.5	18.09	1 10.75	5 58.74	1.103
Wed.	9	19 13 31.64	10.942	22 22 15.1	19 19	1 10.68	6 24.98	1.083
Thur.	10	19 17 54.00	10.920	22 14 21.4	20.29	1 10.61	6 50.71	1.061
Frid.	11	19 22 15.82	10.897	22 6 1.4	21.37	1 10.54	7 15.91	1.038
Sat.	12	19 26 37.08	10.873	21 57 15.5	22 45	1 10.47	7 40.54	1.014
Sun.	13	19 30 57.74	10.848	21 48 4.0	23 51	1 10.39	8 4.58	0.989
Mon.	14	19 35 17.79	10.822	21 38 27.0	24 56	1 10.30	8 28.01	0.963
Tues.	15	19 39 37.20	10.795	21 28 24.9	25 61	1 10.22	8 50.80	0.936
Wed.	16	19 43 55.95	10.767	21 17 57.9	26.64	1 10.13	9 12.93	0.908
Thur.	17	19 48 14.02	10.739	21 7 6.4	27 65	1 10.04	9 34.39	0.880
Frid.	18	19 52 31.40	10.709	20 55 50.7	28 65	1 9.95	9 55.16	0.850
Sat.	19	19 56 48.07	10.679	20 44 11.0	29 65	1 9.85	10 15.21	0.821
Sun.	20	20 1 4.01	10.649	20 32 7.7	30 62	1 9.75	10 34.55	0.790
Mon.	21	20 5 19.22	10.618	20 19 41.2	31 58	1 9.65	10 53.15	0.759
Tues.	22	20 9 33.68	10.587	20 6 51.7	32 53	1 9.55	11 11.00	0.728
Wed.	23	20 13 47.38	10.555	19 53 39.6	33.47	1 9.45	11 28.10	0.697
Thur.	24	20 18 0.31	10.523	19 40 5.3	34 39	1 9.34	11 44.44	0.665
Frid.	25	20 22 12.48	10.491	19 26 9.1	35.29	1 9.23	12 0.01	0.632
Sat.	26	20 26 23.87	10.458	19 11 51.3	36 18	1 9.12	12 14.80	0.600
Sun.	27	20 30 34.48	10.426	18 57 12.3	37 06	1 9.01	12 28.81	0.568
Mon.	28	20 34 44.31	10.393	18 42 12.6	37 91	1 8.91	12 42.05	0.535
Tues.	29	20 38 53.34	10.360	18 26 52.4	38 76	1 8.79	12 54.50	0.502
Wed.	30	20 43 1.58	10.327	18 11 12.1	39 59	1 8.67	13 6.15	0.469
Thur.	31	20 47 9.03	10.294	17 55 12.2	40.40	1 8.56	13 17.01	0.436
Frid.	32	20 51 15.68	10.260	17 38 53.1	41.19	1 8.45	13 27.08	0.403
Sat.	33	20 55 21.53	10.227	S. 17 22 15.1	41.97	1 8.33	13 36.35	0.369

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.19 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be added to Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi-diameter.*		
		h m s	° ' "	' "	m s	h m s
Tues.	1	18 42 42.15	S. 23 5 0.7	16 17.56	3 12.45	18 39 29.70
Wed.	2	18 47 7.28	23 0 16.3	16 17.56	3 41.02	18 43 26.26
Thur.	3	18 51 32.10	22 55 4.3	16 17.56	4 9.29	18 47 22.82
Frid.	4	18 55 56.59	22 49 24.9	16 17.55	4 37.22	18 51 19.37
Sat.	5	19 0 20.71	22 43 18.3	16 17.54	5 4.78	18 55 15.93
Sun.	6	19 4 44.41	22 36 44.7	16 17.52	5 31.93	18 59 12.49
Mon.	7	19 9 7.68	22 29 44.3	16 17.50	5 58.63	19 3 9.05
Tues.	8	19 13 30.47	22 22 17.2	16 17.48	6 24.87	19 7 5.60
Wed.	9	19 17 52.75	22 14 23.7	16 17.45	6 50.59	19 11 2.16
Thur.	10	19 22 14.50	22 6 4.0	16 17.42	7 15.79	19 14 58.72
Frid.	11	19 26 35.69	21 57 18.4	16 17.39	7 40.41	19 18 55.27
Sat.	12	19 30 56.28	21 48 7.1	16 17.35	8 4.45	19 22 51.83
Sun.	13	19 35 16.26	21 38 30.5	16 17.31	8 27.87	19 26 48.39
Mon.	14	19 39 35.60	21 28 28.7	16 17.26	8 50.66	19 30 44.94
Tues.	15	19 43 54.29	21 18 2.0	16 17.21	9 12.79	19 34 41.50
Wed.	16	19 48 12.31	21 7 10.8	16 17.15	9 34.25	19 38 38.06
Thur.	17	19 52 29.63	20 55 55.4	16 17.08	9 55.02	19 42 34.61
Frid.	18	19 56 46.24	20 44 16.1	16 17.01	10 15.07	19 46 31.17
Sat.	19	20 1 2.13	20 32 13.1	16 16.94	10 34.41	19 50 27.72
Sun.	20	20 5 17.29	20 19 46.9	16 16.85	10 53.01	19 54 24.28
Mon.	21	20 9 31.70	20 6 57.8	16 16.77	11 10.87	19 58 20.84
Tues.	22	20 13 45.36	19 53 46.0	16 16.67	11 27.97	20 2 17.39
Wed.	23	20 17 58.26	19 40 12.0	16 16.57	11 44.31	20 6 13.95
Thur.	24	20 22 10.38	19 26 16.1	16 16.47	11 59.88	20 10 10.50
Frid.	25	20 26 21.74	19 11 58.7	16 16.36	12 14.68	20 14 7.06
Sat.	26	20 30 32.31	18 57 20.0	16 16.24	12 28.70	20 18 3.62
Sun.	27	20 34 42.11	18 42 20.6	16 16.11	12 41.94	20 22 0.17
Mon.	28	20 38 51.11	18 27 0.7	16 15.98	12 54.39	20 25 56.73
Tues.	29	20 42 59.33	18 11 20.8	16 15.85	13 6.05	20 29 53.28
Wed.	30	20 47 6.76	17 55 21.2	16 15.71	13 16.92	20 33 49.84
Thur.	31	20 51 13.38	17 39 2.3	16 15.57	13 26.99	20 37 46.39
Frid.	32	20 55 19.21	S. 17 22 24.6	16 15.43	13 36.26	20 41 42.95

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

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
					Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	279° 48' 43.4	N. 0° 58'	9.9926626	5 19 37.79	16 13.70	16 17.73	59 33.61	59 48.42
2	280 49 54.0	0.64	.9926624	5 15 41.88	16 21.26	16 24.15	60 1.35	60 11.97
3	281 51 4.9	0.67	.9926641	5 11 45.97	16 26.29	16 27.58	60 19.83	60 24.56
4	282 52 16.0	0.66	9.9926675	5 7 50.06	16 27.93	16 27.28	60 25.84	60 23.46
5	283 53 27.2	0.62	.9926727	5 3 54.14	16 25.60	16 22.91	60 17.31	60 7.42
6	284 54 38.5	0.56	.9926794	4 59 58.23	16 19.24	16 14.68	59 53.96	59 37.22
7	285 55 49.6	0.45	9.9926877	4 56 2.32	16 9.33	16 3.32	59 17.58	58 55.53
8	286 57 0.4	0.32	.9926976	4 52 6.41	15 56.81	15 49.94	58 31.62	58 6.43
9	287 58 11.0	0.19	.9927092	4 48 10.50	15 42.89	15 35.80	57 40.54	57 14.52
10	288 59 21.1	N. 0.07	9.9927226	4 44 14.59	15 28.82	15 22.08	56 48.90	56 24.16
11	290 0 30.7	S. 0.05	.9927378	4 40 18.68	15 15.70	15 9.77	56 0.74	55 38.99
12	291 1 39.7	0.17	.9927551	4 36 22.77	15 4.39	14 59.60	55 19.23	55 1.67
13	292 2 48.1	0.27	9.9927744	4 32 26.86	14 55.47	14 52.03	54 46.52	54 33.89
14	293 3 55.8	0.35	.9927959	4 28 30.95	14 49.30	14 47.29	54 23.86	54 16.46
15	294 5 2.8	0.40	.9928197	4 24 35.04	14 45.98	14 45.38	54 11.68	54 9.47
16	295 6 9.2	0.43	9.9928458	4 20 39.13	14 45.45	14 46.18	54 9.74	54 12.39
17	296 7 14.7	0.44	.9928744	4 16 43.22	14 47.50	14 49.39	54 17.26	54 24.19
18	297 8 19.6	0.42	.9929055	4 12 47.30	14 51.79	14 54.64	54 32.99	54 43.45
19	298 9 23.7	0.37	9.9929392	4 8 51.39	14 57.88	15 1.45	54 55.34	55 8.44
20	299 10 27.0	0.30	.9929756	4 4 55.48	15 5.28	15 9.30	55 22.50	55 37.28
21	300 11 29.6	0.20	.9930146	4 0 59.57	15 13.47	15 17.70	55 52.55	56 8.09
22	301 12 31.5	N. 0.08	9.9930564	3 57 3.66	15 21.95	15 26.17	56 23.69	56 39.19
23	302 13 32.7	N. 0.05	.9931009	3 53 7.75	15 30.33	15 34.37	56 54.42	57 9.26
24	303 14 33.2	0.19	.9931481	3 49 11.84	15 38.28	15 42.03	57 23.61	57 37.39
25	304 15 33.0	0.33	9.9931979	3 45 15.93	15 45.63	15 49.05	57 50.59	58 3.15
26	305 16 32.3	0.46	.9932503	3 41 20.02	15 52.30	15 55.38	58 15.08	58 26.37
27	306 17 30.9	0.58	.9933051	3 37 24.12	15 58.27	16 0.98	58 37.00	58 46.94
28	307 18 28.9	0.67	9.9933622	3 33 28.21	16 3.49	16 5.78	58 56.15	59 4.56
29	308 19 26.3	0.73	.9934214	3 29 32.30	16 7.83	16 9.60	59 12.08	59 18.56
30	309 20 23.0	0.76	.9934826	3 25 36.39	16 11.04	16 12.10	59 23.85	59 27.75
31	310 21 19.1	0.75	.9935456	3 21 40.48	16 12.74	16 12.89	59 30.09	59 30.64
32	311 22 14.4	N. 0.72	9.9936102	3 17 44.57	16 12.50	16 11.53	59 29.22	59 25.67

MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
					d	h m	h m
1	210° 57' 55.4	218° 9' 49.1	N. 4° 18' 6.1	N. 4° 36' 46.7	24.44	20 5.5	7 38.3
2	225 25 44.6	232 45 10.4	4 51 11.1	5 0 57.4	25.44	21 2.0	8 33.4
3	240 7 25.7	247 31 41.0	5 5 49.0	5 5 35.8	26.44	22 0.9	9 31.2
4	254 56 59.7	262 22 19.6	5 0 14.5	4 49 49.8	27.44	23 1.4	10 31.1
5	269 46 35.9	277 8 44.1	4 34 33.8	4 14 46.7	28.44	* *	11 31.8
6	284 27 42.1	291 42 33.5	3 50 54.7	3 23 29.6	29.44	0 1.9	12 31.6
7	298 52 29.5	305 56 50.4	2 53 6.8	2 20 23.9	0.97	1 0.7	13 29.1
8	312 55 6.7	319 46 59.6	1 45 59.2	N. 1 10 29.8	1.97	1 56.6	14 23.3
9	326 32 20.5	333 11 10.4	N. 0 34 31.4	S. 0 1 23.3	2.97	2 49.0	15 13.9
10	339 43 38.9	346 10 3.3	S. 0 36 44.9	1 11 7.2	3.97	3 38.1	16 1.5
11	352 30 47.1	358 46 18.8	1 44 7.5	2 15 26.2	4.97	4 24.4	16 46.8
12	4 57 10.8	11 3 58.5	2 44 46.5	3 11 54.2	5.97	5 8.8	17 30.5
13	17 7 19.0	23 7 50.3	3 36 36.9	3 58 44.3	6.97	5 52.1	18 13.6
14	29 6 11.0	35 2 59.1	4 18 7.0	4 34 37.3	7.97	6 35.1	18 56.7
15	40 58 51.5	46 54 24.0	4 48 8.0	4 58 32.7	8.97	7 18.5	19 40.6
16	52 50 10.1	58 46 41.6	5 5 45.9	5 9 42.8	9.97	8 3.0	20 25.8
17	64 44 27.2	70 43 53.1	5 10 19.4	5 7 32.8	10.97	8 49.0	21 12.6
18	76 45 22.3	82 49 14.5	5 1 21.2	4 51 44.4	11.97	9 36.7	22 1.1
19	88 55 46.4	95 5 10.9	4 38 43.7	4 22 23.0	12.97	10 25.9	22 50.9
20	101 17 38.1	107 33 14.8	4 2 48.0	3 40 7.2	13.97	11 16.2	23 41.7
21	113 52 4.9	120 14 10.2	3 14 32.1	2 46 17.1	14.97	12 7.2	* *
22	126 39 29.9	133 8 1.8	2 15 39.5	1 42 59.7	15.97	12 58.1	0 32.7
23	139 39 42.7	146 14 28.2	S. 1 8 41.0	S. 0 33 9.2	16.97	13 48.6	1 23.4
24	152 52 14.1	159 32 55.6	N. 0 3 7.7	N. 0 39 39.8	17.97	14 38.6	2 13.7
25	166 16 28.9	173 2 49.9	1 15 55.9	1 51 24.3	18.97	15 28.3	3 3.5
26	179 51 55.3	186 43 41.8	2 25 32.8	2 57 49.6	19.97	16 18.0	3 53.1
27	193 38 6.0	200 35 4.0	3 27 43.9	3 54 46.1	20.97	17 8.5	4 43.1
28	207 34 30.9	214 36 19.6	4 18 28.7	4 38 26.7	21.97	18 0.4	5 34.3
29	221 40 21.2	228 46 23.5	4 54 18.1	5 5 44.4	22.97	18 54.3	6 27.1
30	235 54 10.8	243 3 23.5	5 12 31.3	5 14 29.2	23.97	19 50.3	7 22.0
31	250 13 38.2	257 24 27.3	5 11 33.5	5 3 45.3	24.97	20 48.1	8 19.0
32	264 35 19.7	271 45 41.2	N. 4 51 11.2	N. 4 34 4.1	25.97	21 46.7	9 17.4

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 1.					THURSDAY 3.				
	h m s	s	° ′ ″	″		h m s	s	° ′ ″	″
0	14 1 22.71	22.959	S. 7 46 40.5	106 80	0	15 56 14.43	24.911	S. 15 11 50.9	73.68
1	14 3 40.57	22.996	7 57 20.2	106 42	1	15 58 44.01	24.949	15 19 10.0	72.68
2	14 5 58.66	23.034	8 7 57.5	106 02	2	16 1 13.82	24.987	15 26 23.1	71.67
3	14 8 16.98	23.072	8 18 32.4	105 61	3	16 3 43.85	25.023	15 33 30.0	70.63
4	14 10 35.52	23.110	8 29 4.8	105 18	4	16 6 14.10	25.060	15 40 30.7	69.59
5	14 12 54.30	23.149	8 39 34.6	104 75	5	16 8 44.57	25.096	15 47 25.1	68.54
6	14 15 13.31	23.188	8 50 1.8	104 30	6	16 11 15.25	25.132	15 54 13.2	67.49
7	14 17 32.55	23.227	9 0 26.2	103.84	7	16 13 46.15	25.168	16 0 55.0	66.42
8	14 19 52.03	23.267	9 10 47.9	103 37	8	16 16 17.26	25.202	16 7 30.2	65.33
9	14 22 11.75	23.307	9 21 6.6	102.88	9	16 18 48.57	25.235	16 13 58.9	64.23
10	14 24 31.71	23.347	9 31 22.4	102 38	10	16 21 20.08	25.269	16 20 21.0	63.13
11	14 26 51.91	23.388	9 41 35.2	101 87	11	16 23 51.80	25.303	16 26 36.5	62.02
12	14 29 12.36	23.428	9 51 44.8	101.34	12	16 26 23.71	25.334	16 32 45.2	60.89
13	14 31 33.04	23.468	10 1 51.3	100 81	13	16 28 55.81	25.366	16 38 47.2	59.76
14	14 33 53.98	23.510	10 11 54.5	100 25	14	16 31 28.10	25.397	16 44 42.3	58.61
15	14 36 15.16	23.550	10 21 54.3	99 68	15	16 34 0.57	25.427	16 50 30.5	57.45
16	14 38 36.58	23.592	10 31 50.7	99 10	16	16 36 33.22	25.457	16 56 11.7	56.28
17	14 40 58.26	23 633	10 41 43.5	98 51	17	16 39 6.05	25.487	17 1 45.9	55.12
18	14 43 20.18	23.674	10 51 32.8	97 91	18	16 41 39.06	25.515	17 7 13.1	53.93
19	14 45 42.35	23.717	11 1 18.4	97 29	19	16 44 12.23	25.542	17 12 33.1	52.73
20	14 48 4.78	23.758	11 11 0.3	96 67	20	16 46 45.56	25.568	17 17 45.9	51.53
21	14 50 27.45	23.800	11 20 38.4	95 02	21	16 49 19.04	25.593	17 22 51.5	50.33
22	14 52 50.38	23.843	11 30 12.5	95 35	22	16 51 52.68	25.619	17 27 49.8	49.11
23	14 55 13.56	23.884	S. 11 39 42.6	94.68	23	16 54 26.47	25.644	S. 17 32 40.8	47.88
WEDNESDAY 2.					FRIDAY 4.				
0	14 57 36.99	23.927	S. 11 49 8.7	94.01	0	16 57 0.41	25.667	S. 17 37 24.3	46.63
1	15 0 0.68	23.969	11 58 30.7	93.31	1	16 59 34.48	25.689	17 42 0.4	45.40
2	15 2 24.62	24.011	12 7 48.4	92.59	2	17 2 8.68	25.712	17 46 29.1	44.15
3	15 4 48.81	24.053	12 17 1.8	91.87	3	17 4 43.02	25.733	17 50 50.2	42.89
4	15 7 13.25	24.095	12 26 10.8	91.13	4	17 7 17.47	25.753	17 55 3.8	41.63
5	15 9 37.95	24.138	12 35 15.4	90.39	5	17 9 52.05	25.773	17 59 9.7	40.35
6	15 12 2.90	24.180	12 44 15.5	89.63	6	17 12 26.74	25.790	18 3 8.0	39.08
7	15 14 28.11	24.222	12 53 10.9	88.84	7	17 15 1.53	25.807	18 6 58.7	37.80
8	15 16 53.56	24.263	13 2 1.6	88.06	8	17 17 36.42	25.823	18 10 41.6	36.50
9	15 19 19.27	24.306	13 10 47.6	87.25	9	17 20 11.41	25.839	18 14 16.7	35.20
10	15 21 45.23	24.348	13 19 28.6	86.43	10	17 22 46.49	25.853	18 17 44.0	33.90
11	15 24 11.44	24.389	13 28 4.8	85.61	11	17 25 21.65	25.866	18 21 3.5	32.60
12	15 26 37.90	24.431	13 36 35.9	84.77	12	17 27 56.88	25.878	18 24 15.2	31.29
13	15 29 4.61	24.472	13 45 2.0	83.91	13	17 30 32.19	25.891	18 27 19.0	29.97
14	15 31 31.56	24.513	13 53 22.8	83.04	14	17 33 7.57	25.901	18 30 14.8	28.65
15	15 33 58.76	24.554	14 1 38.5	82.17	15	17 35 43.00	25.910	18 33 2.8	27.33
16	15 36 26.21	24.595	14 9 48.8	81.28	16	17 38 18.49	25.918	18 35 42.8	26.00
17	15 38 53.90	24.636	14 17 53.8	80.37	17	17 40 54.02	25.926	18 38 14.8	24.66
18	15 41 21.84	24.676	14 25 53.2	79.45	18	17 43 29.60	25.933	18 40 38.7	23.33
19	15 43 50.01	24.715	14 33 47.2	78.53	19	17 46 5.21	25.937	18 42 54.7	21.99
20	15 46 18.42	24.756	14 41 35.5	77.57	20	17 48 40.84	25.941	18 45 2.6	20.65
21	15 48 47.08	24.795	14 49 18.0	76.62	21	17 51 16.50	25.944	18 47 2.5	19.31
22	15 51 15.96	24.833	14 56 54.9	75.66	22	17 53 52.17	25.946	18 48 54.3	17.96
23	15 53 45.08	24.872	15 4 25.9	74.67	23	17 56 27.85	25.947	18 50 38.0	16.61
24	15 56 14.43	24.911	S. 15 11 50.9	73.68	24	17 59 3.53	25.947	S. 18 52 13.6	15.27

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 5.					MONDAY 7.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	17 59 3.53	25.947	S. 18 52 13.6	15.27	0	20 1 33.48	24.727	S. 17 33 58.2	45.82
1	18 1 39.21	25.945	18 53 41.2	13.92	1	20 4 1.70	24.680	17 29 20.0	46.92
2	18 4 14.87	25.943	18 55 0.6	12.56	2	20 6 29.64	24.633	17 24 35.2	48.01
3	18 6 50.52	25.939	18 56 11.9	11.20	3	20 8 57.29	24.586	17 19 43.9	49.08
4	18 9 26.14	25.935	18 57 15.0	9.85	4	20 11 24.67	24.538	17 14 46.2	50.15
5	18 12 1.74	25.929	18 58 10.1	8.51	5	20 13 51.75	24.489	17 9 42.1	51.20
6	18 14 37.29	25.922	18 58 57.1	7.15	6	20 16 18.54	24.441	17 4 31.8	52.24
7	18 17 12.80	25.914	18 59 35.9	5.80	7	20 18 45.04	24.391	16 59 15.2	53.28
8	18 19 48.26	25.905	19 0 6.7	4.45	8	20 21 11.23	24.341	16 53 52.4	54.30
9	18 22 23.66	25.895	19 0 29.3	3.09	9	20 23 37.13	24.292	16 48 23.6	55.30
10	18 24 59.00	25.881	19 0 43.8	1.75	10	20 26 2.73	24.241	16 42 48.8	56.30
11	18 27 34.27	25.872	19 0 50.3	0.41	11	20 28 28.02	24.189	16 37 8.0	57.29
12	18 30 9.46	25.858	19 0 48.7	0.94	12	20 30 53.00	24.138	16 31 21.3	58.27
13	18 32 44.56	25.843	19 0 39.0	2.28	13	20 33 17.68	24.086	16 25 28.8	59.23
14	18 35 19.57	25.828	19 0 21.3	3.63	14	20 35 42.03	24.033	16 19 30.5	60.18
15	18 37 54.49	25.812	18 59 55.5	4.97	15	20 38 6.08	23.982	16 13 26.6	61.13
16	18 40 29.31	25.793	18 59 21.7	6.30	16	20 40 29.81	23.928	16 7 17.0	62.06
17	18 43 4.01	25.774	18 58 39.9	7.63	17	20 42 53.22	23.875	16 1 1.9	62.98
18	18 45 38.60	25.755	18 57 50.2	8.95	18	20 45 16.31	23.822	15 54 41.3	63.88
19	18 48 13.07	25.734	18 56 52.5	10.28	19	20 47 39.08	23.768	15 48 15.3	64.78
20	18 50 47.41	25.713	18 55 46.9	11.59	20	20 50 1.53	23.715	15 41 44.0	65.66
21	18 53 21.62	25.689	18 54 33.4	12.91	21	20 52 23.66	23.661	15 35 7.4	66.53
22	18 55 55.68	25.664	18 53 12.0	14.23	22	20 54 45.46	23.606	15 28 25.7	67.38
23	18 58 29.59	25.640	S. 18 51 42.7	15.53	23	20 57 6.93	23.552	S. 15 21 38.8	68.23
SUNDAY 6.					TUESDAY 8.				
0	19 1 3.36	25.614	S. 18 50 5.7	16.82	0	20 59 28.08	23.498	S. 15 14 46.9	69.07
1	19 3 36.96	25.587	18 48 20.9	18.12	1	21 1 48.90	23.443	15 7 50.0	69.89
2	19 6 10.40	25.559	18 46 28.3	19.41	2	21 4 9.39	23.388	15 0 48.2	70.70
3	19 8 43.67	25.530	18 44 28.0	20.68	3	21 6 29.55	23.333	14 53 41.6	71.49
4	19 11 16.76	25.500	18 42 20.1	21.96	4	21 8 49.38	23.278	14 46 30.3	72.28
5	19 13 49.67	25.469	18 40 4.5	23.23	5	21 11 8.88	23.223	14 39 14.2	73.06
6	19 16 22.39	25.438	18 37 41.3	24.49	6	21 13 28.06	23.168	14 31 53.6	73.82
7	19 18 54.92	25.406	18 35 10.6	25.75	7	21 15 46.90	23.112	14 24 28.4	74.58
8	19 21 27.26	25.372	18 32 32.3	27.00	8	21 18 5.40	23.057	14 16 58.7	75.31
9	19 23 59.38	25.337	18 29 46.6	28.24	9	21 20 23.58	23.003	14 9 24.7	76.03
10	19 26 31.30	25.302	18 26 53.4	29.48	10	21 22 41.43	22.947	14 1 46.3	76.75
11	19 29 3.00	25.266	18 23 52.9	30.69	11	21 24 58.94	22.892	13 54 3.7	77.45
12	19 31 34.49	25.228	18 20 45.1	31.91	12	21 27 16.13	22.837	13 46 16.9	78.15
13	19 34 5.74	25.190	18 17 30.0	33.13	13	21 29 32.98	22.782	13 38 25.9	78.83
14	19 36 36.77	25.153	18 14 7.6	34.33	14	21 31 49.51	22.727	13 30 31.0	79.48
15	19 39 7.57	25.113	18 10 38.1	35.52	15	21 34 5.70	22.672	13 22 32.1	80.15
16	19 41 38.13	25.073	18 7 1.4	36.70	16	21 36 21.57	22.618	13 14 29.2	80.79
17	19 44 8.44	25.032	18 3 17.7	37.88	17	21 38 37.11	22.563	13 6 22.6	81.42
18	19 46 38.51	24.990	17 59 26.9	39.05	18	21 40 52.32	22.508	12 58 12.2	82.04
19	19 49 8.32	24.948	17 55 29.2	40.19	19	21 43 7.20	22.453	12 49 58.1	82.65
20	19 51 37.88	24.905	17 51 24.6	41.34	20	21 45 21.76	22.399	12 41 40.4	83.24
21	19 54 7.18	24.862	17 47 13.1	42.48	21	21 47 35.99	22.345	12 33 19.2	83.83
22	19 56 36.22	24.817	17 42 54.8	43.61	22	21 49 49.90	22.292	12 24 54.5	84.40
23	19 59 4.98	24.772	17 38 29.8	44.72	23	21 52 3.49	22.238	12 16 26.4	84.97
24	20 1 33.48	24.727	S. 17 33 58.2	45.82	24	21 54 16.76	22.184	S. 12 7 54.9	85.52

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 9.					FRIDAY 11.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	21 54 16.76	22.184	S. 12 7 54.9	85.52	0	23 35 15.06	20.051	S. 4 33 57.2	99.98
1	21 56 29.70	22.132	11 59 20.2	86.06	1	23 37 15.26	20.018	4 23 57.1	100.06
2	21 58 42.34	22.079	11 50 42.2	86.58	2	23 39 15.27	19.984	4 13 56.5	100.13
3	22 0 54.65	22.026	11 42 1.2	87.10	3	23 41 15.08	19.953	4 3 55.5	100.20
4	22 3 6.65	21.973	11 33 17.0	87.61	4	23 43 14.71	19.923	3 53 54.1	100.26
5	22 5 18.33	21.921	11 24 29.9	88.10	5	23 45 14.15	19.891	3 43 52.4	100.32
6	22 7 29.70	21.869	11 15 39.8	88.59	6	23 47 13.40	19.861	3 33 50.3	100.37
7	22 9 40.76	21.818	11 6 46.8	89.06	7	23 49 12.48	19.832	3 23 48.0	100.40
8	22 11 51.51	21.767	10 57 51.1	89.52	8	23 51 11.38	19.802	3 13 45.5	100.43
9	22 14 1.96	21.716	10 48 52.6	89.97	9	23 53 10.10	19.773	3 3 42.8	100.46
10	22 16 12.10	21.664	10 39 51.5	90.41	10	23 55 8.66	19.745	2 53 40.0	100.48
11	22 18 21.93	21.614	10 30 47.7	90.84	11	23 57 7.04	19.718	2 43 37.0	100.50
12	22 20 31.47	21.565	10 21 41.4	91.26	12	23 59 5.27	19.691	2 33 34.0	100.49
13	22 22 40.71	21.515	10 12 32.6	91.67	13	0 1 3.33	19.664	2 23 31.1	100.49
14	22 24 49.65	21.465	10 3 21.4	92.07	14	0 3 1.24	19.638	2 13 28.1	100.49
15	22 26 58.29	21.417	9 54 7.8	92.45	15	0 4 58.99	19.613	2 3 25.2	100.48
16	22 29 6.65	21.368	9 44 52.0	92.83	16	0 6 56.59	19.588	1 53 22.4	100.45
17	22 31 14.71	21.320	9 35 33.9	93.20	17	0 8 54.04	19.563	1 43 19.8	100.42
18	22 33 22.49	21.273	9 26 13.6	93.56	18	0 10 51.35	19.540	1 33 17.4	100.38
19	22 35 29.98	21.225	9 16 51.2	93.90	19	0 12 48.52	19.516	1 23 15.2	100.35
20	22 37 37.19	21.178	9 7 26.8	94.23	20	0 14 45.54	19.493	1 13 13.2	100.30
21	22 39 44.11	21.131	8 58 0.4	94.57	21	0 16 42.44	19.472	1 3 11.6	100.24
22	22 41 50.76	21.086	8 48 32.0	94.88	22	0 18 39.20	19.450	0 53 10.3	100.18
23	22 43 57.14	21.040	S. 8 39 1.8	95.19	23	0 20 35.84	19.429	S. 0 43 9.4	100.12
THURSDAY 10.					SATURDAY 12.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	22 46 3.24	20.994	S. 8 29 29.7	95.49	0	0 22 32.35	19.408	S. 0 33 8.9	100.04
1	22 48 9.07	20.949	8 19 55.9	95.78	1	0 24 28.74	19.389	0 23 8.9	99.97
2	22 50 14.63	20.905	8 10 20.4	96.06	2	0 26 25.02	19.370	0 13 9.3	99.88
3	22 52 19.93	20.861	8 0 43.2	96.33	3	0 28 21.18	19.350	S. 0 3 10.3	99.78
4	22 54 24.96	20.818	7 51 4.5	96.58	4	0 30 17.22	19.332	N. 0 6 48.1	99.69
5	22 56 29.74	20.775	7 41 24.2	96.84	5	0 32 13.16	19.314	0 16 46.0	99.59
6	22 58 34.26	20.733	7 31 42.4	97.08	6	0 34 8.99	19.298	0 26 43.2	99.48
7	23 0 38.53	20.690	7 21 59.2	97.32	7	0 36 4.73	19.281	0 36 39.8	99.37
8	23 2 42.54	20.648	7 12 14.6	97.53	8	0 38 0.36	19.264	0 46 35.6	99.24
9	23 4 46.31	20.608	7 2 28.8	97.75	9	0 39 55.90	19.248	0 56 30.7	99.13
10	23 6 49.83	20.567	6 52 41.6	97.97	10	0 41 51.34	19.233	1 6 25.1	98.99
11	23 8 53.11	20.527	6 42 53.2	98.16	11	0 43 46.70	19.219	1 16 18.6	98.85
12	23 10 56.15	20.487	6 33 3.7	98.35	12	0 45 41.97	19.205	1 26 11.3	98.71
13	23 12 58.95	20.448	6 23 13.0	98.53	13	0 47 37.16	19.192	1 36 3.1	98.56
14	23 15 1.52	20.409	6 13 21.4	98.69	14	0 49 32.27	19.179	1 45 54.0	98.40
15	23 17 3.86	20.372	6 3 28.7	98.87	15	0 51 27.31	19.167	1 55 43.9	98.24
16	23 19 5.98	20.333	5 53 35.0	99.02	16	0 53 22.27	19.154	2 5 32.9	98.08
17	23 21 7.86	20.296	5 43 40.5	99.17	17	0 55 17.16	19.143	2 15 20.9	97.91
18	23 23 9.53	20.260	5 33 45.0	99.31	18	0 57 11.98	19.133	2 25 7.8	97.73
19	23 25 10.98	20.223	5 23 48.8	99.43	19	0 59 6.75	19.123	2 34 53.7	97.55
20	23 27 12.21	20.188	5 13 51.8	99.55	20	1 1 1.45	19.112	2 44 38.4	97.37
21	23 29 13.23	20.153	5 3 54.2	99.67	21	1 2 56.09	19.103	2 54 22.1	97.18
22	23 31 14.04	20.118	4 53 55.8	99.78	22	1 4 50.69	19.095	3 4 4.5	96.98
23	23 33 14.65	20.085	4 43 56.8	99.88	23	1 6 45.23	19.086	3 13 45.8	96.78
24	23 35 15.06	20.051	S. 4 33 57.2	99.98	24	1 8 39.72	19.078	N. 3 23 25.8	96.57

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
SUNDAY 13.					TUESDAY 15.				
	h m s	s	N. ° ' "	° "		h m s	s	N. ° ' "	° "
0	1 8 39.72	19.078	3 23 25.8	96.57	0	2 40 17.37	19.275	10 33 27.3	80.73
1	1 10 34.17	19.072	3 33 4.6	96.35	1	2 42 13.06	19.290	10 41 30.3	80.28
2	1 12 28.58	19.065	3 42 42.0	96.13	2	2 44 8.85	19.305	10 49 30.7	79.83
3	1 14 22.95	19.058	3 52 18.2	95.91	3	2 46 4.72	19.319	10 57 28.2	79.36
4	1 16 17.28	19.053	4 1 52.9	95.68	4	2 48 0.68	19.335	11 5 23.0	78.90
5	1 18 11.59	19.048	4 11 26.3	95.45	5	2 49 56.74	19.352	11 13 15.0	78.43
6	1 20 5.86	19.043	4 20 58.3	95.22	6	2 51 52.90	19.368	11 21 4.1	77.95
7	1 22 0.11	19.039	4 30 28.9	94.97	7	2 53 49.16	19.385	11 28 50.4	77.48
8	1 23 54.33	19.036	4 39 57.9	94.72	8	2 55 45.52	19.402	11 36 33.8	76.99
9	1 25 48.54	19.033	4 49 25.5	94.47	9	2 57 41.98	19.419	11 44 14.3	76.50
10	1 27 42.73	19.030	4 58 51.5	94.20	10	2 59 38.55	19.438	11 51 51.8	76.01
11	1 29 36.90	19.028	5 8 15.9	93.93	11	3 1 35.23	19.455	11 59 26.4	75.51
12	1 31 31.06	19.027	5 17 38.7	93.67	12	3 3 32.01	19.473	12 6 57.9	75.00
13	1 33 25.22	19.026	5 26 59.9	93.40	13	3 5 28.91	19.493	12 14 26.4	74.49
14	1 35 19.37	19.025	5 36 19.5	93.13	14	3 7 25.92	19.511	12 21 51.8	73.98
15	1 37 13.52	19.024	5 45 37.4	92.83	15	3 9 23.04	19.530	12 29 14.1	73.46
16	1 39 7.66	19.025	5 54 53.5	92.54	16	3 11 20.28	19.550	12 36 33.3	72.93
17	1 41 1.82	19.027	6 4 7.9	92.25	17	3 13 17.64	19.570	12 43 49.3	72.41
18	1 42 55.98	19.027	6 13 20.5	91.95	18	3 15 15.12	19.591	12 51 2.2	71.88
19	1 44 50.14	19.029	6 22 31.3	91.65	19	3 17 12.73	19.611	12 58 11.8	71.33
20	1 46 44.33	19.032	6 31 40.3	91.33	20	3 19 10.45	19.631	13 5 18.1	70.78
21	1 48 38.52	19.034	6 40 47.4	91.03	21	3 21 8.30	19.653	13 12 21.2	70.24
22	1 50 32.74	19.038	6 49 52.6	90.71	22	3 23 6.28	19.674	13 19 21.0	69.68
23	1 52 26.97	19.041	N. 6 58 55.9	90.38	23	3 25 4.39	19.696	N. 13 26 17.4	69.12
MONDAY 14.					WEDNESDAY 16.				
	h m s	s	N. ° ' "	° "		h m s	s	N. ° ' "	° "
0	1 54 21.23	19.045	N. 7 7 57.2	90.06	0	3 27 2.63	19.718	N. 13 33 10.4	68.55
1	1 56 15.51	19.049	7 16 56.6	89.73	1	3 29 1.00	19.739	13 40 0.0	67.98
2	1 58 9.82	19.055	7 25 53.9	89.38	2	3 30 59.50	19.762	13 46 46.2	67.41
3	2 0 4.17	19.061	7 34 49.2	89.05	3	3 32 58.14	19.784	13 53 28.9	66.83
4	2 1 58.55	19.066	7 43 42.5	88.70	4	3 34 56.91	19.807	14 0 8.2	66.25
5	2 3 52.96	19.073	7 52 33.6	88.34	5	3 36 55.82	19.830	14 6 43.9	65.65
6	2 5 47.42	19.080	8 1 22.6	87.98	6	3 38 54.87	19.853	14 13 16.0	65.05
7	2 7 41.92	19.088	8 10 9.4	87.63	7	3 40 54.06	19.878	14 19 44.5	64.46
8	2 9 36.47	19.095	8 18 54.1	87.26	8	3 42 53.40	19.901	14 26 9.5	63.85
9	2 11 31.06	19.103	8 27 36.5	86.88	9	3 44 52.87	19.923	14 32 30.7	63.23
10	2 13 25.70	19.111	8 36 16.7	86.51	10	3 46 52.48	19.948	14 38 48.3	62.63
11	2 15 20.39	19.120	8 44 54.6	86.13	11	3 48 52.25	19.973	14 45 2.2	62.00
12	2 17 15.14	19.130	8 53 30.2	85.74	12	3 50 52.16	19.997	14 51 12.3	61.37
13	2 19 9.95	19.140	9 2 3.5	85.36	13	3 52 52.21	20.021	14 57 18.6	60.73
14	2 21 4.82	19.150	9 10 34.5	84.96	14	3 54 52.41	20.046	15 3 21.1	60.10
15	2 22 59.75	19.161	9 19 3.0	84.55	15	3 56 52.76	20.072	15 9 19.8	59.46
16	2 24 54.75	19.173	9 27 29.1	84.14	16	3 58 53.27	20.097	15 15 14.6	58.81
17	2 26 49.82	19.183	9 35 52.7	83.73	17	4 0 53.92	20.121	15 21 5.5	58.16
18	2 28 44.95	19.195	9 44 13.9	83.33	18	4 2 54.72	20.146	15 26 52.5	57.50
19	2 30 40.16	19.208	9 52 32.6	82.90	19	4 4 55.67	20.173	15 32 35.5	56.83
20	2 32 35.44	19.220	10 0 48.7	82.48	20	4 6 56.79	20.198	15 38 14.5	56.17
21	2 34 30.80	19.233	10 9 2.3	82.05	21	4 8 58.05	20.223	15 43 49.5	55.49
22	2 36 26.24	19.247	10 17 13.3	81.61	22	4 10 59.47	20.249	15 49 20.4	54.82
23	2 38 21.76	19.261	10 25 21.6	81.17	23	4 13 1.04	20.275	15 54 47.3	54.13
24	2 40 17.37	19.275	N. 10 33 27.3	80.73	24	4 15 2.77	20.302	N. 16 0 10.0	53.44

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 17.					SATURDAY 19.				
	h m s	s	N. 0' 10"	"		h m s	s	N. 18' 49"	"
0	4 15 2.77	20.302	N. 16 0 10.0	53.44	0	5 55 29.51	21.514	N. 18 47 49.5	14.64
1	4 17 4.66	20.328	16 5 28.6	52.74	1	5 57 38.66	21.535	18 49 14.6	13.73
2	4 19 6.70	20.354	16 10 42.9	52.04	2	5 59 47.93	21.557	18 50 34.3	12.82
3	4 21 8.91	20.380	16 15 53.1	51.34	3	6 1 57.34	21.578	18 51 48.4	11.89
4	4 23 11.26	20.406	16 20 59.0	50.63	4	6 4 6.86	21.598	18 52 57.0	10.97
5	4 25 13.78	20.433	16 26 0.7	49.92	5	6 6 16.51	21.618	18 54 0.0	10.04
6	4 27 16.46	20.459	16 30 58.0	49.19	6	6 8 26.28	21.638	18 54 57.5	9.12
7	4 29 19.29	20.485	16 35 51.0	48.48	7	6 10 36.17	21.658	18 55 49.4	8.18
8	4 31 22.28	20.513	16 40 39.7	47.74	8	6 12 46.18	21.678	18 56 35.7	7.24
9	4 33 25.44	20.539	16 45 23.9	47.01	9	6 14 56.30	21.696	18 57 16.3	6.31
10	4 35 28.75	20.565	16 50 3.8	46.27	10	6 17 6.53	21.715	18 57 51.4	5.38
11	4 37 32.22	20.593	16 54 39.1	45.52	11	6 19 16.88	21.733	18 58 20.8	4.43
12	4 39 35.86	20.619	16 59 10.0	44.77	12	6 21 27.33	21.751	18 58 44.5	3.48
13	4 41 39.65	20.645	17 3 36.3	44.01	13	6 23 37.89	21.769	18 59 2.5	2.53
14	4 43 43.60	20.672	17 7 58.1	43.25	14	6 25 48.56	21.787	18 59 14.9	1.58
15	4 45 47.71	20.698	17 12 15.3	42.48	15	6 27 59.33	21.803	18 59 21.5	0.63
16	4 47 51.98	20.725	17 16 27.9	41.72	16	6 30 10.20	21.820	18 59 22.4	0.33
17	4 49 56.41	20.751	17 20 35.9	40.94	17	6 32 21.17	21.837	18 59 17.5	1.29
18	4 52 0.99	20.778	17 24 39.2	40.16	18	6 34 32.24	21.853	18 59 6.9	2.24
19	4 54 5.74	20.804	17 28 37.8	39.38	19	6 36 43.40	21.868	18 58 50.6	3.20
20	4 56 10.64	20.831	17 32 31.7	38.59	20	6 38 54.66	21.883	18 58 28.5	4.17
21	4 58 15.71	20.858	17 36 20.9	37.79	21	6 41 6.00	21.898	18 58 0.6	5.14
22	5 0 20.93	20.883	17 40 5.2	36.98	22	6 43 17.43	21.913	18 57 26.8	6.11
23	5 2 26.30	20.909	N. 17 43 44.7	36.18	23	6 45 28.95	21.927	N. 18 56 47.3	7.07
FRIDAY 18.					SUNDAY 20.				
	h m s	s	N. 17 47 19.4	"		h m s	s	N. 18 56 2.0	"
0	5 4 31.84	20.936	N. 17 47 19.4	35.38	0	6 47 40.55	21.941	N. 18 56 2.0	8.04
1	5 6 37.53	20.961	17 50 49.2	34.56	1	6 49 52.24	21.954	18 55 10.8	9.02
2	5 8 43.37	20.988	17 54 14.1	33.74	2	6 52 4.00	21.967	18 54 13.8	9.98
3	5 10 49.38	21.013	17 57 34.1	32.93	3	6 54 15.84	21.979	18 53 11.0	10.95
4	5 12 55.53	21.038	18 0 49.2	32.09	4	6 56 27.75	21.992	18 52 2.4	11.93
5	5 15 1.84	21.064	18 3 59.2	31.26	5	6 58 39.74	22.003	18 50 47.8	12.92
6	5 17 8.30	21.089	18 7 4.3	30.43	6	7 0 51.79	22.014	18 49 27.4	13.88
7	5 19 14.91	21.114	18 10 4.3	29.58	7	7 3 3.91	22.026	18 48 1.2	14.86
8	5 21 21.67	21.140	18 12 59.3	28.73	8	7 5 16.10	22.037	18 46 29.1	15.84
9	5 23 28.59	21.165	18 15 49.1	27.88	9	7 7 28.35	22.047	18 44 51.1	16.82
10	5 25 35.65	21.189	18 18 33.9	27.03	10	7 9 40.66	22.057	18 43 7.3	17.79
11	5 27 42.86	21.213	18 21 13.5	26.17	11	7 11 53.03	22.066	18 41 17.6	18.78
12	5 29 50.21	21.238	18 23 47.9	25.31	12	7 14 5.45	22.075	18 39 22.0	19.76
13	5 31 57.72	21.263	18 26 17.2	24.44	13	7 16 17.93	22.083	18 37 20.5	20.74
14	5 34 5.36	21.287	18 28 41.2	23.57	14	7 18 30.45	22.092	18 35 13.1	21.72
15	5 36 13.16	21.311	18 31 0.0	22.70	15	7 20 43.03	22.100	18 32 59.9	22.69
16	5 38 21.09	21.333	18 33 13.6	21.82	16	7 22 55.65	22.108	18 30 40.8	23.68
17	5 40 29.16	21.358	18 35 21.8	20.93	17	7 25 8.32	22.114	18 28 15.8	24.65
18	5 42 37.38	21.381	18 37 24.8	20.05	18	7 27 21.02	22.120	18 25 45.0	25.63
19	5 44 45.73	21.403	18 39 22.4	19.15	19	7 29 33.76	22.128	18 23 8.3	26.61
20	5 46 54.22	21.426	18 41 14.6	18.26	20	7 31 46.55	22.133	18 20 25.7	27.59
21	5 49 2.84	21.448	18 43 1.5	17.36	21	7 33 59.36	22.138	18 17 37.2	28.57
22	5 51 11.60	21.471	18 44 42.9	16.45	22	7 36 12.21	22.144	18 14 42.9	29.54
23	5 53 20.49	21.493	18 46 18.9	15.55	23	7 38 25.09	22.149	18 11 42.7	30.52
24	5 55 29.51	21.514	N. 18 47 49.5	14.64	24	7 40 38.00	22.153	N. 18 8 36.7	31.48

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 21.					WEDNESDAY 23.				
	h m s	s	N. 18 8 36.7	31.48		h m s	s	N. 13 50 17.0	74.63
0	7 40 38.00	22.153	18 5 24.9	32.46	0	9 26 49.98	21.994	13 42 46.8	75.42
1	7 42 50.93	22.157	18 2 7.2	33.43	1	9 29 1.92	21.986	13 35 12.0	76.18
2	7 45 3.88	22.160	17 58 43.7	34.40	2	9 31 13.81	21.978	13 27 32.6	76.95
3	7 47 16.85	22.163	17 55 14.4	35.37	3	9 33 25.65	21.969	13 19 48.6	77.72
4	7 49 29.84	22.167	17 51 39.3	36.33	4	9 35 37.44	21.961	13 12 0.0	78.48
5	7 51 42.85	22.169	17 47 58.5	37.29	5	9 37 49.18	21.953	13 4 6.9	79.23
6	7 53 55.87	22.172	17 44 11.8	38.26	6	9 40 0.87	21.943	12 56 9.3	79.96
7	7 56 8.91	22.173	17 40 19.4	39.22	7	9 42 12.50	21.934	12 48 7.4	80.69
8	7 58 21.95	22.174	17 36 21.2	40.18	8	9 44 24.08	21.925	12 40 1.0	81.43
9	8 0 35.00	22.175	17 32 17.3	41.13	9	9 46 35.60	21.917	12 31 50.3	82.15
10	8 2 48.05	22.176	17 28 7.6	42.09	10	9 48 47.08	21.908	12 23 35.2	82.86
11	8 5 1.11	22.177	17 23 52.2	43.03	11	9 50 58.50	21.898	12 15 16.0	83.56
12	8 7 14.17	22.177	17 19 31.2	43.98	12	9 53 9.86	21.890	12 6 52.5	84.27
13	8 9 27.23	22.176	17 15 4.5	44.93	13	9 55 21.18	21.882	11 58 24.8	84.96
14	8 11 40.28	22.175	17 10 32.1	45.88	14	9 57 32.44	21.872	11 49 53.0	85.63
15	8 13 53.33	22.174	17 5 54.0	46.81	15	9 59 43.64	21.863	11 41 17.2	86.32
16	8 16 6.37	22.173	17 1 10.4	47.74	16	10 1 54.80	21.855	11 32 37.2	86.99
17	8 18 19.40	22.171	16 56 21.1	48.68	17	10 4 5.90	21.846	11 23 53.3	87.65
18	8 20 32.42	22.169	16 51 26.2	49.61	18	10 6 16.95	21.838	11 15 5.4	88.30
19	8 22 45.43	22.167	16 46 25.8	50.53	19	10 8 27.95	21.829	11 6 13.7	88.94
20	8 24 58.42	22.164	16 41 19.9	51.45	20	10 10 38.90	21.820	10 57 18.1	89.58
21	8 27 11.40	22.162	16 36 8.4	52.38	21	10 12 49.79	21.812	10 48 18.7	90.22
22	8 29 24.36	22.158	16 30 51.4	53.29	22	10 15 0.64	21.803	10 39 15.5	90.84
23	8 31 37.30	22.154			23	10 17 11.43	21.795		
TUESDAY 22.					THURSDAY 24.				
0	8 33 50.21	22.151	N. 16 25 28.9	54.20	0	10 19 22.18	21.787	N. 10 30 8.6	91.45
1	8 36 3.11	22.147	16 20 1.0	55.10	1	10 21 32.87	21.778	10 20 58.1	92.06
2	8 38 15.97	22.143	16 14 27.7	56.01	2	10 23 43.52	21.771	10 11 43.9	92.66
3	8 40 28.82	22.138	16 8 48.9	56.91	3	10 25 54.12	21.763	10 2 26.2	93.24
4	8 42 41.63	22.133	16 3 4.8	57.80	4	10 28 4.68	21.755	9 53 5.0	93.83
5	8 44 54.41	22.128	15 57 15.3	58.70	5	10 30 15.18	21.747	9 43 40.2	94.41
6	8 47 7.16	22.123	15 51 20.4	59.58	6	10 32 25.64	21.740	9 34 12.1	94.97
7	8 49 19.88	22.118	15 45 20.3	60.46	7	10 34 36.06	21.733	9 24 40.6	95.53
8	8 51 32.57	22.112	15 39 14.9	61.33	8	10 36 46.44	21.726	9 15 5.8	96.08
9	8 53 45.22	22.105	15 33 4.3	62.21	9	10 38 56.77	21.718	9 5 27.7	96.61
10	8 55 57.83	22.099	15 26 48.4	63.08	10	10 41 7.06	21.712	8 55 46.5	97.14
11	8 58 10.41	22.093	15 20 27.4	63.93	11	10 43 17.31	21.706	8 46 2.0	97.68
12	9 0 22.95	22.086	15 14 1.3	64.79	12	10 45 27.53	21.699	8 36 14.4	98.18
13	9 2 35.44	22.079	15 7 29.9	65.65	13	10 47 37.70	21.693	8 26 23.8	98.69
14	9 4 47.90	22.073	15 0 53.5	66.48	14	10 49 47.84	21.687	8 16 30.1	99.19
15	9 7 0.31	22.065	14 54 12.1	67.33	15	10 51 57.94	21.681	8 6 33.5	99.68
16	9 9 12.68	22.058	14 47 25.6	68.17	16	10 54 8.01	21.676	7 56 34.0	100.15
17	9 11 25.01	22.051	14 40 34.1	68.99	17	10 56 18.05	21.671	7 46 31.7	100.63
18	9 13 37.29	22.043	14 33 37.7	69.82	18	10 58 28.06	21.666	7 36 26.5	101.09
19	9 15 49.52	22.035	14 26 36.3	70.63	19	11 0 38.04	21.660	7 26 18.6	101.54
20	9 18 1.71	22.028	14 19 30.1	71.44	20	11 2 47.98	21.655	7 16 8.0	101.98
21	9 20 13.85	22.019	14 12 19.0	72.25	21	11 4 57.90	21.652	7 5 54.8	102.42
22	9 22 25.94	22.012	14 5 3.1	73.05	22	11 7 7.80	21.648	6 55 39.0	102.85
23	9 24 37.99	22.003	13 57 42.4	73.84	23	11 9 17.68	21.643	6 45 20.6	103.27
24	9 26 49.98	21.994	N. 13 50 17.0	74.63	24	11 11 27.52	21.639	N. 6 34 59.8	103.67

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 25.					SUNDAY 27.				
	h m s	s	N. ° ' "	103. ° ' "		h m s	s	S. ° ' "	111. ° ' "
0	11 11 27.52	21.639	6 34 59.8	103.67	0	12 55 33.91	21.886	2 11 26.2	111.87
1	11 13 37.35	21.638	6 24 36.6	104.07	1	12 57 45.27	21.902	2 22 37.2	111.79
2	11 15 47.17	21.634	6 14 11.0	104.46	2	12 59 56.73	21.917	2 33 47.7	111.70
3	11 17 56.96	21.631	6 3 43.1	104.84	3	13 2 8.27	21.933	2 44 57.6	111.60
4	11 20 6.74	21.629	5 53 12.9	105.21	4	13 4 19.92	21.949	2 56 6.9	111.49
5	11 22 16.51	21.627	5 42 40.6	105.57	5	13 6 31.66	21.966	3 7 15.5	111.37
6	11 24 26.26	21.624	5 32 6.1	105.93	6	13 8 43.51	21.983	3 18 23.3	111.24
7	11 26 36.00	21.623	5 21 29.5	106.27	7	13 10 55.46	22.001	3 29 30.4	111.10
8	11 28 45.74	21.623	5 10 50.9	106.60	8	13 13 7.52	22.019	3 40 36.5	110.94
9	11 30 55.47	21.622	5 0 10.3	106.93	9	13 15 19.69	22.038	3 51 41.7	110.78
10	11 33 5.20	21.621	4 49 27.8	107.23	10	13 17 31.97	22.057	4 2 45.9	110.62
11	11 35 14.92	21.621	4 38 43.5	107.54	11	13 19 44.37	22.076	4 13 49.1	110.43
12	11 37 24.65	21.621	4 27 57.3	107.84	12	13 21 56.88	22.096	4 24 51.1	110.23
13	11 39 34.37	21.621	4 17 9.4	108.13	13	13 24 9.52	22.116	4 35 51.8	110.02
14	11 41 44.10	21.623	4 6 19.8	108.40	14	13 26 22.27	22.137	4 46 51.4	109.82
15	11 43 53.84	21.624	3 55 28.6	108.66	15	13 28 35.16	22.158	4 57 49.6	109.58
16	11 46 3.59	21.626	3 44 35.9	108.92	16	13 30 48.17	22.179	5 8 46.4	109.34
17	11 48 13.35	21.627	3 33 41.6	109.18	17	13 33 1.31	22.201	5 19 41.7	109.09
18	11 50 23.11	21.629	3 22 45.8	109.41	18	13 35 14.58	22.223	5 30 35.5	108.83
19	11 52 32.90	21.633	3 11 48.7	109.63	19	13 37 27.99	22.246	5 41 27.7	108.56
20	11 54 42.70	21.635	3 0 50.2	109.85	20	13 39 41.53	22.268	5 52 18.2	108.28
21	11 56 52.52	21.639	2 49 50.5	110.06	21	13 41 55.21	22.293	6 3 7.1	107.99
22	11 59 2.37	21.643	2 38 49.5	110.26	22	13 44 9.04	22.317	6 13 54.1	107.68
23	12 1 12.23	21.647	N. 2 27 47.4	110.44	23	13 46 23.01	22.341	S. 6 24 39.3	107.37
SATURDAY 26.					MONDAY 28.				
	h m s	s	N. ° ' "	110. ° ' "		h m s	s	S. ° ' "	107. ° ' "
0	12 3 22.13	21.652	2 16 44.2	110.63	0	13 48 37.13	22.365	6 35 22.5	107.04
1	12 5 32.05	21.657	2 5 39.9	110.80	1	13 50 51.39	22.390	6 46 3.8	106.70
2	12 7 42.01	21.663	1 54 34.6	110.95	2	13 53 5.81	22.416	6 56 42.9	106.35
3	12 9 52.00	21.668	1 43 28.5	111.09	3	13 55 20.38	22.441	7 7 20.0	106.00
4	12 12 2.02	21.673	1 32 21.5	111.24	4	13 57 35.10	22.468	7 17 54.9	105.63
5	12 14 12.08	21.681	1 21 13.6	111.37	5	13 59 49.99	22.494	7 28 27.5	105.24
6	12 16 22.19	21.687	1 10 5.1	111.48	6	14 2 5.03	22.520	7 38 57.8	104.85
7	12 18 32.33	21.695	0 58 55.9	111.59	7	14 4 20.23	22.548	7 49 25.7	104.44
8	12 20 42.53	21.703	0 47 46.0	111.70	8	14 6 35.60	22.575	7 59 51.1	104.03
9	12 22 52.77	21.711	0 36 35.5	111.78	9	14 8 51.13	22.603	8 10 14.0	103.61
10	12 25 3.06	21.719	0 25 24.6	111.86	10	14 11 6.84	22.632	8 20 34.4	103.17
11	12 27 13.40	21.729	0 14 13.2	111.93	11	14 13 22.71	22.659	8 30 52.0	102.72
12	12 29 23.81	21.739	N. 0 3 1.5	111.98	12	14 15 38.75	22.688	8 41 7.0	102.26
13	12 31 34.27	21.748	S. 0 8 10.5	112.03	13	14 17 54.97	22.718	8 51 19.1	101.78
14	12 33 44.79	21.758	0 19 22.8	112.08	14	14 20 11.36	22.747	9 1 28.4	101.31
15	12 35 55.37	21.769	0 30 35.4	112.10	15	14 22 27.93	22.777	9 11 34.8	100.81
16	12 38 6.02	21.781	0 41 48.0	112.11	16	14 24 44.68	22.807	9 21 38.1	100.30
17	12 40 16.74	21.793	0 53 0.7	112.12	17	14 27 1.61	22.837	9 31 38.4	99.79
18	12 42 27.53	21.804	1 4 13.4	112.11	18	14 29 18.72	22.867	9 41 35.6	99.27
19	12 44 38.39	21.817	1 15 26.0	112.10	19	14 31 36.01	22.898	9 51 29.6	98.73
20	12 46 49.33	21.830	1 26 38.6	112.08	20	14 33 53.49	22.929	10 1 20.3	98.17
21	12 49 0.35	21.844	1 37 50.9	112.03	21	14 36 11.16	22.961	10 11 7.6	97.61
22	12 51 11.46	21.858	1 49 3.0	111.99	22	14 38 29.02	22.993	10 20 51.6	97.04
23	12 53 22.64	21.871	2 0 14.8	111.93	23	14 40 47.07	23.023	10 30 32.1	96.46
24	12 55 33.91	21.886	S. 2 11 26.2	111.87	24	14 43 5.30	23.055	S. 10 40 9.1	95.87

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
TUESDAY 29.					THURSDAY 31.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	14 43 5	30	23·055	S. 10 40 9	1	16 37 33	45	24·603	S. 16 51 0
1	14 45 23	73	23·088	10 49 42	1	16 40 1	15	24·629	16 56 25
2	14 47 42	35	23·120	10 59 12	2	16 42 29	00	24·655	17 1 43
3	14 50 1	17	23·153	11 8 38	3	16 44 57	01	24·682	17 6 55
4	14 52 20	18	23·185	11 18 0	4	16 47 25	18	24·707	17 12 0
5	14 54 39	39	23·218	11 27 18	5	16 49 53	49	24·731	17 16 58
6	14 56 58	79	23·251	11 36 32	6	16 52 21	95	24·756	17 21 50
7	14 59 18	40	23·284	11 45 43	7	16 54 50	56	24·780	17 26 35
8	15 1 38	20	23·317	11 54 49	8	16 57 19	31	24·803	17 31 12
9	15 3 58	20	23·351	12 3 51	9	16 59 48	19	24·825	17 35 43
10	15 6 18	41	23·384	12 12 49	10	17 2 17	21	24·847	17 40 7
11	15 8 38	81	23·418	12 21 43	11	17 4 46	35	24·868	17 44 24
12	15 10 59	42	23·452	12 30 32	12	17 7 15	63	24·890	17 48 34
13	15 13 20	23	23·485	12 39 17	13	17 9 45	03	24·909	17 52 37
14	15 15 41	24	23·518	12 47 57	14	17 12 14	54	24·928	17 56 33
15	15 18 2	45	23·553	12 56 33	15	17 14 44	17	24·948	18 0 21
16	15 20 23	87	23·587	13 5 5	16	17 17 13	91	24·966	18 4 3
17	15 22 45	49	23·620	13 13 31	17	17 19 43	76	24·983	18 7 37
18	15 25 7	31	23·653	13 21 53	18	17 22 13	71	25·000	18 11 4
19	15 27 29	33	23·688	13 30 10	19	17 24 43	76	25·017	18 14 24
20	15 29 51	57	23·723	13 38 22	20	17 27 13	91	25·032	18 17 36
21	15 32 14	00	23·755	13 46 30	21	17 29 44	14	25·046	18 20 41
22	15 34 36	63	23·789	13 54 32	22	17 32 14	46	25·060	18 23 39
23	15 36 59	47	23·823	S. 14 2 29	23	17 34 44	86	25·073	S. 18 26 30
WEDNESDAY 30.					FRIDAY, FEB. 1.				
0	15 39 22	51	23·857	S. 14 10 22	0	17 37 15	34	25·086	S. 18 29 13
1	15 41 45	75	23·891	14 18 8					
2	15 44 9	20	23·924	14 25 50					
3	15 46 32	84	23·957	14 33 27					
4	15 48 56	68	23·990	14 40 58					
5	15 51 20	72	24·023	14 48 23					
6	15 53 44	96	24·057	14 55 43					
7	15 56 9	40	24·089	15 2 58					
8	15 58 34	03	24·122	15 10 7					
9	16 0 58	86	24·154	15 17 10					
10	16 3 23	88	24·186	15 24 8					
11	16 5 49	09	24·218	15 31 0					
12	16 8 14	49	24·248	15 37 46					
13	16 10 40	07	24·280	15 44 26					
14	16 13 5	85	24·312	15 51 0					
15	16 15 31	81	24·343	15 57 28					
16	16 17 57	96	24·373	16 3 50					
17	16 20 24	28	24·403	16 10 5					
18	16 22 50	79	24·433	16 16 15					
19	16 25 17	47	24·462	16 22 19					
20	16 27 44	33	24·491	16 28 16					
21	16 30 11	36	24·518	16 34 6					
22	16 32 38	55	24·547	16 39 51					
23	16 35 5	92	24·575	16 45 29					
24	16 37 33	45	24·603	S. 16 51 0					

PHASES OF THE MOON.

	h	m
Jan. 6	●	New Moon - - - 0 47·7
13	☽	First Quarter - - - 10 44·5
21	☾	Full Moon - - - 12 56·7
28	☾	Last Quarter - - - 17 52·9

	h
Jan. 3	☾ Perigee - - - - - 22·2
15	☾ Apogee - - - - - 16·7
31	☾ Perigee - - - - - 9·4

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi-diameter passing the Meridian.*	Equation of Time, to be added to Apparent Time.	Var. in hour.	
	Apparent Right Ascension.	Var. in hour.	Apparent Declination.	Var. in hour.				
	h m s	s	° ' "	"	m s	m s	s	
Frid.	1	20 55 21.53	10.227	S.17 22 15.1	41.97	1 8.33	13 36.35	0.369
Sat.	2	20 59 26.57	10.193	17 5 18.6	42.73	1 8.22	13 44.81	0.336
Sun.	3	21 3 30.79	10.159	16 48 4.0	43.48	1 8.10	13 52.46	0.302
Mon.	4	21 7 34.20	10.125	16 30 31.8	44.20	1 7.98	13 59.30	0.268
Tues.	5	21 11 36.80	10.091	16 12 42.5	44.90	1 7.87	14 5.32	0.234
Wed.	6	21 15 38.58	10.057	15 54 36.4	45.60	1 7.75	14 10.53	0.200
Thur.	7	21 19 39.53	10.023	15 36 13.9	46.27	1 7.64	14 14.92	0.166
Frid.	8	21 23 39.67	9.989	15 17 35.5	46.92	1 7.53	14 18.49	0.132
Sat.	9	21 27 38.99	9.955	14 58 41.6	47.56	1 7.41	14 21.25	0.098
Sun.	10	21 31 37.50	9.921	14 39 32.6	48.18	1 7.30	14 23.20	0.065
Mon.	11	21 35 35.21	9.888	14 20 9.0	48.78	1 7.19	14 24.35	0.031
Tues.	12	21 39 32.12	9.855	14 0 31.1	49.37	1 7.08	14 24.71	0.001
Wed.	13	21 43 28.25	9.822	13 40 39.4	49.93	1 6.97	14 24.28	0.034
Thur.	14	21 47 23.59	9.790	13 20 34.4	50.48	1 6.87	14 23.07	0.066
Frid.	15	21 51 18.16	9.758	13 0 16.4	51.01	1 6.76	14 21.10	0.098
Sat.	16	21 55 11.98	9.727	12 39 45.8	51.53	1 6.66	14 18.37	0.129
Sun.	17	21 59 5.06	9.697	12 19 3.1	52.03	1 6.55	14 14.91	0.159
Mon.	18	22 2 57.42	9.667	11 58 8.6	52.51	1 6.45	14 10.72	0.189
Tues.	19	22 6 49.06	9.637	11 37 2.8	52.97	1 6.35	14 5.82	0.219
Wed.	20	22 10 40.01	9.609	11 15 46.1	53.42	1 6.25	14 0.23	0.247
Thur.	21	22 14 30.28	9.581	10 54 18.8	53.85	1 6.16	13 53.97	0.275
Frid.	22	22 18 19.90	9.554	10 32 41.4	54.26	1 6.06	13 47.05	0.302
Sat.	23	22 22 8.88	9.528	10 10 54.3	54.66	1 5.97	13 39.50	0.327
Sun.	24	22 25 57.25	9.502	9 48 57.8	55.04	1 5.88	13 31.34	0.352
Mon.	25	22 29 45.01	9.478	9 26 52.3	55.41	1 5.79	13 22.58	0.377
Tues.	26	22 33 32.20	9.455	9 4 38.2	55.76	1 5.71	13 13.24	0.401
Wed.	27	22 37 18.83	9.432	8 42 15.9	56.09	1 5.62	13 3.34	0.424
Thur.	28	22 41 4.92	9.409	8 19 45.9	56.40	1 5.54	12 52.90	0.446
Frid.	29	22 44 50.48	9.388	7 57 8.5	56.71	1 5.46	12 41.94	0.467
Sat.	30	22 48 35.53	9.367	S. 7 34 24.0	56.99	1 5.39	12 30.47	0.488

* Mean Time of the Semidiameter passing may be found by subtracting 0.18 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be added to Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi-diameter.*		
		h m s	S. ° ′ ″	′ ″	m s	h m s
Frid.	1	20 55 19.21	S. 17 22 24.6	16 15.43	13 36.26	20 41 42.95
Sat.	2	20 59 24.23	17 5 28.3	16 15.28	13 44.73	20 45 39.50
Sun.	3	21 3 28.44	16 48 14.1	16 15.13	13 52.39	20 49 36.06
Mon.	4	21 7 31.84	16 30 42.2	16 14.97	13 59.23	20 53 32.61
Tues.	5	21 11 34.43	16 12 53.0	16 14.82	14 5.26	20 57 29.17
Wed.	6	21 15 36.20	15 54 47.1	16 14.66	14 10.48	21 1 25.72
Thur.	7	21 19 37.15	15 36 24.9	16 14.49	14 14.88	21 5 22.28
Frid.	8	21 23 37.29	15 17 46.7	16 14.33	14 18.46	21 9 18.83
Sat.	9	21 27 36.61	14 58 52.9	16 14.16	14 21.23	21 13 15.38
Sun.	10	21 31 35.13	14 39 44.1	16 13.99	14 23.19	21 17 11.94
Mon.	11	21 35 32.84	14 20 20.7	16 13.81	14 24.35	21 21 8.49
Tues.	12	21 39 29.76	14 0 43.0	16 13.63	14 24.71	21 25 5.05
Wed.	13	21 43 25.89	13 40 51.4	16 13.45	14 24.29	21 29 1.60
Thur.	14	21 47 21.24	13 20 46.5	16 13.27	14 23.09	21 32 58.15
Frid.	15	21 51 15.83	13 0 28.6	16 13.08	14 21.12	21 36 54.71
Sat.	16	21 55 9.67	12 39 58.1	16 12.88	14 18.41	21 40 51.26
Sun.	17	21 59 2.76	12 19 15.4	16 12.68	14 14.95	21 44 47.81
Mon.	18	22 2 55.13	11 58 21.0	16 12.48	14 10.77	21 48 44.37
Tues.	19	22 6 46.79	11 37 15.3	16 12.27	14 5.87	21 52 40.92
Wed.	20	22 10 37.76	11 15 58.6	16 12.06	14 0.29	21 56 37.47
Thur.	21	22 14 28.06	10 54 31.3	16 11.85	13 54.03	22 0 34.03
Frid.	22	22 18 17.70	10 32 53.9	16 11.63	13 47.12	22 4 30.58
Sat.	23	22 22 6.71	10 11 6.7	16 11.40	13 39.58	22 8 27.13
Sun.	24	22 25 55.10	9 49 10.1	16 11.17	13 31.42	22 12 23.69
Mon.	25	22 29 42.90	9 27 4.6	16 10.94	13 22.66	22 16 20.24
Tues.	26	22 33 30.12	9 4 50.5	16 10.70	13 13.33	22 20 16.79
Wed.	27	22 37 16.78	8 42 28.1	16 10.46	13 3.43	22 24 13.34
Thur.	28	22 41 2.90	8 19 58.0	16 10.22	12 53.00	22 28 9.90
Frid.	29	22 44 48.49	7 57 20.5	16 9.97	12 42.04	22 32 6.45
Sat.	30	22 48 33.58	S. 7 34 35.9	16 9.73	12 30.57	22 36 3.00

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

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
					Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	311° 22' 14.4"	N. 0°.72	9.9936102	3 17 44.57	16 12.50	16 11.53	59 29.22	59 25.67
2	312 23 8.9	0.66	.9936763	3 13 48.66	16 9.95	16 7.73	59 19.86	59 11.71
3	313 24 2.4	0.57	.9937438	3 9 52.75	16 4.87	16 1.40	59 1.22	58 48.47
4	314 24 54.9	0.45	9.9938126	3 5 56.84	15 57.34	15 52.77	58 33.58	58 16.79
5	315 25 46.3	0.32	.9938826	3 2 0.93	15 47.75	15 42.38	57 58.37	57 38.65
6	316 26 36.5	0.19	.9939538	2 58 5.02	15 36.75	15 30.99	57 18.02	56 56.88
7	317 27 25.4	N. 0.06	9.9940263	2 54 9.12	15 25.21	15 19.50	56 35.63	56 14.70
8	318 28 12.9	S. 0.07	.9941001	2 50 13.21	15 13.99	15 8.78	55 54.48	55 35.33
9	319 28 58.9	0.18	.9941752	2 46 17.30	15 3.95	14 59.59	55 17.61	55 1.61
10	320 29 43.4	0.26	9.9942517	2 42 21.39	14 55.77	14 52.55	54 47.59	54 35.77
11	321 30 26.2	0.33	.9943298	2 38 25.48	14 49.97	14 48.09	54 26.33	54 19.40
12	322 31 7.5	0.38	.9944094	2 34 29.58	14 46.91	14 46.45	54 15.08	54 13.41
13	323 31 47.1	0.39	9.9944907	2 30 33.67	14 46.72	14 47.71	54 14.40	54 18.04
14	324 32 25.0	0.37	.9945737	2 26 37.76	14 49.41	14 51.77	54 24.25	54 32.93
15	325 33 1.2	0.33	.9946584	2 22 41.85	14 54.77	14 58.35	54 43.93	54 57.07
16	326 33 35.7	0.26	9.9947451	2 18 45.94	15 2.45	15 7.01	55 12.13	55 28.84
17	327 34 8.5	0.17	.9948336	2 14 50.04	15 11.93	15 17.14	55 46.92	56 6.04
18	328 34 39.6	S. 0.06	.9949241	2 10 54.13	15 22.54	15 28.02	56 25.85	56 45.98
19	329 35 9.0	N. 0.07	9.9950166	2 6 58.22	15 33.49	15 38.85	57 6.05	57 25.70
20	330 35 36.7	0.21	.9951112	2 3 2.31	15 43.99	15 48.82	57 44.57	58 2.32
21	331 36 2.9	0.35	.9952079	1 59 6.41	15 53.28	15 57.28	58 18.66	58 33.35
22	332 36 27.4	0.48	9.9953067	1 55 10.50	16 0.78	16 3.76	58 46.21	58 57.12
23	333 36 50.5	0.60	.9954074	1 51 14.59	16 6.18	16 8.05	59 6.01	59 12.89
24	334 37 12.1	0.70	.9955099	1 47 18.69	16 9.39	16 10.23	59 17.81	59 20.87
25	335 37 32.2	0.78	9.9956142	1 43 22.78	16 10.59	16 10.51	59 22.19	59 21.92
26	336 37 50.9	0.82	.9957201	1 39 26.87	16 10.04	16 9.22	59 20.20	59 17.18
27	337 38 8.2	0.83	.9958274	1 35 30.97	16 8.08	16 6.64	59 12.99	59 7.71
28	338 38 24.1	0.80	9.9959359	1 31 35.06	16 4.93	16 2.96	59 1.43	58 54.21
29	339 38 38.5	0.75	.9960454	1 27 39.15	16 0.74	15 58.27	58 46.06	58 37.00
30	340 38 51.4	N. 0.67	9.9961558	1 23 43.25	15 55.56	15 52.59	58 27.03	58 16.12

MEAN TIME.

THE MOON'S							
Day	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
1	264° 35' 19.7	271° 45' 41.2	N. 4° 51' 11.2	N. 4° 34' 4.1	25.97	21 46.7	9 17.4
2	278 54 55.7	286 2 26.8	4 12 42.1	3 47 28.9	26.97	22 45.0	10 16.0
3	293 7 34.5	300 9 46.3	3 18 52.5	2 47 24.9	27.97	23 41.6	11 13.6
4	307 8 27.9	314 3 10.5	2 13 40.6	1 38 15.5	28.97	* *	12 8.9
5	320 53 29.4	327 39 5.5	N. 1 1 45.9	N. 0 24 47.5	0.43	0 35.5	13 1.4
6	334 19 45.8	340 55 23.2	S. 0 12 5.9	S. 0 48 22.9	1.43	1 26.6	13 51.0
7	347 25 56.6	353 51 31.0	1 23 34.9	1 57 16.7	2.43	2 14.9	14 38.1
8	0 12 16.9	6 28 29.8	2 29 6.2	2 58 44.7	3.43	3 0.9	15 23.3
9	12 40 29.7	18 48 40.9	3 25 56.7	3 50 29.3	4.43	3 45.4	16 7.3
10	24 53 30.6	30 55 29.1	4 12 11.9	4 30 55.9	5.43	4 29.1	16 50.9
11	36 55 8.6	42 53 3.3	4 46 34.7	4 59 2.8	6.43	5 12.7	17 34.7
12	48 49 48.3	54 45 59.3	5 8 15.8	5 14 10.3	7.43	5 56.9	18 19.3
13	60 42 12.4	66 39 2.7	5 16 43.7	5 15 54.0	8.43	6 42.1	19 5.2
14	72 37 5.3	78 36 53.5	5 11 40.2	5 4 1.7	9.43	7 28.7	19 52.6
15	84 38 59.1	90 43 51.5	4 52 59.3	4 38 35.0	10.43	8 16.9	20 41.5
16	96 51 57.7	103 3 41.5	4 20 52.2	3 59 56.5	11.43	9 6.4	21 31.7
17	109 19 23.0	115 39 18.7	3 35 55.7	3 9 0.1	12.43	9 57.1	22 22.7
18	122 3 40.6	128 32 36.0	2 39 23.6	2 7 22.9	13.43	10 48.4	23 14.1
19	135 6 7.7	141 44 13.4	1 33 18.5	S. 0 57 34.6	14.43	11 39.8	* *
20	148 26 46.4	155 13 35.0	S. 0 20 38.9	N. 0 16 57.8	15.43	12 31.1	0 5.5
21	162 4 23.2	168 58 51.5	N. 0 54 41.9	1 31 58.0	16.43	13 22.2	0 56.7
22	175 56 37.0	182 57 14.3	2 8 9.4	2 42 39.6	17.43	14 13.2	1 47.7
23	190 0 16.2	197 5 14.7	3 14 52.7	3 44 15.0	18.43	15 4.7	2 38.9
24	204 11 41.2	211 19 8.1	4 10 15.7	4 32 27.6	19.43	15 57.1	3 30.8
25	218 27 8.3	225 35 16.8	4 50 28.2	5 3 59.6	20.43	16 50.7	4 23.7
26	232 43 10.2	239 50 26.9	5 12 49.3	5 16 49.8	21.43	17 45.9	5 18.1
27	246 56 47.9	254 1 55.5	5 15 59.0	5 10 19.9	22.43	18 42.4	6 14.0
28	261 5 34.1	268 7 29.6	5 0 0.4	4 45 13.1	23.43	19 39.6	7 10.9
29	275 7 29.3	282 5 20.6	4 26 14.7	4 3 25.7	24.43	20 36.5	8 8.1
30	289 0 52.5	295 53 53.9	N. 3 37 10.0	N. 3 7 54.7	25.43	21 32.2	9 4.6

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 1.					SUNDAY 3.				
	h m s	s	° ′ ″	″		h m s	s	° ′ ″	″
0	17 37 15.34	25.086	S. 18 29 13.0	26.54	0	19 37 30.51	24.693	S. 18 11 45.4	33.23
1	17 39 45.89	25.098	18 31 48.5	25.30	1	19 39 58.59	24.665	18 8 22.5	34.40
2	17 42 16.51	25.108	18 34 16.6	24.07	2	19 42 26.49	24.636	18 4 52.6	35.55
3	17 44 47.19	25.118	18 36 37.3	22.82	3	19 44 54.22	24.606	18 1 15.9	36.69
4	17 47 17.93	25.128	18 38 50.4	21.56	4	19 47 21.76	24.576	17 57 32.3	37.84
5	17 49 48.72	25.136	18 40 56.0	20.31	5	19 49 49.13	24.545	17 53 41.8	38.98
6	17 52 19.56	25.144	18 42 54.1	19.05	6	19 52 16.30	24.513	17 49 44.5	40.10
7	17 54 50.45	25.151	18 44 44.6	17.79	7	19 54 43.28	24.481	17 45 40.6	41.22
8	17 57 21.37	25.156	18 46 27.6	16.53	8	19 57 10.07	24.448	17 41 29.9	42.33
9	17 59 52.32	25.162	18 48 3.0	15.27	9	19 59 36.65	24.414	17 37 12.6	43.43
10	18 2 23.31	25.166	18 49 30.8	14.01	10	20 2 3.04	24.380	17 32 48.7	44.53
11	18 4 54.31	25.169	18 50 51.1	12.74	11	20 4 29.21	24.344	17 28 18.3	45.61
12	18 7 25.34	25.173	18 52 3.7	11.47	12	20 6 55.17	24.309	17 23 41.4	46.68
13	18 9 56.38	25.173	18 53 8.7	10.19	13	20 9 20.92	24.274	17 18 58.1	47.75
14	18 12 27.42	25.174	18 54 6.0	8.93	14	20 11 46.46	24.238	17 14 8.4	48.82
15	18 14 58.47	25.175	18 54 55.8	7.66	15	20 14 11.77	24.199	17 9 12.3	49.88
16	18 17 29.52	25.174	18 55 37.9	6.38	16	20 16 36.85	24.162	17 4 9.9	50.91
17	18 20 0.56	25.172	18 56 12.4	5.11	17	20 19 1.71	24.125	16 59 1.4	51.94
18	18 22 31.58	25.169	18 56 39.2	3.83	18	20 21 26.35	24.087	16 53 46.6	52.97
19	18 25 2.59	25.166	18 56 58.4	2.57	19	20 23 50.75	24.047	16 48 25.8	53.98
20	18 27 33.57	25.162	18 57 10.0	1.29	20	20 26 14.91	24.007	16 42 58.8	54.99
21	18 30 4.53	25.157	18 57 13.9	0.02	21	20 28 38.83	23.968	16 37 25.9	55.98
22	18 32 35.45	25.150	18 57 10.2	1.25	22	20 31 2.52	23.928	16 31 47.1	56.96
23	18 35 6.33	25.143	S. 18 56 58.9	2.52	23	20 33 25.96	23.886	S. 16 26 2.4	57.93
SATURDAY 2.					MONDAY 4.				
0	18 37 37.17	25.135	S. 18 56 40.0	3.78	0	20 35 49.15	23.845	S. 16 20 11.9	58.90
1	18 40 7.95	25.127	18 56 13.5	5.05	1	20 38 12.10	23.803	16 14 15.6	59.86
2	18 42 38.69	25.118	18 55 39.4	6.32	2	20 40 34.79	23.761	16 8 13.6	60.81
3	18 45 9.36	25.106	18 54 57.7	7.58	3	20 42 57.23	23.719	16 2 5.9	61.74
4	18 47 39.96	25.095	18 54 8.4	8.84	4	20 45 19.42	23.677	15 55 52.7	62.66
5	18 50 10.50	25.083	18 53 11.6	10.09	5	20 47 41.35	23.633	15 49 34.0	63.58
6	18 52 40.96	25.070	18 52 7.3	11.35	6	20 50 3.02	23.590	15 43 9.8	64.48
7	18 55 11.34	25.057	18 50 55.4	12.61	7	20 52 24.43	23.547	15 36 40.3	65.37
8	18 57 41.64	25.042	18 49 36.0	13.85	8	20 54 45.58	23.503	15 30 5.4	66.26
9	19 0 11.84	25.025	18 48 9.2	15.10	9	20 57 6.46	23.458	15 23 25.2	67.13
10	19 2 41.94	25.009	18 46 34.8	16.35	10	20 59 27.08	23.415	15 16 39.9	67.98
11	19 5 11.95	24.992	18 44 53.0	17.58	11	21 1 47.44	23.370	15 9 49.5	68.83
12	19 7 41.84	24.973	18 43 3.9	18.81	12	21 4 7.52	23.324	15 2 53.9	69.68
13	19 10 11.63	24.955	18 41 7.3	20.05	13	21 6 27.33	23.280	14 55 53.4	70.49
14	19 12 41.30	24.934	18 39 3.3	21.28	14	21 8 46.88	23.235	14 48 48.0	71.31
15	19 15 10.84	24.913	18 36 52.0	22.49	15	21 11 6.15	23.188	14 41 37.7	72.12
16	19 17 40.26	24.893	18 34 33.4	23.70	16	21 13 25.14	23.143	14 34 22.6	72.92
17	19 20 9.55	24.870	18 32 7.6	24.92	17	21 15 43.87	23.098	14 27 2.7	73.70
18	19 22 38.70	24.848	18 29 34.4	26.13	18	21 18 2.32	23.052	14 19 38.2	74.47
19	19 25 7.72	24.824	18 26 54.1	27.32	19	21 20 20.49	23.005	14 12 9.1	75.23
20	19 27 36.59	24.798	18 24 6.6	28.52	20	21 22 38.38	22.959	14 4 35.5	75.98
21	19 30 5.30	24.773	18 21 11.9	29.71	21	21 24 56.00	22.914	13 56 57.4	76.72
22	19 32 33.87	24.748	18 18 10.1	30.89	22	21 27 13.35	22.868	13 49 14.9	77.45
23	19 35 2.27	24.720	18 15 1.2	32.06	23	21 29 30.41	22.821	13 41 28.0	78.16
24	19 37 30.51	24.693	S. 18 11 45.4	33.23	24	21 31 47.20	22.775	S. 13 33 37.0	78.86

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 5.					THURSDAY 7.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	21 31 47.20	22.775	S. 13 33 37.0	78.86	0	23 15 56.93	20.711	S. 6 14 58.0	99.83
1	21 34 3.71	22.728	13 25 41.7	79.56	1	23 18 1.09	20.675	6 4 58.5	100.01
2	21 36 19.94	22.682	13 17 42.3	80.24	2	23 20 5.03	20.640	5 54 57.9	100.18
3	21 38 35.89	22.635	13 9 38.8	80.92	3	23 22 8.77	20.605	5 44 56.3	100.36
4	21 40 51.56	22.588	13 1 31.3	81.57	4	23 24 12.29	20.569	5 34 53.6	100.52
5	21 43 6.95	22.542	12 53 20.0	82.22	5	23 26 15.60	20.535	5 24 50.1	100.67
6	21 45 22.06	22.496	12 45 4.7	82.86	6	23 28 18.71	20.501	5 14 45.6	100.82
7	21 47 36.90	22.450	12 36 45.7	83.48	7	23 30 21.61	20.468	5 4 40.3	100.94
8	21 49 51.46	22.403	12 28 23.0	84.09	8	23 32 24.32	20.435	4 54 34.3	101.06
9	21 52 5.74	22.357	12 19 56.6	84.70	9	23 34 26.83	20.402	4 44 27.6	101.18
10	21 54 19.74	22.311	12 11 26.6	85.29	10	23 36 29.14	20.369	4 34 20.1	101.29
11	21 56 33.47	22.265	12 2 53.1	85.87	11	23 38 31.26	20.338	4 24 12.1	101.38
12	21 58 46.92	22.218	11 54 16.2	86.43	12	23 40 33.19	20.306	4 14 3.5	101.48
13	22 1 0.09	22.173	11 45 35.9	87.00	13	23 42 34.93	20.275	4 3 54.4	101.56
14	22 3 13.00	22.128	11 36 52.2	87.55	14	23 44 36.49	20.245	3 53 44.8	101.64
15	22 5 25.62	22.081	11 28 5.3	88.08	15	23 46 37.87	20.214	3 43 34.7	101.70
16	22 7 37.97	22.036	11 19 15.3	88.60	16	23 48 39.06	20.184	3 33 24.4	101.75
17	22 9 50.05	21.991	11 10 22.1	89.13	17	23 50 40.08	20.155	3 23 13.7	101.81
18	22 12 1.86	21.946	11 1 25.8	89.63	18	23 52 40.92	20.127	3 13 2.7	101.85
19	22 14 13.40	21.901	10 52 26.6	90.11	19	23 54 41.60	20.098	3 2 51.5	101.88
20	22 16 24.67	21.857	10 43 24.5	90.59	20	23 56 42.10	20.070	2 52 40.2	101.90
21	22 18 35.68	21.812	10 34 19.5	91.07	21	23 58 42.44	20.043	2 42 28.7	101.93
22	22 20 46.41	21.767	10 25 11.7	91.53	22	0 0 42.62	20.016	2 32 17.1	101.93
23	22 22 56.88	21.723	S. 10 16 1.2	91.97	23	0 2 42.63	19.989	S. 2 22 5.5	101.93
WEDNESDAY 6.					FRIDAY 8.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	22 25 7.09	21.679	S. 10 6 48.1	92.41	0	0 4 42.49	19.963	S. 2 11 53.9	101.93
1	22 27 17.03	21.635	9 57 32.3	92.83	1	0 6 42.19	19.938	2 1 42.4	101.91
2	22 29 26.71	21.592	9 48 14.1	93.25	2	0 8 41.74	19.913	1 51 31.0	101.89
3	22 31 36.13	21.548	9 38 53.3	93.66	3	0 10 41.15	19.888	1 41 19.7	101.87
4	22 33 45.29	21.505	9 29 30.2	94.05	4	0 12 40.40	19.863	1 31 8.6	101.83
5	22 35 54.19	21.463	9 20 4.7	94.44	5	0 14 39.51	19.840	1 20 57.7	101.78
6	22 38 2.84	21.421	9 10 36.9	94.81	6	0 16 38.48	19.817	1 10 47.2	101.73
7	22 40 11.24	21.378	9 1 7.0	95.17	7	0 18 37.31	19.794	1 0 36.9	101.68
8	22 42 19.38	21.336	8 51 34.9	95.53	8	0 20 36.01	19.772	0 50 27.0	101.61
9	22 44 27.27	21.295	8 42 0.7	95.88	9	0 22 34.57	19.749	0 40 17.6	101.53
10	22 46 34.92	21.254	8 32 24.4	96.21	10	0 24 33.00	19.728	0 30 8.6	101.47
11	22 48 42.32	21.213	8 22 46.2	96.52	11	0 26 31.31	19.708	0 20 0.0	101.38
12	22 50 49.47	21.172	8 13 6.2	96.83	12	0 28 29.49	19.687	S. 0 9 52.0	101.28
13	22 52 56.38	21.132	8 3 24.2	97.14	13	0 30 27.55	19.667	N. 0 0 15.4	101.18
14	22 55 3.05	21.092	7 53 40.5	97.43	14	0 32 25.49	19.647	0 10 22.2	101.08
15	22 57 9.48	21.052	7 43 55.0	97.72	15	0 34 23.31	19.628	0 20 28.3	100.97
16	22 59 15.67	21.013	7 34 7.9	97.98	16	0 36 21.03	19.610	0 30 33.8	100.85
17	23 1 21.63	20.973	7 24 19.2	98.25	17	0 38 18.63	19.591	0 40 38.5	100.72
18	23 3 27.35	20.935	7 14 28.9	98.50	18	0 40 16.12	19.573	0 50 42.4	100.58
19	23 5 32.85	20.897	7 4 37.2	98.74	19	0 42 13.51	19.557	1 0 45.5	100.44
20	23 7 38.11	20.858	6 54 44.0	98.98	20	0 44 10.80	19.540	1 10 47.7	100.30
21	23 9 43.15	20.821	6 44 49.4	99.21	21	0 46 7.99	19.524	1 20 49.1	100.15
22	23 11 47.96	20.784	6 34 53.5	99.42	22	0 48 5.09	19.508	1 30 49.5	99.99
23	23 13 52.56	20.748	6 24 56.4	99.63	23	0 50 2.09	19.493	1 40 49.0	99.83
24	23 15 56.93	20.711	S. 6 14 58.0	99.83	24	0 51 59.00	19.478	N. 1 50 47.5	99.66

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	
SATURDAY 9.					MONDAY 11.					
	h m s	s	N.	° ' "		h m s	s	N.	° ' "	
0	0 51 59.00	19.478	N.	1 50 47.5	99.66	0 22 39.03	19.304	N.	9 18 39.3	84.93
1	0 53 55.82	19.463		2 0 44.9	99.48	1 26 34.87	19.311		9 27 7.6	84.49
2	0 55 52.56	19.450		2 10 41.3	99.30	2 28 30.76	19.318		9 35 33.2	84.05
3	0 57 49.22	19.437		2 20 36.5	99.10	3 2 30 26.69	19.326		9 43 56.2	83.62
4	0 59 45.80	19.423		2 30 30.5	98.91	4 2 32 22.67	19.334		9 52 16.6	83.17
5	1 1 42.30	19.411		2 40 23.4	98.72	5 2 34 18.70	19.343		10 0 34.2	82.72
6	1 3 38.73	19.399		2 50 15.1	98.51	6 2 36 14.79	19.352		10 8 49.2	82.27
7	1 5 35.09	19.388		3 0 5.5	98.29	7 2 38 10.92	19.361		10 17 1.4	81.80
8	1 7 31.38	19.377		3 9 54.6	98.07	8 2 40 7.12	19.371		10 25 10.8	81.33
9	1 9 27.61	19.367		3 19 42.3	97.85	9 2 42 3.37	19.380		10 33 17.4	80.87
10	1 11 23.78	19.356		3 29 28.8	97.63	10 2 43 59.68	19.390		10 41 21.2	80.40
11	1 13 19.88	19.346		3 39 13.8	97.38	11 2 45 56.05	19.401		10 49 22.2	79.92
12	1 15 15.93	19.338		3 48 57.3	97.14	12 2 47 52.49	19.413		10 57 20.2	79.43
13	1 17 11.93	19.328		3 58 39.5	96.90	13 2 49 49.00	19.423		11 5 15.4	78.95
14	1 19 7.87	19.320		4 8 20.1	96.63	14 2 51 45.57	19.435		11 13 7.6	78.45
15	1 21 3.77	19.313		4 17 59.1	96.38	15 2 53 42.22	19.448		11 20 56.8	77.96
16	1 22 59.62	19.305		4 27 36.6	96.12	16 2 55 38.94	19.460		11 28 43.1	77.46
17	1 24 55.43	19.298		4 37 12.5	95.85	17 2 57 35.74	19.473		11 36 26.3	76.94
18	1 26 51.20	19.292		4 46 46.8	95.58	18 2 59 32.62	19.486		11 44 6.4	76.43
19	1 28 46.93	19.286		4 56 19.4	95.29	19 3 1 29.57	19.499		11 51 43.5	75.93
20	1 30 42.63	19.281		5 5 50.3	95.01	20 3 3 26.61	19.513		11 59 17.5	75.40
21	1 32 38.30	19.276		5 15 19.5	94.72	21 3 5 23.73	19.527		12 6 48.3	74.88
22	1 34 33.94	19.271		5 24 46.9	94.42	22 3 7 20.93	19.541		12 14 16.0	74.35
23	1 36 29.55	19.266	N.	5 34 12.5	94.12	23 3 9 18.22	19.557	N.	12 21 40.5	73.81
SUNDAY 10.					TUESDAY 12.					
	h m s	s	N.	° ' "		h m s	s	N.	° ' "	
0	1 38 25.13	19.263	N.	5 43 36.3	93.81	0 3 11 15.61	19.572	N.	12 29 1.7	73.27
1	1 40 20.70	19.260		5 52 58.2	93.49	1 3 13 13.08	19.587		12 36 19.7	72.73
2	1 42 16.25	19.257		6 2 18.2	93.18	2 3 15 10.65	19.603		12 43 34.5	72.18
3	1 44 11.78	19.254		6 11 36.4	92.86	3 3 17 8.31	19.618		12 50 45.9	71.63
4	1 46 7.30	19.253		6 20 52.5	92.53	4 3 19 6.07	19.635		12 57 54.0	71.07
5	1 48 2.81	19.252		6 30 6.7	92.20	5 3 21 3.93	19.652		13 4 58.7	70.51
6	1 49 58.32	19.251		6 39 18.9	91.86	6 3 23 1.89	19.668		13 12 0.1	69.94
7	1 51 53.82	19.249		6 48 29.0	91.52	7 3 24 59.95	19.685		13 18 58.0	69.37
8	1 53 49.31	19.249		6 57 37.1	91.17	8 3 26 58.11	19.703		13 25 52.5	68.79
9	1 55 44.81	19.250		7 6 43.0	90.81	9 3 28 56.38	19.721		13 32 43.5	68.22
10	1 57 40.31	19.250		7 15 46.8	90.46	10 3 30 54.76	19.739		13 39 31.1	67.63
11	1 59 35.81	19.252		7 24 48.5	90.09	11 3 32 53.25	19.757		13 46 15.1	67.03
12	2 1 31.33	19.253		7 33 47.9	89.72	12 3 34 51.84	19.775		13 52 55.5	66.44
13	2 3 26.85	19.255		7 42 45.1	89.35	13 3 36 50.55	19.794		13 59 32.4	65.84
14	2 5 22.39	19.258		7 51 40.1	88.98	14 3 38 49.37	19.813		14 6 5.6	65.24
15	2 7 17.94	19.260		8 0 32.8	88.59	15 3 40 48.31	19.833		14 12 35.3	64.63
16	2 9 13.51	19.263		8 9 23.2	88.20	16 3 42 47.36	19.853		14 19 1.2	64.02
17	2 11 9.10	19.268		8 18 11.2	87.81	17 3 44 46.54	19.873		14 25 23.5	63.41
18	2 13 4.72	19.271		8 26 56.9	87.41	18 3 46 45.83	19.892		14 31 42.1	62.78
19	2 15 0.35	19.275		8 35 40.1	87.00	19 3 48 45.24	19.912		14 37 56.9	62.15
20	2 16 56.02	19.281		8 44 20.9	86.60	20 3 50 44.77	19.933		14 44 7.9	61.52
21	2 18 51.72	19.286		8 52 59.3	86.19	21 3 52 44.43	19.953		14 50 15.1	60.88
22	2 20 47.45	19.292		9 1 35.2	85.77	22 3 54 44.21	19.974		14 56 18.5	60.24
23	2 22 43.22	19.298		9 10 8.5	85.34	23 3 56 44.12	19.996		15 2 18.0	59.60
24	2 24 39.03	19.304	N.	9 18 39.3	84.93	24 3 58 44.16	20.017	N.	15 8 13.7	58.95

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 13.					FRIDAY 15.				
	h m s	s	N. 15 8 13.7	58.95		h m s	s	N. 18 27 33.9	22.41
0	3 58 44.16	20.017			0	5 37 31.00	21.162		
1	4 0 44.32	20.038	15 14 5.4	58.29	1	5 39 38.04	21.186	18 29 45.8	21.54
2	4 2 44.62	20.060	15 19 53.2	57.63	2	5 41 45.23	21.209	18 31 52.4	20.66
3	4 4 45.04	20.082	15 25 37.0	56.97	3	5 43 52.55	21.233	18 33 53.7	19.78
4	4 6 45.60	20.104	15 31 16.8	56.30	4	5 46 0.02	21.256	18 35 49.8	18.92
5	4 8 46.29	20.127	15 36 52.6	55.63	5	5 48 7.62	21.279	18 37 40.7	18.03
6	4 10 47.12	20.148	15 42 24.3	54.95	6	5 50 15.37	21.303	18 39 26.2	17.14
7	4 12 48.07	20.171	15 47 52.0	54.27	7	5 52 23.25	21.325	18 41 6.4	16.26
8	4 14 49.17	20.194	15 53 15.5	53.58	8	5 54 31.27	21.348	18 42 41.3	15.37
9	4 16 50.40	20.217	15 58 34.9	52.88	9	5 56 39.43	21.372	18 44 10.8	14.47
10	4 18 51.77	20.240	16 3 50.1	52.19	10	5 58 47.73	21.394	18 45 34.9	13.57
11	4 20 53.28	20.263	16 9 1.2	51.49	11	6 0 56.16	21.416	18 46 53.6	12.67
12	4 22 54.93	20.287	16 14 8.0	50.78	12	6 3 4.72	21.438	18 48 6.9	11.76
13	4 24 56.72	20.310	16 19 10.6	50.08	13	6 5 13.41	21.460	18 49 14.7	10.85
14	4 26 58.65	20.333	16 24 8.9	49.36	14	6 7 22.24	21.483	18 50 17.1	9.94
15	4 29 0.72	20.357	16 29 2.9	48.63	15	6 9 31.20	21.504	18 51 14.0	9.03
16	4 31 2.93	20.381	16 33 52.5	47.91	16	6 11 40.29	21.525	18 52 5.4	8.10
17	4 33 5.29	20.404	16 38 37.8	47.18	17	6 13 49.50	21.546	18 52 51.2	7.18
18	4 35 7.78	20.428	16 43 18.7	46.45	18	6 15 58.84	21.568	18 53 31.5	6.26
19	4 37 10.43	20.453	16 47 55.2	45.72	19	6 18 8.31	21.588	18 54 6.3	5.33
20	4 39 13.22	20.477	16 52 27.3	44.98	20	6 20 17.90	21.609	18 54 35.5	4.39
21	4 41 16.15	20.501	16 56 54.9	44.23	21	6 22 27.62	21.629	18 54 59.0	3.46
22	4 43 19.23	20.526	17 1 18.0	43.47	22	6 24 37.45	21.649	18 55 17.0	2.53
23	4 45 22.46	20.550	N. 17 5 36.5	42.72	23	6 26 47.41	21.670	N. 18 55 29.3	1.58
THURSDAY 14.					SATURDAY 16.				
0	4 47 25.83	20.574	N. 17 9 50.6	41.96	0	6 28 57.49	21.689	N. 18 55 36.0	0.64
1	4 49 29.35	20.599	17 14 0.0	41.19	1	6 31 7.68	21.708	18 55 37.0	0.31
2	4 51 33.02	20.623	17 18 4.9	40.43	2	6 33 17.99	21.728	18 55 32.3	1.26
3	4 53 36.83	20.648	17 22 5.1	39.65	3	6 35 28.41	21.747	18 55 21.9	2.20
4	4 55 40.79	20.673	17 26 0.7	38.87	4	6 37 38.95	21.766	18 55 5.9	3.15
5	4 57 44.90	20.698	17 29 51.5	38.08	5	6 39 49.60	21.783	18 54 44.1	4.11
6	4 59 49.16	20.722	17 33 37.7	37.31	6	6 42 0.35	21.802	18 54 16.6	5.07
7	5 1 53.56	20.747	17 37 19.2	36.51	7	6 44 11.22	21.820	18 53 43.3	6.03
8	5 3 58.12	20.772	17 40 55.8	35.71	8	6 46 22.19	21.838	18 53 4.3	6.98
9	5 6 2.82	20.796	17 44 27.7	34.92	9	6 48 33.27	21.855	18 52 19.5	7.95
10	5 8 7.67	20.820	17 47 54.8	34.11	10	6 50 44.45	21.872	18 51 28.9	8.92
11	5 10 12.66	20.845	17 51 17.0	33.30	11	6 52 55.73	21.888	18 50 32.5	9.88
12	5 12 17.81	20.870	17 54 34.4	32.49	12	6 55 7.11	21.905	18 49 30.3	10.85
13	5 14 23.10	20.894	17 57 46.9	31.67	13	6 57 18.59	21.921	18 48 22.3	11.82
14	5 16 28.54	20.919	18 0 54.4	30.84	14	6 59 30.16	21.938	18 47 8.5	12.79
15	5 18 34.13	20.944	18 3 57.0	30.03	15	7 1 41.84	21.953	18 45 48.8	13.77
16	5 20 39.87	20.968	18 6 54.7	29.19	16	7 3 53.60	21.968	18 44 23.3	14.74
17	5 22 45.75	20.993	18 9 47.3	28.35	17	7 6 5.45	21.983	18 42 51.9	15.72
18	5 24 51.78	21.017	18 12 34.9	27.52	18	7 8 17.40	21.998	18 41 14.7	16.68
19	5 26 57.95	21.041	18 15 17.5	26.68	19	7 10 29.43	22.012	18 39 31.7	17.67
20	5 29 4.27	21.066	18 17 55.0	25.83	20	7 12 41.54	22.026	18 37 42.7	18.65
21	5 31 10.74	21.090	18 20 27.5	24.98	21	7 14 53.74	22.040	18 35 47.9	19.63
22	5 33 17.35	21.113	18 22 54.8	24.12	22	7 17 6.02	22.054	18 33 47.2	20.61
23	5 35 24.10	21.138	18 25 16.9	23.26	23	7 19 18.39	22.068	18 31 40.6	21.59
24	5 37 31.00	21.162	N. 18 27 33.9	22.41	24	7 21 30.83	22.079	N. 18 29 28.1	22.58

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 17.					TUESDAY 19.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	7 21 30.83	22.079	N.18 29 28.1	22.58	0	9 8 22.85	22.338	N.14 49 27.2	68.26
1	7 23 43.34	22.092	18 27 9.7	23.56	1	9 10 36.87	22.336	14 42 35.0	69.13
2	7 25 55.93	22.104	18 24 45.4	24.53	2	9 12 50.88	22.334	14 35 37.6	70.00
3	7 28 8.59	22.117	18 22 15.3	25.52	3	9 15 4.88	22.333	14 28 35.0	70.87
4	7 30 21.33	22.128	18 19 39.2	26.51	4	9 17 18.88	22.333	14 21 27.2	71.73
5	7 32 34.13	22.138	18 16 57.2	27.48	5	9 19 32.87	22.330	14 14 14.3	72.58
6	7 34 46.99	22.150	18 14 9.4	28.47	6	9 21 46.84	22.328	14 6 56.3	73.42
7	7 36 59.93	22.161	18 11 15.6	29.46	7	9 24 0.80	22.326	13 59 33.3	74.26
8	7 39 12.92	22.171	18 8 15.9	30.44	8	9 26 14.75	22.324	13 52 5.2	75.10
9	7 41 25.98	22.181	18 5 10.3	31.42	9	9 28 28.69	22.322	13 44 32.1	75.93
10	7 43 39.09	22.190	18 1 58.9	32.40	10	9 30 42.61	22.319	13 36 54.1	76.75
11	7 45 52.26	22.200	17 58 41.5	33.38	11	9 32 56.52	22.317	13 29 11.1	77.57
12	7 48 5.49	22.209	17 55 18.3	34.37	12	9 35 10.41	22.314	13 21 23.3	78.38
13	7 50 18.77	22.218	17 51 49.1	35.35	13	9 37 24.29	22.312	13 13 30.6	79.18
14	7 52 32.10	22.226	17 48 14.1	36.33	14	9 39 38.15	22.308	13 5 33.1	79.98
15	7 54 45.48	22.233	17 44 33.2	37.31	15	9 41 51.99	22.305	12 57 30.8	80.78
16	7 56 58.90	22.242	17 40 46.4	38.28	16	9 44 5.81	22.302	12 49 23.8	81.55
17	7 59 12.38	22.249	17 36 53.8	39.26	17	9 46 19.61	22.299	12 41 12.2	82.33
18	8 1 25.89	22.256	17 32 55.3	40.23	18	9 48 33.40	22.296	12 32 55.9	83.11
19	8 3 39.45	22.263	17 28 51.0	41.20	19	9 50 47.16	22.292	12 24 34.9	83.87
20	8 5 53.05	22.270	17 24 40.9	42.18	20	9 53 0.90	22.288	12 16 9.5	84.62
21	8 8 6.69	22.276	17 20 24.9	43.15	21	9 55 14.62	22.285	12 7 39.5	85.38
22	8 10 20.36	22.281	17 16 3.1	44.12	22	9 57 28.32	22.282	11 59 5.0	86.11
23	8 12 34.06	22.287	N.17 11 35.5	45.08	23	9 59 42.00	22.278	N.11 50 26.2	86.84
MONDAY 18.					WEDNESDAY 20.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	8 14 47.80	22.293	N.17 7 2.1	46.04	0	10 1 55.66	22.274	N.11 41 42.9	87.58
1	8 17 1.57	22.297	17 2 23.0	47.01	1	10 4 9.29	22.270	11 32 55.3	88.29
2	8 19 15.36	22.301	16 57 38.0	47.98	2	10 6 22.90	22.267	11 24 3.4	89.00
3	8 21 29.18	22.306	16 52 47.3	48.93	3	10 8 36.49	22.263	11 15 7.3	89.70
4	8 23 43.03	22.311	16 47 50.9	49.88	4	10 10 50.06	22.259	11 6 7.0	90.39
5	8 25 56.91	22.314	16 42 48.8	50.83	5	10 13 3.60	22.255	10 57 2.6	91.08
6	8 28 10.80	22.317	16 37 40.9	51.78	6	10 15 17.12	22.252	10 47 54.0	91.77
7	8 30 24.71	22.321	16 32 27.4	52.73	7	10 17 30.62	22.248	10 38 41.4	92.43
8	8 32 38.65	22.324	16 27 8.2	53.67	8	10 19 44.09	22.244	10 29 24.8	93.09
9	8 34 52.60	22.326	16 21 43.4	54.61	9	10 21 57.55	22.241	10 20 4.3	93.74
10	8 37 6.56	22.328	16 16 12.9	55.55	10	10 24 10.98	22.237	10 10 39.9	94.39
11	8 39 20.54	22.331	16 10 36.8	56.48	11	10 26 24.39	22.233	10 1 11.6	95.03
12	8 41 34.53	22.333	16 4 55.1	57.42	12	10 28 37.78	22.229	9 51 39.6	95.65
13	8 43 48.53	22.334	15 59 7.8	58.34	13	10 30 51.14	22.226	9 42 3.8	96.28
14	8 46 2.54	22.336	15 53 15.0	59.26	14	10 33 4.49	22.223	9 32 24.3	96.88
15	8 48 16.56	22.338	15 47 16.7	60.18	15	10 35 17.81	22.219	9 22 41.2	97.48
16	8 50 30.59	22.338	15 41 12.9	61.10	16	10 37 31.12	22.216	9 12 54.5	98.08
17	8 52 44.62	22.338	15 35 3.5	62.01	17	10 39 44.40	22.212	9 3 4.3	98.65
18	8 54 58.65	22.339	15 28 48.8	62.91	18	10 41 57.66	22.209	8 53 10.7	99.23
19	8 57 12.69	22.340	15 22 28.6	63.82	19	10 44 10.91	22.207	8 43 13.6	99.79
20	8 59 26.73	22.339	15 16 3.0	64.72	20	10 46 24.14	22.203	8 33 13.2	100.34
21	9 1 40.76	22.338	15 9 32.0	65.61	21	10 48 37.35	22.200	8 23 9.5	100.89
22	9 3 54.79	22.338	15 2 55.7	66.49	22	10 50 50.54	22.198	8 13 2.5	101.43
23	9 6 8.82	22.338	14 56 14.1	67.38	23	10 53 3.72	22.195	8 2 52.4	101.95
24	9 8 22.85	22.338	N.14 49 27.2	68.26	24	10 55 16.88	22.193	N. 7 52 39.1	102.47

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
THURSDAY 21.					SATURDAY 23.				
	h m s					h m s			
0	10 55 16.88	22.193	N. 7 52 39.1	102.47	0	12 41 52.45	22.316	S. 0 58 34.0	114.60
1	10 57 30.03	22.190	7 42 22.8	102.97	1	12 44 6.37	22.325	1 10 1.5	114.57
2	10 59 43.16	22.188	7 32 3.5	103.47	2	12 46 20.35	22.336	1 21 28.8	114.53
3	11 1 56.28	22.185	7 21 41.2	103.95	3	12 48 34.40	22.346	1 32 55.9	114.48
4	11 4 9.38	22.183	7 11 16.1	104.43	4	12 50 48.50	22.355	1 44 22.5	114.41
5	11 6 22.48	22.182	7 0 48.1	104.90	5	12 53 2.66	22.366	1 55 48.8	114.35
6	11 8 35.56	22.179	6 50 17.3	105.35	6	12 55 16.89	22.377	2 7 14.7	114.26
7	11 10 48.63	22.178	6 39 43.9	105.79	7	12 57 31.18	22.388	2 18 39.9	114.15
8	11 13 1.70	22.178	6 29 7.8	106.23	8	12 59 45.55	22.400	2 30 4.5	114.04
9	11 15 14.76	22.176	6 18 29.1	106.65	9	13 1 59.98	22.411	2 41 28.4	113.93
10	11 17 27.81	22.174	6 7 48.0	107.07	10	13 4 14.48	22.423	2 52 51.6	113.79
11	11 19 40.85	22.173	5 57 4.3	107.48	11	13 6 29.06	22.437	3 4 13.9	113.64
12	11 21 53.89	22.173	5 46 18.3	107.87	12	13 8 43.72	22.449	3 15 35.3	113.48
13	11 24 6.93	22.173	5 35 29.9	108.25	13	13 10 58.45	22.462	3 26 55.6	113.31
14	11 26 19.97	22.173	5 24 39.3	108.62	14	13 13 13.26	22.475	3 38 15.0	113.13
15	11 28 33.01	22.173	5 13 46.5	108.98	15	13 15 28.15	22.488	3 49 33.2	112.93
16	11 30 46.04	22.173	5 2 51.5	109.33	16	13 17 43.12	22.503	4 0 50.2	112.73
17	11 32 59.08	22.173	4 51 54.5	109.67	17	13 19 58.18	22.518	4 12 6.0	112.51
18	11 35 12.12	22.174	4 40 55.5	110.00	18	13 22 13.33	22.532	4 23 20.3	112.28
19	11 37 25.17	22.175	4 29 54.5	110.32	19	13 24 28.56	22.547	4 34 33.3	112.04
20	11 39 38.22	22.176	4 18 51.7	110.63	20	13 26 43.89	22.562	4 45 44.8	111.78
21	11 41 51.28	22.178	4 7 47.0	110.93	21	13 28 59.30	22.577	4 56 54.7	111.52
22	11 44 4.35	22.179	3 56 40.6	111.21	22	13 31 14.81	22.593	5 8 3.0	111.24
23	11 46 17.43	22.181	N. 3 45 32.5	111.48	23	13 33 30.42	22.610	S. 5 19 9.6	110.95
FRIDAY 22.					SUNDAY 24.				
0	11 48 30.52	22.183	N. 3 34 22.8	111.74	0	13 35 46.13	22.626	S. 5 30 14.4	110.65
1	11 50 43.62	22.185	3 23 11.6	111.98	1	13 38 1.93	22.642	5 41 17.4	110.34
2	11 52 56.74	22.188	3 11 59.0	112.23	2	13 40 17.83	22.659	5 52 18.5	110.02
3	11 55 9.88	22.191	3 0 44.9	112.47	3	13 42 33.84	22.678	6 3 17.6	109.68
4	11 57 23.03	22.193	2 49 24.4	112.68	4	13 44 49.96	22.694	6 14 14.6	109.33
5	11 59 36.20	22.198	2 38 12.7	112.88	5	13 47 6.17	22.712	6 25 9.5	108.97
6	12 1 49.40	22.201	2 26 54.8	113.08	6	13 49 22.50	22.730	6 36 2.2	108.59
7	12 4 2.61	22.204	2 15 35.8	113.26	7	13 51 38.93	22.748	6 46 52.6	108.21
8	12 6 15.85	22.209	2 4 15.7	113.43	8	13 53 55.47	22.767	6 57 40.7	107.81
9	12 8 29.12	22.213	1 52 54.6	113.59	9	13 56 12.13	22.786	7 8 26.3	107.40
10	12 10 42.41	22.218	1 41 32.6	113.74	10	13 58 28.90	22.805	7 19 9.5	106.98
11	12 12 55.74	22.223	1 30 9.7	113.88	11	14 0 45.79	22.824	7 29 50.1	106.55
12	12 15 9.09	22.228	1 18 46.0	114.00	12	14 3 2.79	22.843	7 40 28.1	106.12
13	12 17 22.48	22.234	1 7 21.7	114.12	13	14 5 19.91	22.863	7 51 3.5	105.66
14	12 19 35.90	22.240	0 55 56.6	114.23	14	14 7 37.15	22.883	8 1 36.0	105.18
15	12 21 49.36	22.247	0 44 31.0	114.31	15	14 9 54.51	22.904	8 12 5.7	104.71
16	12 24 2.86	22.253	0 33 4.9	114.39	16	14 12 12.00	22.924	8 22 32.5	104.23
17	12 26 16.40	22.260	0 21 38.3	114.46	17	14 14 29.60	22.945	8 32 56.4	103.73
18	12 28 29.98	22.267	N. 0 10 11.4	114.51	18	14 16 47.34	22.967	8 43 17.2	103.21
19	12 30 43.60	22.274	S. 0 1 15.8	114.56	19	14 19 5.20	22.987	8 53 34.9	102.68
20	12 32 57.27	22.283	0 12 43.3	114.59	20	14 21 23.18	23.008	9 3 49.4	102.15
21	12 35 10.99	22.291	0 24 10.9	114.61	21	14 23 41.29	23.030	9 14 0.7	101.61
22	12 37 24.76	22.299	0 35 38.6	114.62	22	14 25 59.54	23.052	9 24 8.7	101.04
23	12 39 38.58	22.308	0 47 6.3	114.62	23	14 28 17.91	23.073	9 34 13.2	100.48
24	12 41 52.45	22.316	S. 0 58 34.0	114.60	24	14 30 36.42	23.096	S. 9 44 14.4	99.90

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 25.					WEDNESDAY 27.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	14 30 36.42	23.096	S. 9 44 14.4	99.90	0	16 24 7.65	24.183	S. 16 16 56.5	60.03
1	14 32 55.06	23.118	9 54 12.0	99.31	1	16 26 32.80	24.202	16 22 53.6	58.99
2	14 35 13.83	23.140	10 4 6.1	98.71	2	16 28 58.07	24.221	16 28 44.4	57.93
3	14 37 32.74	23.163	10 13 56.5	98.09	3	16 31 23.45	24.239	16 34 28.8	56.87
4	14 39 51.78	23.185	10 23 43.2	97.47	4	16 33 48.94	24.258	16 40 6.8	55.81
5	14 42 10.96	23.208	10 33 26.1	96.83	5	16 36 14.54	24.275	16 45 38.5	54.73
6	14 44 30.28	23.231	10 43 5.1	96.18	6	16 38 40.24	24.292	16 51 3.6	53.65
7	14 46 49.73	23.254	10 52 40.3	95.53	7	16 41 6.04	24.308	16 56 22.3	52.57
8	14 49 9.33	23.278	11 2 11.4	94.86	8	16 43 31.94	24.326	17 1 34.4	51.47
9	14 51 29.06	23.300	11 11 38.6	94.18	9	16 45 57.95	24.342	17 6 39.9	50.37
10	14 53 48.93	23.324	11 21 1.6	93.49	10	16 48 24.04	24.357	17 11 38.8	49.26
11	14 56 8.95	23.348	11 30 20.5	92.79	11	16 50 50.23	24.373	17 16 31.0	48.15
12	14 58 29.10	23.371	11 39 35.1	92.08	12	16 53 16.51	24.388	17 21 16.6	47.03
13	15 0 49.40	23.394	11 48 45.4	91.35	13	16 55 42.88	24.402	17 25 55.4	45.91
14	15 3 9.83	23.418	11 57 51.3	90.63	14	16 58 9.33	24.416	17 30 27.5	44.78
15	15 5 30.41	23.442	12 6 52.9	89.88	15	17 0 35.87	24.429	17 34 52.8	43.65
16	15 7 51.13	23.465	12 15 49.9	89.13	16	17 3 2.48	24.442	17 39 11.3	42.51
17	15 10 11.99	23.489	12 24 42.4	88.37	17	17 5 29.17	24.455	17 43 22.9	41.36
18	15 12 33.00	23.513	12 33 30.3	87.59	18	17 7 55.94	24.467	17 47 27.6	40.22
19	15 14 54.15	23.537	12 42 13.5	86.81	19	17 10 22.77	24.478	17 51 25.5	39.07
20	15 17 15.44	23.560	12 50 52.0	86.01	20	17 12 49.68	24.489	17 55 16.4	37.91
21	15 19 36.87	23.584	12 59 25.6	85.21	21	17 15 16.64	24.499	17 59 0.4	36.74
22	15 21 58.45	23.608	13 7 54.5	84.40	22	17 17 43.67	24.509	18 2 37.3	35.58
23	15 24 20.17	23.632	S. 13 16 18.4	83.57	23	17 20 10.75	24.518	S. 18 6 7.3	34.41
TUESDAY 26.					THURSDAY 28.				
0	15 26 42.03	23.655	S. 13 24 37.3	82.74	0	17 22 37.89	24.528	S. 18 9 30.2	33.23
1	15 29 4.03	23.678	13 32 51.3	81.90	1	17 25 5.08	24.536	18 12 46.1	32.06
2	15 31 26.17	23.703	13 41 0.1	81.04	2	17 27 32.32	24.544	18 15 54.9	30.88
3	15 33 48.46	23.726	13 49 3.8	80.18	3	17 29 59.61	24.551	18 18 56.6	29.69
4	15 36 10.88	23.749	13 57 2.3	79.31	4	17 32 26.93	24.557	18 21 51.2	28.51
5	15 38 33.45	23.773	14 4 55.5	78.43	5	17 34 54.29	24.563	18 24 38.7	27.32
6	15 40 56.16	23.796	14 12 43.5	77.54	6	17 37 21.69	24.568	18 27 19.0	26.12
7	15 43 19.00	23.818	14 20 26.0	76.63	7	17 39 49.11	24.573	18 29 52.1	24.93
8	15 45 41.98	23.842	14 28 3.1	75.73	8	17 42 16.57	24.578	18 32 18.1	23.73
9	15 48 5.10	23.865	14 35 34.8	74.82	9	17 44 44.04	24.581	18 34 36.9	22.53
10	15 50 28.36	23.888	14 43 0.9	73.88	10	17 47 11.54	24.584	18 36 48.4	21.33
11	15 52 51.75	23.910	14 50 21.4	72.95	11	17 49 39.05	24.587	18 38 52.8	20.13
12	15 55 15.28	23.933	14 57 36.3	72.00	12	17 52 6.58	24.588	18 40 49.9	18.91
13	15 57 38.94	23.954	15 4 45.4	71.05	13	17 54 34.11	24.589	18 42 39.7	17.71
14	16 0 2.73	23.977	15 11 48.9	70.09	14	17 57 1.65	24.590	18 44 22.4	16.50
15	16 2 26.66	23.998	15 18 46.5	69.12	15	17 59 29.19	24.589	18 45 57.7	15.28
16	16 4 50.71	24.019	15 25 38.3	68.14	16	18 1 56.72	24.588	18 47 25.8	14.08
17	16 7 14.89	24.041	15 32 24.2	67.16	17	18 4 24.25	24.588	18 48 46.6	12.87
18	16 9 39.20	24.063	15 39 4.2	66.16	18	18 6 51.77	24.586	18 50 0.2	11.66
19	16 12 3.64	24.083	15 45 38.1	65.16	19	18 9 19.28	24.583	18 51 6.5	10.44
20	16 14 28.20	24.103	15 52 6.1	64.15	20	18 11 46.77	24.579	18 52 5.5	9.23
21	16 16 52.88	24.124	15 58 27.9	63.13	21	18 14 14.23	24.575	18 52 57.2	8.01
22	16 19 17.69	24.144	16 4 43.6	62.11	22	18 16 41.67	24.570	18 53 41.6	6.80
23	16 21 42.61	24.163	16 10 53.2	61.08	23	18 19 9.07	24.564	18 54 18.8	5.59
24	16 24 7.65	24.183	S. 16 16 56.5	60.03	24	18 21 36.44	24.559	S. 18 54 48.7	4.38

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 29.				
	h m s	s		
0	18 21 36.44	24.559	S. 18 54 48.7	4.38
1	18 24 3.78	24.553	18 55 11.3	3.16
2	18 26 31.07	24.545	18 55 26.6	1.95
3	18 28 58.32	24.537	18 55 34.7	0.74
4	18 31 25.51	24.528	18 55 35.5	0.47
5	18 33 52.65	24.519	18 55 29.1	1.68
6	18 36 19.74	24.509	18 55 15.4	2.88
7	18 38 46.76	24.498	18 54 54.5	4.08
8	18 41 13.71	24.487	18 54 26.4	5.28
9	18 43 40.60	24.475	18 53 51.1	6.49
10	18 46 7.41	24.463	18 53 8.5	7.69
11	18 48 34.15	24.449	18 52 18.8	8.88
12	18 51 0.80	24.435	18 51 21.9	10.08
13	18 53 27.37	24.421	18 50 17.9	11.26
14	18 55 53.85	24.406	18 49 6.8	12.45
15	18 58 20.24	24.390	18 47 48.5	13.64
16	19 0 46.53	24.373	18 46 23.1	14.82
17	19 3 12.72	24.356	18 44 50.7	15.99
18	19 5 38.80	24.338	18 43 11.2	17.18
19	19 8 4.78	24.321	18 41 24.6	18.34
20	19 10 30.65	24.302	18 39 31.1	19.50
21	19 12 56.40	24.283	18 37 30.6	20.67
22	19 15 22.04	24.263	18 35 23.1	21.83
23	19 17 47.55	24.241	S. 18 33 8.7	22.98
SATURDAY, MARCH 1.				
0	19 20 12.93	24.220	S. 18 30 47.4	24.13

PHASES OF THE MOON.				
				h m
Feb. 4	●	New Moon	- -	13 38.3
12	)	First Quarter	- -	8 9.0
20	○	Full Moon	- -	4 7.2
27	(	Last Quarter	- -	1 15.2
Feb. 12	(	Apogee	- - - -	h 13.7
25	(	Perigee	- - - -	.39

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semidiameter passing the Meridian.*	Equation of Time, to be added to Apparent Time.	Var. in hour.	
	Apparent Right Ascension.	Var. in hour.	Apparent Declination.	Var. in hour.				
	h m s	s	° ' "	"	m s	m s	s	
Sat.	1	22 48 35.53	9 367	N. 7 34 24.0	56.99	I 5.39	12 30.47	0.488
Sun.	2	22 52 20.08	9.346	7 11 33.0	57.25	I 5.31	12 18.51	0.508
Mon.	3	22 56 4.16	9.327	6 48 35.9	57.50	I 5.24	12 6.07	0.528
Tues.	4	22 59 47.78	9.308	6 25 32.9	57.74	I 5.18	11 53.16	0.547
Wed.	5	23 3 30.94	9.289	6 2 24.6	57.95	I 5.11	11 39.81	0.565
Thur.	6	23 7 13.67	9.272	5 39 11.3	58.15	I 5.05	11 26.03	0.583
Frid.	7	23 10 55.98	9.255	5 15 53.5	58.33	I 4.99	11 11.82	0.600
Sat.	8	23 14 37.89	9.238	4 52 31.5	58.49	I 4.93	10 57.22	0.616
Sun.	9	23 18 19.41	9.222	4 29 5.8	58.64	I 4.88	10 42.23	0.632
Mon.	10	23 22 0.56	9.207	4 5 36.8	58.77	I 4.83	10 26.87	0.647
Tues.	11	23 25 41.36	9.193	3 42 4.7	58.89	I 4.78	10 11.16	0.661
Wed.	12	23 29 21.83	9.180	3 18 30.1	58.99	I 4.74	9 55.13	0.675
Thur.	13	23 33 1.99	9.167	2 54 53.3	59.07	I 4.69	9 38.78	0.687
Frid.	14	23 36 41.86	9.155	2 31 14.6	59.14	I 4.66	9 22.14	0.699
Sat.	15	23 40 21.45	9.144	2 7 34.6	59.19	I 4.62	9 5.23	0.710
Sun.	16	23 44 0.79	9.135	1 43 53.4	59.23	I 4.59	8 48.06	0.720
Mon.	17	23 47 39.91	9.125	1 20 11.5	59.25	I 4.56	8 30.67	0.729
Tues.	18	23 51 18.81	9.117	0 56 29.3	59.26	I 4.53	8 13.08	0.737
Wed.	19	23 54 57.54	9.110	0 32 47.1	59.25	I 4.51	7 55.30	0.744
Thur.	20	23 58 36.10	9.104	N. 0 9 5.3	59.23	I 4.49	7 37.36	0.750
Frid.	21	0 2 14.53	9.099	N. 0 14 35.8	59.19	I 4.47	7 19.28	0.755
Sat.	22	0 5 52.85	9.095	0 38 15.9	59.14	I 4.45	7 1.10	0.759
Sun.	23	0 9 31.08	9.092	1 1 54.7	59.08	I 4.44	6 42.84	0.762
Mon.	24	0 13 9.26	9.090	1 25 31.7	59.00	I 4.43	6 24.51	0.764
Tues.	25	0 16 47.40	9.089	1 49 6.7	58.91	I 4.42	6 6.15	0.766
Wed.	26	0 20 25.53	9.089	2 12 39.3	58.80	I 4.42	5 47.77	0.766
Thur.	27	0 24 3.66	9.090	2 36 9.2	58.68	I 4.41	5 29.41	0.765
Frid.	28	0 27 41.83	9.091	2 59 36.1	58.55	I 4.42	5 11.07	0.763
Sat.	29	0 31 20.05	9.094	3 22 59.5	58.40	I 4.43	4 52.79	0.760
Sun.	30	0 34 58.33	9.097	3 46 19.1	58.23	I 4.44	4 34.57	0.757
Mon.	31	0 38 36.70	9.101	4 9 34.6	58.05	I 4.45	4 16.44	0.754
Tues.	32	0 42 15.17	9.105	N. 4 32 45.6	57.86	I 4.46	3 58.40	0.749

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.18 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be added to Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi-diameter.*		
		h m s	S. ° ' "	' "	m s	h m s
Sat.	1	22 48 33.58	S. 7 34 35.9	16 9.73	12 30.57	22 36 3.00
Sun.	2	22 52 18.17	7 11 44.8	16 9.48	12 18.61	22 39 59.55
Mon.	3	22 56 2.28	6 48 47.5	16 9.23	12 6.17	22 43 56.11
Tues.	4	22 59 45.93	6 25 44.4	16 8.98	11 53.27	22 47 52.66
Wed.	5	23 3 29.13	6 2 35.9	16 8.73	11 39.92	22 51 49.21
Thur.	6	23 7 11.90	5 39 22.4	16 8.48	11 26.14	22 55 45.76
Frid.	7	23 10 54.25	5 16 4.4	16 8.22	11 11.94	22 59 42.32
Sat.	8	23 14 36.20	4 52 42.2	16 7.97	10 57.33	23 3 38.87
Sun.	9	23 18 17.76	4 29 16.3	16 7.72	10 42.34	23 7 35.42
Mon.	10	23 21 58.95	4 5 47.0	16 7.46	10 26.98	23 11 31.97
Tues.	11	23 25 39.80	3 42 14.7	16 7.21	10 11.28	23 15 28.52
Wed.	12	23 29 20.31	3 18 39.9	16 6.95	9 55.24	23 19 25.08
Thur.	13	23 33 0.52	2 55 2.8	16 6.69	9 38.89	23 23 21.63
Frid.	14	23 36 40.43	2 31 23.9	16 6.43	9 22.25	23 27 18.18
Sat.	15	23 40 20.07	2 7 43.5	16 6.17	9 5.34	23 31 14.73
Sun.	16	23 43 59.45	1 44 2.1	16 5.90	8 48.17	23 35 11.28
Mon.	17	23 47 38.61	1 20 20.0	16 5.64	8 30.78	23 39 7.83
Tues.	18	23 51 17.56	0 56 37.5	16 5.37	8 13.18	23 43 4.38
Wed.	19	23 54 56.33	0 32 55.0	16 5.10	7 55.40	23 47 0.94
Thur.	20	23 58 34.94	S. 0 9 12.8	16 4.83	7 37.45	23 50 57.49
Frid.	21	0 2 13.42	N. 0 14 28.6	16 4.56	7 19.38	23 54 54.04
Sat.	22	0 5 51.78	0 38 9.0	16 4.28	7 1.19	23 58 50.59
Sun.	23	0 9 30.06	1 1 48.1	16 4.00	6 42.92	0 2 47.14
Mon.	24	0 13 8.29	1 25 25.4	16 3.72	6 24.59	0 6 43.70
Tues.	25	0 16 46.47	1 49 0.7	16 3.44	6 6.22	0 10 40.25
Wed.	26	0 20 24.65	2 12 33.7	16 3.16	5 47.85	0 14 36.80
Thur.	27	0 24 2.83	2 36 3.9	16 2.88	5 29.48	0 18 33.35
Frid.	28	0 27 41.04	2 59 31.0	16 2.59	5 11.14	0 22 29.90
Sat.	29	0 31 19.31	3 22 54.7	16 2.31	4 52.85	0 26 26.46
Sun.	30	0 34 57.64	3 46 14.7	16 2.03	4 34.63	0 30 23.01
Mon.	31	0 38 36.05	4 9 30.5	16 1.74	4 16.49	0 34 19.56
Tues.	32	0 42 14.57	N. 4 32 41.8	16 1.46	3 58.45	0 38 16.11

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

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S				
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.		
					Noon.	Midnight.	Noon.	Midnight.	
				h m s					
1	340° 38' 51.4	N. 0.67	9.9961558	1 23 43.25	15 55.56	15 52.59	58 27.03	58 16.12	
2	341 39 2.7	0.56	.9962669	1 19 47.34	15 49.36	15 45.89	58 4.29	57 51.55	
3	342 39 12.4	0.43	.9963786	1 15 51.43	15 42.18	15 38.24	57 37.92	57 23.48	
4	343 39 20.4	0.29	9.9964908	1 11 55.53	15 34.11	15 29.81	57 8.31	56 52.53	
5	344 39 26.6	0.16	.9966034	1 7 59.62	15 25.39	15 20.91	56 36.32	56 19.86	
6	345 39 31.0	N. 0.04	.9967163	1 4 3.71	15 16.42	15 11.98	56 3.37	55 47.10	
7	346 39 33.4	S. 0.08	9.9968296	1 0 7.81	15 7.67	15 3.56	55 31.29	55 16.21	
8	347 39 33.8	0.18	.9969433	0 56 11.90	14 59.73	14 56.23	55 2.12	54 49.28	
9	348 39 32.2	0.25	.9970574	0 52 16.00	14 53.14	14 50.52	54 37.94	54 28.33	
10	349 39 28.4	0.30	9.9971719	0 48 20.09	14 48.43	14 46.92	54 20.66	54 15.12	
11	350 39 22.5	0.32	.9972869	0 44 24.18	14 46.04	14 45.81	54 11.88	54 11.06	
12	351 39 14.4	0.32	.9974025	0 40 28.28	14 46.27	14 47.44	54 12.75	54 17.04	
13	352 39 4.1	0.29	9.9975186	0 36 32.37	14 49.33	14 51.93	54 23.97	54 33.51	
14	353 38 51.6	0.22	.9976354	0 32 36.47	14 55.22	14 59.20	54 45.60	55 0.18	
15	354 38 36.8	0.14	.9977529	0 28 40.56	15 3.80	15 8.99	55 17.08	55 36.11	
16	355 38 19.8	S. 0.04	9.9978711	0 24 44.65	15 14.69	15 20.82	55 57.03	56 19.53	
17	356 38 0.5	N. 0.08	.9979903	0 20 48.75	15 27.28	15 33.96	56 43.25	57 7.77	
18	357 37 39.0	0.21	.9981104	0 16 52.84	15 40.74	15 47.46	57 32.63	57 57.32	
19	358 37 15.3	0.35	9.9982315	0 12 56.94	15 54.00	16 0.21	58 21.33	58 44.11	
20	359 36 49.5	0.48	.9983536	0 9 1.03	16 5.94	16 11.06	59 5.13	59 23.92	
21	0 36 21.6	0.61	.9984768	0 5 5.12	16 15.45	16 19.03	59 40.05	59 53.17	
22	1 35 51.7	0.71	9.9986011	{ ^{0 1 9.22} _{23 57 13 31} }	16 21.72	16 23.48	60 3.04	60 9.52	
23	2 35 19.9	0.79	.9987264	23 53 17.41	16 24.32	16 24.26	60 12.61	60 12.38	
24	3 34 46.2	0.84	.9988525	23 49 21.50	16 23.35	16 21.66	60 9.02	60 2.82	
25	4 34 10.7	0.86	9.9989793	23 45 25.59	16 19.28	16 16.32	59 54.10	59 43.22	
26	5 33 33.5	0.85	.9991067	23 41 29.69	16 12.87	16 9.05	59 30.58	59 16.54	
27	6 32 54.5	0.81	.9992345	23 37 33.78	16 4.93	16 0.62	59 1.45	58 45.62	
28	7 32 13.7	0.73	9.9993625	23 33 37.88	15 56.18	15 51.68	58 29.33	58 12.81	
29	8 31 31.2	0.63	.9994905	23 29 41.97	15 47.16	15 42.67	57 56.23	57 39.72	
30	9 30 47.0	0.50	.9996184	23 25 46.06	15 38.22	15 33.84	57 23.40	57 7.32	
31	10 30 0.9	0.37	.9997460	23 21 50.16	15 29.54	15 25.33	56 51.54	56 36.09	
32	11 29 13.0	N. 0.24	9.9998732	23 17 54.25	15 21.21	15 17.20	56 20.98	56 6.25	

MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
					d	h m	h m
1	289° 0' 52.5	295° 53' 53.9	N. 3° 37' 10.0	N. 3° 7' 54.7	25.43	21 32.2	9 4.6
2	302 44 14.3	309 31 43.3	2 36 8.7	2 2 23.1	26.43	22 25.9	9 59.3
3	316 16 11.2	322 57 28.8	1 27 9.7	N. 0 51 1.0	27.43	23 17.1	10 51.8
4	329 35 27.9	336 10 1.1	N. 0 14 29.1	S. 0 21 54.9	28.43	* *	11 41.9
5	342 41 2.8	349 8 29.4	S. 0 57 41.2	1 32 22.1	29.43	0 6.0	12 29.6
6	355 32 19.0	1 52 32.8	2 5 32.4	2 36 49.4	0.84	0 52.8	13 15.6
7	8 9 14.7	14 22 31.4	3 5 53.3	3 32 27.3	1.84	1 38.1	14 0.3
8	20 32 32.7	26 39 31.9	3 56 17.4	4 17 12.0	2.84	2 22.4	14 44.4
9	32 43 45.3	38 45 32.4	4 35 2.2	4 49 41.2	3.84	3 6.4	15 28.4
10	44 45 15.8	50 43 20.4	5 1 4.2	5 9 7.7	4.84	3 50.5	16 12.8
11	56 40 14.2	62 36 27.4	5 13 49.9	5 15 9.9	5.84	4 35.4	16 58.2
12	68 32 31.7	74 29 1.0	5 13 7.8	5 7 44.6	6.84	5 21.2	17 44.6
13	80 26 30.0	86 25 34.4	4 59 2.0	4 47 2.5	7.84	6 8.3	18 32.3
14	92 26 50.0	98 30 52.7	4 31 49.7	4 13 28.0	8.84	6 56.7	19 21.3
15	104 38 17.4	110 49 37.3	3 52 3.5	3 27 43.7	9.84	7 46.1	20 11.2
16	117 5 23.9	123 26 5.3	3 0 38.2	2 30 59.3	10.84	8 36.4	21 1.8
17	129 52 5.9	136 23 45.2	1 59 2.2	1 25 5.1	11.84	9 27.3	21 52.9
18	143 1 17.0	149 44 48.8	S. 0 49 30.3	S. 0 12 43.8	12.84	10 18.6	22 44.3
19	156 34 20.0	163 29 42.2	N. 0 24 44.7	N. 1 2 21.5	13.84	11 10.1	23 36.0
20	170 30 38.5	177 36 43.6	1 39 30.0	2 15 31.4	14.84	12 2.0	* *
21	184 47 23.6	192 1 57.5	2 49 45.6	3 21 32.8	15.84	12 54.6	0 28.2
22	199 19 37.3	206 39 31.0	3 50 15.1	4 15 17.8	16.84	13 48.2	1 21.2
23	214 0 43.6	221 22 19.5	4 36 11.1	4 52 30.8	17.84	14 43.2	2 15.5
24	228 43 24.8	236 3 9.1	5 3 59.9	5 10 28.2	18.84	15 39.6	3 11.2
25	243 20 47.1	250 35 40.1	5 11 52.6	5 8 16.9	19.84	16 37.1	4 8.2
26	257 47 16.7	264 55 12.6	4 59 51.0	4 46 50.2	20.84	17 35.0	5 6.0
27	271 59 11.4	278 59 2.8	4 29 34.0	4 8 25.4	21.84	18 32.3	6 3.8
28	285 54 43.1	292 46 13.3	3 43 50.2	3 16 15.9	22.84	19 28.1	7 0.5
29	299 33 38.1	306 17 5.3	2 46 11.3	2 14 5.7	23.84	20 21.7	7 55.2
30	312 56 44.6	319 32 46.4	1 40 28.9	N. 1 5 50.3	24.84	21 12.7	8 47.5
31	326 5 21.5	332 34 40.5	N. 0 30 38.9	S. 0 4 37.3	25.84	22 1.4	9 37.3
32	339 0 53.1	345 24 8.1	S. 0 39 30.9	S. 1 13 36.4	26.84	22 48.1	10 24.9

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 1.					MONDAY 3.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	19 20 12·93	24·220	S. 18 30 47·4	24·13	0	21 13 7·12	22·688	S. 14 34 42·9	71·25
1	19 22 38·19	24·198	18 28 15·2	25·28	1	21 15 23·13	22·648	14 27 33·1	72·02
2	19 25 3·31	24·176	18 25 44·1	26·42	2	21 17 38·90	22·610	14 20 18·7	72·78
3	19 27 28·30	24·153	18 23 2·2	27·54	3	21 19 54·45	22·572	14 12 59·7	73·54
4	19 29 53·15	24·130	18 20 13·6	28·67	4	21 22 9·76	22·533	14 5 36·2	74·29
5	19 32 17·86	24·106	18 17 18·2	29·80	5	21 24 24·84	22·494	13 58 8·2	75·02
6	19 34 42·42	24·081	18 14 16·0	30·92	6	21 26 39·69	22·456	13 50 36·0	75·73
7	19 37 6·83	24·056	18 11 7·2	32·02	7	21 28 54·31	22·417	13 42 59·4	76·46
8	19 39 31·09	24·030	18 7 51·7	33·13	8	21 31 8·69	22·378	13 35 18·5	77·17
9	19 41 55·19	24 003	18 4 29·6	34·23	9	21 33 22·84	22·339	13 27 33·4	77·86
10	19 44 19·13	23·977	18 1 0·9	35·33	10	21 35 36·76	22·301	13 19 44·2	78·53
11	19 46 42·91	23·950	17 57 25·7	36·42	11	21 37 50·45	22 262	13 11 51·0	79·21
12	19 49 6·53	23·923	17 53 43·9	37·50	12	21 40 3·90	22·223	13 3 53·7	79·88
13	19 51 29·98	23·894	17 49 55·7	38·57	13	21 42 17·12	22·184	12 55 52·4	80·53
14	19 53 53·26	23·866	17 46 1·1	39·64	14	21 44 30·11	22·146	12 47 47·3	81·18
15	19 56 16·37	23·837	17 42 0·0	40 71	15	21 46 42·87	22·107	12 39 38·3	81·82
16	19 58 39·30	23·807	17 37 52·6	41·76	16	21 48 55·39	22·068	12 31 25·5	82·43
17	20 1 2·05	23·777	17 33 38·9	42·80	17	21 51 7·68	22 029	12 23 9·1	83·05
18	20 3 24·62	23·747	17 29 19·0	43·84	18	21 53 19·74	21·991	12 14 48·9	83·66
19	20 5 47·01	23·716	17 24 52·8	44 88	19	21 55 31·57	21 953	12 6 25·2	84·24
20	20 8 9·21	23·684	17 20 20·4	45·91	20	21 57 43·18	21 915	11 57 58·0	84·83
21	20 10 31·22	23·653	17 15 41·9	46·93	21	21 59 54·55	21 876	11 49 27·2	85·41
22	20 12 53·04	23·621	17 10 57·3	47·93	22	22 2 5·69	21 838	11 40 53·1	85·98
23	20 15 14·67	23·588	S. 17 6 6·7	48 93	23	22 4 16·61	21 801	S. 11 32 15·5	86·53
SUNDAY 2.					TUESDAY 4.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	20 17 36·10	23·555	S. 17 1 10·1	49·93	0	22 6 27·30	21·763	S. 11 23 34·7	87 07
1	20 19 57·33	23·523	16 56 7·5	50·93	1	22 8 37·76	21·724	11 14 50·7	87 60
2	20 22 18·37	23·489	16 50 59·0	51·90	2	22 10 47·99	21·687	11 6 3·5	88·13
3	20 24 39·20	23·455	16 45 44·7	52 88	3	22 12 58·00	21·650	10 57 13·2	88·64
4	20 26 59·83	23 421	16 40 24·5	53 84	4	22 15 7·79	21·613	10 48 19·8	89·15
5	20 29 20·25	23·387	16 34 58·6	54·79	5	22 17 17·35	21·575	10 39 23·4	89·64
6	20 31 40·47	23·352	16 29 27·0	55·73	6	22 19 26·69	21 538	10 30 24·1	90·12
7	20 34 0·47	23·317	16 23 49·8	56·68	7	22 21 35·81	21·502	10 21 22·0	90 59
8	20 36 20·27	23·282	16 18 6·9	57·61	8	22 23 44·71	21·465	10 12 17·0	91·07
9	20 38 39·85	23 246	16 12 18·5	58·53	9	22 25 53·39	21·429	10 3 9·2	91·52
10	20 40 59·22	23·210	16 6 24·6	59·43	10	22 28 1·86	21·393	9 53 58·8	91·96
11	20 43 18·37	23·173	16 0 25·3	60·34	11	22 30 10·10	21·356	9 44 45·7	92·39
12	20 45 37·30	23·138	15 54 20·5	61·23	12	22 32 18·13	21·321	9 35 30·1	92·82
13	20 47 56·02	23·101	15 48 10·5	62·12	13	22 34 25·95	21·285	9 26 11·9	93·23
14	20 50 14·51	23·064	15 41 55·1	63·00	14	22 36 33·55	21·250	9 16 51·3	93·63
15	20 52 32·79	23·028	15 35 34·5	63·86	15	22 38 40·95	21·215	9 7 28·3	94·03
16	20 54 50·84	22·990	15 29 8·8	64·72	16	22 40 48·13	21·180	8 58 3·0	94 41
17	20 57 8·67	22·952	15 22 37·9	65·58	17	22 42 55·11	21·145	8 48 35·4	94·79
18	20 59 26·27	22·915	15 16 1·9	66·42	18	22 45 1·87	21·110	8 39 5·5	95·16
19	21 1 43·65	22·878	15 9 20·9	67·24	19	22 47 8·43	21·077	8 29 33·5	95·51
20	21 4 0·80	22·839	15 2 35·0	68·06	20	22 49 14·79	21·043	8 19 59·4	95·86
21	21 6 17·72	22·802	14 55 44·2	68·88	21	22 51 20·95	21·009	8 10 23·2	96·20
22	21 8 34·42	22·763	14 48 48·5	69·68	22	22 53 26·90	20·976	8 0 45·0	96·52
23	21 10 50·88	22·725	14 41 48·1	70·47	23	22 55 32·66	20·943	7 51 5·0	96·83
24	21 13 7·12	22·688	S. 14 34 42·9	71·25	24	22 57 38·21	20·909	S. 7 41 23·0	97·15

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 5.					FRIDAY 7.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	22 57 38.21	20.909	S. 7 41 23.0	97 15	0	0 34 50.53	19.729	N. 0 23 16.5	101.57
1	22 59 43.57	20.878	7 31 39.2	97.45	1	0 36 48.86	19.714	0 33 25.6	101.46
2	23 1 48.74	20.846	7 21 53.7	97.73	2	0 38 47.10	19.699	0 43 34.0	101.34
3	23 3 53.72	20.813	7 12 6.4	98.02	3	0 40 45.25	19.684	0 53 41.7	101.22
4	23 5 58.50	20.782	7 2 17.5	98.28	4	0 42 43.31	19.669	1 3 48.6	101.09
5	23 8 3.10	20.751	6 52 27.0	98.54	5	0 44 41.28	19.656	1 13 54.8	100.97
6	23 10 7.51	20.719	6 42 35.0	98.79	6	0 46 39.18	19.643	1 24 0.2	100.83
7	23 12 11.73	20.688	6 32 41.5	99.04	7	0 48 36.99	19.629	1 34 4.7	100.68
8	23 14 15.77	20.658	6 22 46.5	99.28	8	0 50 34.73	19.617	1 44 8.3	100.53
9	23 16 19.63	20.628	6 12 50.2	99.49	9	0 52 32.39	19.604	1 54 11.0	100.36
10	23 18 23.30	20.598	6 2 52.6	99.71	10	0 54 29.98	19.592	2 4 12.6	100.19
11	23 20 26.80	20.569	5 52 53.7	99.91	11	0 56 27.49	19.580	2 14 13.3	100.03
12	23 22 30.13	20.540	5 42 53.7	100.11	12	0 58 24.94	19.569	2 24 12.9	99.84
13	23 24 33.28	20.511	5 32 52.4	100.30	13	1 0 22.32	19.558	2 34 11.4	99.65
14	23 26 36.26	20.483	5 22 50.1	100.48	14	1 2 19.64	19.548	2 44 8.7	99.46
15	23 28 39.07	20.454	5 12 46.7	100.64	15	1 4 16.89	19.538	2 54 4.9	99.26
16	23 30 41.71	20.426	5 2 42.4	100.80	16	1 6 14.09	19.528	3 3 59.8	99.04
17	23 32 44.18	20.398	4 52 37.1	100.96	17	1 8 11.23	19.518	3 13 53.4	98.83
18	23 34 46.49	20.372	4 42 30.9	101.10	18	1 10 8.31	19.509	3 23 45.7	98.61
19	23 36 48.64	20.346	4 32 23.9	101.23	19	1 12 5.34	19.502	3 33 36.7	98.39
20	23 38 50.64	20.319	4 22 16.1	101.37	20	1 14 2.33	19.493	3 43 26.4	98.16
21	23 40 52.47	20.293	4 12 7.5	101.48	21	1 15 59.26	19.485	3 53 14.6	97.91
22	23 42 54.15	20.267	4 1 58.3	101.58	22	1 17 56.15	19.478	4 3 1.3	97.67
23	23 44 55.67	20.242	S. 3 51 48.5	101.68	23	1 19 52.99	19.471	N. 4 12 46.6	97.42
THURSDAY 6.					SATURDAY 8.				
0	23 46 57.05	20.217	S. 3 41 38.1	101.78	0	1 21 49.80	19.464	N. 4 22 30.3	97.15
1	23 48 58.27	20.192	3 31 27.2	101.86	1	1 23 46.56	19.458	4 32 12.4	96.89
2	23 50 59.35	20.168	3 21 15.8	101.94	2	1 25 43.29	19.453	4 41 53.0	96.63
3	23 53 0.28	20.144	3 11 3.9	102.01	3	1 27 39.99	19.447	4 51 31.9	96.34
4	23 55 1.08	20.121	3 0 51.7	102.06	4	1 29 36.65	19.442	5 1 9.1	96.06
5	23 57 1.73	20.097	2 50 39.2	102.11	5	1 31 33.29	19.437	5 10 44.6	95.77
6	23 59 2.24	20.074	2 40 26.4	102.15	6	1 33 29.89	19.432	5 20 18.3	95.48
7	0 1 2.62	20.052	2 30 13.4	102.18	7	1 35 26.47	19.428	5 29 50.3	95.18
8	0 3 2.86	20.030	2 20 0.2	102.21	8	1 37 23.03	19.425	5 39 20.5	94.87
9	0 5 2.98	20.008	2 9 46.9	102.23	9	1 39 19.57	19.422	5 48 48.7	94.55
10	0 7 2.96	19.987	1 59 33.5	102.24	10	1 41 16.09	19.418	5 58 15.1	94.24
11	0 9 2.82	19.967	1 49 20.0	102.24	11	1 43 12.59	19.416	6 7 39.6	93.92
12	0 11 2.56	19.946	1 39 6.6	102.23	12	1 45 9.08	19.413	6 17 2.1	93.58
13	0 13 2.17	19.926	1 28 53.2	102.22	13	1 47 5.55	19.412	6 26 22.6	93.25
14	0 15 1.67	19.906	1 18 40.0	102.19	14	1 49 2.02	19.411	6 35 41.1	92.90
15	0 17 1.04	19.886	1 8 26.9	102.17	15	1 50 58.48	19.409	6 44 57.4	92.55
16	0 19 0.30	19.868	0 58 14.0	102.13	16	1 52 54.93	19.408	6 54 11.7	92.21
17	0 20 59.45	19.849	0 48 1.3	102.08	17	1 54 51.38	19.408	7 3 23.9	91.85
18	0 22 58.49	19.831	0 37 49.0	102.03	18	1 56 47.83	19.408	7 12 33.9	91.48
19	0 24 57.42	19.813	0 27 37.0	101.98	19	1 58 44.28	19.408	7 21 41.7	91.11
20	0 26 56.24	19.795	0 17 25.3	101.91	20	2 0 40.73	19.409	7 30 47.2	90.73
21	0 28 54.96	19.778	S. 0 7 14.1	101.83	21	2 2 37.19	19.410	7 39 50.5	90.36
22	0 30 53.58	19.763	N. 0 2 56.6	101.74	22	2 4 33.65	19.411	7 48 51.5	89.97
23	0 32 52.11	19.746	0 13 6.8	101.66	23	2 6 30.12	19.413	7 57 50.2	89.58
24	0 34 50.53	19.729	N. 0 23 16.5	101.57	24	2 8 26.61	19.416	N. 8 6 46.5	89.18

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 9.					TUESDAY 11.				
	h m s	s	N. ° ' "	89. ° "		h m s	s	N. ° ' "	61. ° "
0	2 8 26.61	19.416	8 6 46.5	89.18	0	3 42 28.05	19.869	14 19 33.2	61.30
1	2 10 23.11	19.418	8 15 40.4	88.78	1	3 44 27.31	19.884	14 25 57.1	63.67
2	2 12 19.62	19.420	8 24 31.9	88.38	2	3 46 26.66	19.900	14 32 17.2	63.03
3	2 14 16.15	19.423	8 33 20.9	87.96	3	3 48 26.11	19.916	14 38 33.4	62.38
4	2 16 12.70	19.427	8 42 7.4	87.54	4	3 50 25.65	19.933	14 44 45.8	61.74
5	2 18 9.27	19.431	8 50 51.4	87.13	5	3 52 25.30	19.949	14 50 54.3	61.09
6	2 20 5.87	19.435	8 59 32.9	86.70	6	3 54 25.04	19.965	14 56 58.9	60.44
7	2 22 2.49	19.438	9 8 11.8	86.26	7	3 56 24.88	19.983	15 2 59.6	59.78
8	2 23 59.13	19.443	9 16 48.0	85.82	8	3 58 24.83	19.999	15 8 56.3	59.13
9	2 25 55.81	19.449	9 25 21.6	85.38	9	4 0 24.87	20.016	15 14 49.1	58.46
10	2 27 52.52	19.454	9 33 52.5	84.93	10	4 2 25.02	20.033	15 20 37.8	57.78
11	2 29 49.26	19.460	9 42 20.7	84.48	11	4 4 25.27	20.051	15 26 22.5	57.11
12	2 31 46.04	19.466	9 50 46.2	84.02	12	4 6 25.63	20.068	15 32 3.1	56.43
13	2 33 42.85	19.472	9 59 8.9	83.55	13	4 8 26.09	20.086	15 37 39.6	55.74
14	2 35 39.70	19.479	10 7 28.8	83.08	14	4 10 26.66	20.104	15 43 12.0	55.06
15	2 37 36.60	19.486	10 15 45.9	82.61	15	4 12 27.34	20.122	15 48 40.3	54.37
16	2 39 33.53	19.493	10 24 0.1	82.13	16	4 14 28.12	20.140	15 54 4.4	53.67
17	2 41 30.51	19.501	10 32 11.4	81.64	17	4 16 29.02	20.158	15 59 24.3	52.97
18	2 43 27.54	19.508	10 40 19.8	81.16	18	4 18 30.02	20.176	16 4 40.0	52.27
19	2 45 24.61	19.517	10 48 25.3	80.67	19	4 20 31.13	20.195	16 9 51.5	51.56
20	2 47 21.74	19.525	10 56 27.8	80.17	20	4 22 32.36	20.214	16 14 58.7	50.84
21	2 49 18.91	19.533	11 4 27.3	79.66	21	4 24 33.70	20.233	16 20 1.6	50.12
22	2 51 16.14	19.543	11 12 23.7	79.15	22	4 26 35.15	20.252	16 25 0.2	49.41
23	2 53 13.43	19.553	N. 11 20 17.1	78.64	23	4 28 36.72	20.271	N. 16 29 54.5	48.68
MONDAY 10.					WEDNESDAY 12.				
	h m s	s	N. ° ' "	78. ° "		h m s	s	N. ° ' "	47. ° "
0	2 55 10.77	19.562	N. 11 28 7.4	78.12	0	4 30 38.40	20.289	N. 16 34 44.4	47.95
1	2 57 8.17	19.571	11 35 54.5	77.59	1	4 32 40.19	20.308	16 39 29.9	47.22
2	2 59 5.62	19.581	11 43 38.5	77.08	2	4 34 42.10	20.328	16 44 11.0	46.48
3	3 1 3.14	19.593	11 51 19.4	76.54	3	4 36 44.13	20.348	16 48 47.7	45.74
4	3 3 0.73	19.603	11 58 57.0	76.00	4	4 38 46.27	20.367	16 53 19.9	44.99
5	3 4 58.38	19.613	12 6 31.4	75.46	5	4 40 48.53	20.387	16 57 47.6	44.24
6	3 6 56.09	19.624	12 14 2.5	74.91	6	4 42 50.91	20.406	17 2 10.8	43.49
7	3 8 53.87	19.636	12 21 30.3	74.36	7	4 44 53.40	20.426	17 6 29.5	42.74
8	3 10 51.72	19.648	12 28 54.8	73.81	8	4 46 56.02	20.446	17 10 43.7	41.98
9	3 12 49.65	19.660	12 36 16.0	73.25	9	4 48 58.75	20.465	17 14 53.2	41.21
10	3 14 47.64	19.672	12 43 33.8	72.68	10	4 51 1.60	20.485	17 18 58.2	40.44
11	3 16 45.71	19.685	12 50 48.2	72.11	11	4 53 4.57	20.505	17 22 58.5	39.67
12	3 18 43.86	19.698	12 57 59.1	71.53	12	4 55 7.66	20.525	17 26 54.2	38.90
13	3 20 42.09	19.711	13 5 6.6	70.96	13	4 57 10.87	20.545	17 30 45.3	38.12
14	3 22 40.39	19.723	13 12 10.6	70.38	14	4 59 14.20	20.565	17 34 31.6	37.33
15	3 24 38.77	19.738	13 19 11.2	69.79	15	5 1 17.65	20.586	17 38 13.2	36.54
16	3 26 37.24	19.751	13 26 8.1	69.19	16	5 3 21.23	20.606	17 41 50.1	35.75
17	3 28 35.78	19.764	13 33 1.5	68.60	17	5 5 24.92	20.625	17 45 22.2	34.95
18	3 30 34.41	19.779	13 39 51.3	68.00	18	5 7 28.73	20.646	17 48 49.5	34.15
19	3 32 33.13	19.794	13 46 37.5	67.39	19	5 9 32.67	20.666	17 52 12.0	33.35
20	3 34 31.94	19.808	13 53 20.0	66.78	20	5 11 36.72	20.686	17 55 29.7	32.55
21	3 36 30.83	19.823	13 59 58.9	66.17	21	5 13 40.90	20.707	17 58 42.6	31.74
22	3 38 29.81	19.838	14 6 34.0	65.55	22	5 15 45.20	20.727	18 1 50.6	30.93
23	3 40 28.88	19.853	14 13 5.5	64.93	23	5 17 49.62	20.747	18 4 53.7	30.10
24	3 42 28.05	19.869	N. 14 19 33.2	64.30	24	5 19 54.16	20.767	N. 18 7 51.8	29.28

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 13.					SATURDAY 15.				
	h m s	s	N. 18° 7' 51".8	29".28		h m s	s	N. 18° 47' 51".6	13".64
0	5 19 54.16	20.767	N. 18 7 51.8	29.28	0	7 1 47.24	21.643	N. 18 47 51.6	13.64
1	5 21 58.82	20.787	18 10 45.1	28.46	1	7 3 57.14	21.658	18 46 26.9	14.59
2	5 24 3.60	20.807	18 13 33.3	27.63	2	7 6 7.13	21.673	18 44 56.5	15.55
3	5 26 8.50	20.827	18 16 16.6	26.80	3	7 8 17.21	21.687	18 43 20.3	16.50
4	5 28 13.52	20.848	18 18 54.9	25.97	4	7 10 27.37	21.701	18 41 38.5	17.44
5	5 30 18.67	20.868	18 21 28.2	25.13	5	7 12 37.62	21.715	18 39 51.0	18.40
6	5 32 23.93	20.887	18 23 56.5	24.29	6	7 14 47.95	21.728	18 37 57.7	19.37
7	5 34 29.31	20.908	18 26 19.7	23.44	7	7 16 58.36	21.743	18 35 58.6	20.32
8	5 36 34.82	20.928	18 28 37.8	22.59	8	7 19 8.86	21.757	18 33 53.9	21.27
9	5 38 40.44	20.947	18 30 50.8	21.74	9	7 21 19.44	21.769	18 31 43.4	22.23
10	5 40 46.18	20.967	18 32 58.7	20.88	10	7 23 30.09	21.783	18 29 27.1	23.19
11	5 42 52.04	20.987	18 35 1.4	20.02	11	7 25 40.83	21.796	18 27 5.1	24.15
12	5 44 58.02	21.007	18 36 59.0	19.17	12	7 27 51.64	21.808	18 24 37.3	25.12
13	5 47 4.12	21.027	18 38 51.4	18.30	13	7 30 2.53	21.821	18 22 3.7	26.08
14	5 49 10.34	21.046	18 40 38.6	17.43	14	7 32 13.49	21.833	18 19 24.4	27.03
15	5 51 16.67	21.065	18 42 20.6	16.57	15	7 34 24.53	21.846	18 16 39.4	27.99
16	5 53 23.12	21.085	18 43 57.4	15.69	16	7 36 35.64	21.858	18 13 48.5	28.96
17	5 55 29.69	21.104	18 45 28.9	14.81	17	7 38 46.82	21.869	18 10 51.9	29.92
18	5 57 36.37	21.123	18 46 55.1	13.93	18	7 40 58.07	21.881	18 7 49.5	30.88
19	5 59 43.17	21.143	18 48 16.0	13.05	19	7 43 9.39	21.893	18 4 41.4	31.83
20	6 1 50.08	21.162	18 49 31.7	12.17	20	7 45 20.78	21.904	18 1 27.5	32.80
21	6 3 57.11	21.181	18 50 42.0	11.28	21	7 47 32.24	21.915	17 58 7.8	33.77
22	6 6 4.25	21.199	18 51 47.0	10.38	22	7 49 43.76	21.925	17 54 42.3	34.73
23	6 8 11.50	21.218	N. 18 52 46.6	9.48	23	7 51 55.34	21.936	N. 17 51 11.0	35.69
FRIDAY 14.					SUNDAY 16.				
0	6 10 18.87	21.237	N. 18 53 40.8	8.59	0	7 54 6.99	21.947	N. 17 47 34.0	36.65
1	6 12 26.34	21.255	18 54 29.7	7.69	1	7 56 18.70	21.957	17 43 51.2	37.61
2	6 14 33.93	21.274	18 55 13.1	6.78	2	7 58 30.47	21.967	17 40 2.7	38.57
3	6 16 41.63	21.293	18 55 51.1	5.88	3	8 0 42.30	21.977	17 36 8.4	39.53
4	6 18 49.44	21.310	18 56 23.7	4.98	4	8 2 54.19	21.987	17 32 8.4	40.48
5	6 20 57.35	21.328	18 56 50.8	4.07	5	8 5 6.14	21.996	17 28 2.6	41.44
6	6 23 5.38	21.347	18 57 12.5	3.15	6	8 7 18.14	22.005	17 23 51.1	42.39
7	6 25 13.51	21.363	18 57 28.6	2.23	7	8 9 30.20	22.015	17 19 33.9	43.35
8	6 27 21.74	21.382	18 57 39.3	1.33	8	8 11 42.32	22.023	17 15 10.9	44.31
9	6 29 30.09	21.400	18 57 44.5	0.40	9	8 13 54.48	22.032	17 10 42.2	45.27
10	6 31 38.54	21.417	18 57 44.1	0.53	10	8 16 6.70	22.041	17 6 7.7	46.22
11	6 33 47.09	21.433	18 57 38.2	1.45	11	8 18 18.97	22.049	17 1 27.6	47.16
12	6 35 55.74	21.450	18 57 26.7	2.38	12	8 20 31.29	22.058	16 56 41.8	48.11
13	6 38 4.49	21.468	18 57 9.7	3.30	13	8 22 43.66	22.065	16 51 50.3	49.06
14	6 40 13.35	21.485	18 56 47.1	4.23	14	8 24 56.07	22.073	16 46 53.1	50.01
15	6 42 22.31	21.501	18 56 18.9	5.17	15	8 27 8.54	22.082	16 41 50.2	50.95
16	6 44 31.36	21.517	18 55 45.1	6.11	16	8 29 21.05	22.088	16 36 41.7	51.89
17	6 46 40.51	21.533	18 55 5.6	7.04	17	8 31 33.60	22.096	16 31 27.5	52.83
18	6 48 49.76	21.550	18 54 20.6	7.98	18	8 33 46.20	22.103	16 26 7.7	53.77
19	6 50 59.11	21.566	18 53 29.9	8.92	19	8 35 58.84	22.111	16 20 42.3	54.70
20	6 53 8.55	21.581	18 52 33.6	9.87	20	8 38 11.53	22.118	16 15 11.3	55.63
21	6 55 18.08	21.597	18 51 31.6	10.80	21	8 40 24.25	22.124	16 9 34.7	56.57
22	6 57 27.71	21.613	18 50 24.0	11.75	22	8 42 37.02	22.131	16 3 52.5	57.49
23	6 59 37.43	21.628	18 49 10.6	12.70	23	8 44 49.82	22.138	15 58 4.8	58.42
24	7 1 47.24	21.643	N. 18 47 51.6	13.64	24	8 47 2.67	22.144	N. 15 52 11.5	59.34

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 17.					WEDNESDAY 19.				
	h m s	s	N. 15 52 11.5	59.34		h m s	s	N. 9 29 8.7	98.09
0	8 47 2.67	22.144	15 46 12.7	60.26	0	10 33 54.01	22.368	9 19 18.2	98.73
1	8 49 15.55	22.150	15 40 8.4	61.18	1	10 36 8.23	22.373	9 9 23.9	99.38
2	8 51 28.47	22.156	15 33 58.6	62.08	2	10 38 22.48	22.378	8 59 25.7	100.00
3	8 53 41.42	22.162	15 27 43.4	62.99	3	10 40 36.76	22.382	8 49 23.9	100.62
4	8 55 54.41	22.168	15 21 22.7	63.90	4	10 42 51.06	22.387	8 39 18.3	101.23
5	8 58 7.44	22.174	15 14 56.6	64.81	5	10 45 5.40	22.393	8 29 9.1	101.83
6	9 0 20.50	22.179	15 8 25.0	65.71	6	10 47 19.77	22.398	8 18 56.4	102.42
7	9 2 33.59	22.184	15 1 48.1	66.60	7	10 49 34.17	22.403	8 8 40.1	103.00
8	9 4 46.71	22.190	14 55 5.8	67.49	8	10 51 48.61	22.409	7 58 20.4	103.58
9	9 6 59.87	22.196	14 48 18.2	68.38	9	10 54 3.08	22.414	7 47 57.2	104.14
10	9 9 13.06	22.201	14 41 25.2	69.27	10	10 56 17.58	22.420	7 37 30.7	104.69
11	9 11 26.28	22.206	14 34 27.0	70.14	11	10 58 32.12	22.427	7 27 0.9	105.23
12	9 13 39.53	22.211	14 27 23.5	71.03	12	11 0 46.70	22.433	7 16 27.9	105.77
13	9 15 52.81	22.215	14 20 14.7	71.89	13	11 3 1.32	22.439	6 5 51.7	106.30
14	9 18 6.11	22.220	14 13 0.8	72.76	14	11 5 15.97	22.445	6 55 12.3	106.81
15	9 20 19.45	22.225	14 5 41.6	73.63	15	11 7 30.66	22.452	6 44 30.0	107.31
16	9 22 32.81	22.229	13 58 17.3	74.48	16	11 9 45.39	22.458	6 33 44.6	107.81
17	9 24 46.20	22.234	13 50 47.8	75.33	17	11 12 0.16	22.466	6 22 56.3	108.29
18	9 26 59.62	22.239	13 43 13.3	76.18	18	11 14 14.98	22.473	6 12 5.1	108.77
19	9 29 13.07	22.243	13 35 33.7	77.03	19	11 16 29.83	22.479	6 1 11.1	109.23
20	9 31 26.54	22.248	13 27 49.0	77.87	20	11 18 44.73	22.488	5 50 14.4	109.68
21	9 33 40.04	22.252	13 19 59.3	78.69	21	11 20 59.68	22.495	5 39 15.0	110.12
22	9 35 53.56	22.256	N. 13 12 4.7	79.52	22	11 23 14.67	22.502	N. 5 28 13.0	110.54
23	9 38 7.11	22.261			23	11 25 29.70	22.510		
TUESDAY 18.					THURSDAY 20.				
0	9 40 20.69	22.265	12 56 0.6	80.34	0	11 27 44.79	22.518	N. 5 17 8.5	110.97
1	9 42 34.29	22.269	12 47 51.2	81.98	1	11 29 59.92	22.527	5 6 1.4	111.38
2	9 44 47.92	22.273	12 39 36.9	82.78	2	11 32 15.11	22.536	4 54 52.0	111.77
3	9 47 1.57	22.277	12 31 17.9	83.57	3	11 34 30.35	22.544	4 43 40.2	112.16
4	9 49 15.24	22.281	12 22 54.1	84.37	4	11 36 45.64	22.551	4 32 26.1	112.53
5	9 51 28.94	22.286	12 14 25.5	85.15	5	11 39 0.98	22.561	4 21 9.9	112.88
6	9 53 42.67	22.290	12 5 52.3	85.93	6	11 41 16.37	22.571	4 9 51.5	113.24
7	9 55 56.42	22.293	11 57 14.4	86.70	7	11 43 31.83	22.581	3 58 31.0	113.58
8	9 58 10.19	22.298	11 48 31.9	87.47	8	11 45 47.34	22.589	3 47 8.5	113.91
9	10 0 23.99	22.302	11 39 44.8	88.23	9	11 48 2.90	22.599	3 35 44.1	114.23
10	10 2 37.81	22.306	11 30 53.1	88.98	10	11 50 18.53	22.610	3 24 17.8	114.53
11	10 4 51.66	22.310	11 21 57.0	89.73	11	11 52 34.22	22.621	3 12 49.7	114.82
12	10 7 5.53	22.314	11 12 56.4	90.47	12	11 54 49.98	22.631	3 1 20.0	115.10
13	10 9 19.43	22.318	11 3 51.4	91.20	13	11 57 5.79	22.641	2 49 48.5	115.38
14	10 11 33.35	22.323	10 54 42.0	91.93	14	11 59 21.67	22.653	2 38 15.5	115.62
15	10 13 47.30	22.327	10 45 28.3	92.63	15	12 1 37.62	22.664	2 26 41.1	115.86
16	10 16 1.27	22.331	10 36 10.4	93.34	16	12 3 53.64	22.675	2 15 5.2	116.10
17	10 18 15.27	22.336	10 26 48.2	94.05	17	12 6 9.72	22.687	2 3 27.9	116.32
18	10 20 29.30	22.340	10 17 21.8	94.74	18	12 8 25.88	22.698	1 51 49.4	116.52
19	10 22 43.35	22.344	10 7 51.3	95.43	19	12 10 42.10	22.710	1 40 9.7	116.71
20	10 24 57.43	22.348	9 58 16.6	96.11	20	12 12 58.40	22.723	1 28 28.9	116.89
21	10 27 11.53	22.353	9 48 38.0	96.78	21	12 15 14.78	22.736	1 16 47.0	117.06
22	10 29 25.66	22.358	9 38 55.3	97.44	22	12 17 31.23	22.748	1 5 4.2	117.22
23	10 31 39.82	22.363	N. 9 29 8.7	98.09	23	12 19 47.76	22.762	0 53 20.4	117.36
24	10 33 54.01	22.368			24	12 22 4.37	22.774	N. 0 41 35.9	117.48

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 21.					SUNDAY 23.				
	h m s	s	N. ° ' "	" "		h m s	s	S. ° ' "	" "
0	12 22 4.37	22.774	N. 0 41 35.9	117.48	0	14 13 20.32	23.659	S. 8 31 27.6	107.66
1	12 24 21.05	22.788	0 29 50.6	117.60	1	14 15 42.34	23.681	8 42 12.0	107.12
2	12 26 37.82	22.803	0 18 4.7	117.70	2	14 18 4.49	23.703	8 52 53.0	106.56
3	12 28 54.68	22.816	N. 0 6 18.2	117.79	3	14 20 26.78	23.726	9 3 30.7	106.00
4	12 31 11.61	22.829	S. 0 5 28.8	117.88	4	14 22 49.20	23.748	9 14 5.0	105.42
5	12 33 28.63	22.844	0 17 16.3	117.93	5	14 25 11.76	23.771	9 24 35.7	104.82
6	12 35 45.74	22.859	0 29 4.0	117.98	6	14 27 34.45	23.793	9 35 2.8	104.21
7	12 38 2.94	22.874	0 40 52.1	118.03	7	14 29 57.27	23.815	9 45 26.2	103.58
8	12 40 20.23	22.889	0 52 40.3	118.04	8	14 32 20.23	23.838	9 55 45.8	102.95
9	12 42 37.61	22.904	1 4 28.6	118.05	9	14 34 43.33	23.860	10 6 1.6	102.31
10	12 44 55.08	22.920	1 16 16.9	118.04	10	14 37 6.55	23.883	10 16 13.5	101.65
11	12 47 12.65	22.937	1 28 5.1	118.03	11	14 39 29.92	23.906	10 26 21.4	100.98
12	12 49 30.32	22.953	1 39 53.2	118.00	12	14 41 53.42	23.928	10 36 25.2	100.28
13	12 51 48.08	22.968	1 51 41.1	117.95	13	14 44 17.05	23.950	10 46 24.8	99.58
14	12 54 5.93	22.984	2 3 28.6	117.89	14	14 46 40.82	23.973	10 56 20.2	98.88
15	12 56 23.89	23.002	2 15 15.8	117.83	15	14 49 4.72	23.995	11 6 11.4	98.16
16	12 58 41.95	23.018	2 27 2.5	117.73	16	14 51 28.76	24.017	11 15 58.1	97.42
17	13 1 0.11	23.035	2 38 48.6	117.63	17	14 53 52.92	24.038	11 25 40.4	96.68
18	13 3 18.37	23.053	2 50 34.1	117.53	18	14 56 17.22	24.062	11 35 18.2	95.92
19	13 5 36.74	23.071	3 2 18.9	117.39	19	14 58 41.66	24.083	11 44 51.4	95.15
20	13 7 55.22	23.088	3 14 2.8	117.25	20	15 1 6.22	24.105	11 54 20.0	94.36
21	13 10 13.80	23.107	3 25 45.9	117.10	21	15 3 30.92	24.127	12 3 43.7	93.56
22	13 12 32.50	23.125	3 37 28.0	116.93	22	15 5 55.74	24.148	12 13 2.7	92.76
23	13 14 51.30	23.143	S. 3 49 9.0	116.74	23	15 8 20.70	24.170	S. 12 22 16.8	91.94
SATURDAY 22.					MONDAY 24.				
0	13 17 10.21	23.162	S. 4 0 48.9	116.55	0	15 10 45.78	24.192	S. 12 31 26.0	91.11
1	13 19 29.24	23.181	4 12 27.6	116.34	1	15 13 11.00	24.213	12 40 30.1	90.26
2	13 21 48.38	23.199	4 24 5.0	116.12	2	15 15 36.34	24.233	12 49 29.1	89.41
3	13 24 7.63	23.219	4 35 41.0	115.88	3	15 18 1.80	24.254	12 58 23.0	88.55
4	13 26 27.01	23.239	4 47 15.5	115.62	4	15 20 27.39	24.275	13 7 11.7	87.68
5	13 28 46.50	23.257	4 58 48.4	115.35	5	15 22 53.10	24.296	13 15 55.1	86.79
6	13 31 6.10	23.278	5 10 19.7	115.08	6	15 25 18.94	24.316	13 24 33.2	85.89
7	13 33 25.83	23.298	5 21 49.3	114.78	7	15 27 44.89	24.336	13 33 5.8	84.98
8	13 35 45.67	23.318	5 33 17.1	114.48	8	15 30 10.97	24.356	13 41 33.0	84.07
9	13 38 5.64	23.338	5 44 43.0	114.15	9	15 32 37.16	24.376	13 49 54.6	83.13
10	13 40 25.73	23.359	5 56 6.9	113.81	10	15 35 3.48	24.395	13 58 10.6	82.20
11	13 42 45.95	23.379	6 7 28.7	113.46	11	15 37 29.90	24.413	14 6 21.0	81.25
12	13 45 6.28	23.400	6 18 48.4	113.10	12	15 39 56.44	24.433	14 14 25.6	80.29
13	13 47 26.75	23.422	6 30 5.9	112.73	13	15 42 23.10	24.452	14 22 24.5	79.33
14	13 49 47.34	23.442	6 41 21.1	112.33	14	15 44 49.86	24.469	14 30 17.5	78.34
15	13 52 8.05	23.463	6 52 33.9	111.93	15	15 47 16.73	24.488	14 38 4.6	77.35
16	13 54 28.90	23.485	7 3 44.2	111.50	16	15 49 43.71	24.506	14 45 45.7	76.36
17	13 56 49.87	23.506	7 14 51.9	111.07	17	15 52 10.80	24.523	14 53 20.9	75.36
18	13 59 10.97	23.528	7 25 57.0	110.63	18	15 54 37.99	24.540	15 0 50.0	74.33
19	14 1 32.20	23.549	7 36 59.4	110.17	19	15 57 5.28	24.556	15 8 12.9	73.31
20	14 3 53.56	23.571	7 47 59.0	109.69	20	15 59 32.66	24.573	15 15 29.7	72.28
21	14 6 15.05	23.593	7 58 55.7	109.20	21	16 2 0.15	24.589	15 22 40.3	71.24
22	14 8 36.67	23.615	8 9 49.4	108.70	22	16 4 27.73	24.604	15 29 44.6	70.19
23	14 10 58.43	23.638	8 20 40.1	108.18	23	16 6 55.40	24.619	15 36 42.6	69.13
24	14 13 20.32	23.659	S. 8 31 27.6	107.66	24	16 9 23.16	24.634	S. 15 43 34.2	68.06

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 25.					THURSDAY 27.				
	h' m s	s	S. ° ' "	"		h' m s	s	S. ° ' "	"
0	16 9 23.16	24.634	S. 15 43 34.2	68.06	0	18 8 22.51	24.721	S. 18 56 23.5	10.94
1	16 11 51.01	24.648	15 50 19.3	66.98	1	18 10 50.80	24.708	18 57 25.4	9.71
2	16 14 18.94	24.663	15 56 58.0	65.91	2	18 13 19.00	24.693	18 58 20.0	8.48
3	16 16 46.96	24.676	16 3 30.2	64.83	3	18 15 47.11	24.678	18 59 7.2	7.25
4	16 19 15.05	24.688	16 9 55.9	63.73	4	18 18 15.14	24.663	18 59 47.0	6.02
5	16 21 43.22	24.702	16 16 14.9	62.62	5	18 20 43.07	24.648	19 0 19.4	4.79
6	16 24 11.47	24.714	16 22 27.3	61.50	6	18 23 10.91	24.632	19 0 44.5	3.56
7	16 26 39.79	24.726	16 28 32.9	60.38	7	18 25 38.65	24.614	19 1 2.1	2.33
8	16 29 8.18	24.738	16 34 31.9	59.27	8	18 28 6.28	24.597	19 1 12.5	1.12
9	16 31 36.64	24.748	16 40 24.1	58.13	9	18 30 33.81	24.578	19 1 15.5	0.11
10	16 34 5.16	24.758	16 46 9.5	56.99	10	18 33 1.22	24.559	19 1 11.2	1.32
11	16 36 33.73	24.768	16 51 48.0	55.85	11	18 35 28.52	24.540	19 0 59.7	2.53
12	16 39 2.37	24.778	16 57 19.7	54.70	12	18 37 55.70	24.519	19 0 40.8	3.75
13	16 41 31.06	24.786	17 2 44.4	53.54	13	18 40 22.75	24.499	19 0 14.7	4.95
14	16 43 59.80	24.794	17 8 2.2	52.38	14	18 42 49.69	24.478	18 59 41.4	6.15
15	16 46 28.59	24.803	17 13 13.0	51.22	15	18 45 16.49	24.456	18 59 0.9	7.36
16	16 48 57.43	24.809	17 18 16.8	50.04	16	18 47 43.16	24.433	18 58 13.1	8.56
17	16 51 26.30	24.816	17 23 13.5	48.87	17	18 50 9.69	24.411	18 57 18.2	9.75
18	16 53 55.22	24.822	17 28 3.2	47.68	18	18 52 36.09	24.388	18 56 16.1	10.93
19	16 56 24.16	24.827	17 32 45.7	46.50	19	18 55 2.34	24.363	18 55 7.0	12.12
20	16 58 53.14	24.833	17 37 21.2	45.31	20	18 57 28.44	24.338	18 53 50.7	13.31
21	17 1 22.15	24.837	17 41 49.4	44.11	21	18 59 54.40	24.313	18 52 27.3	14.48
22	17 3 51.18	24.841	17 46 10.5	42.92	22	19 2 20.20	24.288	18 50 57.0	15.64
23	17 6 20.24	24.844	S. 17 50 24.4	41.71	23	19 4 45.85	24.262	S. 18 49 19.6	16.82
WEDNESDAY 26.					FRIDAY 28.				
	h' m s	s	S. ° ' "	"		h' m s	s	S. ° ' "	"
0	17 8 49.31	24.846	S. 17 54 31.0	40.50	0	19 7 11.34	24.234	S. 18 47 35.2	17.98
1	17 11 18.39	24.848	17 58 30.4	39.29	1	19 9 36.66	24.207	18 45 43.8	19.13
2	17 13 47.48	24.849	18 2 22.5	38.08	2	19 12 1.82	24.180	18 43 45.6	20.28
3	17 16 16.58	24.851	18 6 7.4	36.87	3	19 14 26.82	24.152	18 41 40.4	21.43
4	17 18 45.69	24.851	18 9 44.9	35.64	4	19 16 51.64	24.123	18 39 28.4	22.57
5	17 21 14.79	24.849	18 13 15.1	34.43	5	19 19 16.29	24.093	18 37 9.6	23.71
6	17 23 43.88	24.848	18 16 38.0	33.20	6	19 21 40.76	24.063	18 34 43.9	24.84
7	17 26 12.97	24.847	18 19 53.5	31.97	7	19 24 5.05	24.033	18 32 11.5	25.96
8	17 28 42.05	24.845	18 23 1.6	30.73	8	19 26 29.16	24.003	18 29 32.4	27.08
9	17 31 11.11	24.842	18 26 2.3	29.51	9	19 28 53.09	23.973	18 26 46.6	28.18
10	17 33 40.15	24.838	18 28 55.7	28.28	10	19 31 16.83	23.940	18 23 54.2	29.29
11	17 36 9.17	24.834	18 31 41.7	27.04	11	19 33 40.37	23.908	18 20 55.1	30.39
12	17 38 38.16	24.829	18 34 20.2	25.81	12	19 36 3.73	23.877	18 17 49.5	31.48
13	17 41 7.12	24.823	18 36 51.4	24.58	13	19 38 26.89	23.844	18 14 37.3	32.58
14	17 43 36.04	24.818	18 39 15.1	23.33	14	19 40 49.86	23.811	18 11 18.6	33.65
15	17 46 4.93	24.811	18 41 31.4	22.09	15	19 43 12.62	23.777	18 7 53.5	34.72
16	17 48 33.77	24.803	18 43 40.2	20.85	16	19 45 35.18	23.743	18 4 22.0	35.78
17	17 51 2.57	24.796	18 45 41.6	19.62	17	19 47 57.54	23.710	18 0 44.1	36.85
18	17 53 31.32	24.787	18 47 35.6	18.38	18	19 50 19.70	23.675	17 56 59.8	37.90
19	17 56 0.01	24.777	18 49 22.2	17.14	19	19 52 41.64	23.640	17 53 9.3	38.94
20	17 58 28.64	24.767	18 51 1.3	15.90	20	19 55 3.38	23.605	17 49 12.5	39.97
21	18 0 57.21	24.757	18 52 33.0	14.66	21	19 57 24.90	23.569	17 45 9.6	41.01
22	18 3 25.72	24.745	18 53 57.2	13.43	22	19 59 46.21	23.534	17 41 0.4	42.03
23	18 5 54.15	24.733	18 55 14.1	12.19	23	20 2 7.31	23.498	17 36 45.2	43.04
24	18 8 22.51	24.721	S. 18 56 23.5	10.94	24	20 4 28.19	23.462	S. 17 32 23.9	44.05

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 29.					MONDAY 31.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	20 4 28.19	23.462	S. 17 32 23.9	44.05	0	21 52 38.24	21.602	S. 12 20 42.8	82.43
1	20 6 48.85	23.425	17 27 56.6	45.05	1	21 54 47.74	21.564	12 12 26.5	83.00
2	20 9 9.29	23.388	17 23 23.3	46.05	2	21 56 57.01	21.527	12 4 6.8	83.58
3	20 11 29.51	23.352	17 18 44.0	47.03	3	21 59 6.06	21.490	11 55 43.6	84.14
4	20 13 49.51	23.314	17 13 58.9	48.01	4	22 1 14.89	21.453	11 47 17.1	84.69
5	20 16 9.28	23.277	17 9 7.9	48.98	5	22 3 23.49	21.416	11 38 47.3	85.23
6	20 18 28.83	23.239	17 4 11.2	49.93	6	22 5 31.88	21.381	11 30 14.3	85.76
7	20 20 48.15	23.201	16 59 8.7	50.89	7	22 7 40.06	21.344	11 21 38.2	86.28
8	20 23 7.24	23.163	16 54 0.5	51.83	8	22 9 48.01	21.308	11 12 58.9	86.81
9	20 25 26.10	23.124	16 48 46.7	52.77	9	22 11 55.75	21.273	11 4 16.5	87.31
10	20 27 44.73	23.087	16 43 27.3	53.69	10	22 14 3.28	21.238	10 55 31.2	87.81
11	20 30 3.14	23.048	16 38 2.4	54.61	11	22 16 10.60	21.203	10 46 42.8	88.30
12	20 32 21.31	23.008	16 32 32.0	55.52	12	22 18 17.71	21.168	10 37 51.6	88.77
13	20 34 39.24	22.969	16 26 56.1	56.43	13	22 20 24.61	21.133	10 28 57.6	89.24
14	20 36 56.94	22.931	16 21 14.8	57.33	14	22 22 31.30	21.098	10 20 0.7	89.71
15	20 39 14.41	22.893	16 15 28.2	58.21	15	22 24 37.79	21.064	10 11 1.1	90.16
16	20 41 31.65	22.853	16 9 36.3	59.08	16	22 26 44.07	21.030	10 1 58.8	90.60
17	20 43 48.65	22.813	16 3 39.2	59.95	17	22 28 50.15	20.997	9 52 53.9	91.03
18	20 46 5.41	22.773	15 57 36.9	60.81	18	22 30 56.03	20.963	9 43 46.4	91.46
19	20 48 21.93	22.734	15 51 29.5	61.66	19	22 33 1.71	20.930	9 34 36.4	91.88
20	20 50 38.22	22.695	15 45 17.0	62.51	20	22 35 7.19	20.898	9 25 23.9	92.28
21	20 52 54.27	22.655	15 38 59.4	63.34	21	22 37 12.48	20.866	9 16 9.0	92.67
22	20 55 10.08	22.616	15 32 36.9	64.16	22	22 39 17.58	20.833	9 6 51.8	93.07
23	20 57 25.66	22.577	S. 15 26 9.5	64.98	23	22 41 22.48	20.802	S. 8 57 32.2	93.45
SUNDAY 30.					TUESDAY, APRIL 1.				
0	20 59 41.00	22.537	S. 15 19 37.2	65.78	0	22 43 27.20	20.771	S. 8 48 10.4	93.83
1	21 1 56.10	22.497	15 13 0.1	66.58					
2	21 4 10.96	22.457	15 6 18.2	67.38					
3	21 6 25.58	22.417	14 51 31.6	68.15					
4	21 8 39.96	22.378	14 52 40.4	68.92					
5	21 10 54.11	22.338	14 45 44.6	69.68					
6	21 13 8.02	22.298	14 38 44.2	70.44					
7	21 15 21.69	22.258	14 31 39.3	71.18					
8	21 17 35.12	22.219	14 24 30.0	71.91					
9	21 19 48.32	22.180	14 17 16.4	72.63					
10	21 22 1.28	22.140	14 9 58.4	73.36					
11	21 24 14.00	22.101	14 2 36.1	74.07					
12	21 26 26.49	22.063	13 55 9.6	74.76					
13	21 28 38.75	22.022	13 47 39.0	75.45					
14	21 30 50.77	21.983	13 40 4.2	76.13					
15	21 33 2.55	21.945	13 32 25.4	76.80					
16	21 35 14.11	21.907	13 24 42.6	77.47					
17	21 37 25.43	21.868	13 16 55.8	78.12					
18	21 39 36.52	21.828	13 9 5.2	78.76					
19	21 41 47.37	21.790	13 1 10.7	79.39					
20	21 43 58.00	21.753	12 53 12.5	80.02					
21	21 46 8.40	21.715	12 45 10.5	80.63					
22	21 48 18.58	21.677	12 37 4.9	81.24					
23	21 50 28.52	21.638	12 28 55.6	81.84					
24	21 52 38.24	21.602	S. 12 20 42.8	82.43					

PHASES OF THE MOON.

		h	m
Mar. 5	● New Moon	3	57.7
13	☽ First Quarter	4	50.4
20	○ Full Moon	16	30.1
27	☾ Last Quarter	8	24.3
Mar. 11	☾ Apogee	9	9
23	☾ Perigee	5	2

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semidiameter passing the Meridian.*	Equation of Time, to be added to		Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.		subtracted from Apparent Time.		
	h m s	s	N. ° ' "	"	m s	m s	s	
Tues.	1	0 42 15.17	9.105	4 32' 45.6"	57.86	1 4.46	3 58.40	0.749
Wed.	2	0 45 53.76	9.111	4 55 51.8	57.65	1 4.48	3 40.49	0.744
Thur.	3	0 49 32.48	9.116	5 18 52.7	57.42	1 4.50	3 22.71	0.738
Frid.	4	0 53 11.35	9.123	5 41 48.1	57.19	1 4.52	3 5.07	0.731
Sat.	5	0 56 50.38	9.130	6 4 37.6	56.93	1 4.55	2 47.60	0.724
Sun.	6	1 0 29.59	9.138	6 27 20.7	56.66	1 4.58	2 30.31	0.716
Mon.	7	1 4 9.00	9.146	6 49 57.2	56.37	1 4.61	2 13.21	0.708
Tues.	8	1 7 48.61	9.155	7 12 26.6	56.07	1 4.64	1 56.32	0.699
Wed.	9	1 11 28.46	9.165	7 34 48.7	55.76	1 4.68	1 39.65	0.689
Thur.	10	1 15 8.54	9.175	7 57 3.1	55.43	1 4.72	1 23.23	0.679
Frid.	11	1 18 48.88	9.186	8 19 9.4	55.09	1 4.76	1 7.06	0.668
Sat.	12	1 22 29.49	9.198	8 41 7.3	54.73	1 4.80	0 51.16	0.656
Sun.	13	1 26 10.39	9.210	9 2 56.5	54.36	1 4.85	0 35.55	0.644
Mon.	14	1 29 51.59	9.224	9 24 36.5	53.97	1 4.90	0 20.24	0.631
Tues.	15	1 33 33.12	9.237	9 46 7.1	53.57	1 4.95	0 5.26	0.617
Wed.	16	1 37 14.98	9.252	10 7 28.0	53.16	1 5.00	0 9.39	0.603
Thur.	17	1 40 57.19	9.267	10 28 38.7	52.73	1 5.06	0 23.69	0.588
Frid.	18	1 44 39.78	9.283	10 49 39.0	52.29	1 5.12	0 37.62	0.572
Sat.	19	1 48 22.77	9.300	11 10 28.7	51.84	1 5.18	0 51.15	0.555
Sun.	20	1 52 6.16	9.317	11 31 7.2	51.37	1 5.24	1 4.27	0.538
Mon.	21	1 55 49.98	9.335	11 51 34.5	50.89	1 5.30	1 16.97	0.520
Tues.	22	1 59 34.25	9.354	12 11 50.1	50.40	1 5.36	1 29.22	0.501
Wed.	23	2 3 18.99	9.374	12 31 53.7	49.90	1 5.43	1 41.00	0.481
Thur.	24	2 7 4.20	9.394	12 51 45.1	49.38	1 5.50	1 52.31	0.461
Frid.	25	2 10 49.91	9.415	13 11 23.9	48.85	1 5.57	2 3.13	0.440
Sat.	26	2 14 36.12	9.436	13 30 49.8	48.30	1 5.64	2 13.44	0.419
Sun.	27	2 18 22.85	9.458	13 50 2.5	47.75	1 5.71	2 23.24	0.398
Mon.	28	2 22 10.10	9.480	14 9 1.6	47.17	1 5.78	2 32.52	0.376
Tues.	29	2 25 57.88	9.502	14 27 46.8	46.59	1 5.86	2 41.27	0.353
Wed.	30	2 29 46.20	9.525	14 46 17.9	45.99	1 5.94	2 49.48	0.331
Thur.	31	2 33 35.06	9.547	N. 15 4 34.4	45.38	1 6.01	2 57.15	0.308

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.18 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be added to	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi- diameter.*	subtracted from Apparent Time.	
		h m s	N. ° ' "	' "	m s	h m s
Tues.	1	0 42 14.57	N. 4 32 41.8	16 1.46	3 58.45	0 38 16.11
Wed.	2	0 45 53.20	4 55 48.3	16 1.18	3 40.53	0 42 12.66
Thur.	3	0 49 31.96	5 18 49.5	16 0.90	3 22.75	0 46 9.22
Frid.	4	0 53 10.88	5 41 45.2	16 0.62	3 5.11	0 50 5.77
Sat.	5	0 56 49.95	6 4 34.9	16 0.35	2 47.63	0 54 2.32
Sun.	6	1 0 29.21	6 27 18.3	16 0.08	2 30.34	0 57 58.87
Mon.	7	1 4 8.66	6 49 55.1	15 59.80	2 13.24	1 1 55.42
Tues.	8	1 7 48.32	7 12 24.8	15 59.53	1 56.34	1 5 51.98
Wed.	9	1 11 28.20	7 34 47.2	15 59.26	1 39.67	1 9 48.53
Thur.	10	1 15 8.33	7 57 1.9	15 59.00	1 23.24	1 13 45.08
Frid.	11	1 18 48.71	8 19 8.4	15 58.73	1 7.07	1 17 41.63
Sat.	12	1 22 29.36	8 41 6.6	15 58.46	0 51.17	1 21 38.19
Sun.	13	1 26 10.30	9 2 55.9	15 58.20	0 35.56	1 25 34.74
Mon.	14	1 29 51.54	9 24 36.2	15 57.93	0 20.25	1 29 31.29
Tues.	15	1 33 33.10	9 46 7.0	15 57.67	0 5.26	1 33 27.84
Wed.	16	1 37 15.00	10 7 28.1	15 57.41	0 9.40	1 37 24.40
Thur.	17	1 40 57.25	10 28 39.1	15 57.15	0 23.70	1 41 20.95
Frid.	18	1 44 39.88	10 49 39.6	15 56.89	0 37.62	1 45 17.50
Sat.	19	1 48 22.90	11 10 29.4	15 56.63	0 51.16	1 49 14.06
Sun.	20	1 52 6.33	11 31 8.2	15 56.36	1 4.28	1 53 10.61
Mon.	21	1 55 50.18	11 51 35.6	15 56.10	1 16.98	1 57 7.16
Tues.	22	1 59 34.48	12 11 51.3	15 55.84	1 29.23	2 1 3.72
Wed.	23	2 3 19.25	12 31 55.1	15 55.58	1 41.02	2 5 0.27
Thur.	24	2 7 4.50	12 51 46.6	15 55.32	1 52.33	2 8 56.82
Frid.	25	2 10 50.24	13 11 25.5	15 55.06	2 3.14	2 12 53.38
Sat.	26	2 14 36.48	13 30 51.6	15 54.80	2 13.45	2 16 49.93
Sun.	27	2 18 23.23	13 50 4.4	15 54.55	2 23.25	2 20 46.48
Mon.	28	2 22 10.51	14 9 3.6	15 54.30	2 32.53	2 24 43.04
Tues.	29	2 25 58.31	14 27 48.9	15 54.05	2 41.28	2 28 39.59
Wed.	30	2 29 46.65	14 46 20.0	15 53.80	2 49.49	2 32 36.15
Thur.	31	2 33 35.53	N. 15 4 36.6	15 53.56	2 57.17	2 36 32.70

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

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
					Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	11° 29' 13"·0	N. 0°·24	9·9998732	23 17 54·25	15 21'·21	15 17'·20	56 20'·98	56 6'·25
2	12 28 23·2	N. 0°·11	9·9999998	23 13 58·35	15 13·30	15 9·52	55 51·93	55 38·07
3	13 27 31·5	S. 0°·01	0·0001259	23 10 2·44	15 5·88	15 2·40	55 24·71	55 11·95
4	14 26 37·7	0°·11	0·0002512	23 6 6·53	14 59·11	14 56·03	54 59·86	54 48·57
5	15 25 41·9	0°·19	·0003759	23 2 10·63	14 53·21	14 50·68	54 38·21	54 28·92
6	16 24 44·0	0°·25	·0004999	22 58 14·72	14 48·48	14 46·66	54 20·85	54 14·17
7	17 23 44·0	0°·28	0·0006231	22 54 18·81	14 45·26	14 44·33	54 9·03	54 5·61
8	18 22 41·8	0°·28	·0007456	22 50 22·91	14 43·91	14 44·04	54 4·06	54 4·54
9	19 21 37·4	0°·26	·0008676	22 46 27·00	14 44·75	14 46·10	54 7·18	54 12·10
10	20 20 30·7	0°·21	0·0009889	22 42 31·09	14 48·08	14 50·74	54 19·39	54 29·13
11	21 19 21·8	0°·14	·0011096	22 38 35·19	14 54·07	14 58·07	54 41·35	54 56·06
12	22 18 10·6	S. 0°·05	·0012298	22 34 39·28	15 2·75	15 8·06	55 13·21	55 32·71
13	23 16 57·2	N. 0°·06	0·0013496	22 30 43·37	15 13·98	15 20·44	55 54·42	56 18·13
14	24 15 41·5	0°·18	·0014690	22 26 47·47	15 27·36	15 34·66	56 43·55	57 10·34
15	25 14 23·5	0°·31	·0015882	22 22 51·56	15 42·22	15 49·89	57 38·07	58 6·24
16	26 13 3·4	0°·44	0·0017071	22 18 55·65	15 57·54	16 4·98	58 34·30	59 1·62
17	27 11 41·1	0°·56	·0018260	22 14 59·75	16 12·04	16 18·54	59 27·53	59 51·38
18	28 10 16·7	0°·67	·0019449	22 11 3·84	16 24·30	16 29·16	60 12·52	60 30·34
19	29 8 50·2	0°·76	0·0020638	22 7 7·93	16 32·97	16 35·64	60 44·35	60 54·16
20	30 7 21·9	0°·82	·0021828	22 3 12·02	16 37·11	16 37·33	60 59·52	61 0·36
21	31 5 51·7	0°·84	·0023017	21 59 16·12	16 36·35	16 34·23	60 56·76	60 48·98
22	32 4 19·8	0°·83	0·0024204	21 55 20·21	16 31·07	16 27·00	60 37·37	60 22·42
23	33 2 46·2	0°·79	·0025389	21 51 24·30	16 22·16	16 16·72	60 4·67	59 44·69
24	34 1 11·0	0°·72	·0026569	21 47 28·39	16 10·82	16 4·64	59 23·06	59 0·35
25	34 59 34·2	0°·62	0·0027744	21 43 32·49	15 58·29	15 51·90	58 37·05	58 13·61
26	35 57 55·9	0°·51	·0028911	21 39 36·58	15 45·58	15 39·42	57 50·43	57 27·81
27	36 56 16·1	0°·38	·0030068	21 35 40·67	15 33·48	15 27·81	57 6·00	56 45·19
28	37 54 34·7	0°·25	0·0031215	21 31 44·76	15 22·44	15 17·40	56 25·49	56 7·01
29	38 52 51·8	N. 0°·12	·0032349	21 27 48·85	15 12·71	15 8·36	55 49·77	55 33·80
30	39 51 7·4	0°·00	·0033469	21 23 52·95	15 4·35	15 0·68	55 19·09	55 5·63
31	40 49 21·3	S. 0°·10	0·0034575	21 19 57·04	14 57·34	14 54·33	54 53·38	54 42·33

MEAN TIME.

THE MOON'S																	
Day.	Longitude.				Latitude.				Age.	Meridian Passage.							
	Noon.		Midnight.		Noon.		Midnight.		Noon.	Upper.	Lower.						
1	339	0	53.1	345	24	8.1	S. 0	39	30.9	S. 1	13	36.4	26.84	22	48.1	10	24.9
2	351	44	33.3	358	2	15.4	1	46	29.3	2	17	47.4	27.84	23	33.2	11	10.8
3	4	17	20.8	10	29	55.0	2	47	10.0	3	14	18.9	28.84	*	*	11	55.4
4	16	40	3.6	22	47	52.6	3	38	57.9	4	0	53.4	0.20	0	17.5	12	39.4
5	28	53	28.8	34	57	0.1	4	19	53.9	4	35	50.3	1.20	1	1.4	13	23.4
6	40	58	36.2	46	58	28.7	4	48	35.7	4	58	5.4	2.20	1	45.5	14	7.7
7	52	56	51.6	58	54	1.1	5	4	16.4	5	7	7.5	3.20	2	30.1	14	52.7
8	64	50	16.5	70	45	59.5	5	6	39.0	5	2	52.6	4.20	3	15.6	15	38.7
9	76	41	34.9	82	37	30.0	4	55	50.9	4	45	38.0	5.20	4	2.1	16	25.7
10	88	34	14.5	94	32	20.7	4	32	18.5	4	15	58.1	6.20	4	49.5	17	13.6
11	100	32	22.9	106	34	56.8	3	56	43.5	3	34	42.5	7.20	5	37.9	18	2.3
12	112	40	39.3	118	50	8.0	3	10	3.9	2	42	58.2	8.20	6	26.9	18	51.6
13	125	4	0.1	131	22	51.8	2	13	37.6	1	42	16.5	9.20	7	16.4	19	41.3
14	137	47	17.2	144	17	47.0	S. 1	9	11.7	S. 0	34	43.2	10.20	8	6.3	20	31.4
15	150	54	47.3	157	38	38.0	N. 0	0	46.0	N. 0	36	49.1	11.20	8	56.6	21	22.0
16	164	29	31.5	171	27	30.7	1	12	55.8	1	48	32.3	12.20	9	47.5	22	13.4
17	178	32	28.2	185	44	4.7	2	23	1.6	2	55	44.7	13.20	10	39.5	23	6.1
18	193	1	48.5	200	24	55.7	3	26	1.4	3	53	11.9	14.20	11	33.0	*	*
19	207	52	30.8	215	23	28.3	4	16	38.9	4	35	49.3	15.20	12	28.4	0	0.5
20	222	56	35.4	230	30	34.8	4	50	15.8	4	59	38.6	16.20	13	25.9	0	56.9
21	238	4	8.6	245	36	1.5	5	3	46.5	5	2	37.0	17.20	14	25.2	1	55.4
22	253	5	4.4	260	30	16.7	4	56	16.2	4	44	58.3	18.20	15	25.3	2	55.2
23	267	50	48.8	275	6	2.6	4	29	4.0	4	8	59.3	19.20	16	25.0	3	55.3
24	282	15	31.9	289	19	2.0	3	45	13.8	3	18	19.7	20.20	17	23.1	4	54.3
25	296	16	28.5	303	7	55.6	2	48	49.9	2	17	17.5	21.20	18	18.4	5	51.1
26	309	53	35.1	316	33	43.9	1	44	14.8	1	10	12.8	22.20	19	10.6	6	44.9
27	323	8	43.2	329	38	56.2	N. 0	35	40.8	N. 0	1	6.7	23.20	19	59.8	7	35.6
28	336	4	47.6	342	26	42.3	S. 0	33	3.9	S. 1	6	26.7	24.20	20	46.6	8	23.5
29	348	45	4.0	355	0	15.6	1	38	39.9	2	9	22.9	25.20	21	31.6	9	9.3
30	1	12	37.8	7	22	29.4	2	38	17.0	3	5	5.4	26.20	22	15.5	9	53.7
31	13	30	7.1	19	35	45.6	S. 3	29	32.6	S. 3	51	25.5	27.20	22	59.0	10	37.3

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 1.					THURSDAY 3.				
	h m s	s	° ' "	° ' "		h m s	s	° ' "	° ' "
0	22 43 27.20	20.771	S. 8 48 10.4	93.83	0	0 20 10.05	19.666	S. 0 51 7.4	101.81
1	22 45 31.73	20.739	8 38 46.3	94.19	1	0 22 8.00	19.652	0 40 56.6	101.79
2	22 47 36.07	20.708	8 29 20.1	94.54	2	0 24 5.87	19.638	0 30 45.9	101.76
3	22 49 40.23	20.678	8 19 51.8	94.88	3	0 26 3.66	19.625	0 20 35.5	101.71
4	22 51 44.20	20.647	8 10 21.5	95.22	4	0 28 1.37	19.613	0 10 25.4	101.66
5	22 53 47.99	20.617	8 0 49.2	95.55	5	0 29 59.01	19.600	S. 0 0 15.6	101.61
6	22 55 51.60	20.588	7 51 14.9	95.88	6	0 31 56.57	19.588	N. 0 9 53.9	101.54
7	22 57 55.04	20.559	7 41 38.7	96.18	7	0 33 54.06	19.577	0 20 2.9	101.47
8	22 59 58.31	20.530	7 32 0.7	96.48	8	0 35 51.49	19.564	0 30 11.5	101.39
9	23 2 1.40	20.501	7 22 20.9	96.78	9	0 37 48.84	19.553	0 40 10.6	101.31
10	23 4 4.32	20.473	7 12 39.3	97.07	10	0 39 46.13	19.543	0 50 27.2	101.22
11	23 6 7.07	20.445	7 2 56.1	97.33	11	0 41 43.36	19.533	1 0 34.2	101.12
12	23 8 9.66	20.418	6 53 11.3	97.60	12	0 43 40.52	19.523	1 10 40.6	101.01
13	23 10 12.08	20.390	6 43 24.9	97.87	13	0 45 37.63	19.513	1 20 46.3	100.89
14	23 12 14.34	20.363	6 33 36.9	98.12	14	0 47 34.68	19.503	1 30 51.3	100.78
15	23 14 16.44	20.337	6 23 47.5	98.36	15	0 49 31.67	19.495	1 40 55.6	100.64
16	23 16 18.38	20.311	6 13 56.6	98.59	16	0 51 28.62	19.487	1 50 59.0	100.51
17	23 18 20.17	20.285	6 4 4.4	98.82	17	0 53 25.51	19.478	2 1 1.7	100.38
18	23 20 21.80	20.259	5 54 10.8	99.04	18	0 55 22.36	19.471	2 11 3.5	100.22
19	23 22 23.28	20.234	5 44 15.9	99.25	19	0 57 19.16	19.463	2 21 4.3	100.06
20	23 24 24.61	20.209	5 34 19.8	99.45	20	0 59 15.92	19.457	2 31 4.2	99.90
21	23 26 25.79	20.184	5 24 22.5	99.63	21	1 1 12.64	19.450	2 41 3.1	99.73
22	23 28 26.82	20.161	5 14 24.2	99.82	22	1 3 9.32	19.443	2 51 1.0	99.56
23	23 30 27.72	20.138	S. 5 4 24.7	100.00	23	1 5 5.96	19.437	N. 3 0 57.8	99.37
WEDNESDAY 2.					FRIDAY 4.				
0	23 32 28.47	20.114	S. 4 54 24.2	100.17	0	1 7 2.56	19.431	N. 3 10 53.4	99.18
1	23 34 29.09	20.091	4 44 22.7	100.33	1	1 8 59.13	19.427	3 20 47.9	98.98
2	23 36 29.56	20.068	4 34 20.3	100.48	2	1 10 55.68	19.422	3 30 41.2	98.78
3	23 38 29.91	20.047	4 24 16.9	100.63	3	1 12 52.19	19.417	3 40 33.3	98.58
4	23 40 30.12	20.024	4 14 12.8	100.75	4	1 14 48.68	19.413	3 50 24.1	98.35
5	23 42 30.20	20.003	4 4 7.9	100.88	5	1 16 45.14	19.408	4 0 13.5	98.13
6	23 44 30.15	19.982	3 54 2.2	101.01	6	1 18 41.58	19.405	4 10 1.6	97.90
7	23 46 29.98	19.962	3 43 55.8	101.12	7	1 20 38.00	19.402	4 19 48.3	97.68
8	23 48 29.69	19.941	3 33 48.8	101.22	8	1 22 34.40	19.399	4 29 33.6	97.43
9	23 50 29.27	19.920	3 23 41.2	101.31	9	1 24 30.79	19.397	4 39 17.4	97.18
10	23 52 28.73	19.901	3 13 33.1	101.40	10	1 26 27.16	19.393	4 48 59.7	96.92
11	23 54 28.08	19.883	3 3 24.4	101.48	11	1 28 23.51	19.392	4 58 40.4	96.65
12	23 56 27.32	19.863	2 53 15.3	101.55	12	1 30 19.86	19.391	5 8 19.5	96.38
13	23 58 26.44	19.843	2 43 5.8	101.62	13	1 32 16.20	19.389	5 17 57.0	96.12
14	0 0 25.45	19.827	2 32 55.9	101.68	14	1 34 12.53	19.388	5 27 32.9	95.83
15	0 2 24.36	19.809	2 22 45.7	101.72	15	1 36 8.86	19.388	5 37 7.0	95.54
16	0 4 23.16	19.792	2 12 35.2	101.76	16	1 38 5.19	19.388	5 46 39.4	95.25
17	0 6 21.86	19.775	2 2 24.6	101.79	17	1 40 1.51	19.388	5 56 10.0	94.94
18	0 8 20.46	19.758	1 52 13.7	101.83	18	1 41 57.84	19.388	6 5 38.7	94.64
19	0 10 18.96	19.742	1 42 2.7	101.84	19	1 43 54.17	19.388	6 15 5.7	94.33
20	0 12 17.36	19.725	1 31 51.6	101.85	20	1 45 50.50	19.389	6 24 30.7	94.01
21	0 14 15.66	19.710	1 21 40.5	101.85	21	1 47 46.84	19.391	6 33 53.8	93.68
22	0 16 13.88	19.696	1 11 29.4	101.85	22	1 49 43.19	19.393	6 43 14.9	93.36
23	0 18 12.01	19.681	1 1 18.3	101.83	23	1 51 39.55	19.394	6 52 34.1	93.03
24	0 20 10.05	19.666	S. 0 51 7.4	101.81	24	1 53 35.92	19.397	N. 7 1 51.2	92.68

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 5.					MONDAY 7.				
	h m s	s	N. ° ' "	92° 68'		h m s	s	N. 13° 36' 16".7	69° 60'
0	1 53 35.92	19.397	7 1 51.2	92.68	0	3 27 27.68	19.802	13 36 16.7	69.60
1	1 55 32.31	19.399	7 11 6.2	92.33	1	3 29 26.53	19.815	13 43 12.5	68.99
2	1 57 28.71	19.402	7 20 19.1	91.97	2	3 31 25.46	19.828	13 50 4.6	68.38
3	1 59 25.13	19.404	7 29 29.8	91.61	3	3 33 24.47	19.842	13 56 53.0	67.76
4	2 1 21.56	19.408	7 38 38.4	91.24	4	3 35 23.56	19.856	14 3 37.7	67.14
5	2 3 18.02	19.413	7 47 44.7	90.87	5	3 37 22.74	19.870	14 10 18.7	66.51
6	2 5 14.51	19.416	7 56 48.8	90.49	6	3 39 22.00	19.883	14 16 55.8	65.88
7	2 7 11.01	19.419	8 5 50.6	90.10	7	3 41 21.34	19.898	14 23 29.2	65.25
8	2 9 7.54	19.424	8 14 50.0	89.71	8	3 43 20.77	19.913	14 29 58.8	64.61
9	2 11 4.10	19.429	8 23 47.1	89.33	9	3 45 20.29	19.928	14 36 24.5	63.96
10	2 13 0.69	19.435	8 32 41.9	88.92	10	3 47 19.90	19.942	14 42 46.3	63.31
11	2 14 57.32	19.440	8 41 34.1	88.50	11	3 49 19.59	19.956	14 49 4.2	62.66
12	2 16 53.97	19.445	8 50 23.9	88.09	12	3 51 19.37	19.971	14 55 18.2	62.00
13	2 18 50.66	19.451	8 59 11.2	87.68	13	3 53 19.24	19.986	15 1 28.2	61.33
14	2 20 47.38	19.458	9 7 56.0	87.25	14	3 55 19.20	20.001	15 7 34.2	60.67
15	2 22 44.15	19.464	9 16 38.2	86.82	15	3 57 19.25	20.016	15 13 36.2	60.00
16	2 24 40.95	19.470	9 25 17.8	86.38	16	3 59 19.39	20.031	15 19 34.2	59.33
17	2 26 37.79	19.477	9 33 54.8	85.94	17	4 1 19.62	20.046	15 25 28.1	58.64
18	2 28 34.67	19.484	9 42 29.1	85.49	18	4 3 19.94	20.061	15 31 17.9	57.95
19	2 30 31.60	19.493	9 51 0.7	85.04	19	4 5 20.35	20.077	15 37 3.5	57.27
20	2 32 28.58	19.500	9 59 29.6	84.58	20	4 7 20.86	20.093	15 42 45.1	56.58
21	2 34 25.60	19.507	10 7 55.7	84.11	21	4 9 21.46	20.108	15 48 22.4	55.88
22	2 36 22.66	19.515	10 16 18.9	83.64	22	4 11 22.15	20.123	15 53 55.6	55.18
23	2 38 19.78	19.524	N.10 24 39.4	83.18	23	4 13 22.94	20.139	N.15 59 24.5	54.47
SUNDAY 6.					TUESDAY 8.				
	h m s	s	N. 10° 32' 57.0"	82° 69'		h m s	s	N. 16° 4 49.2"	53° 77'
0	2 40 16.95	19.533	10 41 11.7	82.20	0	4 15 23.82	20.155	16 10 9.7	53.05
1	2 42 14.17	19.542	10 49 23.4	81.71	1	4 17 24.80	20.171	16 15 25.8	52.33
2	2 44 11.45	19.551	10 57 32.2	81.22	2	4 19 25.87	20.187	16 20 37.6	51.61
3	2 46 8.78	19.560	11 5 38.0	80.72	3	4 21 27.04	20.203	16 25 45.1	50.88
4	2 48 6.17	19.569	11 13 40.8	80.20	4	4 23 28.30	20.218	16 30 48.2	50.15
5	2 50 3.61	19.579	11 21 40.4	79.68	5	4 25 29.66	20.234	16 35 46.9	49.42
6	2 52 1.12	19.589	11 29 37.0	79.18	6	4 27 31.11	20.250	16 40 41.2	48.68
7	2 53 58.68	19.599	11 37 30.6	78.66	7	4 29 32.66	20.267	16 45 31.1	47.94
8	2 55 56.31	19.610	11 45 20.9	78.12	8	4 31 34.31	20.283	16 50 16.5	47.20
9	2 57 54.00	19.620	11 53 8.0	77.58	9	4 33 36.05	20.298	16 54 57.5	46.45
10	2 59 51.75	19.631	12 0 51.9	77.05	10	4 35 37.89	20.315	16 59 33.9	45.69
11	3 1 49.57	19.643	12 8 32.6	76.52	11	4 37 39.83	20.331	17 4 5.8	44.93
12	3 3 47.46	19.653	12 16 10.1	75.97	12	4 39 41.86	20.347	17 8 33.1	44.18
13	3 5 45.41	19.664	12 23 44.2	75.40	13	4 41 43.99	20.363	17 12 55.9	43.42
14	3 7 43.43	19.677	12 31 14.9	74.84	14	4 43 46.22	20.380	17 17 14.1	42.65
15	3 9 41.53	19.688	12 38 42.3	74.28	15	4 45 48.55	20.396	17 21 27.7	41.88
16	3 11 39.69	19.700	12 46 6.3	73.72	16	4 47 50.97	20.411	17 25 36.6	41.10
17	3 13 37.93	19.713	12 53 26.9	73.14	17	4 49 53.48	20.428	17 29 40.9	40.32
18	3 15 36.24	19.724	13 0 44.0	72.56	18	4 51 56.10	20.444	17 33 40.4	39.53
19	3 17 34.62	19.737	13 7 57.6	71.98	19	4 53 58.81	20.460	17 37 35.3	38.76
20	3 19 33.08	19.749	13 15 7.7	71.39	20	4 56 1.62	20.477	17 41 25.5	37.97
21	3 21 31.61	19.762	13 22 14.3	70.80	21	4 58 4.53	20.493	17 45 10.9	37.18
22	3 23 30.22	19.775	13 29 17.3	70.20	22	5 0 7.53	20.508	17 48 51.6	36.38
23	3 25 28.91	19.788	N.13 36 16.7	69.60	23	5 2 10.63	20.524	N.17 52 27.4	35.58
24	3 27 27.68	19.802			24	5 4 13.82	20.540		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 9.					FRIDAY 11.				
	h m s	s	N. 17 52 27.4	35.58		h m s	s	N. 19 5 42.2	5.97
0	5 4 13.82	20.540			0	6 44 32.22	21.216		
1	5 6 17.11	20.557	17 55 58.5	34.78	1	6 46 39.55	21.227	19 5 3.6	6.88
2	5 8 20.50	20.573	17 59 24.7	33.97	2	6 48 46.94	21.238	19 4 19.6	7.80
3	5 10 23.98	20.588	18 2 46.1	33.16	3	6 50 54.40	21.248	19 3 30.0	8.72
4	5 12 27.56	20.604	18 6 2.6	32.35	4	6 53 1.92	21.259	19 2 35.0	9.63
5	5 14 31.23	20.620	18 9 14.3	31.53	5	6 55 9.51	21.270	19 1 34.4	10.56
6	5 16 35.00	20.636	18 12 21.0	30.71	6	6 57 17.16	21.281	19 0 28.3	11.48
7	5 18 38.86	20.652	18 15 22.8	29.89	7	6 59 24.88	21.291	18 59 16.7	12.39
8	5 20 42.82	20.668	18 18 19.7	29.07	8	7 1 32.65	21.301	18 57 59.6	13.32
9	5 22 46.87	20.683	18 21 11.6	28.24	9	7 3 40.49	21.312	18 56 36.9	14.24
10	5 24 51.01	20.698	18 23 58.6	27.41	10	7 5 48.39	21.322	18 55 8.7	15.16
11	5 26 55.24	20.713	18 26 40.5	26.58	11	7 7 56.35	21.331	18 53 35.0	16.08
12	5 28 59.57	20.729	18 29 17.5	25.74	12	7 10 4.36	21.341	18 51 55.7	17.02
13	5 31 3.99	20.745	18 31 49.4	24.90	13	7 12 12.44	21.351	18 50 10.8	17.94
14	5 33 8.51	20.760	18 34 16.3	24.06	14	7 14 20.57	21.360	18 48 20.4	18.86
15	5 35 13.11	20.774	18 36 38.1	23.21	15	7 16 28.76	21.369	18 46 24.5	19.78
16	5 37 17.80	20.790	18 38 54.8	22.37	16	7 18 37.00	21.378	18 44 23.0	20.72
17	5 39 22.59	20.805	18 41 6.5	21.52	17	7 20 45.30	21.388	18 42 15.9	21.64
18	5 41 27.46	20.819	18 43 13.0	20.66	18	7 22 53.65	21.396	18 40 3.3	22.57
19	5 43 32.42	20.834	18 45 14.4	19.81	19	7 25 2.05	21.405	18 37 45.1	23.50
20	5 45 37.47	20.849	18 47 10.7	18.95	20	7 27 10.51	21.414	18 35 21.3	24.43
21	5 47 42.61	20.864	18 49 1.8	18.08	21	7 29 19.02	21.423	18 32 52.0	25.35
22	5 49 47.84	20.878	18 50 47.7	17.22	22	7 31 27.58	21.431	18 30 17.1	26.28
23	5 51 53.15	20.893	N. 18 52 28.4	16.35	23	7 33 36.19	21.439	N. 18 27 36.6	27.22
THURSDAY 10.					SATURDAY 12.				
	h m s	s	N. 18 54 3.9	15.48		h m s	s	N. 18 24 50.5	28.14
0	5 53 58.55	20.907			0	7 35 44.85	21.448		
1	5 56 4.03	20.921	18 55 34.2	14.62	1	7 37 53.56	21.455	18 21 58.9	29.07
2	5 58 9.60	20.936	18 56 59.3	13.75	2	7 40 2.31	21.463	18 19 1.7	30.00
3	6 0 15.26	20.950	18 58 19.2	12.88	3	7 42 11.12	21.472	18 15 58.9	30.93
4	6 2 21.00	20.963	18 59 33.8	11.99	4	7 44 19.97	21.479	18 12 50.6	31.85
5	6 4 26.82	20.977	19 0 43.1	11.11	5	7 46 28.87	21.487	18 9 36.7	32.78
6	6 6 32.72	20.991	19 1 47.1	10.23	6	7 48 37.81	21.494	18 6 17.2	33.71
7	6 8 38.71	21.004	19 2 45.8	9.34	7	7 50 46.80	21.502	18 2 52.2	34.63
8	6 10 44.77	21.018	19 3 39.2	8.46	8	7 52 55.83	21.509	17 59 21.7	35.56
9	6 12 50.92	21.031	19 4 27.3	7.57	9	7 55 4.91	21.517	17 55 45.5	36.49
10	6 14 57.14	21.044	19 5 10.0	6.68	10	7 57 14.03	21.523	17 52 3.8	37.41
11	6 17 3.45	21.058	19 5 47.4	5.79	11	7 59 23.19	21.530	17 48 16.6	38.33
12	6 19 9.83	21.070	19 6 19.5	4.89	12	8 1 32.39	21.537	17 44 23.9	39.25
13	6 21 16.29	21.083	19 6 46.1	3.99	13	8 3 41.63	21.543	17 40 25.6	40.18
14	6 23 22.82	21.095	19 7 7.4	3.10	14	8 5 50.91	21.551	17 36 21.7	41.10
15	6 25 29.43	21.108	19 7 23.3	2.20	15	8 8 0.24	21.558	17 32 12.4	42.02
16	6 27 36.12	21.121	19 7 33.8	1.30	16	8 10 9.60	21.564	17 27 57.5	42.94
17	6 29 42.88	21.133	19 7 38.9	0.40	17	8 12 19.01	21.571	17 23 37.1	43.86
18	6 31 49.72	21.145	19 7 38.6	0.51	18	8 14 28.45	21.577	17 19 11.2	44.78
19	6 33 56.62	21.157	19 7 32.8	1.42	19	8 16 37.93	21.583	17 14 39.8	45.68
20	6 36 3.60	21.169	19 7 21.6	2.33	20	8 18 47.45	21.589	17 10 3.0	46.60
21	6 38 10.65	21.181	19 7 4.9	3.23	21	8 20 57.00	21.595	17 5 20.6	47.52
22	6 40 17.77	21.193	19 6 42.8	4.14	22	8 23 6.59	21.602	17 0 32.8	48.43
23	6 42 24.96	21.204	19 6 15.2	5.05	23	8 25 16.22	21.608	16 55 39.5	49.34
24	6 44 32.22	21.216	N. 19 5 42.2	5.97	24	8 27 25.89	21.614	N. 16 50 40.7	50.25

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 13.					TUESDAY 15.				
	h m s	s	N. 16 50 40	7 50 25		h m s	s	N. 11 9 54	7 90 32
0	8 27 25	89	21.614		0	10 11 52	02	21.920	
1	8 29 35	59	21.620	16 45 36	5 51 15	10 14 3	56	21.928	11 0 50
2	8 31 45	33	21.626	16 40 26	0 52 06	10 16 15	16	21.938	10 51 42
3	8 33 55	10	21.632	16 35 11	8 52 06	10 18 26	81	21.947	10 42 29
4	8 36 4	91	21.638	16 29 51	4 53 85	10 20 38	52	21.955	10 33 12
5	8 38 14	75	21.643	16 24 25	6 54 76	10 22 50	27	21.964	10 23 51
6	8 40 24	63	21.649	16 18 54	3 55 66	10 25 2	09	21.974	10 14 25
7	8 42 34	54	21.655	16 13 17	7 56 55	10 27 13	06	21.983	10 4 56
8	8 44 44	49	21.661	16 7 35	7 57 44	10 29 25	89	21.993	9 55 22
9	8 46 54	47	21.667	16 1 48	4 58 33	10 31 37	88	22.003	9 45 44
10	8 49 4	49	21.673	15 55 55	7 59 22	10 33 49	93	22.013	9 36 3 2
11	8 51 14	54	21.678	15 49 57	8 60 10	10 36 2	04	22.024	9 26 17
12	8 53 24	62	21.683	15 43 54	5 60 99	10 38 14	22	22.035	9 16 27
13	8 55 34	74	21.689	15 37 45	9 61 87	10 40 26	46	22.045	9 6 34
14	8 57 44	89	21.695	15 31 32	1 62 74	10 42 38	76	22.056	8 56 37
15	8 59 55	08	21.701	15 25 13	0 63 62	10 44 51	13	22.068	8 46 35
16	9 2 5	30	21.707	15 18 48	7 64 49	10 47 3	57	22.079	8 36 30
17	9 4 15	56	21.712	15 12 19	1 65 36	10 49 16	08	22.091	8 26 22
18	9 6 25	84	21.718	15 5 44	4 66 22	10 51 28	66	22.103	8 16 10
19	9 8 36	17	21.724	14 59 4	5 67 08	10 53 41	31	22.115	8 5 54
20	9 10 46	53	21.729	14 52 19	4 67 95	10 55 54	04	22.128	7 55 34
21	9 12 56	92	21.735	14 45 29	1 68 80	10 58 6	84	22.140	7 45 11
22	9 15 7	35	21.741	14 38 33	8 69 65	11 0 19	72	22.153	7 34 45
23	9 17 17	81	21.747	N. 14 31 33	3 70 50	11 2 32	67	22.166	N. 7 24 15
MONDAY 14.					WEDNESDAY 16.				
	h m s	s	N. 14 24 27	8 71 34		h m s	s	N. 7 13 42	2 105 82
0	9 19 28	31	21.753		0	11 4 45	71	22.179	
1	9 21 38	84	21.758	14 17 17	2 72 19	11 6 58	82	22.193	7 3 5 6
2	9 23 49	41	21.765	14 10 1	5 73 03	11 9 12	02	22.207	6 52 25
3	9 26 0	02	21.771	14 2 40	9 73 86	11 11 25	30	22.221	6 41 42
4	9 28 10	66	21.777	13 55 15	2 74 69	11 13 38	67	22.236	6 30 56
5	9 30 21	34	21.783	13 47 44	6 75 52	11 15 52	13	22.250	6 20 7 5
6	9 32 32	06	21.789	13 40 9	0 76 33	11 18 5	67	22.264	6 9 15
7	9 34 42	81	21.795	13 32 28	6 77 15	11 20 19	30	22.280	5 58 20
8	9 36 53	60	21.803	13 24 43	2 77 98	11 22 33	03	22.297	5 47 21
9	9 39 4	44	21.809	13 16 52	9 78 78	11 24 46	85	22.312	5 36 20
10	9 41 15	31	21.815	13 8 57	9 79 58	11 27 0	77	22.328	5 25 16
11	9 43 26	22	21.822	13 0 58	0 80 38	11 29 14	78	22.343	5 14 10
12	9 45 37	17	21.828	12 52 53	3 81 18	11 31 28	89	22.360	5 3 1 0
13	9 47 48	16	21.836	12 44 43	8 81 97	11 33 43	10	22.378	4 51 49
14	9 49 59	20	21.843	12 36 29	7 82 75	11 35 57	42	22.395	4 40 34
15	9 52 10	28	21.850	12 28 10	8 83 53	11 38 11	84	22.412	4 29 17
16	9 54 21	40	21.857	12 19 47	3 84 31	11 40 26	36	22.429	4 17 58
17	9 56 32	56	21.864	12 11 19	1 85 08	11 42 40	99	22.448	4 6 36
18	9 58 43	77	21.873	12 2 46	3 85 85	11 44 55	73	22.466	3 55 12
19	10 0 55	03	21.880	11 54 8	9 86 61	11 47 10	58	22.485	3 43 45
20	10 3 6	33	21.888	11 45 27	0 87 36	11 49 25	55	22.504	3 32 17
21	10 5 17	68	21.896	11 36 40	6 88 11	11 51 40	63	22.523	3 20 46
22	10 7 29	08	21.903	11 27 49	7 88 85	11 53 55	82	22.542	3 9 13
23	10 9 40	52	21.912	11 18 54	4 89 58	11 56 11	13	22.563	2 57 38
24	10 11 52	02	21.920	N. 11 9 54	7 90 32	11 58 26	57	22.583	N. 2 46 2 3

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
THURSDAY 17.					SATURDAY 19.				
	h m s	s				h m s	s		
0	11 58 26.57	22.583	N. 2 46 2.3	116.26	0	13 49 42.09	23.873	S. 6 43 27.3	115.61
1	12 0 42.12	22.603	2 34 23.8	116.57	1	13 52 5.42	23.904	6 54 59.9	115.23
2	12 2 57.80	22.624	2 22 43.5	116.85	2	13 54 28.94	23.936	7 6 30.1	114.84
3	12 5 13.61	22.645	2 11 1.6	117.13	3	13 56 52.65	23.968	7 17 58.0	114.44
4	12 7 29.54	22.666	1 59 18.0	117.39	4	13 59 16.56	24.001	7 29 23.4	114.02
5	12 9 45.60	22.688	1 47 32.9	117.64	5	14 1 40.66	24.033	7 40 46.2	113.58
6	12 12 1.79	22.709	1 35 46.3	117.88	6	14 4 4.95	24.065	7 52 6.4	113.13
7	12 14 18.11	22.732	1 23 58.3	118.12	7	14 6 29.44	24.098	8 3 23.8	112.66
8	12 16 34.57	22.755	1 12 8.9	118.33	8	14 8 54.13	24.131	8 14 38.3	112.18
9	12 18 51.16	22.777	1 0 18.3	118.53	9	14 11 19.01	24.163	8 25 49.9	111.68
10	12 21 7.89	22.800	0 48 26.5	118.73	10	14 13 44.08	24.196	8 36 58.4	111.16
11	12 23 24.76	22.824	0 36 33.6	118.90	11	14 16 9.36	24.228	8 48 3.8	110.63
12	12 25 41.78	22.848	0 24 39.7	119.07	12	14 18 34.82	24.260	8 59 6.0	110.08
13	12 27 58.93	22.871	0 12 44.8	119.23	13	14 21 0.48	24.293	9 10 4.8	109.53
14	12 30 16.23	22.896	N. 0 0 49.0	119.36	14	14 23 26.34	24.326	9 21 0.3	108.95
15	12 32 33.68	22.920	S. 0 11 7.5	119.48	15	14 25 52.39	24.358	9 31 52.2	108.35
16	12 34 51.27	22.945	0 23 4.8	119.59	16	14 28 18.64	24.391	9 42 40.5	107.74
17	12 37 9.02	22.971	0 35 2.6	119.69	17	14 30 45.08	24.423	9 53 25.1	107.13
18	12 39 26.92	22.996	0 47 1.1	119.78	18	14 33 11.72	24.456	10 4 6.0	106.48
19	12 41 44.97	23.021	0 59 0.0	119.85	19	14 35 38.55	24.488	10 14 42.9	105.83
20	12 44 3.17	23.048	1 10 59.3	119.92	20	14 38 5.57	24.519	10 25 15.9	105.17
21	12 46 21.54	23.074	1 22 59.0	119.96	21	14 40 32.78	24.551	10 35 44.9	104.48
22	12 48 40.06	23.100	1 34 58.8	119.98	22	14 43 0.18	24.583	10 46 9.6	103.78
23	12 50 58.74	23.128	S. 1 46 58.8	120.00	23	14 45 27.78	24.616	S. 10 56 30.2	103.07
FRIDAY 18.					SUNDAY 20.				
0	12 53 17.59	23.154	S. 1 58 58.8	120.00	0	14 47 55.57	24.647	S. 11 6 46.4	102.33
1	12 55 36.59	23.181	2 10 58.8	119.99	1	14 50 23.54	24.678	11 16 58.2	101.58
2	12 57 55.76	23.209	2 22 58.7	119.96	2	14 52 51.71	24.710	11 27 5.4	100.83
3	13 0 15.10	23.238	2 34 58.3	119.92	3	14 55 20.06	24.740	11 37 8.1	100.06
4	13 2 34.61	23.266	2 46 57.7	119.87	4	14 57 48.59	24.771	11 47 6.1	99.27
5	13 4 54.29	23.293	2 58 56.7	119.80	5	15 0 17.31	24.802	11 56 59.3	98.47
6	13 7 14.13	23.322	3 10 55.3	119.72	6	15 2 46.21	24.833	12 6 47.7	97.65
7	13 9 34.15	23.352	3 22 53.3	119.61	7	15 5 15.30	24.863	12 16 31.1	96.82
8	13 11 54.35	23.381	3 34 50.6	119.50	8	15 7 44.56	24.892	12 26 9.5	95.98
9	13 14 14.72	23.409	3 46 47.3	119.38	9	15 10 14.00	24.922	12 35 42.8	95.12
10	13 16 35.26	23.438	3 58 43.1	119.22	10	15 12 43.62	24.951	12 45 10.9	94.24
11	13 18 55.98	23.469	4 10 37.9	119.06	11	15 15 13.41	24.980	12 54 33.7	93.35
12	13 21 16.89	23.499	4 22 31.8	118.89	12	15 17 43.38	25.008	13 3 51.1	92.44
13	13 23 37.97	23.528	4 34 24.6	118.71	13	15 20 13.51	25.037	13 13 3.0	91.53
14	13 25 59.23	23.559	4 46 16.3	118.50	14	15 22 43.82	25.065	13 22 9.5	90.61
15	13 28 20.68	23.590	4 58 6.6	118.28	15	15 25 14.29	25.093	13 31 10.3	89.67
16	13 30 42.31	23.621	5 9 55.6	118.04	16	15 27 44.93	25.119	13 40 5.5	88.72
17	13 33 4.13	23.652	5 21 43.1	117.79	17	15 30 15.72	25.146	13 48 54.9	87.74
18	13 35 26.13	23.682	5 33 29.1	117.53	18	15 32 46.68	25.173	13 57 38.4	86.76
19	13 37 48.31	23.713	5 45 13.5	117.25	19	15 35 17.79	25.198	14 6 16.0	85.78
20	13 40 10.69	23.746	5 56 56.1	116.95	20	15 37 49.06	25.224	14 14 47.7	84.77
21	13 42 33.26	23.777	6 8 36.9	116.63	21	15 40 20.48	25.249	14 23 13.2	83.75
22	13 44 56.01	23.808	6 20 15.7	116.31	22	15 42 52.05	25.273	14 31 32.7	82.73
23	13 47 18.95	23.840	6 31 52.6	115.97	23	15 45 23.76	25.297	14 39 45.9	81.68
24	13 49 42.09	23.873	S. 6 43 27.3	115.61	24	15 47 55.62	25.321	S. 14 47 52.9	80.63

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 21.					WEDNESDAY 23.				
	h m s	s	° ' "	° ' "		h m s	s	° ' "	° ' "
0	15 47 55.62	25.321	S. 14 47 52.9	80.63	0	17 50 55.32	25.626	S. 18 56 44.1	20.81
1	15 50 27.61	25.343	14 55 53.4	79.56	1	17 53 29.03	25.612	18 58 44.9	19.47
2	15 52 59.74	25.367	15 3 47.6	78.49	2	17 56 2.66	25.598	19 0 37.7	18.13
3	15 55 32.01	25.389	15 11 35.3	77.41	3	17 58 36.20	25.583	19 2 22.5	16.80
4	15 58 4.41	25.410	15 19 16.5	76.31	4	18 1 9.65	25.566	19 3 59.3	15.47
5	16 0 36.93	25.431	15 26 51.0	75.19	5	18 3 42.99	25.548	19 5 28.1	14.13
6	16 3 9.58	25.451	15 34 18.8	74.08	6	18 6 16.22	25.530	19 6 48.9	12.80
7	16 5 42.34	25.470	15 41 39.9	72.95	7	18 8 49.35	25.511	19 8 1.7	11.47
8	16 8 15.22	25.490	15 48 54.2	71.82	8	18 11 22.35	25.490	19 9 6.5	10.14
9	16 10 48.22	25.508	15 56 1.7	70.67	9	18 13 55.23	25.469	19 10 3.4	8.83
10	16 13 21.32	25.525	16 3 2.2	69.50	10	18 16 27.98	25.448	19 10 52.4	7.50
11	16 15 54.52	25.543	16 9 55.7	68.33	11	18 19 0.61	25.426	19 11 33.4	6.18
12	16 18 27.83	25.559	16 16 42.2	67.16	12	18 21 33.09	25.402	19 12 6.5	4.86
13	16 21 1.23	25.575	16 23 21.6	65.98	13	18 24 5.43	25.378	19 12 31.7	3.55
14	16 23 34.73	25.590	16 29 53.9	64.78	14	18 26 37.62	25.353	19 12 49.1	2.24
15	16 26 8.31	25.604	16 36 19.0	63.58	15	18 29 9.67	25.327	19 12 58.6	0.93
16	16 28 41.98	25.618	16 42 36.8	62.37	16	18 31 41.55	25.301	19 13 0.3	0.37
17	16 31 15.73	25.631	16 48 47.4	61.15	17	18 34 13.28	25.274	19 12 54.2	1.67
18	16 33 49.55	25.643	16 54 50.6	59.92	18	18 36 44.84	25.246	19 12 40.3	2.97
19	16 36 23.45	25.655	17 0 46.4	58.68	19	18 39 16.23	25.217	19 12 18.6	4.25
20	16 38 57.41	25.665	17 6 34.8	57.45	20	18 41 47.44	25.188	19 11 49.3	5.53
21	16 41 31.43	25.675	17 12 15.8	56.20	21	18 44 18.48	25.158	19 11 12.2	6.82
22	16 44 5.51	25.684	17 17 49.2	54.94	22	18 46 49.33	25.126	19 10 27.5	8.08
23	16 46 39.64	25.692	S. 17 23 15.1	53.68	23	18 49 19.99	25.094	S. 19 9 35.2	9.35
TUESDAY 22.					THURSDAY 24.				
0	16 49 13.81	25.699	S. 17 28 33.3	52.41	0	18 51 50.46	25.063	S. 19 8 35.3	10.62
1	16 51 48.03	25.707	17 33 44.0	51.14	1	18 54 20.74	25.029	19 7 27.8	11.88
2	16 54 22.29	25.713	17 38 47.0	49.86	2	18 56 50.81	24.995	19 6 12.8	13.13
3	16 56 56.58	25.718	17 43 42.3	48.57	3	18 59 20.68	24.961	19 4 50.3	14.38
4	16 59 30.90	25.723	17 48 29.8	47.28	4	19 1 50.34	24.926	19 3 20.3	15.62
5	17 2 5.25	25.726	17 53 9.6	45.99	5	19 4 19.79	24.890	19 1 42.9	16.85
6	17 4 39.61	25.728	17 57 41.7	44.69	6	19 6 49.02	24.854	18 59 58.1	18.08
7	17 7 13.98	25.730	18 2 5.9	43.38	7	19 9 18.04	24.818	18 58 6.0	19.29
8	17 9 48.37	25.731	18 6 22.3	42.08	8	19 11 46.83	24.779	18 56 6.6	20.50
9	17 12 22.75	25.730	18 10 30.8	40.76	9	19 14 15.39	24.741	18 54 0.0	21.71
10	17 14 57.13	25.730	18 14 31.4	39.45	10	19 16 43.72	24.703	18 51 46.1	22.91
11	17 17 31.51	25.728	18 18 24.2	38.13	11	19 19 11.82	24.664	18 49 25.1	24.10
12	17 20 5.87	25.725	18 22 9.0	36.80	12	19 21 39.69	24.624	18 46 56.9	25.28
13	17 22 40.21	25.722	18 25 45.8	35.48	13	19 24 7.31	24.583	18 44 21.7	26.46
14	17 25 14.53	25.718	18 29 14.8	34.16	14	19 26 34.69	24.542	18 41 39.4	27.63
15	17 27 48.83	25.713	18 32 35.7	32.83	15	19 29 1.82	24.502	18 38 50.1	28.79
16	17 30 23.09	25.707	18 35 48.7	31.49	16	19 31 28.71	24.460	18 35 53.9	29.94
17	17 32 57.31	25.699	18 38 53.6	30.16	17	19 33 55.34	24.418	18 32 50.8	31.09
18	17 35 31.48	25.692	18 41 50.6	28.83	18	19 36 21.72	24.375	18 29 40.8	32.23
19	17 38 5.61	25.683	18 44 39.5	27.49	19	19 38 47.84	24.333	18 26 24.1	33.35
20	17 40 39.68	25.673	18 47 20.5	26.16	20	19 41 13.71	24.289	18 23 0.6	34.48
21	17 43 13.69	25.663	18 49 53.4	24.82	21	19 43 39.31	24.244	18 19 30.4	35.58
22	17 45 47.64	25.653	18 52 18.3	23.48	22	19 46 4.64	24.200	18 15 53.6	36.68
23	17 48 21.52	25.640	18 54 35.2	22.15	23	19 48 29.71	24.156	18 12 10.2	37.77
24	17 50 55.32	25.626	S. 18 56 44.1	20.81	24	19 50 54.51	24.111	S. 18 8 20.2	38.87

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 25.					SUNDAY 27.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	19 50 54.51	24.111	S. 18 8 20.2	38.87	0	21 41 8.10	21.817	S. 13 14 43.1	79.73
1	19 53 19.04	24.065	18 4 23.8	39.94	1	21 43 18.87	21.772	13 6 42.9	80.33
2	19 55 43.29	24.019	18 0 20.9	41.02	2	21 45 29.36	21.726	12 58 39.1	80.93
3	19 58 7.27	23.974	17 56 11.6	42.08	3	21 47 39.58	21.681	12 50 31.7	81.53
4	20 0 30.98	23.928	17 51 56.0	43.12	4	21 49 49.53	21.636	12 42 20.8	82.11
5	20 2 54.40	23.881	17 47 34.2	44.16	5	21 51 59.21	21.592	12 34 6.4	82.68
6	20 5 17.55	23.834	17 43 6.1	45.19	6	21 54 8.63	21.548	12 25 48.6	83.24
7	20 7 40.41	23.787	17 38 31.9	46.21	7	21 56 17.79	21.504	12 17 27.5	83.80
8	20 10 2.99	23.739	17 33 51.6	47.23	8	21 58 26.68	21.461	12 9 3.0	84.35
9	20 12 25.28	23.692	17 29 5.2	48.23	9	22 0 35.32	21.418	12 0 35.3	84.88
10	20 14 47.29	23.645	17 24 12.8	49.23	10	22 2 43.70	21.375	11 52 4.4	85.41
11	20 17 9.02	23.597	17 19 14.5	50.20	11	22 4 51.82	21.333	11 43 30.4	85.93
12	20 19 30.45	23.548	17 14 10.4	51.18	12	22 6 59.69	21.291	11 34 53.3	86.43
13	20 21 51.60	23.501	17 9 0.4	52.15	13	22 9 7.31	21.249	11 26 13.1	86.94
14	20 24 12.46	23.452	17 3 44.6	53.10	14	22 11 14.68	21.208	11 17 30.0	87.43
15	20 26 33.02	23.403	16 58 23.2	54.04	15	22 13 21.80	21.167	11 8 44.0	87.90
16	20 28 53.30	23.355	16 52 56.1	54.98	16	22 15 28.68	21.126	10 59 55.2	88.38
17	20 31 13.28	23.306	16 47 23.4	55.91	17	22 17 35.31	21.085	10 51 3.5	88.85
18	20 33 32.97	23.258	16 41 45.2	56.83	18	22 19 41.70	21.045	10 42 9.0	89.30
19	20 35 52.37	23.209	16 36 1.5	57.73	19	22 21 47.85	21.006	10 33 11.9	89.74
20	20 38 11.48	23.160	16 30 12.4	58.63	20	22 23 53.77	20.968	10 24 12.1	90.18
21	20 40 30.29	23.110	16 24 18.0	59.51	21	22 25 59.46	20.928	10 15 9.7	90.61
22	20 42 48.80	23.062	16 18 18.3	60.39	22	22 28 4.91	20.889	10 6 4.8	91.03
23	20 45 7.03	23.013	S. 16 12 13.3	61.26	23	22 30 10.13	20.852	S. 9 56 57.4	91.44
SATURDAY 26.					MONDAY 28.				
0	20 47 24.96	22.963	S. 16 6 3.2	62.11	0	22 32 15.13	20.814	S. 9 47 47.5	91.84
1	20 49 42.59	22.914	15 59 48.0	62.96	1	22 34 19.90	20.777	9 38 35.3	92.23
2	20 51 59.93	22.866	15 53 27.7	63.80	2	22 36 24.45	20.740	9 29 20.7	92.62
3	20 54 16.98	22.817	15 47 2.4	64.63	3	22 38 28.78	20.703	9 20 3.9	92.99
4	20 56 33.73	22.768	15 40 32.2	65.43	4	22 40 32.89	20.668	9 10 44.8	93.36
5	20 58 50.19	22.718	15 33 57.2	66.24	5	22 42 36.79	20.633	9 1 23.6	93.72
6	21 1 6.35	22.670	15 27 17.3	67.05	6	22 44 40.48	20.598	8 52 0.2	94.08
7	21 3 22.23	22.622	15 20 32.6	67.84	7	22 46 43.96	20.563	8 42 34.7	94.42
8	21 5 37.81	22.573	15 13 43.2	68.61	8	22 48 47.23	20.527	8 33 7.2	94.74
9	21 7 53.10	22.524	15 6 49.3	69.38	9	22 50 50.29	20.493	8 23 37.8	95.07
10	21 10 8.10	22.476	14 59 50.7	70.14	10	22 52 53.15	20.461	8 14 6.4	95.39
11	21 12 22.81	22.428	14 52 47.6	70.89	11	22 54 55.82	20.428	8 4 33.1	95.69
12	21 14 37.23	22.379	14 45 40.0	71.63	12	22 56 58.28	20.394	7 54 58.1	95.99
13	21 16 51.36	22.332	14 38 28.0	72.35	13	22 59 0.55	20.363	7 45 21.2	96.29
14	21 19 5.21	22.284	14 31 11.8	73.07	14	23 1 2.64	20.332	7 35 42.6	96.57
15	21 21 18.77	22.236	14 23 51.2	73.78	15	23 3 4.53	20.299	7 26 2.4	96.84
16	21 23 32.04	22.188	14 16 26.4	74.48	16	23 5 6.23	20.268	7 16 20.5	97.12
17	21 25 45.03	22.142	14 8 57.5	75.17	17	23 7 7.75	20.238	7 6 37.0	97.38
18	21 27 57.74	22.094	14 1 24.4	75.85	18	23 9 9.09	20.208	6 56 52.0	97.63
19	21 30 10.16	22.048	13 53 47.3	76.52	19	23 11 10.25	20.179	6 47 5.5	97.87
20	21 32 22.31	22.001	13 46 6.2	77.18	20	23 13 11.24	20.150	6 37 17.6	98.10
21	21 34 34.17	21.954	13 38 21.2	77.83	21	23 15 12.05	20.121	6 27 28.3	98.33
22	21 36 45.76	21.908	13 30 32.3	78.47	22	23 17 12.69	20.093	6 17 37.7	98.55
23	21 38 57.07	21.862	13 22 39.6	79.10	23	23 19 13.17	20.066	6 7 45.7	98.77
24	21 41 8.10	21.817	S. 13 14 43.1	79.73	24	23 21 13.48	20.038	S. 5 57 52.5	98.97

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 29.					WEDNESDAY 30.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	23 21 13.48	20.038	S. 5 57 52.5	98.97	0	0 8 38.48	19.519	S. 1 56 19.1	101.63
1	23 23 13.62	20.011	5 47 58.1	99.16	1	0 10 35.55	19.504	1 46 9.3	101.64
2	23 25 13.61	19.985	5 38 2.6	99.35	2	0 12 32.53	19.488	1 35 59.4	101.66
3	23 27 13.44	19.959	5 28 5.9	99.53	3	0 14 29.41	19.473	1 25 49.4	101.67
4	23 29 13.12	19.934	5 18 8.2	99.71	4	0 16 26.20	19.458	1 15 39.4	101.66
5	23 31 12.65	19.908	5 8 9.4	99.88	5	0 18 22.91	19.444	1 5 29.5	101.65
6	23 33 12.02	19.884	4 58 9.7	100.03	6	0 20 19.53	19.430	0 55 19.6	101.64
7	23 35 11.26	19.861	4 48 9.1	100.18	7	0 22 16.07	19.417	0 45 9.8	101.62
8	23 37 10.35	19.836	4 38 7.6	100.33	8	0 24 12.53	19.404	0 35 0.2	101.59
9	23 39 9.29	19.813	4 28 5.2	100.47	9	0 26 8.92	19.392	0 24 50.7	101.56
10	23 41 8.10	19.791	4 18 2.0	100.59	10	0 28 5.23	19.379	0 14 41.5	101.52
11	23 43 6.78	19.768	4 7 58.1	100.71	11	0 30 1.47	19.368	S. 0 4 32.5	101.47
12	23 45 5.32	19.746	3 57 53.5	100.83	12	0 31 57.64	19.357	N. 0 5 36.1	101.41
13	23 47 3.73	19.725	3 47 48.2	100.93	13	0 33 53.75	19.346	0 15 44.4	101.35
14	23 49 2.02	19.704	3 37 42.3	101.02	14	0 35 49.79	19.336	0 25 52.3	101.28
15	23 51 0.18	19.683	3 27 35.9	101.12	15	0 37 45.78	19.326	0 35 59.8	101.21
16	23 52 58.22	19.663	3 17 28.9	101.21	16	0 39 41.70	19.316	0 46 6.8	101.13
17	23 54 56.14	19.643	3 7 21.4	101.28	17	0 41 37.57	19.308	0 56 13.3	101.03
18	23 56 53.94	19.624	2 57 13.5	101.35	18	0 43 33.39	19.298	1 6 19.2	100.94
19	23 58 51.63	19.606	2 47 5.2	101.42	19	0 45 29.15	19.290	1 16 24.6	100.84
20	0 0 49.21	19.588	2 36 56.5	101.48	20	0 47 24.87	19.283	1 26 29.3	100.73
21	0 2 46.69	19.570	2 26 47.5	101.53	21	0 49 20.54	19.275	1 36 33.3	100.61
22	0 4 44.05	19.553	2 16 38.2	101.56	22	0 51 16.17	19.268	1 46 36.6	100.49
23	0 6 41.32	19.536	2 6 28.8	101.59	23	0 53 11.76	19.262	1 56 39.2	100.37
24	0 8 38.48	19.519	S. 1 56 19.1	101.63	24	0 55 7.31	19.256	N. 2 6 41.0	100.23

PHASES OF THE MOON.

		h	m
Apr. 3	● New Moon	-	19 17.3
11	) First Quarter	-	23 12.1
19	○ Full Moon	-	2 10.7
25	(Last Quarter	-	16 28.1

		h
Apr. 8	(Apogee	3.2
20	(Perigee	8.3

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi-diameter passing the Meridian.*	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.				
Thur.	1	h m s	s	N. 15° 4' 34".4	45° 38'	m s	m s	s
Frid.	2	2 33 35.06	9.547	15 22 36.0	44.75	1 6.01	2 57.15	0.308
Sat.	3	2 37 24.47	9.570	15 40 22.5	44.11	1 6.09	3 4.28	0.286
Sun.	4	2 41 14.43	9.593	15 57 53.4	43.46	1 6.17	3 10.86	0.263
Mon.	5	2 45 4.94	9.616	16 15 8.5	42.79	1 6.25	3 16.89	0.240
Tues.	6	2 48 56.00	9.639	16 32 7.5	42.11	1 6.33	3 22.36	0.216
Wed.	7	2 52 47.62	9.662	16 48 49.9	41.42	1 6.41	3 27.28	0.194
Thur.	8	2 56 39.80	9.686	17 5 15.5	40.71	1 6.49	3 31.65	0.170
Frid.	9	3 0 32.54	9.709	17 21 24.0	39.99	1 6.58	3 35.45	0.147
Sat.	10	3 4 25.84	9.732	17 37 15.1	39.26	1 6.66	3 38.70	0.124
Sun.	11	3 8 19.69	9.756	17 52 48.5	38.52	1 6.74	3 41.39	0.101
Mon.	12	3 12 14.11	9.779	18 8 3.9	37.76	1 6.82	3 43.53	0.078
Tues.	13	3 16 9.08	9.802	18 23 0.9	36.99	1 6.91	3 45.11	0.054
Wed.	14	3 20 4.61	9.825	18 37 39.3	36.21	1 6.99	3 46.13	0.031
Thur.	15	3 24 0.69	9.848	18 51 58.8	35.41	1 7.07	3 46.60	0.008
Frid.	16	3 27 57.32	9.871	19 5 59.2	34.61	1 7.15	3 46.52	0.015
Sat.	17	3 31 54.51	9.895	19 19 40.1	33.79	1 7.23	3 45.89	0.038
Sun.	18	3 35 52.26	9.918	19 33 1.3	32.97	1 7.31	3 44.70	0.061
Mon.	19	3 39 50.55	9.941	19 46 2.7	32.14	1 7.39	3 42.97	0.084
Tues.	20	3 43 49.41	9.964	19 58 43.8	31.29	1 7.47	3 40.68	0.107
Wed.	21	3 47 48.82	9.987	20 11 4.5	30.43	1 7.55	3 37.83	0.130
Thur.	22	3 51 48.78	10.010	20 23 4.6	29.57	1 7.62	3 34.43	0.153
Frid.	23	3 55 49.29	10.033	20 34 43.9	28.70	1 7.70	3 30.49	0.176
Sat.	24	3 59 50.34	10.055	20 46 2.0	27.81	1 7.77	3 26.00	0.198
Sun.	25	4 3 51.94	10.077	20 56 58.8	26.92	1 7.84	3 20.98	0.220
Mon.	26	4 7 54.06	10.099	21 7 34.0	26.01	1 7.91	3 15.43	0.242
Tues.	27	4 11 56.71	10.121	21 17 47.4	25.10	1 7.98	3 9.36	0.264
Wed.	28	4 15 59.86	10.141	21 27 38.9	24.18	1 8.05	3 2.78	0.284
Thur.	29	4 20 3.50	10.162	21 37 8.1	23.25	1 8.11	2 55.71	0.304
Frid.	30	4 24 7.62	10.181	21 46 14.8	22.31	1 8.18	2 48.17	0.324
Sat.	31	4 28 12.20	10.200	21 54 59.0	21.36	1 8.24	2 40.17	0.343
Sun.	32	4 32 17.22	10.218	N. 22° 3' 20".3	20.41	1 8.30	2 31.73	0.361
Sun.	32	4 36 22.67	10.235			1 8.35	2 22.86	0.378

* Mean Time of the Semidiameter passing may be found by subtracting 0^m.18 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be subtracted from Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi-diameter.*		
		h m s	N. ° ' "	' "	m s	h m s
Thur.	1	2 33 35.53	N. 15 4 36.6	15 53.56	2 57.17	2 36 32.70
Frid.	2	2 37 24.96	15 22 38.3	15 53.32	3 4.30	2 40 29.25
Sat.	3	2 41 14.94	15 40 24.8	15 53.08	3 10.87	2 44 25.81
Sun.	4	2 45 5.46	15 57 55.8	15 52.85	3 16.90	2 48 22.36
Mon.	5	2 48 56.54	16 15 10.9	15 52.62	3 22.37	2 52 18.92
Tues.	6	2 52 48.18	16 32 9.9	15 52.40	3 27.29	2 56 15.47
Wed.	7	2 56 40.37	16 48 52.3	15 52.18	3 31.65	3 0 12.03
Thur.	8	3 0 33.12	17 5 18.0	15 51.96	3 35.46	3 4 8.58
Frid.	9	3 4 26.43	17 21 26.5	15 51.75	3 38.71	3 8 5.14
Sat.	10	3 8 20.29	17 37 17.6	15 51.54	3 41.40	3 12 1.69
Sun.	11	3 12 14.71	17 52 50.9	15 51.33	3 43.53	3 15 58.25
Mon.	12	3 16 9.69	18 8 6.2	15 51.13	3 45.11	3 19 54.80
Tues.	13	3 20 5.22	18 23 3.2	15 50.92	3 46.13	3 23 51.36
Wed.	14	3 24 1.31	18 37 41.6	15 50.73	3 46.60	3 27 47.91
Thur.	15	3 27 57.94	18 52 1.0	15 50.53	3 46.52	3 31 44.47
Frid.	16	3 31 55.13	19 6 1.3	15 50.34	3 45.89	3 35 41.02
Sat.	17	3 35 52.87	19 19 42.2	15 50.14	3 44.70	3 39 37.58
Sun.	18	3 39 51.17	19 33 3.4	15 49.95	3 42.96	3 43 34.13
Mon.	19	3 43 50.02	19 46 4.6	15 49.77	3 40.67	3 47 30.69
Tues.	20	3 47 49.42	19 58 45.7	15 49.58	3 37.82	3 51 27.24
Wed.	21	3 51 49.37	20 11 6.4	15 49.40	3 34.43	3 55 23.80
Thur.	22	3 55 49.87	20 23 6.4	15 49.22	3 30.48	3 59 20.35
Frid.	23	3 59 50.92	20 34 45.5	15 49.04	3 25.99	4 3 16.91
Sat.	24	4 3 52.50	20 46 3.5	15 48.86	3 20.97	4 7 13.47
Sun.	25	4 7 54.61	20 57 0.2	15 48.69	3 15.41	4 11 10.02
Mon.	26	4 11 57.24	21 7 35.4	15 48.52	3 9.34	4 15 6.58
Tues.	27	4 16 0.37	21 17 48.7	15 48.35	3 2.76	4 19 3.13
Wed.	28	4 20 3.99	21 27 40.0	15 48.19	2 55.70	4 22 59.69
Thur.	29	4 24 8.09	21 37 9.1	15 48.03	2 48.16	4 26 56.25
Frid.	30	4 28 12.65	21 46 15.8	15 47.88	2 40.15	4 30 52.80
Sat.	31	4 32 17.65	21 54 59.9	15 47.73	2 31.71	4 34 49.36
Sun.	32	4 36 23.07	N. 22 3 21.1	15 47.59	2 22.84	4 38 45.92

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

MEAN TIME.

Day.	THE SUN'S		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	<i>Apparent</i>				Semidiameter.		Horizontal Parallax.	
	Longitude.	Latitude.			Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	40° 49' 21.3	S. 0° 10'	0.0034575	21 19 57.04	14 57.34	14 54.33	54 53.38	54 42.33
2	41 47 33.6	0 19	.0035666	21 16 1.13	14 51.64	14 49.27	54 32.45	54 23.75
3	42 45 44.3	0 25	.0036740	21 12 5.22	14 47.22	14 45.49	54 16.22	54 9.88
4	43 43 53.3	0 29	0.0037798	21 8 9.31	14 44.10	14 43.06	54 4.78	54 0.96
5	44 42 0.6	0 30	.0038840	21 4 13.40	14 42.39	14 42.11	53 58.50	53 57.48
6	45 40 6.1	0 28	.0039864	21 0 17.50	14 42.25	14 42.84	53 57.99	54 0.14
7	46 38 9.8	0 24	0.0040872	20 56 21.59	14 43.90	14 45.46	54 4.03	54 9.76
8	47 36 11.8	0 18	.0041863	20 52 25.68	14 47.56	14 50.21	54 17.45	54 27.19
9	48 34 12.0	S. 0 09	.0042839	20 48 29.77	14 53.44	14 57.26	54 39.05	54 53.08
10	49 32 10.3	N. 0 02	0.0043799	20 44 33.86	15 1.69	15 6.72	55 9.33	55 27.78
11	50 30 6.9	0 14	.0044744	20 40 37.95	15 12.33	15 18.50	55 48.38	56 11.03
12	51 28 1.6	0 27	.0045675	20 36 42.04	15 25.19	15 32.32	56 35.56	57 1.75
13	52 25 54.5	0 39	0.0046592	20 32 46.13	15 39.82	15 47.59	57 29.28	57 57.77
14	53 23 45.6	0 51	.0047498	20 28 50.22	15 55.48	16 3.36	58 26.75	58 55.66
15	54 21 34.9	0 61	.0048393	20 24 54.31	16 11.04	16 18.35	59 23.87	59 50.70
16	55 19 22.6	0 69	0.0049278	20 20 58.40	16 25.09	16 31.07	60 15.43	60 37.35
17	56 17 8.7	0 75	.0050154	20 17 2.49	16 36.08	16 39.98	60 55.77	61 10.08
18	57 14 53.2	0 78	.0051022	20 13 6.59	16 42.63	16 43.94	61 19.80	61 24.59
19	58 12 36.4	0 77	0.0051881	20 9 10.68	16 43.86	16 42.41	61 24.31	61 19.00
20	59 10 18.2	0 73	.0052733	20 5 14.77	16 39.66	16 35.70	61 8.89	60 54.37
21	60 7 58.8	0 66	.0053575	20 1 18.86	16 30.69	16 24.80	60 35.99	60 14.35
22	61 5 38.4	0 56	0.0054407	19 57 22.95	16 18.21	16 11.11	59 50.16	59 24.11
23	62 3 16.9	0 44	.0055227	19 53 27.04	16 3.69	15 56.13	58 56.89	58 29.13
24	63 0 54.4	0 31	.0056034	19 49 31.13	15 48.57	15 41.15	58 1.39	57 34.17
25	63 58 31.0	0 18	0.0056826	19 45 35.22	15 33.99	15 27.17	57 7.88	56 42.85
26	64 56 6.6	N. 0 05	.0057602	19 41 39.31	15 20.76	15 14.82	56 19.33	55 57.50
27	65 53 41.4	S. 0 07	.0058360	19 37 43.40	15 9.36	15 4.42	55 37.48	55 19.34
28	66 51 15.3	0 18	0.0059098	19 33 47.49	14 59.99	14 56.09	55 3.11	54 48.77
29	67 48 48.3	0 27	.0059817	19 29 51.57	14 52.69	14 49.78	54 36.29	54 25.61
30	68 46 20.3	0 34	.0060514	19 25 55.66	14 47.34	14 45.36	54 16.67	54 9.39
31	69 43 51.5	0 37	.0061189	19 21 59.75	14 43.81	14 42.67	54 3.70	53 59.52
32	70 41 21.7	S. 0 38	0.0061842	19 18 3.84	14 41.93	14 41.57	53 56.80	53 55.49

MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
					d	h m	h m
1	13 30 7.1	19 35 45.6	S. 3 29 32.6	S. 3 51 25.5	27.20	22 59.0	10 37.3
2	25 39 37.5	31 41 54.0	4 10 32.2	4 26 43.0	28.20	23 42.6	11 20.7
3	37 42 45.0	43 42 19.7	4 39 50.0	4 49 47.1	29.20	* *	12 4.6
4	49 40 47.0	55 38 16.1	4 56 30.0	4 59 56.6	0.54	0 26.8	12 49.3
5	61 34 57.0	67 31 0.7	5 0 6.1	4 57 0.0	1.54	1 12.0	13 34.9
6	73 26 40.2	79 22 10.4	4 50 40.6	4 41 12.5	2.54	1 58.1	14 21.6
7	85 17 48.7	91 13 54.8	4 28 41.0	4 13 13.0	3.54	2 45.3	15 9.1
8	97 10 51.6	103 9 4.2	3 54 56.5	3 34 0.6	4.54	3 33.1	15 57.3
9	109 9 1.0	115 11 12.7	3 10 35.3	2 44 52.1	5.54	4 21.5	16 45.7
10	121 16 12.3	127 24 34.7	2 17 3.4	1 47 23.2	6.54	5 10.0	17 34.3
11	133 36 56.3	139 53 53.9	1 16 6.8	S. 0 43 31.7	7.54	5 58.6	18 22.9
12	146 16 4.1	152 44 2.2	S. 0 9 57.0	N. 0 24 15.4	8.54	6 47.2	19 11.7
13	159 18 20.6	165 59 27.3	N. 0 58 41.2	1 32 53.1	9.54	7 36.3	20 1.1
14	172 47 44.8	179 43 27.2	2 6 21.2	2 38 32.7	10.54	8 26.2	20 51.6
15	186 46 38.9	193 57 12.7	3 8 52.5	3 36 43.8	11.54	9 17.5	21 44.0
16	201 14 48.1	208 38 50.9	4 1 29.6	4 22 33.9	12.54	10 11.1	22 38.8
17	216 8 32.2	223 42 49.7	4 39 23.2	4 51 29.1	13.54	11 7.3	23 36.5
18	231 20 29.2	239 0 8.1	4 58 29.5	5 0 10.5	14.54	12 6.3	* *
19	246 40 18.4	254 19 31.6	4 56 27.3	4 47 24.9	15.54	13 7.6	0 36.8
20	261 56 22.3	269 29 32.8	4 33 17.7	4 14 28.6	16.54	14 9.8	1 38.7
21	276 57 55.8	284 20 36.7	3 51 27.2	3 24 48.0	17.54	15 11.1	2 40.7
22	291 36 54.8	298 46 23.5	2 55 8.7	2 23 8.2	18.54	16 9.8	3 40.9
23	305 48 49.1	312 44 9.9	1 49 24.9	1 14 36.0	19.54	17 5.1	4 37.9
24	319 32 34.3	326 14 19.0	N. 0 39 15.9	N. 0 3 56.5	20.54	17 56.7	5 31.3
25	332 49 46.7	339 19 24.7	S. 0 30 53.6	S. 1 4 48.8	21.54	18 45.0	6 21.2
26	345 43 43.4	352 3 14.5	1 37 26.4	2 8 26.4	22.54	19 30.8	7 8.2
27	358 18 30.2	4 30 1.8	2 37 31.1	3 4 25.2	23.54	20 15.0	7 53.1
28	10 38 19.4	16 43 51.9	3 28 55.1	3 50 49.0	24.54	20 58.3	8 36.7
29	22 47 5.1	28 48 22.9	4 9 56.8	4 26 9.8	25.54	21 41.5	9 19.9
30	34 48 6.8	40 46 35.6	4 39 20.6	4 49 23.7	26.54	22 25.2	10 3.2
31	46 44 6.1	52 40 52.7	4 56 14.6	4 59 50.7	27.54	23 9.8	10 47.4
32	58 37 8.9	64 33 6.0	S. 5 0 10.6	S. 4 57 14.8	28.54	23 55.6	11 32.5

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 1.					SATURDAY 3.				
	h m s	s	N. ° ' "	100. "		h m s	s	N. ° ' "	86. "
0	0 55 7.31	19.256	2 6 41.0	100.23	0	2 27 32.49	19.381	9 40 16.1	86.40
1	0 57 2.83	19.250	2 16 42.0	100.09	1	2 29 28.81	19.391	9 48 53.2	85.97
2	0 58 58.31	19.244	2 26 42.1	99.94	2	2 31 25.18	19.401	9 57 27.7	85.53
3	1 0 53.76	19.239	2 36 41.3	99.78	3	2 33 21.62	19.412	10 5 59.6	85.09
4	1 2 49.18	19.235	2 46 39.5	99.63	4	2 35 18.12	19.422	10 14 28.8	84.63
5	1 4 44.58	19.231	2 56 36.8	99.46	5	2 37 14.68	19.433	10 22 55.2	84.17
6	1 6 39.95	19.228	3 6 33.0	99.28	6	2 39 11.32	19.445	10 31 18.8	83.71
7	1 8 35.31	19.224	3 16 28.2	99.11	7	2 41 8.02	19.456	10 39 39.7	83.24
8	1 10 30.64	19.220	3 26 22.3	98.92	8	2 43 4.79	19.467	10 47 57.7	82.76
9	1 12 25.95	19.218	3 36 15.2	98.72	9	2 45 1.62	19.478	10 56 12.8	82.28
10	1 14 21.25	19.216	3 46 7.0	98.53	10	2 46 58.53	19.492	11 4 25.1	81.80
11	1 16 16.54	19.214	3 55 57.6	98.33	11	2 48 55.52	19.504	11 12 34.4	81.30
12	1 18 11.82	19.212	4 5 46.9	98.11	12	2 50 52.58	19.516	11 20 40.7	80.81
13	1 20 7.08	19.211	4 15 34.9	97.89	13	2 52 49.71	19.528	11 28 44.1	80.31
14	1 22 2.35	19.211	4 25 21.6	97.68	14	2 54 46.92	19.542	11 36 44.4	79.79
15	1 23 57.61	19.209	4 35 7.0	97.44	15	2 56 44.21	19.555	11 44 41.6	79.28
16	1 25 52.86	19.209	4 44 50.9	97.20	16	2 58 41.58	19.568	11 52 35.7	78.76
17	1 27 48.12	19.210	4 54 33.4	96.96	17	3 0 39.02	19.581	12 0 26.7	78.24
18	1 29 43.38	19.211	5 4 14.4	96.71	18	3 2 36.55	19.595	12 8 14.6	77.71
19	1 31 38.65	19.213	5 13 53.9	96.46	19	3 4 34.16	19.608	12 15 59.2	77.17
20	1 33 33.93	19.213	5 23 31.9	96.19	20	3 6 31.85	19.622	12 23 40.6	76.63
21	1 35 29.21	19.214	5 33 8.2	95.93	21	3 8 29.62	19.636	12 31 18.7	76.08
22	1 37 24.50	19.217	5 42 43.0	95.65	22	3 10 27.48	19.651	12 38 53.6	75.53
23	1 39 19.81	19.219	N. 5 52 16.0	95.37	23	3 12 25.43	19.665	N. 12 46 25.1	74.97
FRIDAY 2.					SUNDAY 4.				
	h m s	s	N. ° ' "	95. "		h m s	s	N. ° ' "	74. "
0	1 41 15.13	19.222	6 1 47.4	95.09	0	3 14 23.46	19.679	N. 12 53 53.2	74.40
1	1 43 10.47	19.226	6 11 17.1	94.79	1	3 16 21.58	19.694	13 1 17.9	73.84
2	1 45 5.84	19.229	6 20 44.9	94.49	2	3 18 19.79	19.709	13 8 39.3	73.27
3	1 47 1.22	19.232	6 30 11.0	94.19	3	3 20 18.09	19.724	13 15 57.1	72.68
4	1 48 56.62	19.236	6 39 35.2	93.88	4	3 22 16.48	19.738	13 23 11.5	72.10
5	1 50 52.05	19.241	6 48 57.5	93.56	5	3 24 14.95	19.753	13 30 22.3	71.51
6	1 52 47.51	19.246	6 58 17.9	93.24	6	3 26 13.52	19.769	13 37 29.6	70.92
7	1 54 43.00	19.251	7 7 36.4	92.91	7	3 28 12.18	19.785	13 44 33.3	70.32
8	1 56 38.52	19.256	7 16 52.8	92.58	8	3 30 10.94	19.800	13 51 33.4	69.72
9	1 58 34.07	19.262	7 26 7.3	92.23	9	3 32 9.78	19.815	13 58 29.9	69.11
10	2 0 29.66	19.268	7 35 19.6	91.88	10	3 34 8.72	19.832	14 5 22.7	68.48
11	2 2 25.28	19.274	7 44 29.9	91.53	11	3 36 7.76	19.848	14 12 11.7	67.87
12	2 4 20.95	19.281	7 53 38.0	91.18	12	3 38 6.89	19.862	14 18 57.1	67.24
13	2 6 16.65	19.287	8 2 44.0	90.82	13	3 40 6.11	19.878	14 25 38.6	66.61
14	2 8 12.39	19.294	8 11 47.8	90.44	14	3 42 5.43	19.895	14 32 16.4	65.98
15	2 10 8.18	19.302	8 20 49.3	90.06	15	3 44 4.85	19.911	14 38 50.4	65.34
16	2 12 4.01	19.309	8 29 48.5	89.68	16	3 46 4.36	19.927	14 45 20.5	64.69
17	2 13 59.89	19.318	8 38 45.4	89.29	17	3 48 3.97	19.943	14 51 46.7	64.04
18	2 15 55.82	19.325	8 47 40.0	88.90	18	3 50 3.67	19.959	14 58 9.0	63.39
19	2 17 51.79	19.333	8 56 32.2	88.49	19	3 52 3.48	19.976	15 4 27.4	62.73
20	2 19 47.82	19.343	9 5 21.9	88.08	20	3 54 3.38	19.992	15 10 41.7	62.06
21	2 21 43.91	19.353	9 14 9.2	87.68	21	3 56 3.38	20.008	15 16 52.1	61.40
22	2 23 40.05	19.361	9 22 54.1	87.27	22	3 58 3.48	20.023	15 22 58.5	60.73
23	2 25 36.24	19.370	9 31 36.4	86.83	23	4 0 3.68	20.041	15 29 0.8	60.04
24	2 27 32.49	19.381	N. 9 40 16.1	86.40	24	4 2 3.97	20.058	N. 15 34 59.0	59.36

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 5.					WEDNESDAY 7.				
	h m s	s	N. 15 34 59.0	59.36		h m s	s	N. 18 53 16.7	21.87
0	4 2 3.97	20.058	15 40 53.1	58.68	0	5 40 10.50	20.788	18 55 25.3	21.00
1	4 4 4.37	20.074	15 46 43.1	57.98	1	5 42 15.26	20.800	18 57 28.7	20.14
2	4 6 4.86	20.090	15 52 28.9	57.28	2	5 44 20.10	20.813	18 59 27.0	19.28
3	4 8 5.45	20.108	16 3 47.8	55.87	3	5 46 25.01	20.824	19 1 20.1	18.41
4	4 10 6.15	20.124	16 9 20.9	55.17	4	5 48 29.99	20.836	19 3 7.9	17.53
5	4 12 6.94	20.140	16 14 49.8	54.45	5	5 50 35.04	20.848	19 4 50.5	16.67
6	4 14 7.83	20.157	16 20 14.3	53.73	6	5 52 40.16	20.859	19 6 27.9	15.80
7	4 16 8.82	20.173	16 25 34.5	53.01	7	5 54 45.35	20.870	19 8 0.1	14.93
8	4 18 9.90	20.189	16 30 50.4	52.28	8	5 56 50.60	20.881	19 9 27.0	14.04
9	4 20 11.09	20.206	16 36 1.9	51.54	9	5 58 55.92	20.892	19 10 48.6	13.16
10	4 22 12.37	20.223	16 41 8.9	50.81	10	6 1 1.30	20.903	19 12 4.9	12.28
11	4 24 13.76	20.239	16 46 11.6	50.08	11	6 3 6.75	20.913	19 13 15.9	11.39
12	4 26 15.24	20.255	16 51 9.8	49.33	12	6 5 12.26	20.923	19 14 21.6	10.51
13	4 28 16.82	20.272	16 56 3.5	48.58	13	6 7 17.83	20.934	19 15 22.0	9.63
14	4 30 18.50	20.288	17 0 52.7	47.83	14	6 9 23.47	20.944	19 16 17.1	8.73
15	4 32 20.28	20.304	17 5 37.4	47.07	15	6 11 29.16	20.953	19 17 51.2	7.84
16	4 34 22.15	20.320	17 10 17.5	46.31	16	6 13 34.91	20.963	19 18 30.2	6.95
17	4 36 24.12	20.337	17 14 53.1	45.54	17	6 15 40.71	20.972	19 19 3.8	6.05
18	4 38 26.19	20.353	17 19 24.0	44.78	18	6 17 46.57	20.981	19 19 32.1	5.16
19	4 40 28.36	20.369	17 23 50.4	44.01	19	6 19 52.48	20.990	19 19 55.0	4.27
20	4 42 30.62	20.384	17 28 12.1	43.23	20	6 21 58.45	20.999	19 20 12.5	3.37
21	4 44 32.97	20.400	17 32 29.1	42.44	21	6 24 4.47	21.008	19 20 24.7	2.48
22	4 46 35.42	20.417	17 36 41.4	41.66	22	6 26 10.54	21.016	19 20 32.7	1.58
23	4 48 37.97	20.433	17 40 49.0	40.88	23	6 28 16.66	21.024	19 20 38.6	0.67
TUESDAY 6.					THURSDAY 8.				
0	4 50 40.61	20.448	17 44 51.9	40.08	0	6 30 22.83	21.033	19 20 40.0	8.39
1	4 52 43.34	20.463	17 48 50.0	39.29	1	6 32 29.05	21.040	19 20 43.7	7.30
2	4 54 46.17	20.479	17 52 43.4	38.49	2	6 34 35.31	21.048	19 20 47.9	6.21
3	4 56 49.09	20.494	17 56 31.9	37.68	3	6 36 41.62	21.055	19 20 52.6	5.12
4	4 58 52.10	20.509	18 0 15.6	36.88	4	6 38 47.97	21.062	19 20 57.8	4.03
5	5 0 55.20	20.525	18 3 54.5	36.08	5	6 40 54.36	21.068	19 20 58.6	2.94
6	5 2 58.40	20.540	18 7 28.5	35.27	6	6 43 0.79	21.075	19 20 58.6	1.85
7	5 5 1.68	20.554	18 10 57.7	34.45	7	6 45 7.26	21.083	19 20 58.6	0.76
8	5 7 5.05	20.569	18 14 21.9	33.63	8	6 47 13.78	21.089	19 20 58.6	0.67
9	5 9 8.51	20.584	18 17 41.2	32.81	9	6 49 20.33	21.094	19 20 58.6	0.58
10	5 11 12.06	20.599	18 20 55.6	31.99	10	6 51 26.91	21.101	19 20 58.6	0.49
11	5 13 15.70	20.613	18 24 5.1	31.16	11	6 53 33.54	21.107	19 20 58.6	0.40
12	5 15 19.42	20.628	18 27 9.5	30.33	12	6 55 40.19	21.112	19 20 58.6	0.31
13	5 17 23.23	20.642	18 30 9.0	29.49	13	6 57 46.88	21.118	19 20 58.6	0.22
14	5 19 27.12	20.655	18 33 3.4	28.65	14	6 59 53.60	21.123	19 20 58.6	0.13
15	5 21 31.09	20.669	18 35 52.8	27.82	15	7 2 0.36	21.128	19 20 58.6	0.04
16	5 23 35.15	20.683	18 38 37.2	26.98	16	7 4 7.14	21.133	19 20 58.6	0.04
17	5 25 39.29	20.698	18 41 16.6	26.13	17	7 6 13.95	21.138	19 20 58.6	0.04
18	5 27 43.52	20.711	18 43 50.8	25.28	18	7 8 20.79	21.143	19 20 58.6	0.04
19	5 29 47.82	20.723	18 46 20.0	24.43	19	7 10 27.66	21.147	19 20 58.6	0.04
20	5 31 52.20	20.737	18 48 44.0	23.58	20	7 12 34.55	21.151	19 20 58.6	0.04
21	5 33 56.66	20.750	18 51 2.9	22.73	21	7 14 41.47	21.155	19 20 58.6	0.04
22	5 36 1.20	20.763	18 53 16.7	21.87	22	7 16 48.41	21.158	19 20 58.6	0.04
23	5 38 5.81	20.775	18 55 59.8	21.04	23	7 18 55.37	21.162	19 20 58.6	0.04
24	5 40 10.50	20.788	18 58 3.9	20.23	24	7 21 2.35	21.166	19 20 58.6	0.04

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
FRIDAY 9.					SUNDAY 11.				
	h m s	s				h m s	s		
0	7 21 2.35	21.166	N.18° 55' 59.8	21.14	0	9 2 49.52	21.223	N.15° 31' 36.9	63.36
1	7 23 9.36	21.170	18 53 50.2	22.06	1	9 4 56.86	21.223	15 25 14.3	64.18
2	7 25 16.39	21.173	18 51 35.1	22.97	2	9 7 4.20	21.224	15 18 46.8	64.99
3	7 27 23.43	21.175	18 49 14.6	23.87	3	9 9 11.55	21.225	15 12 14.4	65.82
4	7 29 30.49	21.178	18 46 48.7	24.78	4	9 11 18.90	21.226	15 5 37.0	66.63
5	7 31 37.57	21.182	18 44 17.3	25.68	5	9 13 26.26	21.227	14 58 54.8	67.44
6	7 33 44.67	21.184	18 41 40.5	26.59	6	9 15 33.62	21.228	14 52 7.7	68.25
7	7 35 51.78	21.186	18 38 58.2	27.50	7	9 17 41.00	21.230	14 45 15.8	69.06
8	7 37 58.90	21.188	18 36 10.5	28.41	8	9 19 48.38	21.231	14 38 19.0	69.87
9	7 40 6.04	21.192	18 33 17.3	29.32	9	9 21 55.77	21.233	14 31 17.4	70.66
10	7 42 13.20	21.193	18 30 18.7	30.22	10	9 24 3.17	21.234	14 24 11.1	71.45
11	7 44 20.36	21.195	18 27 14.7	31.12	11	9 26 10.58	21.236	14 17 0.0	72.24
12	7 46 27.54	21.197	18 24 5.3	32.02	12	9 28 18.00	21.238	14 9 44.2	73.03
13	7 48 34.72	21.198	18 20 50.5	32.92	13	9 30 25.43	21.239	14 2 23.6	73.82
14	7 50 41.92	21.201	18 17 30.3	33.82	14	9 32 32.87	21.242	13 54 58.4	74.59
15	7 52 49.13	21.202	18 14 4.7	34.72	15	9 34 40.33	21.244	13 47 28.5	75.38
16	7 54 56.34	21.203	18 10 33.7	35.62	16	9 36 47.80	21.247	13 39 53.9	76.14
17	7 57 3.57	21.205	18 6 57.3	36.52	17	9 38 55.29	21.250	13 32 14.8	76.91
18	7 59 10.80	21.205	18 3 15.5	37.41	18	9 41 2.80	21.253	13 24 31.0	77.68
19	8 1 18.03	21.207	17 59 28.4	38.30	19	9 43 10.32	21.255	13 16 42.7	78.43
20	8 3 25.28	21.208	17 55 35.9	39.19	20	9 45 17.86	21.258	13 8 49.8	79.18
21	8 5 32.53	21.209	17 51 38.1	40.08	21	9 47 25.42	21.262	13 0 52.5	79.93
22	8 7 39.79	21.210	17 47 34.9	40.98	22	9 49 33.00	21.265	12 52 50.6	80.68
23	8 9 47.05	21.210	N.17° 43' 26.4	41.86	23	9 51 40.60	21.269	N.12° 44' 44.3	81.42
SATURDAY 10.					MONDAY 12.				
0	8 11 54.31	21.211	N.17° 39' 12.6	42.74	0	9 53 48.23	21.273	N.12° 36' 33.5	82.17
1	8 14 1.58	21.213	17 34 53.5	43.63	1	9 55 55.88	21.278	12 28 18.3	82.90
2	8 16 8.86	21.213	17 30 29.0	44.52	2	9 58 3.56	21.282	12 19 58.7	83.63
3	8 18 16.13	21.213	17 25 59.3	45.39	3	10 0 11.26	21.286	12 11 34.8	84.34
4	8 20 23.41	21.214	17 21 24.3	46.27	4	10 2 18.99	21.291	12 3 6.6	85.07
5	8 22 30.70	21.214	17 16 44.1	47.14	5	10 4 26.75	21.296	11 54 34.0	85.78
6	8 24 37.98	21.214	17 11 58.6	48.03	6	10 6 34.54	21.302	11 45 57.2	86.48
7	8 26 45.27	21.215	17 7 7.8	48.90	7	10 8 42.37	21.307	11 37 16.2	87.18
8	8 28 52.56	21.216	17 2 11.8	49.77	8	10 10 50.22	21.313	11 28 31.0	87.88
9	8 30 59.86	21.216	16 57 10.6	50.63	9	10 12 58.12	21.319	11 19 41.6	88.58
10	8 33 7.15	21.216	16 52 4.3	51.49	10	10 15 6.05	21.325	11 10 48.0	89.28
11	8 35 14.45	21.217	16 46 52.7	52.37	11	10 17 14.02	21.332	11 1 50.3	89.95
12	8 37 21.75	21.217	16 41 35.9	53.23	12	10 19 22.03	21.338	10 52 48.6	90.63
13	8 39 29.05	21.217	16 36 14.0	54.08	13	10 21 30.08	21.345	10 43 42.8	91.31
14	8 41 36.35	21.218	16 30 47.0	54.93	14	10 23 38.17	21.353	10 34 32.9	91.98
15	8 43 43.66	21.218	16 25 14.8	55.79	15	10 25 46.31	21.361	10 25 19.1	92.63
16	8 45 50.97	21.218	16 19 37.5	56.64	16	10 27 54.50	21.368	10 16 1.4	93.28
17	8 47 58.28	21.218	16 13 55.1	57.49	17	10 30 2.73	21.377	10 6 39.7	93.93
18	8 50 5.59	21.218	16 8 7.6	58.33	18	10 32 11.02	21.385	9 57 14.2	94.58
19	8 52 12.90	21.219	16 2 15.0	59.18	19	10 34 19.35	21.393	9 47 44.8	95.21
20	8 54 20.22	21.220	15 56 17.4	60.02	20	10 36 27.74	21.403	9 38 11.7	95.84
21	8 56 27.54	21.221	15 50 14.8	60.85	21	10 38 36.19	21.413	9 28 34.7	96.48
22	8 58 34.87	21.221	15 44 7.2	61.68	22	10 40 44.70	21.423	9 18 54.0	97.09
23	9 0 42.19	21.221	15 37 54.6	62.53	23	10 42 53.26	21.433	9 9 9.6	97.70
24	9 2 49.52	21.223	N.15° 31' 36.9	63.36	24	10 45 1.89	21.443	N. 8° 59' 21.6	98.31

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 13.					THURSDAY 15.				
	h m s	s	N. ° ' "	98' "		h m s	s	N. ° ' "	118' "
0	10 45 1.89	21.443	N. 8 59 21.6	98.31	0	12 29 52.10	22.397	N. 0 12 0.5	118.01
1	10 47 10.58	21.453	8 49 29.9	98.91	1	12 32 6.57	22.426	N. 0 0 11.9	118.18
2	10 49 19.33	21.464	8 39 34.7	99.50	2	12 34 21.21	22.456	S. 0 11 37.6	118.33
3	10 51 28.15	21.476	8 29 35.9	100.09	3	12 36 36.04	22.488	0 23 28.1	118.48
4	10 53 37.04	21.488	8 19 33.6	100.67	4	12 38 51.06	22.519	0 35 19.4	118.61
5	10 55 46.01	21.500	8 9 27.9	101.24	5	12 41 6.27	22.551	0 47 11.4	118.73
6	10 57 55.04	21.512	7 59 18.7	101.81	6	12 43 21.67	22.583	0 59 4.2	118.84
7	11 0 4.15	21.526	7 49 6.2	102.37	7	12 45 37.27	22.616	1 10 57.5	118.93
8	11 2 13.35	21.539	7 38 50.3	102.93	8	12 47 53.06	22.648	1 22 51.4	119.03
9	11 4 22.62	21.552	7 28 31.1	103.47	9	12 50 9.05	22.683	1 34 45.8	119.10
10	11 6 31.97	21.566	7 18 8.7	104.01	10	12 52 25.25	22.717	1 46 40.6	119.16
11	11 8 41.41	21.580	7 7 43.0	104.53	11	12 54 41.65	22.750	1 58 35.7	119.20
12	11 10 50.93	21.595	6 57 14.3	105.05	12	12 56 58.25	22.785	2 10 31.0	119.23
13	11 13 0.55	21.610	6 46 42.4	105.58	13	12 59 15.07	22.821	2 22 26.4	119.25
14	11 15 10.25	21.625	6 36 7.4	106.08	14	1 1 32.10	22.856	2 34 22.0	119.26
15	11 17 20.05	21.642	6 25 29.4	106.58	15	1 3 49.34	22.892	2 46 17.5	119.25
16	11 19 29.95	21.658	6 14 48.4	107.08	16	1 3 6.80	22.928	2 58 13.0	119.23
17	11 21 39.94	21.674	6 4 4.5	107.56	17	1 3 8 24.48	22.964	3 10 8.2	119.19
18	11 23 50.04	21.691	5 53 17.7	108.03	18	1 3 10 42.37	23.001	3 22 3.3	119.15
19	11 26 0.23	21.708	5 42 28.1	108.50	19	1 3 13 0.49	23.039	3 33 58.0	119.08
20	11 28 10.54	21.727	5 31 35.7	108.96	20	1 3 15 18.84	23.078	3 45 52.2	119.00
21	11 30 20.95	21.744	5 20 40.6	109.41	21	1 3 17 37.42	23.115	3 57 46.0	118.92
22	11 32 31.47	21.763	5 9 42.8	109.86	22	1 3 19 56.22	23.153	4 9 39.2	118.81
23	11 34 42.11	21.783	N. 4 58 42.3	110.29	23	1 3 22 15.25	23.192	S. 4 21 31.7	118.69
WEDNESDAY 14.					FRIDAY 16.				
	h m s	s	N. ° ' "	110' "		h m s	s	N. ° ' "	118' "
0	11 36 52.86	21.802	N. 4 47 39.3	110.71	0	1 3 24 34.52	23.232	S. 4 33 23.5	118.56
1	11 39 3.73	21.822	4 36 33.8	111.13	1	1 3 26 54.03	23.271	4 45 14.4	118.41
2	11 41 14.72	21.842	4 25 25.7	111.54	2	1 3 29 13.77	23.310	4 57 4.4	118.25
3	11 43 25.83	21.863	4 14 15.3	111.93	3	1 3 31 33.75	23.351	5 8 53.4	118.08
4	11 45 37.07	21.883	4 3 2.5	112.33	4	1 3 33 53.98	23.391	5 20 41.3	117.88
5	11 47 48.43	21.905	3 51 47.4	112.71	5	1 3 36 14.44	23.431	5 32 28.0	117.67
6	11 49 59.93	21.928	3 40 30.0	113.08	6	1 3 38 35.15	23.473	5 44 13.3	117.44
7	11 52 11.56	21.949	3 29 10.4	113.44	7	1 3 40 56.11	23.514	5 55 57.3	117.22
8	11 54 23.32	21.972	3 17 48.7	113.79	8	1 3 43 17.32	23.555	6 7 39.9	116.97
9	11 56 35.22	21.996	3 6 24.9	114.13	9	1 3 45 38.77	23.597	6 19 20.9	116.69
10	11 58 47.27	22.020	2 54 59.1	114.46	10	1 3 48 0.48	23.639	6 31 0.2	116.41
11	12 0 59.46	22.043	2 43 31.4	114.78	11	1 3 50 22.44	23.682	6 42 37.8	116.11
12	12 3 11.79	22.068	2 32 1.7	115.10	12	1 3 52 44.66	23.724	6 54 13.5	115.79
13	12 5 24.27	22.093	2 20 30.2	115.40	13	1 3 55 7.13	23.767	7 5 47.3	115.47
14	12 7 36.90	22.118	2 8 56.9	115.69	14	1 3 57 29.86	23.809	7 17 19.1	115.13
15	12 9 49.69	22.144	1 57 21.9	115.97	15	1 3 59 52.84	23.853	7 28 48.8	114.77
16	12 12 2.63	22.170	1 45 45.3	116.23	16	1 4 2 16.09	23.896	7 40 16.3	114.38
17	12 14 15.73	22.197	1 34 7.1	116.50	17	1 4 4 39.59	23.939	7 51 41.4	113.99
18	12 16 28.99	22.224	1 22 27.3	116.75	18	1 4 7 3.36	23.983	8 3 4.2	113.58
19	12 18 42.42	22.252	1 10 46.1	116.98	19	1 4 9 27.39	24.027	8 14 24.4	113.16
20	12 20 56.01	22.279	0 59 3.5	117.21	20	1 4 11 51.68	24.071	8 25 42.1	112.72
21	12 23 9.77	22.308	0 47 19.6	117.43	21	1 4 14 16.24	24.115	8 36 57.0	112.26
22	12 25 23.71	22.337	0 35 34.4	117.63	22	1 4 16 41.06	24.159	8 48 9.2	111.79
23	12 27 37.81	22.366	0 23 48.0	117.82	23	1 4 19 .6.15	24.203	8 59 18.5	111.30
24	12 29 52.10	22.397	N. 0 12 0.5	118.01	24	1 4 21 31.50	24.248	S. 9 10 24.8	110.79

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 17.					MONDAY 19.				
	h m s	s	° ′ ″	″		h m s	s	° ′ ″	″
0	14 21 31.50	24.248	S. 9 10 24.8	110.79	0	16 22 46.77	26.136	S. 16 33 31.2	68.03
1	14 23 57.12	24.293	9 21 28.0	110.27	1	16 25 23.67	26.163	16 40 15.7	66.80
2	14 26 23.01	24.337	9 32 28.0	109.73	2	16 28 0.72	26.188	16 46 52.8	65.56
3	14 28 49.16	24.381	9 43 24.7	109.18	3	16 30 37.93	26.213	16 53 22.4	64.31
4	14 31 15.58	24.426	9 54 18.1	108.61	4	16 33 15.28	26.237	16 59 44.5	63.04
5	14 33 42.27	24.470	10 5 8.0	108.02	5	16 35 52.77	26.260	17 5 58.9	61.77
6	14 36 9.22	24.514	10 15 54.3	107.42	6	16 38 30.40	26.282	17 12 5.7	60.48
7	14 38 36.44	24.559	10 26 37.0	106.80	7	16 41 8.15	26.303	17 18 4.7	59.19
8	14 41 3.93	24.604	10 37 15.9	106.16	8	16 43 46.03	26.323	17 23 56.0	57.89
9	14 43 31.69	24.648	10 47 50.9	105.51	9	16 46 24.03	26.343	17 29 39.4	56.58
10	14 45 59.71	24.693	10 58 22.0	104.84	10	16 49 2.14	26.360	17 35 14.9	55.26
11	14 48 28.00	24.737	11 8 49.0	104.15	11	16 51 40.35	26.377	17 40 42.5	53.93
12	14 50 56.55	24.781	11 19 11.8	103.44	12	16 54 18.66	26.393	17 46 2.0	52.58
13	14 53 25.37	24.825	11 29 30.3	102.73	13	16 56 57.07	26.409	17 51 13.5	51.24
14	14 55 54.45	24.869	11 39 44.5	102.00	14	16 59 35.57	26.423	17 56 16.9	49.89
15	14 58 23.80	24.913	11 49 54.3	101.25	15	17 2 14.15	26.436	18 1 12.2	48.53
16	15 0 53.40	24.956	11 59 59.5	100.48	16	17 4 52.80	26.448	18 5 59.3	47.17
17	15 3 23.27	25.000	12 10 0.1	99.70	17	17 7 31.52	26.458	18 10 38.2	45.79
18	15 5 53.40	25.043	12 19 55.9	98.90	18	17 10 10.30	26.468	18 15 8.8	44.41
19	15 8 23.78	25.085	12 29 46.9	98.09	19	17 12 49.14	26.478	18 19 31.1	43.03
20	15 10 54.42	25.128	12 39 33.0	97.26	20	17 15 28.03	26.485	18 23 45.2	41.64
21	15 13 25.32	25.171	12 49 14.0	96.41	21	17 18 6.96	26.492	18 27 50.8	40.24
22	15 15 56.47	25.213	12 58 49.9	95.55	22	17 20 45.93	26.497	18 31 48.1	38.84
23	15 18 27.87	25.254	S. 13 8 20.6	94.67	23	17 23 24.92	26.501	S. 18 35 36.9	37.43
SUNDAY 18.					TUESDAY 20.				
	h m s	s	° ′ ″	″		h m s	s	° ′ ″	″
0	15 20 59.52	25.296	S. 13 17 45.9	93.78	0	17 26 3.94	26.504	S. 18 39 17.3	36.03
1	15 23 31.42	25.337	13 27 5.9	92.87	1	17 28 42.97	26.506	18 42 49.3	34.62
2	15 26 3.56	25.378	13 36 20.3	91.94	2	17 31 22.01	26.508	18 46 12.7	33.20
3	15 28 35.95	25.418	13 45 29.2	91.01	3	17 34 1.06	26.507	18 49 27.7	31.78
4	15 31 8.57	25.458	13 54 32.4	90.05	4	17 36 40.09	26.505	18 52 34.1	30.35
5	15 33 41.44	25.498	14 3 29.8	89.08	5	17 39 19.12	26.503	18 55 31.9	28.93
6	15 36 14.54	25.536	14 12 21.4	88.10	6	17 41 58.13	26.499	18 58 21.2	27.50
7	15 38 47.87	25.574	14 21 7.0	87.10	7	17 44 37.11	26.493	19 1 1.9	26.08
8	15 41 21.43	25.613	14 29 46.6	86.09	8	17 47 16.05	26.488	19 3 34.1	24.65
9	15 43 55.22	25.650	14 38 20.1	85.06	9	17 49 54.96	26.481	19 5 57.7	23.21
10	15 46 29.23	25.687	14 46 47.3	84.02	10	17 52 33.82	26.472	19 8 12.6	21.78
11	15 49 3.46	25.723	14 55 8.3	82.97	11	17 55 12.62	26.462	19 10 19.0	20.35
12	15 51 37.91	25.759	15 3 22.9	81.89	12	17 57 51.36	26.452	19 12 16.8	18.91
13	15 54 12.57	25.794	15 11 31.0	80.80	13	18 0 30.04	26.440	19 14 5.9	17.47
14	15 56 47.44	25.829	15 19 32.5	79.71	14	18 3 8.64	26.426	19 15 46.4	16.04
15	15 59 22.52	25.863	15 27 27.5	78.60	15	18 5 47.15	26.412	19 17 18.4	14.61
16	16 1 57.80	25.896	15 35 15.7	77.48	16	18 8 25.58	26.397	19 18 41.7	13.18
17	16 4 33.27	25.928	15 42 57.2	76.34	17	18 11 3.91	26.380	19 19 56.5	11.74
18	16 7 8.94	25.961	15 50 31.8	75.18	18	18 13 42.14	26.363	19 21 2.6	10.31
19	16 9 44.80	25.992	15 57 59.4	74.03	19	18 16 20.26	26.344	19 22 0.2	8.89
20	16 12 20.84	26.023	16 5 20.1	72.86	20	18 18 58.27	26.324	19 22 49.3	7.47
21	16 14 57.07	26.053	16 12 33.7	71.67	21	18 21 36.15	26.302	19 23 29.8	6.05
22	16 17 33.47	26.081	16 19 40.1	70.47	22	18 24 13.89	26.280	19 24 1.9	4.63
23	16 20 10.04	26.108	16 26 39.3	69.26	23	18 26 51.51	26.257	19 24 25.4	3.21
24	16 22 46.77	26.136	S. 16 33 31.2	68.03	24	18 29 28.98	26.233	S. 19 24 40.4	1.80

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
WEDNESDAY 21.					FRIDAY 23.				
	h m s	s	S.	1°		h m s	s	S.	1°
0	18 29 28.98	26.233	19 24 40.4	1.80	0	20 30 52.06	24.083	17 3 21.9	57.19
1	18 32 6.30	26.207	19 24 47.0	0.39	1	20 33 16.39	24.026	16 57 35.8	58.17
2	18 34 43.46	26.180	19 24 45.1	1.02	2	20 35 40.37	23.968	16 51 43.9	59.13
3	18 37 20.46	26.153	19 24 34.8	2.42	3	20 38 4.01	23.911	16 45 46.2	60.09
4	18 39 57.30	26.125	19 24 16.1	3.81	4	20 40 27.30	23.853	16 39 42.8	61.03
5	18 42 33.96	26.094	19 23 49.1	5.19	5	20 42 50.24	23.794	16 33 33.8	61.97
6	18 45 10.43	26.063	19 23 13.8	6.58	6	20 45 12.83	23.737	16 27 19.2	62.89
7	18 47 46.72	26.033	19 22 30.1	7.97	7	20 47 35.08	23.679	16 20 59.1	63.80
8	18 50 22.82	26.004	19 21 38.2	9.33	8	20 49 56.98	23.620	16 14 33.6	64.69
9	18 52 58.72	25.966	19 20 38.1	10.69	9	20 52 18.52	23.562	16 8 2.8	65.58
10	18 55 34.41	25.931	19 19 29.9	12.06	10	20 54 39.72	23.504	16 1 26.7	66.44
11	18 58 9.89	25.895	19 18 13.4	13.42	11	20 57 0.57	23.446	15 54 45.5	67.30
12	19 0 45.15	25.858	19 16 48.9	14.76	12	20 59 21.07	23.388	15 47 59.1	68.16
13	19 3 20.19	25.822	19 15 16.3	16.11	13	21 1 41.22	23.329	15 41 7.6	69.00
14	19 5 55.01	25.783	19 13 35.6	17.44	14	21 4 1.02	23.271	15 34 11.1	69.83
15	19 8 29.59	25.744	19 11 47.0	18.76	15	21 6 20.47	23.213	15 27 9.7	70.63
16	19 11 3.94	25.704	19 9 50.5	20.08	16	21 8 39.57	23.155	15 20 3.5	71.43
17	19 13 38.04	25.663	19 7 46.0	21.39	17	21 10 58.33	23.097	15 12 52.5	72.23
18	19 16 11.89	25.621	19 5 33.8	22.69	18	21 13 16.73	23.038	15 5 36.8	73.00
19	19 18 45.49	25.578	19 3 13.7	23.99	19	21 15 34.79	22.982	14 58 16.5	73.77
20	19 21 18.83	25.535	19 0 45.9	25.28	20	21 17 52.51	22.923	14 50 51.6	74.53
21	19 23 51.91	25.491	18 58 10.4	26.55	21	21 20 9.87	22.866	14 43 22.2	75.28
22	19 26 24.72	25.446	18 55 27.3	27.82	22	21 22 26.90	22.809	14 35 48.3	76.01
23	19 28 57.26	25.401	S. 18 52 36.6	29.08	23	21 24 43.58	22.752	S. 14 28 10.1	76.72
THURSDAY 22.					SATURDAY 24.				
	h m s	s	S.	30		h m s	s	S.	14
0	19 31 29.53	25.354	18 49 38.4	30.33	0	21 26 59.92	22.695	14 20 27.7	77.43
1	19 34 1.51	25.307	18 46 32.7	31.57	1	21 29 15.92	22.638	14 12 41.0	78.13
2	19 36 33.21	25.259	18 43 19.6	32.79	2	21 31 31.58	22.582	14 4 50.1	78.82
3	19 39 4.62	25.211	18 39 59.2	34.02	3	21 33 46.90	22.525	13 56 55.2	79.48
4	19 41 35.74	25.163	18 36 31.4	35.23	4	21 36 1.88	22.469	13 48 56.3	80.15
5	19 44 6.57	25.113	18 32 56.4	36.43	5	21 38 16.53	22.414	13 40 53.4	80.81
6	19 46 37.10	25.063	18 29 14.3	37.62	6	21 40 30.85	22.358	13 32 46.6	81.45
7	19 49 7.32	25.012	18 25 25.0	38.80	7	21 42 44.83	22.303	13 24 36.0	82.08
8	19 51 37.24	24.960	18 21 28.7	39.97	8	21 44 58.48	22.248	13 16 21.7	82.69
9	19 54 6.84	24.908	18 17 25.4	41.13	9	21 47 11.80	22.193	13 8 3.7	83.30
10	19 56 36.14	24.857	18 13 15.1	42.28	10	21 49 24.80	22.139	12 59 42.1	83.90
11	19 59 5.12	24.803	18 8 58.0	43.41	11	21 51 37.47	22.085	12 51 16.9	84.49
12	20 1 33.78	24.750	18 4 34.2	44.53	12	21 53 49.82	22.032	12 42 48.2	85.07
13	20 4 2.12	24.697	18 0 3.6	45.66	13	21 56 1.85	21.978	12 34 16.1	85.63
14	20 6 30.14	24.643	17 55 26.3	46.77	14	21 58 13.56	21.925	12 25 40.7	86.18
15	20 8 57.83	24.588	17 50 42.4	47.86	15	22 0 24.95	21.872	12 17 2.0	86.72
16	20 11 25.20	24.533	17 45 52.0	48.93	16	22 2 36.02	21.820	12 8 20.1	87.25
17	20 13 52.23	24.478	17 40 55.2	50.01	17	22 4 46.79	21.768	11 59 35.0	87.78
18	20 16 18.93	24.423	17 35 51.9	51.08	18	22 6 57.24	21.717	11 50 46.8	88.29
19	20 18 45.30	24.367	17 30 42.3	52.13	19	22 9 7.39	21.666	11 41 55.5	88.79
20	20 21 11.33	24.310	17 25 26.4	53.16	20	22 11 17.23	21.614	11 33 1.3	89.28
21	20 23 37.02	24.254	17 20 4.4	54.18	21	22 13 26.76	21.564	11 24 4.2	89.76
22	20 26 2.38	24.198	17 14 36.3	55.19	22	22 15 36.00	21.515	11 15 4.2	90.23
23	20 28 27.39	24.140	17 9 2.1	56.20	23	22 17 44.94	21.465	11 6 1.4	90.69
24	20 30 52.06	24.083	S. 17 3 21.9	57.19	24	22 19 53.58	21.417	S. 10 56 55.9	91.14

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
SUNDAY 25.					TUESDAY 27.				
	h m s					h m s			
0	22 19 53.58	21.417	S. 10 56 55.9	91.14	0	23 57 58.42	19.653	S. 3 4 53.3	102.35
1	22 22 1.94	21.368	10 47 47.7	91.58	1	23 59 56.26	19.628	2 54 39.1	102.39
2	22 24 10.00	21.319	10 38 36.9	92.02	2	0 1 53.96	19.605	2 44 24.6	102.43
3	22 26 17.77	21.272	10 29 23.5	92.43	3	0 3 51.52	19.583	2 34 9.9	102.46
4	22 28 25.26	21.225	10 20 7.7	92.84	4	0 5 48.95	19.561	2 23 55.1	102.48
5	22 30 32.47	21.178	10 10 49.4	93.25	5	0 7 46.25	19.539	2 13 40.2	102.49
6	22 32 39.39	21.131	10 1 28.7	93.64	6	0 9 43.42	19.519	2 3 25.2	102.50
7	22 34 46.04	21.086	9 52 5.7	94.02	7	0 11 40.47	19.498	1 53 10.2	102.50
8	22 36 52.42	21.041	9 42 40.5	94.39	8	0 13 37.39	19.478	1 42 55.2	102.50
9	22 38 58.53	20.996	9 33 13.0	94.76	9	0 15 34.20	19.458	1 32 40.2	102.48
10	22 41 4.37	20.951	9 23 43.4	95.12	10	0 17 30.89	19.439	1 22 25.4	102.46
11	22 43 9.94	20.907	9 14 11.6	95.46	11	0 19 27.47	19.422	1 12 10.7	102.44
12	22 45 15.25	20.864	9 4 37.9	95.79	12	0 21 23.95	19.403	1 1 56.1	102.41
13	22 47 20.31	20.821	8 55 2.1	96.13	13	0 23 20.31	19.386	0 51 41.8	102.37
14	22 49 25.10	20.778	8 45 24.4	96.43	14	0 25 16.58	19.369	0 41 27.7	102.33
15	22 51 29.65	20.737	8 35 44.9	96.74	15	0 27 12.74	19.353	0 31 13.9	102.28
16	22 53 33.94	20.695	8 26 3.5	97.05	16	0 29 8.81	19.338	0 21 0.4	102.22
17	22 55 37.99	20.654	8 16 20.3	97.34	17	0 31 4.79	19.322	0 10 47.3	102.15
18	22 57 41.79	20.614	8 6 35.4	97.62	18	0 33 0.67	19.307	S. 0 0 34.6	102.08
19	22 59 45.36	20.574	7 56 48.9	97.89	19	0 34 56.47	19.293	N. 0 9 37.7	102.01
20	23 1 48.68	20.534	7 47 0.7	98.16	20	0 36 52.19	19.279	0 19 49.5	101.92
21	23 3 51.77	20.496	7 37 11.0	98.42	21	0 38 47.82	19.266	0 30 0.7	101.83
22	23 5 54.63	20.458	7 27 19.7	98.67	22	0 40 43.38	19.254	0 40 11.4	101.74
23	23 7 57.26	20.420	S. 7 17 27.0	98.91	23	0 42 38.87	19.242	N. 0 50 21.6	101.64
MONDAY 26.					WEDNESDAY 28.				
0	23 9 59.67	20.383	S. 7 7 32.8	99.14	0	0 44 34.28	19.229	N. 1 0 31.1	101.53
1	23 12 1.86	20.347	6 57 37.3	99.36	1	0 46 29.62	19.218	1 10 39.9	101.41
2	23 14 3.83	20.310	6 47 40.5	99.58	2	0 48 24.90	19.208	1 20 48.0	101.30
3	23 16 5.58	20.274	6 37 42.4	99.78	3	0 50 20.12	19.198	1 30 55.5	101.18
4	23 18 7.12	20.239	6 27 43.1	99.97	4	0 52 15.28	19.188	1 41 2.1	101.03
5	23 20 8.45	20.205	6 17 42.7	100.17	5	0 54 10.38	19.178	1 51 7.9	100.90
6	23 22 9.58	20.171	6 7 41.1	100.36	6	0 56 5.42	19.170	2 1 12.9	100.75
7	23 24 10.50	20.138	5 57 38.4	100.53	7	0 58 0.42	19.163	2 11 16.9	100.60
8	23 26 11.23	20.105	5 47 34.7	100.69	8	0 59 55.37	19.154	2 21 20.1	100.45
9	23 28 11.76	20.072	5 37 30.1	100.85	9	1 1 50.27	19.147	2 31 22.3	100.28
10	23 30 12.09	20.040	5 27 24.5	101.01	10	1 3 45.13	19.140	2 41 23.5	100.12
11	23 32 12.24	20.009	5 17 18.0	101.16	11	1 5 39.95	19.134	2 51 23.7	99.95
12	23 34 12.20	19.978	5 7 10.6	101.29	12	1 7 34.74	19.128	3 1 22.9	99.77
13	23 36 11.98	19.948	4 57 2.5	101.42	13	1 9 29.49	19.123	3 11 20.9	99.58
14	23 38 11.58	19.918	4 46 53.6	101.54	14	1 11 24.21	19.118	3 21 17.8	99.38
15	23 40 11.00	19.889	4 36 44.0	101.65	15	1 13 18.90	19.113	3 31 13.5	99.18
16	23 42 10.25	19.861	4 26 33.8	101.76	16	1 15 13.57	19.110	3 41 8.0	98.98
17	23 44 9.33	19.833	4 16 22.9	101.86	17	1 17 8.22	19.106	3 51 1.3	98.78
18	23 46 8.25	19.806	4 6 11.5	101.94	18	1 19 2.84	19.103	4 0 53.3	98.56
19	23 48 7.00	19.778	3 55 59.6	102.03	19	1 20 57.45	19.100	4 10 44.0	98.33
20	23 50 5.59	19.752	3 45 47.1	102.12	20	1 22 52.04	19.098	4 20 33.3	98.11
21	23 52 4.02	19.726	3 35 34.2	102.18	21	1 24 46.62	19.096	4 30 21.3	97.88
22	23 54 2.30	19.701	3 25 20.9	102.24	22	1 26 41.19	19.094	4 40 7.8	97.63
23	23 56 0.43	19.677	3 15 7.3	102.30	23	1 28 35.75	19.093	4 49 52.9	97.40
24	23 57 58.42	19.653	S. 3 4 53.3	102.35	24	1 30 30.31	19.093	N. 4 59 36.6	97.15

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 29.					SATURDAY 31.				
	h m s	s	N. ° ' "	' "		h m s	s	N. ° ' "	' "
0	1 30 30.31	19.093	N. 4 59 36.6	97.15	0	3 2 49.07	19.497	N. 12 6 19.4	78.51
1	1 32 24.87	19.093	5 9 18.7	96.88	1	3 4 46.10	19.512	12 14 8.9	77.98
2	1 34 19.43	19.093	5 18 59.2	96.63	2	3 6 43.21	19.527	12 21 55.2	77.45
3	1 36 13.99	19.094	5 28 38.2	96.36	3	3 8 40.42	19.543	12 29 38.3	76.92
4	1 38 8.56	19.096	5 38 15.5	96.08	4	3 10 37.72	19.558	12 37 18.2	76.38
5	1 40 3.14	19.097	5 47 51.2	95.81	5	3 12 35.12	19.575	12 44 54.8	75.83
6	1 41 57.72	19.098	5 57 25.2	95.53	6	3 14 32.62	19.591	12 52 28.2	75.28
7	1 43 52.32	19.102	6 6 57.5	95.23	7	3 16 30.21	19.608	12 59 58.2	74.72
8	1 45 46.94	19.104	6 16 28.0	94.93	8	3 18 27.91	19.624	13 7 24.8	74.16
9	1 47 41.57	19.108	6 25 56.7	94.63	9	3 20 25.70	19.641	13 14 48.1	73.60
10	1 49 36.23	19.112	6 35 23.6	94.33	10	3 22 23.60	19.658	13 22 8.0	73.03
11	1 51 30.91	19.115	6 44 48.6	94.02	11	3 24 21.60	19.675	13 29 24.4	72.44
12	1 53 25.61	19.119	6 54 11.8	93.70	12	3 26 19.70	19.692	13 36 37.3	71.86
13	1 55 20.34	19.124	7 3 33.0	93.37	13	3 28 17.91	19.710	13 43 46.7	71.28
14	1 57 15.10	19.129	7 12 52.2	93.04	14	3 30 16.22	19.728	13 50 52.6	70.68
15	1 59 9.89	19.135	7 22 9.5	92.71	15	3 32 14.64	19.745	13 57 54.9	70.08
16	2 1 4.72	19.141	7 31 24.7	92.37	16	3 34 13.16	19.763	14 4 53.6	69.48
17	2 2 59.58	19.147	7 40 37.9	92.03	17	3 36 11.79	19.781	14 11 48.7	68.87
18	2 4 54.48	19.154	7 49 49.0	91.67	18	3 38 10.53	19.799	14 18 40.0	68.25
19	2 6 49.43	19.161	7 58 57.9	91.31	19	3 40 9.38	19.818	14 25 27.7	67.64
20	2 8 44.41	19.168	8 8 4.7	90.94	20	3 42 8.34	19.835	14 32 11.7	67.01
21	2 10 39.44	19.176	8 17 9.2	90.58	21	3 44 7.40	19.853	14 38 51.8	66.38
22	2 12 34.52	19.183	8 26 11.6	90.21	22	3 46 6.58	19.873	14 45 28.2	65.75
23	2 14 29.64	19.192	N. 8 35 11.7	89.83	23	3 48 5.87	19.890	N. 14 52 0.8	65.11
FRIDAY 30.					SUNDAY, JUNE 1.				
0	2 16 24.82	19.201	N. 8 44 9.5	89.43	0	3 50 5.26	19.908	N. 14 58 29.5	64.46
1	2 18 20.05	19.209	8 53 4.9	89.04					
2	2 20 15.33	19.218	9 1 58.0	88.65					
3	2 22 10.67	19.228	9 10 48.7	88.24					
4	2 24 6.07	19.239	9 19 36.9	87.83					
5	2 26 1.54	19.249	9 28 22.7	87.42					
6	2 27 57.06	19.258	9 37 5.9	87.00					
7	2 29 52.64	19.270	9 45 46.7	86.58					
8	2 31 48.30	19.282	9 54 24.8	86.14					
9	2 33 44.02	19.293	10 3 0.4	85.71					
10	2 35 39.81	19.304	10 11 33.3	85.27					
11	2 37 35.67	19.317	10 20 3.6	84.83					
12	2 39 31.61	19.329	10 28 31.2	84.37					
13	2 41 27.62	19.341	10 36 56.0	83.91					
14	2 43 23.70	19.353	10 45 18.1	83.45					
15	2 45 19.86	19.368	10 53 37.4	82.98					
16	2 47 16.11	19.381	11 1 53.8	82.50					
17	2 49 12.43	19.393	11 10 7.4	82.03					
18	2 51 8.83	19.408	11 18 18.1	81.53					
19	2 53 5.32	19.423	11 26 25.8	81.04					
20	2 55 1.90	19.437	11 34 30.6	80.55					
21	2 56 58.56	19.451	11 42 32.4	80.04					
22	2 58 55.31	19.465	11 50 31.1	79.53					
23	3 0 52.14	19.480	11 58 26.8	79.03					
24	3 2 49.07	19.497	N. 12 6 19.4	78.51					

PHASES OF THE MOON.

	h	m
May 3	●	New Moon - - 11 0.0
11	)	First Quarter - 14 13.7
18	○	Full Moon - - 9 52.5
25	(	Last Quarter - - 2 16.3
h		
May 5	(	Apogee - - - - 14.0
18	(	Perigee - - - - 17.3

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semidiameter passing the Meridian.*	Equation of Time, to be subtracted from		Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.		added to Apparent Time.		
	h m s	s	° ' "	"	m s	m s	s	
Sun.	1	4 36 22.67	10.235	N.22 3 20.3	20.41	1 8.35	2 22.86	0.378
Mon.	2	4 40 28.52	10.252	22 11 18.6	19.45	1 8.41	2 13.59	0.394
Tues.	3	4 44 34.76	10.267	22 18 53.7	18.48	1 8.46	2 3.93	0.410
Wed.	4	4 48 41.36	10.282	22 26 5.5	17.50	1 8.51	1 53.91	0.425
Thur.	5	4 52 48.31	10.296	22 32 53.7	16.51	1 8.56	1 43.55	0.438
Frid.	6	4 56 55.57	10.309	22 39 18.2	15.52	1 8.60	1 32.87	0.451
Sat.	7	5 1 3.14	10.321	22 45 18.9	14.53	1 8.65	1 21.89	0.463
Sun.	8	5 5 10.98	10.332	22 50 55.6	13.53	1 8.69	1 10.64	0.474
Mon.	9	5 9 19.08	10.342	22 56 8.2	12.52	1 8.72	0 59.13	0.484
Tues.	10	5 13 27.41	10.351	23 0 56.6	11.51	1 8.76	0 47.39	0.494
Wed.	11	5 17 35.94	10.359	23 5 20.7	10.49	1 8.79	0 35.44	0.502
Thur.	12	5 21 44.66	10.367	23 9 20.3	9.47	1 8.82	0 23.31	0.509
Frid.	13	5 25 53.55	10.373	23 12 55.5	8.45	1 8.84	0 11.01	0.515
Sat.	14	5 30 2.58	10.379	23 16 6.1	7.43	1 8.86	0 1.43	0.521
Sun.	15	5 34 11.74	10.384	23 18 52.0	6.40	1 8.88	0 13.99	0.526
Mon.	16	5 38 21.01	10.388	23 21 13.2	5.37	1 8.89	0 26.67	0.530
Tues.	17	5 42 30.36	10.391	23 23 9.8	4.34	1 8.90	0 39.43	0.533
Wed.	18	5 46 39.79	10.394	23 24 41.6	3.31	1 8.91	0 52.27	0.536
Thur.	19	5 50 49.27	10.396	23 25 48.6	2.27	1 8.92	1 5.16	0.538
Frid.	20	5 54 58.79	10.397	23 26 30.7	1.24	1 8.92	1 18.08	0.539
Sat.	21	5 59 8.33	10.397	23 26 48.1	0.21	1 8.92	1 31.02	0.539
Sun.	22	6 3 17.86	10.396	23 26 40.8	0.82	1 8.91	1 43.96	0.539
Mon.	23	6 7 27.36	10.395	23 26 8.6	1.86	1 8.90	1 56.87	0.537
Tues.	24	6 11 36.81	10.392	23 25 11.6	2.89	1 8.89	2 9.73	0.534
Wed.	25	6 15 46.19	10.389	23 23 50.0	3.92	1 8.88	2 22.52	0.531
Thur.	26	6 19 55.47	10.384	23 22 3.6	4.95	1 8.86	2 35.20	0.526
Frid.	27	6 24 4.62	10.378	23 19 52.6	5.97	1 8.84	2 47.76	0.520
Sat.	28	6 28 13.62	10.371	23 17 17.0	6.99	1 8.81	3 0.17	0.514
Sun.	29	6 32 22.44	10.364	23 14 16.9	8.01	1 8.78	3 12.41	0.506
Mon.	30	6 36 31.07	10.355	23 10 52.4	9.03	1 8.75	3 24.45	0.497
Tues.	31	6 40 39.47	10.345	N.23 7 3.5	10.04	1 8.72	3 36.26	0.487

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.19 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be subtracted from	Sidereal Time.
		Apparent Right Ascension,	Apparent Declination,	Semi-diameter.*	added to Apparent Time.	
		h m s	N. ° ' "	' "	m s	h m s
Sun.	1	4 36 23.07	N. 22 3 21.1	15 47.59	2 22.84	4 38 45.92
Mon.	2	4 40 28.90	22 11 19.3	15 47.45	2 13.57	4 42 42.47
Tues.	3	4 44 35.11	22 18 54.3	15 47.32	2 3.92	4 46 39.03
Wed.	4	4 48 41.68	22 26 6.0	15 47.19	1 53.90	4 50 35.59
Thur.	5	4 52 48.60	22 32 54.2	15 47.07	1 43.54	4 54 32.14
Frid.	6	4 56 55.84	22 39 18.6	15 46.95	1 32.86	4 58 28.70
Sat.	7	5 1 3.38	22 45 19.2	15 46.84	1 21.88	5 2 25.26
Sun.	8	5 5 11.19	22 50 55.8	15 46.74	1 10.63	5 6 21.81
Mon.	9	5 9 19.25	22 56 8.4	15 46.63	0 59.12	5 10 18.37
Tues.	10	5 13 27.54	23 0 56.8	15 46.54	0 47.38	5 14 14.93
Wed.	11	5 17 36.04	23 5 20.8	15 46.44	0 35.44	5 18 11.48
Thur.	12	5 21 44.73	23 9 20.4	15 46.35	0 23.31	5 22 8.04
Frid.	13	5 25 53.58	23 12 55.5	15 46.26	0 11.01	5 26 4.60
Sat.	14	5 30 2.58	23 16 6.1	15 46.18	0 1.43	5 30 1.15
Sun.	15	5 34 11.70	23 18 52.0	15 46.10	0 13.99	5 33 57.71
Mon.	16	5 38 20.93	23 21 13.2	15 46.02	0 26.66	5 37 54.27
Tues.	17	5 42 30.25	23 23 9.7	15 45.95	0 39.42	5 41 50.82
Wed.	18	5 46 39.64	23 24 41.5	15 45.88	0 52.26	5 45 47.38
Thur.	19	5 50 49.09	23 25 48.5	15 45.81	1 5.15	5 49 43.94
Frid.	20	5 54 58.57	23 26 30.7	15 45.74	1 18.07	5 53 40.50
Sat.	21	5 59 8.06	23 26 48.1	15 45.68	1 31.01	5 57 37.05
Sun.	22	6 3 17.56	23 26 40.8	15 45.62	1 43.95	6 1 33.61
Mon.	23	6 7 27.02	23 26 8.6	15 45.57	1 56.86	6 5 30.17
Tues.	24	6 11 36.44	23 25 11.7	15 45.52	2 9.71	6 9 26.72
Wed.	25	6 15 45.78	23 23 50.1	15 45.47	2 22.50	6 13 23.28
Thur.	26	6 19 55.02	23 22 3.8	15 45.43	2 35.18	6 17 19.84
Frid.	27	6 24 4.13	23 19 52.9	15 45.40	2 47.74	6 21 16.39
Sat.	28	6 28 13.10	23 17 17.4	15 45.36	3 0.15	6 25 12.95
Sun.	29	6 32 21.89	23 14 17.4	15 45.34	3 12.38	6 29 9.51
Mon.	30	6 36 30.48	23 10 52.9	15 45.32	3 24.42	6 33 6.06
Tues.	31	6 40 38.85	N. 23 7 4.2	15 45.30	3 36.23	6 37 2.62

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

MEAN TIME.

Day.	THE SUN'S		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	<i>Apparent</i>				Semidiameter.		Horizontal Parallax.	
	Longitude.	Latitude.						
	Noon.	Noon.	Noon.	Noon.	Midnight.	Noon.	Midnight.	
				h m s				
1	70° 41' 21.7	S. 0.38	0.0061842	19 18 3.84	14 41.93	14 41.57	53 56.80	53 55.49
2	71 38 50.9	0.37	.0062472	19 14 7.93	14 41.59	14 41.98	53 55.56	53 56.98
3	72 36 19.2	0.33	.0063079	19 10 12.02	14 42.73	14 43.86	53 59.76	54 3.90
4	73 33 46.5	0.26	0.0063662	19 6 16.11	14 45.37	14 47.27	54 9.44	54 16.41
5	74 31 12.8	0.18	.0064223	19 2 20.20	14 49.58	14 52.30	54 24.87	54 34.87
6	75 28 38.0	S. 0.08	.0064759	18 58 24.29	14 55.46	14 59.08	54 46.48	54 59.75
7	76 26 2.2	N. 0.03	0.0065274	18 54 28.38	15 3.15	15 7.70	55 14.71	55 31.40
8	77 23 25.4	0.15	.0065766	18 50 32.47	15 12.72	15 18.21	55 49.83	56 9.95
9	78 20 47.5	0.27	.0066237	18 46 36.56	15 24.14	15 30.47	56 31.71	56 54.97
10	79 18 8.5	0.39	0.0066688	18 42 40.65	15 37.17	15 44.17	57 19.56	57 45.22
11	80 15 28.5	0.50	.0067120	18 38 44.74	15 51.36	15 58.65	58 11.64	58 38.39
12	81 12 47.5	0.58	.0067534	18 34 48.82	16 5.91	16 12.97	59 5.01	59 30.94
13	82 10 5.5	0.64	0.0067931	18 30 52.91	16 19.68	16 25.85	59 55.55	60 18.21
14	83 7 22.7	0.67	.0068313	18 26 57.00	16 31.30	16 35.86	60 38.23	60 54.95
15	84 4 39.0	0.66	.0068681	18 23 1.09	16 39.36	16 41.67	61 7.80	61 16.27
16	85 1 54.5	0.61	0.0069035	18 19 5.18	16 42.69	16 42.36	61 20.01	61 18.82
17	85 59 9.5	0.54	.0069376	18 15 9.27	16 40.69	16 37.72	61 12.69	61 1.79
18	86 56 23.9	0.46	.0069705	18 11 13.36	16 33.55	16 28.31	60 46.47	60 27.23
19	87 53 38.0	0.35	0.0070020	18 7 17.45	16 22.16	16 15.29	60 4.67	59 39.45
20	88 50 51.7	0.22	.0070321	18 3 21.53	16 7.89	16 0.16	59 12.31	58 43.93
21	89 48 5.3	N. 0.08	.0070606	17 59 25.62	15 52.28	15 44.41	58 14.99	57 46.11
22	90 45 18.7	S. 0.06	0.0070874	17 55 29.71	15 36.70	15 29.28	57 17.82	56 50.60
23	91 42 32.0	0.19	.0071124	17 51 33.80	15 22.26	15 15.71	56 24.81	56 0.77
24	92 39 45.3	0.31	.0071355	17 47 37.89	15 9.69	15 4.26	55 38.71	55 18.78
25	93 36 58.5	0.40	0.0071564	17 43 41.98	14 59.44	14 55.25	55 1.09	54 45.68
26	94 34 11.7	0.47	.0071752	17 39 46.07	14 51.67	14 48.72	54 32.57	54 21.73
27	95 31 24.9	0.52	.0071917	17 35 50.16	14 46.37	14 44.59	54 13.09	54 6.59
28	96 28 38.1	0.54	0.0072058	17 31 54.25	14 43.37	14 42.68	54 2.11	53 59.55
29	97 25 51.3	0.53	.0072174	17 27 58.34	14 42.47	14 42.73	53 58.80	53 59.74
30	98 23 4.5	0.50	.0072266	17 24 2.42	14 43.41	14 44.49	54 2.24	54 6.19
31	99 20 17.6	S. 0.44	0.0072332	17 20 6.51	14 45.93	14 47.73	54 11.51	54 18.09

MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Noon.	Upper.	Lower.
	h m	h m	S. N.	h m	d	h m	h m
1	58° 37' 8.9	64° 33' 6.0	S. 5° 0' 10.6	S. 4° 57' 14.8	28.54	23 55.6	11 32.5
2	70 28 55.1	76 24 46.8	4 51 5.5	4 41 46.1	29.54	* *	12 18.9
3	82 20 52.0	88 17 22.0	4 29 22.1	4 14 0.1	0.89	0 42.5	13 6.3
4	94 14 29.2	100 12 27.7	3 55 48.8	3 34 57.8	1.89	1 30.3	13 54.4
5	106 11 33.5	112 12 4.5	3 11 38.6	2 46 3.8	2.89	2 18.6	14 42.8
6	118 14 21.2	124 18 46.5	2 18 27.2	1 49 4.3	3.89	3 7.0	15 31.2
7	130 25 45.4	136 35 45.3	1 18 11.4	S. 0 46 6.3	4.89	3 55.2	16 19.2
8	142 49 15.9	149 6 47.5	S. 0 13 8.2	N. 0 20 22.2	5.89	4 43.1	17 7.0
9	155 28 51.9	161 56 0.4	N. 0 54 2.6	1 27 29.1	6.89	5 30.8	17 54.7
10	168 28 43.2	175 7 28.2	2 0 15.8	2 31 55.3	7.89	6 18.8	18 43.1
11	181 52 39.2	188 44 34.4	3 1 58.1	3 29 53.5	8.89	7 7.7	19 32.7
12	195 43 24.8	202 49 11.6	3 55 9.6	4 17 14.2	9.89	7 58.3	20 24.5
13	210 1 45.6	217 20 45.0	4 35 35.7	4 49 44.4	10.89	8 51.4	21 19.1
14	224 45 35.0	232 15 27.4	4 59 14.1	5 3 43.8	11.89	9 47.6	22 16.9
15	239 49 21.8	247 26 6.9	5 2 58.6	4 56 52.4	12.89	10 47.0	23 17.8
16	255 4 23.6	262 42 48.2	4 45 27.5	4 28 55.9	13.89	11 49.0	* *
17	270 19 56.5	277 54 27.6	4 7 38.7	3 42 4.9	14.89	12 51.9	0 20.4
18	285 25 7.5	292 50 51.7	3 12 50.2	2 40 34.8	15.89	13 53.6	1 23.0
19	300 10 48.1	307 24 17.2	2 6 1.3	1 29 52.9	16.89	14 52.6	2 23.5
20	314 30 52.5	321 30 20.1	N. 0 52 51.7	N. 0 15 36.8	17.89	15 47.7	3 20.6
21	328 22 37.7	335 7 52.8	S. 0 21 15.8	S. 0 57 14.3	18.89	16 39.0	4 13.8
22	341 46 21.2	348 18 25.2	1 31 50.9	2 4 42.2	19.89	17 27.1	5 3.4
23	354 44 32.2	1 5 12.9	2 35 28.2	3 3 52.4	20.89	18 12.7	5 50.1
24	7 21 0.4	13 32 28.5	3 29 41.2	3 52 43.4	21.89	18 56.7	6 34.8
25	19 40 11.8	25 44 43.8	4 12 50.3	4 29 54.3	22.89	19 40.1	7 18.5
26	31 46 37.1	37 46 22.4	4 43 50.2	4 54 33.2	23.89	20 23.6	8 1.8
27	43 44 28.8	49 41 23.0	5 2 0.3	5 6 9.6	24.89	21 7.8	8 45.6
28	55 37 29.6	61 33 10.5	5 7 0.4	5 4 32.7	25.89	21 53.1	9 30.3
29	67 28 45.7	73 24 33.3	4 58 48.2	4 49 50.2	26.89	22 39.6	10 16.1
30	79 20 49.1	85 17 47.3	4 37 43.0	4 22 32.6	27.89	23 27.2	11 3.3
31	91 15 41.0	97 14 42.3	S. 4 4 26.8	S. 3 43 34.9	28.89	* *	11 51.4

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY I.					TUESDAY 3.				
	h m s	s				h m s	s		
0	3 50 5.26	19.908	N.14 58' 29".5	64.46	0	5 27 45.94	20.758	N.18 44' 36".6	28.13
1	3 52 4.77	19.928	15 4 54.3	63.81	1	5 29 50.53	20.773	18 47 22.8	27.28
2	3 54 4.39	19.946	15 11 15.2	63.16	2	5 31 55.21	20.787	18 50 3.9	26.43
3	3 56 4.12	19.965	15 17 32.2	62.49	3	5 33 59.97	20.801	18 52 39.9	25.57
4	3 58 3.97	19.984	15 23 45.1	61.83	4	5 36 4.82	20.815	18 55 10.7	24.71
5	4 0 3.93	20.003	15 29 54.1	61.16	5	5 38 9.75	20.828	18 57 36.4	23.84
6	4 2 4.00	20.021	15 35 59.0	60.48	6	5 40 14.76	20.842	18 59 56.8	22.98
7	4 4 4.18	20.039	15 41 59.9	59.80	7	5 42 19.85	20.855	19 2 12.1	22.12
8	4 6 4.47	20.058	15 47 56.6	59.12	8	5 44 25.02	20.868	19 4 22.2	21.24
9	4 8 4.88	20.078	15 53 49.3	58.43	9	5 46 30.27	20.881	19 6 27.0	20.36
10	4 10 5.41	20.097	15 59 37.7	57.73	10	5 48 35.59	20.893	19 8 26.5	19.48
11	4 12 6.04	20.115	16 5 22.0	57.03	11	5 50 40.99	20.906	19 10 20.8	18.62
12	4 14 6.79	20.134	16 11 2.1	56.33	12	5 52 46.46	20.917	19 12 9.9	17.73
13	4 16 7.65	20.153	16 16 38.0	55.63	13	5 51 51.99	20.928	19 13 53.6	16.84
14	4 18 8.62	20.172	16 22 9.6	54.90	14	5 56 57.60	20.941	19 15 32.0	15.96
15	4 20 9.71	20.191	16 27 36.8	54.18	15	5 59 3.28	20.952	19 17 5.1	15.08
16	4 22 10.91	20.209	16 32 59.8	53.47	16	6 1 9.02	20.962	19 18 52.9	14.19
17	4 24 12.22	20.228	16 38 18.4	52.73	17	6 3 14.82	20.973	19 19 55.4	13.30
18	4 26 13.65	20.247	16 43 32.6	52.00	18	6 5 20.69	20.983	19 21 12.5	12.40
19	4 28 15.18	20.265	16 48 42.4	51.27	19	6 7 26.62	20.993	19 22 24.2	11.51
20	4 30 16.83	20.284	16 53 47.8	50.53	20	6 9 32.61	21.003	19 23 30.6	10.61
21	4 32 18.59	20.303	16 58 48.7	49.78	21	6 11 38.66	21.013	19 24 31.5	9.71
22	4 34 20.46	20.321	17 3 45.1	49.03	22	6 13 44.77	21.023	19 25 27.1	8.81
23	4 36 22.44	20.339	N.17 8 37.0	48.28	23	6 15 50.93	21.031	N.19 26 17.2	7.91
MONDAY 2.					WEDNESDAY 4.				
0	4 38 24.53	20.358	N.17 13 24.4	47.53	0	6 17 57.14	21.039	N.19 27 2.0	7.01
1	4 40 26.73	20.376	17 18 7.3	46.76	1	6 20 3.40	21.048	19 27 41.3	6.10
2	4 42 29.04	20.394	17 22 45.5	45.98	2	6 22 9.72	21.057	19 28 15.2	5.20
3	4 44 31.46	20.413	17 27 19.1	45.22	3	6 24 16.08	21.064	19 28 43.7	4.29
4	4 46 33.99	20.430	17 31 48.1	44.44	4	6 26 22.49	21.072	19 29 6.7	3.38
5	4 48 36.62	20.448	17 36 12.4	43.66	5	6 28 28.94	21.079	19 29 24.2	2.47
6	4 50 39.36	20.466	17 40 32.0	42.88	6	6 30 35.44	21.086	19 29 36.3	1.57
7	4 52 42.21	20.483	17 44 46.9	42.08	7	6 32 41.97	21.093	19 29 43.0	0.65
8	4 54 45.16	20.500	17 48 57.0	41.29	8	6 34 48.55	21.100	19 29 44.1	0.27
9	4 56 48.21	20.518	17 53 2.4	40.50	9	6 36 55.17	21.106	19 29 39.8	1.18
10	4 58 51.37	20.536	17 57 3.0	39.70	10	6 39 1.82	21.112	19 29 30.0	2.09
11	5 0 54.64	20.553	18 0 58.8	38.90	11	6 41 8.51	21.118	19 29 14.7	3.01
12	5 2 58.00	20.569	18 4 49.8	38.09	12	6 43 15.23	21.123	19 28 53.9	3.93
13	5 5 1.47	20.586	18 8 35.9	37.28	13	6 45 21.98	21.128	19 28 27.6	4.83
14	5 7 5.03	20.602	18 12 17.1	36.47	14	6 47 28.76	21.133	19 27 55.9	5.75
15	5 9 8.69	20.618	18 15 53.5	35.65	15	6 49 35.57	21.137	19 27 18.6	6.68
16	5 11 12.45	20.635	18 19 24.9	34.83	16	6 51 42.40	21.141	19 26 35.8	7.59
17	5 13 16.31	20.651	18 22 51.4	34.00	17	6 53 49.26	21.145	19 25 47.5	8.50
18	5 15 20.26	20.667	18 26 12.9	33.17	18	6 55 56.14	21.149	19 24 53.8	9.42
19	5 17 24.31	20.683	18 29 29.4	32.33	19	6 58 3.05	21.153	19 23 54.5	10.34
20	5 19 28.46	20.698	18 32 40.9	31.50	20	7 0 9.97	21.155	19 22 49.7	11.26
21	5 21 32.69	20.713	18 35 47.4	30.67	21	7 2 16.91	21.158	19 21 39.4	12.18
22	5 23 37.02	20.728	18 38 48.9	29.83	22	7 4 23.87	21.161	19 20 23.6	13.09
23	5 25 41.43	20.743	18 41 45.3	28.98	23	7 6 30.84	21.163	19 19 2.3	14.01
24	5 27 45.94	20.758	N.18 44 36.6	28.13	24	7 8 37.83	21.166	N.19 17 35.5	14.93

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 5.					SATURDAY 7.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	7 8 37.83	21.166	N.19 17 35.5	14.93	0	8 50 3.08	21.033	N.16 22 33.6	57.23
1	7 10 44.83	21.168	19 16 3.2	15.84	1	8 52 9.26	21.028	16 16 47.8	58.05
2	7 12 51.84	21.169	19 14 25.4	16.76	2	8 54 15.41	21.022	16 10 57.0	58.88
3	7 14 58.86	21.170	19 12 42.1	17.68	3	8 56 21.52	21.016	16 5 1.3	59.69
4	7 17 5.88	21.171	19 10 53.3	18.59	4	8 58 27.60	21.010	15 59 0.7	60.50
5	7 19 12.91	21.172	19 8 59.0	19.51	5	9 0 33.64	21.005	15 52 55.3	61.30
6	7 21 19.94	21.173	19 6 59.2	20.42	6	9 2 39.66	21.000	15 46 45.1	62.11
7	7 23 26.98	21.173	19 4 54.0	21.33	7	9 4 45.64	20.994	15 40 30.0	62.91
8	7 25 34.02	21.173	19 2 43.3	22.24	8	9 6 51.59	20.989	15 34 10.2	63.69
9	7 27 41.06	21.173	19 0 27.1	23.15	9	9 8 57.51	20.983	15 27 45.7	64.48
10	7 29 48.09	21.172	18 58 5.5	24.06	10	9 11 3.39	20.978	15 21 16.4	65.28
11	7 31 55.12	21.172	18 55 38.4	24.98	11	9 13 9.25	20.974	15 14 42.3	66.07
12	7 34 2.15	21.172	18 53 5.8	25.88	12	9 15 15.08	20.968	15 8 3.6	66.83
13	7 36 9.18	21.170	18 50 27.8	26.78	13	9 17 20.87	20.963	15 1 20.3	67.61
14	7 38 16.19	21.168	18 47 44.4	27.68	14	9 19 26.63	20.958	14 54 32.3	68.38
15	7 40 23.20	21.167	18 44 55.6	28.59	15	9 21 32.37	20.954	14 47 39.7	69.16
16	7 42 30.19	21.165	18 42 1.3	29.50	16	9 23 38.08	20.948	14 40 42.4	69.93
17	7 44 37.18	21.163	18 39 1.6	30.40	17	9 25 43.75	20.943	14 33 40.6	70.68
18	7 46 44.15	21.161	18 35 56.5	31.29	18	9 27 49.40	20.940	14 26 34.3	71.43
19	7 48 51.11	21.159	18 32 46.1	32.19	19	9 29 55.03	20.936	14 19 23.5	72.18
20	7 50 58.06	21.157	18 29 30.2	33.09	20	9 32 0.63	20.931	14 12 8.2	72.93
21	7 53 4.99	21.154	18 26 9.0	33.98	21	9 34 6.20	20.926	14 4 48.4	73.67
22	7 55 11.91	21.151	18 22 42.4	34.88	22	9 36 11.74	20.923	13 57 24.2	74.40
23	7 57 18.80	21.148	N.18 19 10.5	35.77	23	9 38 17.27	20.919	N.13 49 55.6	75.13
FRIDAY 6.					SUNDAY 8.				
0	7 59 25.68	21.145	N.18 15 33.2	36.66	0	9 40 22.77	20.914	N.13 42 22.6	75.86
1	8 1 32.54	21.142	18 11 50.6	37.54	1	9 42 28.24	20.911	13 34 45.3	76.58
2	8 3 39.38	21.138	18 8 2.7	38.43	2	9 44 33.70	20.908	13 27 3.6	77.31
3	8 5 46.19	21.134	18 4 9.5	39.31	3	9 46 39.13	20.904	13 19 17.6	78.02
4	8 7 52.99	21.131	18 0 11.0	40.19	4	9 48 44.55	20.902	13 11 27.4	78.73
5	8 9 59.76	21.126	17 56 7.2	41.08	5	9 50 49.95	20.898	13 3 32.9	79.43
6	8 12 6.50	21.122	17 51 58.1	41.95	6	9 52 55.33	20.895	12 55 34.2	80.13
7	8 14 13.22	21.118	17 47 43.8	42.82	7	9 55 0.69	20.893	12 47 31.3	80.83
8	8 16 19.92	21.114	17 43 24.3	43.68	8	9 57 6.04	20.891	12 39 24.3	81.51
9	8 18 26.59	21.109	17 38 59.6	44.56	9	9 59 11.38	20.889	12 31 13.2	82.20
10	8 20 33.23	21.105	17 34 29.6	45.43	10	10 1 16.71	20.887	12 22 57.9	82.88
11	8 22 39.85	21.100	17 29 54.5	46.28	11	10 3 22.02	20.885	12 14 38.6	83.55
12	8 24 46.43	21.095	17 25 14.2	47.15	12	10 5 27.33	20.884	12 6 15.3	84.23
13	8 26 52.99	21.091	17 20 28.7	48.01	13	10 7 32.63	20.883	11 57 47.9	84.89
14	8 28 59.52	21.085	17 15 38.1	48.86	14	10 9 37.92	20.882	11 49 16.6	85.54
15	8 31 6.01	21.080	17 10 42.4	49.71	15	10 11 43.21	20.881	11 40 41.4	86.20
16	8 33 12.48	21.076	17 5 41.6	50.56	16	10 13 48.49	20.881	11 32 2.2	86.86
17	8 35 18.92	21.070	17 0 35.7	51.40	17	10 15 53.78	20.881	11 23 19.1	87.50
18	8 37 25.32	21.065	16 55 24.8	52.24	18	10 17 59.06	20.881	11 14 32.2	88.13
19	8 39 31.70	21.060	16 50 8.8	53.09	19	10 20 4.35	20.882	11 5 41.5	88.77
20	8 41 38.04	21.054	16 44 47.7	53.93	20	10 22 9.64	20.882	10 56 47.0	89.39
21	8 43 44.35	21.049	16 39 21.6	54.76	21	10 24 14.93	20.883	10 47 48.8	90.02
22	8 45 50.63	21.043	16 33 50.6	55.58	22	10 26 20.23	20.884	10 38 46.8	90.63
23	8 47 56.87	21.038	16 28 14.6	56.42	23	10 28 25.54	20.886	10 29 41.2	91.24
24	8 50 3.08	21.033	N.16 22 33.6	57.23	24	10 30 30.86	20.888	N.10 20 31.9	91.84

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 9.					WEDNESDAY 11.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	10 30 30.86	20.888	N. 10 20 31.9	91.84	0	12 11 42.99	21.448	N. 2 2 8.2	113.05
1	10 32 36.19	20.890	10 11 19.1	92.44	1	12 13 51.74	21.471	1 50 49.1	113.30
2	10 34 41.54	20.893	10 2 2.6	93.04	2	12 16 0.64	21.495	1 39 28.6	113.54
3	10 36 46.90	20.895	9 52 42.6	93.63	3	12 18 9.68	21.519	1 28 6.6	113.78
4	10 38 52.28	20.898	9 43 19.0	94.22	4	12 20 18.87	21.543	1 16 43.3	113.99
5	10 40 57.68	20.902	9 33 52.0	94.78	5	12 22 28.20	21.568	1 5 18.7	114.21
6	10 43 3.10	20.906	9 24 21.6	95.35	6	12 24 37.69	21.595	0 53 52.8	114.41
7	10 45 8.55	20.911	9 14 47.8	95.92	7	12 26 47.34	21.621	0 42 25.8	114.60
8	10 47 14.03	20.915	9 5 10.6	96.48	8	12 28 57.14	21.648	0 30 57.6	114.79
9	10 49 19.53	20.919	8 55 30.0	97.03	9	12 31 7.11	21.675	0 19 28.3	114.97
10	10 51 25.06	20.925	8 45 46.2	97.57	10	12 33 17.24	21.703	N. 0 7 58.0	115.13
11	10 53 30.63	20.932	8 35 59.2	98.11	11	12 35 27.54	21.731	S. 0 3 33.2	115.28
12	10 55 36.24	20.938	8 26 8.9	98.65	12	12 37 38.01	21.760	0 15 5.4	115.43
13	10 57 41.88	20.943	8 16 15.4	99.18	13	12 39 48.66	21.790	0 26 38.4	115.56
14	10 59 47.56	20.950	8 6 18.8	99.69	14	12 41 59.49	21.819	0 38 12.1	115.68
15	11 1 53.28	20.958	7 56 19.1	100.20	15	12 44 10.49	21.849	0 49 46.6	115.80
16	11 3 59.05	20.965	7 46 16.4	100.71	16	12 46 21.68	21.881	1 1 21.7	115.90
17	11 6 4.86	20.973	7 36 10.6	101.21	17	12 48 33.06	21.913	1 12 57.4	115.99
18	11 8 10.73	20.983	7 26 1.9	101.70	18	12 50 44.63	21.945	1 24 33.6	116.07
19	11 10 16.65	20.991	7 15 50.2	102.19	19	12 52 56.40	21.978	1 36 10.2	116.13
20	11 12 22.62	21.000	7 5 35.6	102.67	20	12 55 8.36	22.010	1 47 47.2	116.20
21	11 14 28.65	21.009	6 55 18.2	103.14	21	12 57 20.52	22.043	1 59 24.6	116.25
22	11 16 34.73	21.019	6 44 57.9	103.61	22	12 59 32.88	22.078	2 11 2.2	116.28
23	11 18 40.88	21.031	N. 6 34 34.9	104.07	23	13 1 45.45	22.112	S. 2 22 40.0	116.31
TUESDAY 10.					THURSDAY 12.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	11 20 47.10	21.043	N. 6 24 9.1	104.53	0	13 3 58.22	22.147	S. 2 31 17.9	116.33
1	11 22 53.39	21.053	6 13 40.6	104.97	1	13 6 11.21	22.183	2 45 55.9	116.33
2	11 24 59.74	21.065	6 3 9.5	105.40	2	13 8 24.42	22.219	2 57 33.8	116.32
3	11 27 6.17	21.078	5 52 35.8	105.83	3	13 10 37.84	22.255	3 9 11.7	116.30
4	11 29 12.67	21.090	5 41 59.6	106.25	4	13 12 51.48	22.293	3 20 49.4	116.26
5	11 31 19.25	21.103	5 31 20.8	106.68	5	13 15 5.35	22.330	3 32 26.8	116.22
6	11 33 25.91	21.118	5 20 39.5	107.08	6	13 17 19.44	22.368	3 44 4.0	116.17
7	11 35 32.66	21.132	5 9 55.8	107.48	7	13 19 33.76	22.407	3 55 40.8	116.09
8	11 37 39.49	21.147	4 59 9.8	107.88	8	13 21 48.32	22.446	4 7 17.1	116.01
9	11 39 46.42	21.162	4 48 21.4	108.26	9	13 24 3.11	22.485	4 18 52.9	115.92
10	11 41 53.43	21.177	4 37 30.7	108.64	10	13 26 18.14	22.525	4 30 28.1	115.81
11	11 44 0.54	21.193	4 26 37.7	109.01	11	13 28 33.41	22.566	4 42 2.6	115.68
12	11 46 7.75	21.210	4 15 42.6	109.36	12	13 30 48.93	22.608	4 53 36.3	115.56
13	11 48 15.06	21.227	4 4 45.4	109.72	13	13 33 4.70	22.648	5 5 9.3	115.42
14	11 50 22.47	21.244	3 53 46.0	110.07	14	13 35 20.71	22.690	5 16 41.3	115.25
15	11 52 29.99	21.263	3 42 44.6	110.40	15	13 37 36.98	22.733	5 28 12.3	115.08
16	11 54 37.63	21.282	3 31 41.2	110.73	16	13 39 53.50	22.775	5 39 42.3	114.90
17	11 56 45.37	21.300	3 20 35.9	111.05	17	13 42 10.28	22.818	5 51 11.1	114.71
18	11 58 53.23	21.320	3 9 28.6	111.37	18	13 44 27.32	22.862	6 2 38.8	114.50
19	12 1 1.21	21.340	2 58 19.5	111.67	19	13 46 44.62	22.905	6 14 5.1	114.27
20	12 3 9.31	21.360	2 47 8.6	111.96	20	13 49 2.18	22.950	6 25 30.0	114.03
21	12 5 17.53	21.382	2 35 56.0	112.24	21	13 51 20.02	22.995	6 36 53.5	113.78
22	12 7 25.89	21.403	2 24 41.7	112.53	22	13 53 38.12	23.040	6 48 15.4	113.51
23	12 9 34.37	21.425	2 13 25.7	112.79	23	13 55 56.50	23.086	6 59 35.6	113.23
24	12 11 42.99	21.448	N. 2 2 8.2	113.05	24	13 58 15.15	23.132	S. 7 10 54.2	112.94

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
FRIDAY 13.					SUNDAY 15.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	13 58 15	15	23 132	S. 7 10 54	2	15 54 59	02	25 513	S. 15 10 55
1	14 03 4	08	23 178	7 22 10	9	15 57 32	24	25 559	15 18 59
2	14 08 2	28	23 224	7 33 25	8	16 05 7	25	25 605	15 26 56
3	14 12 5	77	23 272	7 44 38	7	16 12 39	50	25 650	15 34 48
4	14 17 3	54	23 318	7 55 49	6	16 19 53	25	25 694	15 42 32
5	14 21 9	59	23 366	8 06 58	5	16 27 8	25	25 738	15 50 11
6	14 25 12	93	23 414	8 18 4	4	16 34 39	25	25 782	15 57 42
7	14 28 33	56	23 463	8 29 8	3	16 41 21	25	25 825	16 5 7
8	14 31 54	48	23 511	8 40 10	2	16 47 59	25	25 867	16 12 26
9	14 35 15	69	23 560	8 51 9	1	16 54 41	25	25 908	16 19 37
10	14 38 37	20	23 609	9 02 6	0	17 01 23	18	25 949	16 26 41
11	14 41 59	00	23 658	9 13 0	11	17 07 5	00	25 989	16 33 39
12	14 45 21	10	23 708	9 23 5	10	17 13 47	05	26 027	16 40 29
13	14 48 43	50	23 758	9 34 40	9	17 19 33	33	26 067	16 47 12
14	14 52 6	19	23 808	9 45 25	8	17 25 19	55	26 105	16 53 48
15	14 55 29	19	23 858	9 56 8	7	17 31 5	59	26 142	17 0 17
16	14 58 52	49	23 908	10 06 47	6	17 37 41	55	26 178	17 6 38
17	15 02 16	09	23 959	10 17 23	5	17 43 27	72	26 213	17 12 52
18	15 05 40	00	24 010	10 27 56	4	17 49 13	10	26 248	17 18 58
19	15 09 4	21	24 061	10 38 25	3	17 54 59	69	26 281	17 24 57
20	15 12 28	73	24 112	10 48 51	2	18 00 45	47	26 313	17 30 48
21	15 15 12	55	24 163	10 59 13	1	18 06 31	45	26 345	17 36 31
22	15 17 56	68	24 214	11 9 32	0	18 12 17	61	26 376	17 42 7
23	15 20 40	12	24 265	S. 11 19 46	11	18 18 3	96	26 406	S. 17 47 34
SATURDAY 14.					MONDAY 16.				
0	14 55 9	86	24 317	S. 11 29 57	0	16 57 24	48	26 434	S. 17 52 54
1	15 00 35	92	24 368	11 40 4	1	17 03 17	26	26 462	17 58 6
2	15 05 2	28	24 419	11 50 7	0	17 09 2	02	26 488	18 3 9
3	15 09 58	95	24 471	12 0 6	1	17 14 5	03	26 514	18 8 5
4	15 14 5	93	24 522	12 10 0	0	17 20 39	49	26 538	18 12 53
5	15 19 41	21	24 573	12 19 51	1	17 26 37	96	26 562	18 17 32
6	15 24 27	80	24 624	12 29 36	0	17 32 34	93	26 585	18 22 3
7	15 29 13	70	24 676	12 39 18	1	17 38 31	51	26 606	18 26 26
8	15 34 0	91	24 727	12 48 54	0	17 44 28	20	26 626	18 30 40
9	15 38 46	42	24 778	12 58 26	1	17 50 25	02	26 645	18 34 46
10	15 43 32	24	24 828	13 7 53	0	17 56 22	94	26 662	18 38 44
11	15 48 18	36	24 879	13 17 15	1	18 02 19	96	26 678	18 42 33
12	15 53 4	79	24 930	13 26 32	0	18 08 16	08	26 694	18 46 14
13	15 58 30	52	24 980	13 35 44	1	18 14 13	29	26 708	18 49 46
14	16 03 16	55	25 030	13 44 51	0	18 20 10	58	26 722	18 53 10
15	16 08 2	88	25 080	13 53 53	1	18 26 7	95	26 733	18 56 25
16	16 13 48	51	25 129	14 2 49	0	18 32 4	38	26 743	18 59 31
17	16 19 4	43	25 178	14 11 40	1	18 38 1	87	26 753	19 2 29
18	16 25 39	65	25 228	14 20 25	0	18 44 0	41	26 761	19 5 18
19	16 31 34	16	25 276	14 29 5	1	18 50 0	00	26 768	19 7 58
20	16 37 29	96	25 324	14 37 39	0	18 56 0	62	26 773	19 10 29
21	16 43 24	05	25 372	14 46 7	1	19 02 0	27	26 777	19 12 52
22	16 49 19	42	25 419	14 54 29	0	19 08 0	2	26 779	19 15 6
23	16 55 14	08	25 467	15 2 45	1	19 14 0	62	26 781	19 17 12
24	17 01 9	02	25 513	S. 15 10 55	0	19 20 0	31	26 781	S. 19 19 8

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 17.					THURSDAY 19.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	18 1 24.31	26.781	S. 19 19 8.4	18.67	0	20 7 35.90	25.373	S. 18 3 56.7	47.64
1	18 4 4.99	26.779	19 20 56.0	17.20	1	20 10 7.98	25.320	17 59 7.3	48.82
2	18 6 45.66	26.778	19 22 34.8	15.73	2	20 12 39.74	25.267	17 54 10.9	49.98
3	18 9 26.32	26.774	19 24 4.7	14.25	3	20 15 11.18	25.213	17 49 7.5	51.13
4	18 12 6.95	26.769	19 25 25.8	12.78	4	20 17 42.29	25.158	17 43 57.3	52.28
5	18 14 47.55	26.763	19 26 38.1	11.32	5	20 20 13.07	25.102	17 38 40.2	53.41
6	18 17 28.10	26.754	19 27 41.6	9.84	6	20 22 43.51	25.046	17 33 16.4	54.53
7	18 20 8.60	26.746	19 28 36.2	8.36	7	20 25 13.62	24.990	17 27 45.9	55.63
8	18 22 49.05	26.736	19 29 21.9	6.89	8	20 27 43.39	24.933	17 22 8.8	56.72
9	18 25 29.43	26.723	19 29 58.9	5.43	9	20 30 12.82	24.877	17 16 25.3	57.79
10	18 28 9.73	26.711	19 30 27.0	3.95	10	20 32 41.91	24.819	17 10 35.3	58.87
11	18 30 49.96	26.697	19 30 46.3	2.48	11	20 35 10.65	24.761	17 4 38.9	59.92
12	18 33 30.09	26.681	19 30 56.8	1.02	12	20 37 39.04	24.702	16 58 36.3	60.95
13	18 36 10.13	26.665	19 30 58.5	0.44	13	20 40 7.07	24.643	16 52 27.5	61.98
14	18 38 50.07	26.647	19 30 51.5	1.90	14	20 42 34.75	24.584	16 46 12.5	63.00
15	18 41 29.89	26.627	19 30 35.7	3.36	15	20 45 2.08	24.525	16 39 51.5	64.00
16	18 44 9.59	26.607	19 30 11.2	4.82	16	20 47 29.05	24.465	16 33 24.5	64.98
17	18 46 49.17	26.585	19 29 37.9	6.27	17	20 49 55.66	24.405	16 26 51.7	65.96
18	18 49 28.61	26.563	19 28 56.0	7.70	18	20 52 21.91	24.345	16 20 13.0	66.93
19	18 52 7.92	26.538	19 28 5.5	9.14	19	20 54 47.80	24.284	16 13 28.6	67.88
20	18 54 47.07	26.512	19 27 6.3	10.58	20	20 57 13.32	24.223	16 6 38.5	68.81
21	18 57 26.06	26.485	19 25 58.5	12.02	21	20 59 38.48	24.163	15 59 42.9	69.73
22	19 0 4.89	26.458	19 24 42.1	13.44	22	21 2 3.27	24.102	15 52 41.8	70.63
23	19 2 43.55	26.428	S. 19 23 17.2	14.86	23	21 4 27.70	24.041	S. 15 45 35.3	71.53
WEDNESDAY 18.					FRIDAY 20.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	19 5 22.03	26.398	S. 19 21 43.8	16.27	0	21 6 51.76	23.979	S. 15 38 23.5	72.41
1	19 8 0.33	26.368	19 20 2.0	17.67	1	21 9 15.45	23.918	15 31 6.4	73.28
2	19 10 38.44	26.334	19 18 11.8	19.08	2	21 11 38.78	23.857	15 23 44.2	74.13
3	19 13 16.34	26.300	19 16 13.1	20.47	3	21 14 1.73	23.795	15 16 16.8	74.98
4	19 15 54.04	26.266	19 14 6.2	21.85	4	21 16 24.32	23.733	15 8 44.5	75.80
5	19 18 31.53	26.231	19 11 50.9	23.23	5	21 18 46.53	23.672	15 1 7.2	76.62
6	19 21 8.81	26.194	19 9 27.4	24.60	6	21 21 8.38	23.611	14 53 25.1	77.42
7	19 23 45.86	26.156	19 6 55.7	25.97	7	21 23 29.86	23.549	14 45 38.2	78.20
8	19 26 22.68	26.117	19 4 15.8	27.32	8	21 25 50.97	23.488	14 37 46.7	78.98
9	19 28 59.26	26.077	19 1 27.9	28.66	9	21 28 11.71	23.426	14 29 50.5	79.74
10	19 31 35.60	26.036	18 58 31.9	29.99	10	21 30 32.08	23.365	14 21 49.8	80.49
11	19 34 11.69	25.994	18 55 28.0	31.32	11	21 32 52.09	23.304	14 13 44.6	81.23
12	19 36 47.53	25.952	18 52 16.1	32.64	12	21 35 11.73	23.243	14 5 35.1	81.95
13	19 39 23.11	25.908	18 48 56.3	33.95	13	21 37 31.00	23.182	13 57 21.2	82.66
14	19 41 58.42	25.863	18 45 28.7	35.24	14	21 39 49.91	23.121	13 49 3.2	83.35
15	19 44 33.46	25.818	18 41 53.4	36.53	15	21 42 8.45	23.060	13 40 41.0	84.03
16	19 47 8.23	25.772	18 38 10.4	37.81	16	21 44 26.63	23.000	13 32 14.8	84.71
17	19 49 42.72	25.725	18 34 19.7	39.08	17	21 46 44.45	22.940	13 23 44.5	85.37
18	19 52 16.93	25.677	18 30 21.5	40.33	18	21 49 1.91	22.879	13 15 10.4	86.01
19	19 54 50.84	25.628	18 26 15.7	41.58	19	21 51 19.00	22.819	13 6 32.4	86.64
20	19 57 24.46	25.578	18 22 2.5	42.81	20	21 53 35.74	22.760	12 57 50.7	87.26
21	19 59 57.78	25.528	18 17 42.0	44.03	21	21 55 52.12	22.701	12 49 5.3	87.87
22	20 2 30.79	25.477	18 13 14.1	45.25	22	21 58 8.15	22.642	12 40 16.3	88.46
23	20 5 3.50	25.426	18 8 39.0	46.45	23	22 0 23.82	22.583	12 31 23.8	89.04
24	20 7 35.90	25.373	S. 18 3 56.7	47.64	24	22 2 39.14	22.524	S. 12 22 27.8	89.62

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 21.					MONDAY 23.				
	h m s	s	S. ° ' "	° ' "		h m s	s	S. ° ' "	° ' "
0	22 2 39.14	22.524	S. 12 22 27.8	89.62	0	23 44 49.07	20.237	S. 4 28 4.4	104.17
1	22 4 54.11	22.467	12 13 28.4	90.18	1	23 46 50.39	20.203	4 17 39.2	104.23
2	22 7 8.74	22.409	12 4 25.7	90.72	2	23 48 51.50	20.168	4 7 13.6	104.30
3	22 9 23.02	22.351	11 55 19.8	91.25	3	23 50 52.40	20.134	3 56 47.6	104.37
4	22 11 36.95	22.293	11 46 10.7	91.77	4	23 52 53.11	20.103	3 46 21.2	104.42
5	22 13 50.54	22.237	11 36 58.6	92.28	5	23 54 53.63	20.070	3 35 54.6	104.45
6	22 16 3.79	22.180	11 27 43.4	92.78	6	23 56 53.95	20.038	3 25 27.8	104.48
7	22 18 16.70	22.124	11 18 25.3	93.26	7	23 58 54.08	20.007	3 15 0.8	104.52
8	22 20 29.28	22.068	11 9 4.3	93.73	8	0 0 54.03	19.978	3 4 33.6	104.53
9	22 22 41.52	22.012	10 59 40.5	94.19	9	0 2 53.81	19.948	2 54 6.4	104.55
10	22 24 53.43	21.958	10 50 14.0	94.65	10	0 4 53.40	19.918	2 43 39.0	104.56
11	22 27 5.01	21.903	10 40 44.7	95.09	11	0 6 52.82	19.889	2 33 11.7	104.55
12	22 29 16.27	21.850	10 31 12.9	95.51	12	0 8 52.07	19.861	2 22 44.4	104.54
13	22 31 27.21	21.796	10 21 38.6	95.93	13	0 10 51.15	19.833	2 12 17.2	104.53
14	22 33 37.82	21.743	10 12 1.7	96.34	14	0 12 50.06	19.806	2 1 50.1	104.50
15	22 35 48.12	21.690	10 2 22.5	96.73	15	0 14 48.82	19.780	1 51 23.2	104.47
16	22 37 58.10	21.638	9 52 40.9	97.12	16	0 16 47.42	19.754	1 40 56.5	104.43
17	22 40 7.77	21.585	9 42 57.1	97.48	17	0 18 45.87	19.729	1 30 30.0	104.39
18	22 42 17.12	21.533	9 33 11.1	97.84	18	0 20 44.17	19.705	1 20 3.8	104.33
19	22 44 26.17	21.483	9 23 23.0	98.20	19	0 22 42.33	19.681	1 9 38.0	104.28
20	22 46 34.92	21.433	9 13 32.7	98.54	20	0 24 40.34	19.657	0 59 12.5	104.22
21	22 48 43.36	21.383	9 3 40.5	98.87	21	0 26 38.21	19.633	0 48 47.4	104.14
22	22 50 51.51	21.333	8 53 46.3	99.19	22	0 28 35.94	19.612	0 38 22.8	104.07
23	22 52 59.36	21.284	S. 8 43 50.2	99.51	23	0 30 33.55	19.590	S. 0 27 58.6	103.98
SUNDAY 22.					TUESDAY 24.				
0	22 55 6.92	21.237	S. 8 33 52.2	99.80	0	0 32 31.02	19.568	S. 0 17 35.0	103.88
1	22 57 14.20	21.188	8 23 52.6	100.08	1	0 34 28.37	19.548	S. 0 7 12.0	103.79
2	22 59 21.18	21.140	8 13 51.2	100.37	2	0 36 25.60	19.528	N. 0 3 10.5	103.68
3	23 1 27.88	21.094	8 3 48.2	100.64	3	0 38 22.71	19.508	0 13 32.2	103.57
4	23 3 34.31	21.048	7 53 43.5	100.90	4	0 40 19.70	19.489	0 23 53.3	103.46
5	23 5 40.45	21.001	7 43 37.4	101.14	5	0 42 16.58	19.472	0 34 13.7	103.34
6	23 7 46.32	20.956	7 33 29.8	101.39	6	0 44 13.36	19.454	0 44 33.4	103.21
7	23 9 51.92	20.912	7 23 20.7	101.62	7	0 46 10.03	19.436	0 54 52.2	103.07
8	23 11 57.26	20.868	7 13 10.4	101.83	8	0 48 6.59	19.419	1 5 10.2	102.93
9	23 14 2.33	20.823	7 2 58.7	102.05	9	0 50 3.06	19.404	1 15 27.4	102.78
10	23 16 7.14	20.781	6 52 45.8	102.26	10	0 51 59.44	19.388	1 25 43.6	102.63
11	23 18 11.70	20.738	6 42 31.6	102.45	11	0 53 55.72	19.373	1 35 58.9	102.47
12	23 20 16.00	20.696	6 32 16.4	102.63	12	0 55 51.91	19.358	1 46 13.2	102.30
13	23 22 20.05	20.654	6 22 0.1	102.81	13	0 57 48.02	19.344	1 56 26.5	102.13
14	23 24 23.85	20.613	6 11 42.7	102.98	14	0 59 44.04	19.331	2 6 38.7	101.95
15	23 26 27.41	20.574	6 1 24.4	103.13	15	1 1 39.99	19.318	2 16 49.9	101.78
16	23 28 30.74	20.534	5 51 5.2	103.28	16	1 3 35.86	19.306	2 27 0.0	101.58
17	23 30 33.82	20.494	5 40 45.1	103.42	17	1 5 31.66	19.294	2 37 8.8	101.38
18	23 32 36.67	20.456	5 30 24.2	103.55	18	1 7 27.39	19.283	2 47 16.5	101.18
19	23 34 39.29	20.418	5 20 2.5	103.68	19	1 9 23.06	19.273	2 57 23.0	100.98
20	23 36 41.69	20.381	5 9 40.1	103.78	20	1 11 18.66	19.262	3 7 28.2	100.76
21	23 38 43.86	20.343	4 59 17.1	103.89	21	1 13 14.20	19.253	3 17 32.1	100.54
22	23 40 45.81	20.308	4 48 53.4	103.99	22	1 15 9.69	19.244	3 27 34.7	100.33
23	23 42 47.55	20.272	4 38 29.2	104.08	23	1 17 5.13	19.235	3 37 36.0	100.09
24	23 44 49.07	20.237	S. 4 28 4.4	104.17	24	1 19 0.51	19.227	N. 3 47 35.8	99.86

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
WEDNESDAY 25.					FRIDAY 27.				
	h m s	s	N. ° ' "	° ' "		h m s	s	N. ° ' "	° ' "
0	1 19 0.51	19.227	N. 3 47 35.8	99.86	0	2 51 15.55	19.374	N. 11 9 37.1	82.32
1	1 20 55.85	19.219	3 57 34.3	99.62	1	2 53 11.83	19.386	11 17 49.6	81.83
2	1 22 51.14	19.212	4 7 31.2	99.37	2	2 55 8.18	19.399	11 25 59.0	81.32
3	1 24 46.39	19.205	4 17 26.7	99.12	3	2 57 4.62	19.413	11 34 5.4	80.82
4	1 26 41.60	19.199	4 27 20.6	98.86	4	2 59 1.13	19.425	11 42 8.8	80.32
5	1 28 36.78	19.194	4 37 13.0	98.60	5	3 0 57.72	19.439	11 50 9.2	79.80
6	1 30 31.93	19.189	4 47 3.8	98.33	6	3 2 54.40	19.453	11 58 6.4	79.28
7	1 32 27.05	19.184	4 56 53.0	98.06	7	3 4 51.16	19.468	12 6 0.6	78.77
8	1 34 22.14	19.180	5 6 40.5	97.78	8	3 6 48.01	19.482	12 13 51.6	78.23
9	1 36 17.21	19.177	5 16 26.3	97.49	9	3 8 44.94	19.497	12 21 39.4	77.69
10	1 38 12.26	19.173	5 26 10.4	97.20	10	3 10 41.97	19.513	12 29 23.9	77.16
11	1 40 7.29	19.170	5 35 52.7	96.91	11	3 12 39.09	19.528	12 37 5.3	76.62
12	1 42 2.30	19.168	5 45 33.3	96.61	12	3 14 36.30	19.543	12 44 43.3	76.07
13	1 43 57.31	19.168	5 55 12.0	96.30	13	3 16 33.60	19.558	12 52 18.1	75.52
14	1 45 52.31	19.166	6 4 48.9	95.99	14	3 18 31.00	19.575	12 59 49.5	74.96
15	1 47 47.30	19.165	6 14 23.9	95.68	15	3 20 28.50	19.591	13 7 17.6	74.39
16	1 49 42.29	19.164	6 23 57.0	95.35	16	3 22 26.09	19.608	13 14 42.2	73.83
17	1 51 37.27	19.164	6 33 28.1	95.03	17	3 24 23.79	19.624	13 22 3.5	73.26
18	1 53 32.26	19.166	6 42 57.3	94.69	18	3 26 21.58	19.641	13 29 21.3	72.68
19	1 55 27.26	19.167	6 52 24.4	94.35	19	3 28 19.48	19.658	13 36 35.6	72.08
20	1 57 22.26	19.168	7 1 49.5	94.01	20	3 30 17.48	19.676	13 43 46.3	71.50
21	1 59 17.27	19.169	7 11 12.5	93.66	21	3 32 15.59	19.693	13 50 53.6	70.91
22	2 1 12.29	19.173	7 20 33.4	93.31	22	3 34 13.80	19.711	13 57 57.2	70.31
23	2 3 7.34	19.176	N. 7 29 52.2	92.96	23	3 36 12.12	19.729	N. 14 4 57.3	69.71
THURSDAY 26.					SATURDAY 28.				
	h m s	s	N. ° ' "	° ' "		h m s	s	N. ° ' "	° ' "
0	2 5 2.40	19.178	N. 7 39 8.9	92.59	0	3 38 10.55	19.747	N. 14 11 53.7	69.10
1	2 6 57.48	19.182	7 48 23.3	92.22	1	3 40 9.08	19.765	14 18 46.5	68.49
2	2 8 52.58	19.186	7 57 35.5	91.84	2	3 42 7.73	19.783	14 25 35.6	67.87
3	2 10 47.71	19.190	8 6 45.4	91.46	3	3 44 6.48	19.802	14 32 20.9	67.24
4	2 12 42.86	19.195	8 15 53.0	91.08	4	3 46 5.35	19.821	14 39 2.5	66.62
5	2 14 38.05	19.201	8 24 58.4	90.69	5	3 48 4.33	19.839	14 45 40.3	65.98
6	2 16 33.27	19.207	8 34 1.3	90.29	6	3 50 3.42	19.858	14 52 14.3	65.35
7	2 18 28.53	19.213	8 43 1.9	89.89	7	3 52 2.63	19.878	14 58 44.5	64.70
8	2 20 23.82	19.219	8 52 0.0	89.48	8	3 54 1.95	19.897	15 5 10.7	64.05
9	2 22 19.16	19.226	9 0 55.7	89.08	9	3 56 1.39	19.917	15 11 33.1	63.40
10	2 24 14.53	19.233	9 9 49.0	88.67	10	3 58 0.95	19.936	15 17 51.5	62.74
11	2 26 9.96	19.242	9 18 39.7	88.24	11	4 0 0.62	19.955	15 24 6.0	62.08
12	2 28 5.43	19.249	9 27 27.9	87.83	12	4 2 0.41	19.974	15 30 16.5	61.42
13	2 30 0.95	19.258	9 36 13.6	87.39	13	4 4 0.31	19.994	15 36 23.0	60.74
14	2 31 56.52	19.266	9 44 56.6	86.95	14	4 6 0.34	20.014	15 42 25.4	60.06
15	2 33 52.14	19.275	9 53 37.0	86.51	15	4 8 0.48	20.034	15 48 23.7	59.38
16	2 35 47.82	19.286	10 2 14.7	86.07	16	4 10 0.75	20.054	15 54 18.0	58.70
17	2 37 43.57	19.296	10 10 49.8	85.62	17	4 12 1.13	20.074	16 0 8.1	58.00
18	2 39 39.37	19.305	10 19 22.1	85.16	18	4 14 1.64	20.094	16 5 54.0	57.30
19	2 41 35.23	19.316	10 27 51.7	84.70	19	4 16 2.26	20.114	16 11 35.7	56.60
20	2 43 31.16	19.327	10 36 18.5	84.23	20	4 18 3.01	20.135	16 17 13.2	55.90
21	2 45 27.15	19.338	10 44 42.4	83.76	21	4 20 3.88	20.154	16 22 46.5	55.18
22	2 47 23.21	19.349	10 53 3.6	83.28	22	4 22 4.86	20.174	16 28 15.4	54.47
23	2 49 19.34	19.362	11 1 21.8	82.79	23	4 24 5.97	20.195	16 33 40.1	53.75
24	2 51 15.55	19.374	N. 11 9 37.1	82.32	24	4 26 7.20	20.216	N. 16 39 0.4	53.03

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 29.					MONDAY 30.				
	h m s	s	N. 16° 39' 0".4	53.03		h m s	s	N. 18° 24' 17".9	34.31
0	4 26 7.20	20.216	16 44 16.4	52.30	0	5 15 12.60	20.685	18 27 41.3	33.48
1	4 28 8.56	20.236	16 49 28.0	51.56	1	5 17 16.77	20.703	18 30 59.7	32.65
2	4 30 10.03	20.256	16 54 35.1	50.82	2	5 19 21.04	20.721	18 34 13.1	31.81
3	4 32 11.63	20.276	16 59 37.8	50.08	3	5 21 25.42	20.739	18 37 21.4	30.97
4	4 34 13.34	20.296	17 4 36.0	49.33	4	5 23 29.91	20.758	18 40 24.7	30.13
5	4 36 15.18	20.317	17 9 29.8	48.58	5	5 25 34.51	20.774	18 43 22.9	29.28
6	4 38 17.14	20.337	17 14 19.0	47.82	6	5 27 39.20	20.791	18 46 16.0	28.43
7	4 40 19.22	20.357	17 19 3.6	47.06	7	5 29 44.00	20.809	18 49 4.0	27.58
8	4 42 21.42	20.377	17 23 43.7	46.30	8	5 31 48.91	20.826	18 51 46.9	26.72
9	4 44 23.74	20.397	17 28 19.2	45.53	9	5 33 53.91	20.842	18 54 24.6	25.85
10	4 46 26.18	20.417	17 32 50.0	44.75	10	5 35 59.01	20.858	18 56 57.1	24.98
11	4 48 28.74	20.436	17 37 16.2	43.98	11	5 38 4.21	20.875	18 59 24.4	24.12
12	4 50 31.41	20.456	17 41 37.7	43.18	12	5 40 9.51	20.891	19 1 46.5	23.25
13	4 52 34.21	20.476	17 45 54.4	42.40	13	5 42 14.90	20.907	19 4 3.4	22.38
14	4 54 37.12	20.495	17 50 6.5	41.62	14	5 44 20.39	20.923	19 6 15.1	21.51
15	4 56 40.15	20.515	17 54 13.8	40.82	15	5 46 25.97	20.938	19 8 21.5	20.62
16	4 58 43.30	20.535	17 58 16.3	40.02	16	5 48 31.64	20.953	19 10 22.5	19.73
17	5 0 46.57	20.554	18 2 14.0	39.22	17	5 50 37.40	20.967	19 12 18.3	18.86
18	5 2 49.95	20.573	18 6 6.9	38.41	18	5 52 43.24	20.982	19 14 8.8	17.97
19	5 4 53.44	20.592	18 9 54.9	37.59	19	5 54 49.18	20.997	19 15 53.9	17.08
20	5 6 57.05	20.611	18 13 38.0	36.78	20	5 56 55.20	21.010	19 17 33.7	16.18
21	5 9 0.77	20.629	18 17 16.3	35.97	21	5 59 1.30	21.023	19 19 8.1	15.29
22	5 11 4.60	20.648	18 20 49.6	35.13	22	6 1 7.48	21.037	19 20 37.2	14.40
23	5 13 8.55	20.667	N. 18 24 17.9	34.31	23	6 3 13.74	21.050	N. 19 22 0.0	13.49
24	5 15 12.60	20.685			24	6 5 20.08	21.063		

PHASES OF THE MOON.

		h	m
June 2	● New Moon	2	33.9
10	) First Quarter	1	36.9
16	○ Full Moon	16	41.4
23	(Last Quarter	14	16.0

		h
June 1	(Apogee	17.4
16	(Perigee	3.1
28	(Apogee	23.4

AT APPARENT NOON.

		THE SUN'S				Sidereal Time of the Semi- diameter passing the Meridian.*	Equation of Time, to be added to		Var. in 1 hour.
Date.		Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.		Apparent Time.		
Tues.	1	h m s 6 40 39.47	s 10.345	N.23 7 3.5	10.04	m s 1 8.72	m s 3 36.26	s 0.487	
Wed.	2	6 44 47.62	10.334	23 2 50.4	11.05	1 8.68	3 47.82	0.476	
Thur.	3	6 48 55.49	10.322	22 58 13.1	12.05	1 8.64	3 59.10	0.464	
Frid.	4	6 53 3.06	10.309	22 53 11.8	13.05	1 8.60	4 10.08	0.451	
Sat.	5	6 57 10.31	10.295	22 47 46.6	14.05	1 8.56	4 20.75	0.437	
Sun.	6	7 1 17.21	10.280	22 41 57.6	15.03	1 8.51	4 31.06	0.422	
Mon.	7	7 5 23.73	10.264	22 35 45.0	16.01	1 8.46	4 41.00	0.406	
Tues.	8	7 9 29.86	10.247	22 29 9.0	16.99	1 8.40	4 50.55	0.389	
Wed.	9	7 13 35.58	10.229	22 22 9.6	17.96	1 8.35	4 59.69	0.372	
Thur.	10	7 17 40.87	10.211	22 14 47.0	18.92	1 8.29	5 8.40	0.354	
Frid.	11	7 21 45.71	10.192	22 7 1.5	19.87	1 8.23	5 16.66	0.334	
Sat.	12	7 25 50.08	10.172	21 58 53.2	20.82	1 8.17	5 24.45	0.315	
Sun.	13	7 29 53.98	10.152	21 50 22.3	21.75	1 8.10	5 31.77	0.295	
Mon.	14	7 33 57.39	10.131	21 41 29.0	22.68	1 8.04	5 38.60	0.274	
Tues.	15	7 38 0.29	10.110	21 32 13.5	23.60	1 7.97	5 44.94	0.253	
Wed.	16	7 42 2.69	10.089	21 22 36.0	24.51	1 7.89	5 50.76	0.232	
Thur.	17	7 46 4.57	10.068	21 12 36.7	25.42	1 7.82	5 56.08	0.211	
Frid.	18	7 50 5.94	10.046	21 2 15.8	26.31	1 7.75	6 0.87	0.189	
Sat.	19	7 54 6.78	10.024	20 51 33.6	27.20	1 7.67	6 5.14	0.167	
Sun.	20	7 58 7.09	10.001	20 40 30.2	28.08	1 7.59	6 8.88	0.145	
Mon.	21	8 2 6.85	9.979	20 29 6.0	28.94	1 7.51	6 12.08	0.122	
Tues.	22	8 6 6.07	9.956	20 17 21.1	29.80	1 7.43	6 14.74	0.099	
Wed.	23	8 10 4.74	9.933	20 5 15.8	30.64	1 7.35	6 16.85	0.076	
Thur.	24	8 14 2.85	9.909	19 52 50.3	31.48	1 7.27	6 18.39	0.053	
Frid.	25	8 18 0.38	9.885	19 40 4.9	32.30	1 7.18	6 19.37	0.029	
Sat.	26	8 21 57.35	9.861	19 27 0.0	33.11	1 7.10	6 19.78	0.005	
Sun.	27	8 25 53.73	9.837	19 13 35.6	33.91	1 7.01	6 19.61	0.019	
Mon.	28	8 29 49.52	9.812	18 59 52.1	34.70	1 6.93	6 18.85	0.044	
Tues.	29	8 33 44.73	9.788	18 45 49.8	35.48	1 6.84	6 17.50	0.069	
Wed.	30	8 37 39.34	9.763	18 31 29.0	36.25	1 6.75	6 15.56	0.093	
Thur.	31	8 41 33.34	9.737	18 16 49.9	37.00	1 6.67	6 13.02	0.119	
Frid.	32	8 45 26.74	9.712	N.18 1 52.9	37.74	1 6.58	6 9.87	0.144	

* Mean Time of the Semidiameter passing may be found by subtracting 0.19 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be added to Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi-diameter.*		
Tues.	1	h m s 6 40 38.85	N. 23 7 4.2	15 45.30	m s 3 36.23	h m s 6 37 2.62
Wed.	2	6 44 46.96	23 2 51.1	15 45.30	3 47.79	6 40 59.18
Thur.	3	6 48 54.80	22 58 13.9	15 45.29	3 59.07	6 44 55.74
Frid.	4	6 53 2.34	22 53 12.7	15 45.30	4 10.05	6 48 52.29
Sat.	5	6 57 9.56	22 47 47.6	15 45.30	4 20.71	6 52 48.85
Sun.	6	7 1 16.43	22 41 58.8	15 45.32	4 31.03	6 56 45.40
Mon.	7	7 5 22.93	22 35 46.3	15 45.34	4 40.97	7 0 41.96
Tues.	8	7 9 29.04	22 29 10.3	15 45.36	4 50.52	7 4 38.52
Wed.	9	7 13 34.73	22 22 11.1	15 45.39	4 59.66	7 8 35.08
Thur.	10	7 17 40.00	22 14 48.6	15 45.42	5 8.37	7 12 31.63
Frid.	11	7 21 44.81	22 7 3.2	15 45.46	5 16.63	7 16 28.19
Sat.	12	7 25 49.17	21 58 55.1	15 45.50	5 24.42	7 20 24.74
Sun.	13	7 29 53.04	21 50 24.3	15 45.55	5 31.74	7 24 21.30
Mon.	14	7 33 56.43	21 41 31.1	15 45.59	5 38.58	7 28 17.86
Tues.	15	7 37 59.32	21 32 15.8	15 45.65	5 44.91	7 32 14.41
Wed.	16	7 42 1.71	21 22 38.4	15 45.70	5 50.74	7 36 10.97
Thur.	17	7 46 3.58	21 12 39.2	15 45.76	5 56.05	7 40 7.52
Frid.	18	7 50 4.93	21 2 18.5	15 45.82	6 0.85	7 44 4.08
Sat.	19	7 54 5.76	20 51 36.4	15 45.88	6 5.13	7 48 0.64
Sun.	20	7 58 6.06	20 40 33.1	15 45.95	6 8.87	7 51 57.19
Mon.	21	8 2 5.82	20 29 9.0	15 46.02	6 12.07	7 55 53.75
Tues.	22	8 6 5.04	20 17 24.2	15 46.09	6 14.73	7 59 50.30
Wed.	23	8 10 3.70	20 5 19.0	15 46.17	6 16.84	8 3 46.86
Thur.	24	8 14 1.80	19 52 53.6	15 46.25	6 18.39	8 7 43.42
Frid.	25	8 17 59.34	19 40 8.3	15 46.34	6 19.37	8 11 39.97
Sat.	26	8 21 56.31	19 27 3.4	15 46.43	6 19.78	8 15 36.53
Sun.	27	8 25 52.69	19 13 39.2	15 46.53	6 19.61	8 19 33.08
Mon.	28	8 29 48.49	18 59 55.8	15 46.63	6 18.86	8 23 29.64
Tues.	29	8 33 43.70	18 45 53.5	15 46.74	6 17.51	8 27 26.19
Wed.	30	8 37 38.32	18 31 32.8	15 46.85	6 15.57	8 31 22.75
Thur.	31	8 41 32.33	18 16 53.8	15 46.96	6 13.03	8 35 19.30
Frid.	32	8 45 25.74	N. 18 1 56.8	15 47.08	6 9.89	8 39 15.86

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

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	<i>Noon.</i>	<i>Noon.</i>			<i>Noon.</i>	<i>Midnight.</i>	<i>Noon.</i>	<i>Midnight.</i>
				h m s				
1	99° 20' 17.6	S. 0.44	0.0072332	17 20 6.51	14 45.93	14 47.73	54 11.51	54 18.09
2	100 17 30.7	0.36	0.0072372	17 16 10.60	14 49.85	14 52.28	54 25.87	54 34.78
3	101 14 43.8	0.25	0.0072387	17 12 14.69	14 55.00	14 58.01	54 44.78	54 55.83
4	102 11 56.7	0.13	0.0072375	17 8 18.78	15 1.30	15 4.88	55 7.91	55 21.03
5	103 9 9.6	S. 0.01	0.0072338	17 4 22.87	15 8.74	15 12.88	55 35.19	55 50.38
6	104 6 22.4	N. 0.11	0.0072277	17 0 26.96	15 17.30	15 22.00	56 6.62	56 23.88
7	105 3 35.0	0.23	0.0072190	16 56 31.05	15 26.98	15 32.21	56 42.14	57 1.34
8	106 0 47.5	0.34	0.0072080	16 52 35.14	15 37.67	15 43.33	57 21.39	57 42.17
9	106 57 59.8	0.43	0.0071948	16 48 39.23	15 49.14	15 55.03	58 3.48	58 25.09
10	107 55 12.1	0.50	0.0071795	16 44 43.32	16 0.91	16 6.70	58 46.69	59 7.92
11	108 52 24.2	0.53	0.0071622	16 40 47.41	16 12.27	16 17.50	59 28.38	59 47.58
12	109 49 36.3	0.53	0.0071431	16 36 51.50	16 22.25	16 26.28	60 5.00	60 20.14
13	110 46 48.5	0.50	0.0071224	16 32 55.59	16 29.74	16 32.21	60 32.48	60 41.55
14	111 44 0.7	0.44	0.0071002	16 28 59.68	16 33.68	16 34.06	60 46.94	60 48.33
15	112 41 13.1	0.35	0.0070765	16 25 3.77	16 33.30	16 31.40	60 45.56	60 38.59
16	113 38 25.7	0.23	0.0070514	16 21 7.86	16 28.39	16 24.32	60 27.52	60 12.61
17	114 35 38.8	N. 0.10	0.0070250	16 17 11.95	16 19.32	16 13.51	59 54.24	59 32.91
18	115 32 52.4	S. 0.04	0.0069973	16 13 16.04	16 7.04	16 0.09	59 9.18	58 43.66
19	116 30 6.6	0.18	0.0069681	16 9 20.13	15 52.82	15 45.40	58 16.98	57 49.76
20	117 27 21.5	0.32	0.0069374	16 5 24.22	15 37.99	15 30.74	57 22.57	56 55.94
21	118 24 37.2	0.45	0.0069051	16 1 28.31	15 23.76	15 17.18	56 30.34	56 6.17
22	119 21 53.6	0.55	0.0068711	15 57 32.40	15 11.07	15 5.52	55 43.76	55 23.37
23	120 19 11.0	0.62	0.0068352	15 53 36.49	15 0.57	14 56.26	55 5.21	54 49.42
24	121 16 29.2	0.67	0.0067974	15 49 40.58	14 52.63	14 49.68	54 36.08	54 25.24
25	122 13 48.4	0.69	0.0067576	15 45 44.67	14 47.40	14 45.80	54 16.90	54 11.02
26	123 11 8.5	0.69	0.0067156	15 41 48.76	14 44.86	14 44.53	54 7.55	54 6.36
27	124 8 29.5	0.66	0.0066714	15 37 52.85	14 44.81	14 45.64	54 7.36	54 10.41
28	125 5 51.5	0.60	0.0066250	15 33 56.94	14 46.98	14 48.79	54 15.34	54 22.00
29	126 3 14.4	0.52	0.0065763	15 30 1.03	14 51.03	14 53.64	54 30.21	54 39.78
30	127 0 38.2	0.42	0.0065252	15 26 5.12	14 56.57	14 59.78	54 50.55	55 2.33
31	127 58 2.9	0.30	0.0064717	15 22 9.21	15 3.23	15 6.86	55 14.97	55 28.31
32	128 55 28.5	S. 0.17	0.0064158	15 18 13.30	15 10.65	15 14.56	55 42.22	55 56.56

MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.		Noon.	Upper.	Lower.
					d	h m	h m
1	91° 15' 41.0	97° 14' 42.3	S. 4° 4' 26.8	S. 3° 43' 34.9	28.89	* *	11 51.4
2	103 15 2.5	109 16 53.2	3 20 8.0	2 54 19.0	0.26	0 15.7	12 40.1
3	115 20 26.0	121 25 52.9	2 26 22.5	1 56 34.5	1.26	1 4.5	13 28.9
4	127 33 27.1	133 43 22.8	1 25 13.1	S. 0 52 37.5	2.26	1 53.2	14 17.3
5	139 55 55.7	146 11 22.6	S. 0 19 8.5	N. 0 14 52.2	3.26	2 41.3	15 5.2
6	152 30 1.9	158 52 13.1	N. 0 49 1.0	1 22 53.9	4.26	3 29.0	15 52.7
7	165 18 16.5	171 48 32.6	1 56 5.4	2 28 9.5	5.26	4 16.4	16 40.1
8	178 23 21.5	185 3 2.0	2 58 39.1	3 27 6.6	6.26	5 4.0	17 28.1
9	191 47 50.8	198 38 1.0	3 53 4.3	4 16 4.4	7.26	5 52.5	18 17.4
10	205 33 40.7	212 34 52.2	4 35 39.6	4 51 23.9	8.26	6 42.8	19 8.8
11	219 41 30.8	226 53 22.5	5 2 53.2	5 9 46.7	9.26	7 35.6	20 3.1
12	234 10 4.7	241 31 4.8	5 11 47.4	5 8 43.8	10.26	8 31.5	21 0.7
13	248 55 40.9	256 23 2.1	5 0 30.7	4 47 10.2	11.26	9 30.5	22 1.0
14	263 52 10.0	271 22 0.9	4 28 52.4	4 5 55.3	12.26	10 31.9	23 2.9
15	278 51 28.0	286 19 24.5	3 38 44.9	3 7 53.9	13.26	11 33.9	* *
16	293 44 45.2	301 6 30.6	2 34 0.4	1 57 46.6	14.26	12 34.8	0 4.6
17	308 23 48.0	315 35 53.2	1 19 56.5	N. 0 41 14.2	15.26	13 32.8	1 4.2
18	322 42 11.6	329 42 19.1	N. 0 2 22.1	S. 0 36 0.0	16.26	14 27.3	2 0.5
19	336 36 1.0	343 23 12.5	S. 1 13 16.6	1 48 56.6	17.26	15 18.2	2 53.2
20	350 3 57.1	356 38 25.8	2 22 33.2	2 53 44.8	18.26	16 6.1	3 42.5
21	3 6 56.2	9 29 51.1	3 22 13.7	3 47 46.2	19.26	16 51.9	4 29.2
22	15 47 37.3	22 0 44.8	4 10 12.0	4 29 23.3	20.26	17 36.3	5 14.2
23	28 9 45.8	34 15 13.8	4 45 15.1	4 57 43.9	21.26	18 20.2	5 58.3
24	40 17 42.6	46 17 46.5	5 6 48.1	5 12 26.7	22.26	19 4.4	6 42.3
25	52 15 58.8	58 12 52.2	5 14 40.5	5 13 30.7	23.26	19 49.3	7 26.7
26	64 8 58.0	70 4 45.6	5 8 59.7	5 1 10.7	24.26	20 35.4	8 12.2
27	76 0 42.8	81 57 15.2	4 50 7.9	4 35 56.6	25.26	21 22.6	8 58.9
28	87 54 46.3	93 53 37.7	4 18 43.5	3 58 36.5	26.26	22 11.0	9 46.7
29	99 54 8.4	105 56 35.4	3 35 45.4	3 10 21.7	27.26	22 59.9	10 35.4
30	112 1 13.7	118 8 16.2	2 42 38.6	2 12 51.5	28.26	23 49.2	11 24.6
31	124 17 54.1	130 30 17.2	1 41 17.9	S. 1 8 17.2	29.26	* *	12 13.7
32	136 45 33.7	143 3 50.9	S. 0 34 10.9	N. 0 0 38.0	0.68	0 38.1	13 2.4

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
TUESDAY 1.					THURSDAY 3.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	6 5 20.08	21.063	N.19 22 0.9	13.49	0	7 47 19.75	21.311	N.18 40 37.8	30.84
1	6 7 26.50	21.076	19 23 19.1	12.58	1	7 49 27.61	21.308	18 37 30.0	31.76
2	6 9 32.99	21.088	19 24 31.9	11.68	2	7 51 35.45	21.306	18 34 16.7	32.67
3	6 11 39.56	21.101	19 25 39.3	10.78	3	7 53 43.28	21.303	18 30 58.0	33.58
4	6 13 46.20	21.113	19 26 41.3	9.88	4	7 55 51.09	21.299	18 27 33.8	34.48
5	6 15 52.91	21.123	19 27 37.8	8.96	5	7 57 58.87	21.296	18 24 4.2	35.39
6	6 17 59.68	21.134	19 28 28.8	8.04	6	8 0 6.64	21.293	18 20 29.1	36.29
7	6 20 6.52	21.145	19 29 14.3	7.13	7	8 2 14.38	21.288	18 16 48.7	37.19
8	6 22 13.42	21.156	19 29 54.4	6.22	8	8 4 22.09	21.283	18 13 2.8	38.09
9	6 24 20.39	21.166	19 30 28.9	5.30	9	8 6 29.78	21.280	18 9 11.6	38.98
10	6 26 27.41	21.176	19 30 58.0	4.38	10	8 8 37.45	21.275	18 5 15.0	39.88
11	6 28 34.50	21.186	19 31 21.5	3.46	11	8 10 45.08	21.269	18 1 13.0	40.78
12	6 30 41.64	21.194	19 31 39.5	2.54	12	8 12 52.68	21.264	17 57 5.7	41.66
13	6 32 48.83	21.203	19 31 52.0	1.63	13	8 15 0.25	21.258	17 52 53.1	42.55
14	6 34 56.08	21.213	19 31 59.0	0.70	14	8 17 7.78	21.253	17 48 35.1	43.43
15	6 37 3.38	21.220	19 32 0.4	0.23	15	8 19 15.28	21.248	17 44 11.9	44.31
16	6 39 10.72	21.228	19 31 56.2	1.16	16	8 21 22.75	21.242	17 39 43.4	45.19
17	6 41 18.12	21.237	19 31 46.5	2.08	17	8 23 30.18	21.235	17 35 9.6	46.06
18	6 43 25.56	21.243	19 31 31.2	3.01	18	8 25 37.57	21.228	17 30 30.7	46.93
19	6 45 33.04	21.250	19 31 10.4	3.94	19	8 27 44.92	21.222	17 25 46.5	47.80
20	6 47 40.56	21.257	19 30 43.9	4.88	20	8 29 52.23	21.215	17 20 57.1	48.67
21	6 49 48.12	21.263	19 30 11.9	5.80	21	8 31 59.50	21.208	17 16 2.5	49.53
22	6 51 55.71	21.269	19 29 34.3	6.73	22	8 34 6.73	21.201	17 11 2.7	50.39
23	6 54 3.35	21.275	N.19 28 51.2	7.66	23	8 36 13.91	21.193	N.17 5 57.8	51.23
WEDNESDAY 2.					FRIDAY 4.				
0	6 56 11.01	21.279	N.19 28 2.4	8.60	0	8 38 21.05	21.187	N.17 0 47.9	52.08
1	6 58 18.70	21.285	19 27 8.0	9.53	1	8 40 28.15	21.179	16 55 32.8	52.94
2	7 0 26.43	21.290	19 26 8.1	10.45	2	8 42 35.20	21.171	16 50 12.6	53.78
3	7 2 34.18	21.294	19 25 2.6	11.39	3	8 44 42.20	21.163	16 44 47.4	54.62
4	7 4 41.96	21.298	19 23 51.4	12.33	4	8 46 49.16	21.155	16 39 17.2	55.45
5	7 6 49.76	21.302	19 22 34.7	13.25	5	8 48 56.06	21.147	16 33 42.0	56.28
6	7 8 57.58	21.305	19 21 12.4	14.19	6	8 51 2.92	21.139	16 28 1.8	57.12
7	7 11 5.42	21.308	19 19 44.4	15.13	7	8 53 9.73	21.131	16 22 16.6	57.94
8	7 13 13.27	21.311	19 18 10.9	16.05	8	8 55 16.49	21.123	16 16 26.5	58.76
9	7 15 21.15	21.313	19 16 31.8	16.98	9	8 57 23.20	21.114	16 10 31.5	59.58
10	7 17 29.03	21.315	19 14 47.1	17.91	10	8 59 29.86	21.106	16 4 31.6	60.39
11	7 19 36.93	21.317	19 12 56.9	18.84	11	9 1 36.47	21.098	15 58 26.8	61.20
12	7 21 44.83	21.318	19 11 1.0	19.78	12	9 3 43.03	21.088	15 52 17.2	62.00
13	7 23 52.75	21.320	19 8 59.6	20.70	13	9 5 49.53	21.079	15 46 2.8	62.80
14	7 26 0.67	21.320	19 6 52.6	21.62	14	9 7 55.98	21.071	15 39 43.6	63.59
15	7 28 8.59	21.320	19 4 40.1	22.55	15	9 10 2.38	21.063	15 33 19.7	64.38
16	7 30 16.51	21.321	19 2 22.0	23.48	16	9 12 8.73	21.053	15 26 51.0	65.18
17	7 32 24.44	21.321	18 59 58.3	24.41	17	9 14 15.02	21.044	15 20 17.6	65.95
18	7 34 32.36	21.320	18 57 29.1	25.33	18	9 16 21.26	21.036	15 13 39.6	66.73
19	7 36 40.28	21.319	18 54 54.3	26.26	19	9 18 27.45	21.027	15 6 56.9	67.50
20	7 38 48.19	21.318	18 52 14.0	27.18	20	9 20 33.58	21.018	15 0 9.6	68.27
21	7 40 56.09	21.317	18 49 28.2	28.09	21	9 22 39.66	21.009	14 53 17.7	69.02
22	7 43 3.99	21.316	18 46 36.9	29.01	22	9 24 45.69	21.001	14 46 21.3	69.78
23	7 45 11.88	21.313	18 43 40.1	29.93	23	9 26 51.67	20.992	14 39 20.3	70.54
24	7 47 19.75	21.311	N.18 40 37.8	30.84	24	9 28 57.59	20.983	N.14 32 14.8	71.28

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
SATURDAY 5.					MONDAY 7.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	9 28 57.59	20.983	N. 14 32 14.8	71 28	0	11 8 54.36	20.746	N. 7 34 36.8	100.38
1	9 31 3.46	20.973	14 25 4.9	72.02	1	11 10 58.84	20.747	7 24 33.2	100.83
2	9 33 9.27	20.965	14 17 50.6	72.76	2	11 13 3.32	20.748	7 14 26.8	101.28
3	9 35 15.04	20.957	14 10 31.8	73.49	3	11 15 7.82	20.752	7 4 17.8	101.72
4	9 37 20.75	20.948	14 3 8.7	74.22	4	11 17 12.34	20.755	6 54 6.2	102.14
5	9 39 26.41	20.939	13 55 41.2	74.91	5	11 19 16.88	20.758	6 43 52.1	102.56
6	9 41 32.02	20.932	13 48 9.4	75.66	6	11 21 21.44	20.762	6 33 35.5	102.97
7	9 43 37.59	20.923	13 40 33.3	76.38	7	11 23 26.02	20.765	6 23 16.5	103.38
8	9 45 43.10	20.914	13 32 52.9	77.08	8	11 25 30.62	20.770	6 12 55.0	103.78
9	9 47 48.56	20.906	13 25 8.4	77.77	9	11 27 35.26	20.776	6 2 31.1	104.17
10	9 49 53.97	20.898	13 17 19.7	78.47	10	11 29 39.93	20.780	5 52 5.0	104.55
11	9 51 59.34	20.891	13 9 26.8	79.16	11	11 31 44.62	20.786	5 41 36.5	104.93
12	9 54 4.66	20.883	13 1 29.8	79.84	12	11 33 49.36	20.793	5 31 5.9	105.29
13	9 56 9.93	20.874	12 53 28.7	80.52	13	11 35 54.14	20.799	5 20 33.0	105.66
14	9 58 15.15	20.867	12 45 23.6	81.19	14	11 37 58.95	20.806	5 9 58.0	106.01
15	10 0 20.33	20.860	12 37 14.4	81.86	15	11 40 3.81	20.814	4 59 20.9	106.36
16	10 2 25.47	20.853	12 29 1.3	82.52	16	11 42 8.72	20.822	4 48 41.7	106.69
17	10 4 30.57	20.846	12 20 44.2	83.18	17	11 44 13.67	20.830	4 38 0.6	107.02
18	10 6 35.62	20.838	12 12 23.2	83.83	18	11 46 18.68	20.839	4 27 17.5	107.34
19	10 8 40.63	20.832	12 3 58.3	84.47	19	11 48 23.74	20.848	4 16 32.5	107.66
20	10 10 45.60	20.825	11 55 29.6	85.10	20	11 50 28.86	20.858	4 5 45.6	107.97
21	10 12 50.53	20.819	11 46 57.1	85.73	21	11 52 34.04	20.868	3 54 56.9	108.27
22	10 14 55.43	20.813	11 38 20.8	86.36	22	11 54 39.28	20.879	3 44 6.4	108.55
23	10 17 0.29	20.807	N. 11 29 40.8	86.98	23	11 56 44.59	20.891	N. 3 33 14.3	108.83
SUNDAY 6.					TUESDAY 8.				
0	10 19 5.11	20.801	N. 11 20 57.0	87.60	0	11 58 49.97	20.903	N. 3 22 20.4	109.12
1	10 21 9.90	20.796	11 12 9.6	88.20	1	12 0 55.42	20.914	3 11 24.9	109.38
2	10 23 14.66	20.791	11 3 18.6	88.79	2	12 3 0.94	20.928	3 0 27.8	109.63
3	10 25 19.39	20.785	10 54 24.1	89.39	3	12 5 6.55	20.941	2 49 29.3	109.88
4	10 27 24.08	20.780	10 45 25.9	89.99	4	12 7 12.23	20.954	2 38 29.2	110.13
5	10 29 28.75	20.776	10 36 24.2	90.57	5	12 9 18.00	20.968	2 27 27.7	110.36
6	10 31 33.39	20.772	10 27 19.1	91.13	6	12 11 23.85	20.983	2 16 24.9	110.58
7	10 33 38.01	20.768	10 18 10.6	91.71	7	12 13 29.79	20.998	2 5 20.7	110.80
8	10 35 42.60	20.763	10 8 58.6	92.28	8	12 15 35.83	21.014	1 54 15.3	111.01
9	10 37 47.17	20.761	9 59 43.3	92.83	9	12 17 41.96	21.030	1 43 8.6	111.21
10	10 39 51.73	20.758	9 50 24.6	93.38	10	12 19 48.19	21.048	1 32 0.8	111.40
11	10 41 56.26	20.754	9 41 2.7	93.93	11	12 21 54.53	21.064	1 20 51.8	111.58
12	10 44 0.78	20.752	9 31 37.5	94.47	12	12 24 0.96	21.082	1 9 41.8	111.75
13	10 46 5.28	20.749	9 22 9.1	94.99	13	12 26 7.51	21.100	0 58 30.8	111.92
14	10 48 9.77	20.747	9 12 37.6	95.52	14	12 28 14.16	21.118	0 47 18.8	112.08
15	10 50 14.24	20.745	9 3 2.9	96.04	15	12 30 20.93	21.138	0 36 5.9	112.22
16	10 52 18.71	20.744	8 53 25.1	96.55	16	12 32 27.82	21.158	0 24 52.2	112.36
17	10 54 23.17	20.743	8 43 44.3	97.05	17	12 34 34.83	21.178	0 13 37.6	112.49
18	10 56 27.63	20.743	8 34 0.5	97.55	18	12 36 41.96	21.199	N. 0 2 22.3	112.60
19	10 58 32.08	20.742	8 24 13.7	98.04	19	12 38 49.22	21.221	S. 0 8 53.6	112.71
20	11 0 36.53	20.742	8 14 24.0	98.53	20	12 40 56.61	21.243	0 20 10.2	112.82
21	11 2 40.98	20.742	8 4 31.4	99.00	21	12 43 4.14	21.266	0 31 27.4	112.91
22	11 4 45.43	20.743	7 54 36.0	99.47	22	12 45 11.80	21.288	0 42 45.1	112.98
23	11 6 49.89	20.744	7 44 37.8	99.93	23	12 47 19.60	21.312	0 54 3.2	113.06
24	11 8 54.36	20.746	N. 7 34 36.8	100.38	24	12 49 27.54	21.336	S. 1 5 21.8	113.13

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 9.					FRIDAY 11.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	12 49 27.54	21.336	S. 1 5 21.8	113.13	0	14 35 37.87	23.087	S. 9 55 40.6	103.45
1	12 51 35.63	21.361	1 16 40.7	113.18	1	14 37 56.53	23.133	10 5 59.8	102.95
2	12 53 43.87	21.386	1 27 59.9	113.23	2	14 40 15.47	23.180	10 16 16.0	102.43
3	12 55 52.26	21.412	1 39 19.4	113.26	3	14 42 34.69	23.228	10 26 29.0	101.91
4	12 58 0.81	21.438	1 50 39.0	113.28	4	14 44 54.20	23.276	10 36 38.9	101.38
5	13 0 9.51	21.464	2 1 58.7	113.28	5	14 47 14.00	23.324	10 46 45.6	100.83
6	13 2 18.38	21.492	2 13 18.4	113.29	6	14 49 34.09	23.373	10 56 48.9	100.26
7	13 4 27.41	21.519	2 24 38.2	113.29	7	14 51 54.47	23.421	11 6 48.7	99.68
8	13 6 36.61	21.548	2 35 57.9	113.28	8	14 54 15.14	23.469	11 16 45.1	99.10
9	13 8 45.98	21.577	2 47 17.5	113.25	9	14 56 36.10	23.518	11 26 37.9	98.49
10	13 10 55.53	21.607	2 58 36.9	113.21	10	14 58 57.36	23.568	11 36 27.0	97.87
11	13 13 5.26	21.637	3 9 56.0	113.16	11	15 1 18.92	23.618	11 46 12.3	97.23
12	13 15 15.17	21.667	3 21 14.8	113.11	12	15 3 40.77	23.667	11 55 53.8	96.60
13	13 17 25.26	21.698	3 32 33.3	113.04	13	15 6 2.92	23.717	12 5 31.5	95.94
14	13 19 35.54	21.729	3 43 51.3	112.96	14	15 8 25.37	23.767	12 15 5.1	95.26
15	13 21 46.01	21.761	3 55 8.8	112.87	15	15 10 48.12	23.817	12 24 34.6	94.58
16	13 23 56.67	21.793	4 6 25.7	112.78	16	15 13 11.17	23.867	12 34 0.0	93.88
17	13 26 7.53	21.827	4 17 42.1	112.67	17	15 15 34.52	23.917	12 43 21.1	93.17
18	13 28 18.59	21.860	4 28 57.7	112.53	18	15 17 58.17	23.968	12 52 38.0	92.44
19	13 30 29.85	21.894	4 40 12.5	112.41	19	15 20 22.13	24.018	13 1 50.4	91.69
20	13 32 41.32	21.929	4 51 26.6	112.27	20	15 22 46.38	24.068	13 10 58.3	90.93
21	13 34 53.00	21.964	5 2 39.7	112.11	21	15 25 10.94	24.118	13 20 1.6	90.17
22	13 37 4.89	22.000	5 13 51.9	111.94	22	15 27 35.80	24.168	13 29 0.3	89.38
23	13 39 17.00	22.037	S. 5 25 3.0	111.76	23	15 30 0.96	24.218	S. 13 37 54.2	88.58
THURSDAY 10.					SATURDAY 12.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	13 41 29.33	22.073	S. 5 36 13.0	111.58	0	15 32 26.42	24.269	S. 13 46 43.3	87.78
1	13 43 41.87	22.109	5 47 21.9	111.38	1	15 34 52.19	24.320	13 55 27.5	86.95
2	13 45 54.64	22.148	5 58 29.6	111.17	2	15 37 18.26	24.369	14 4 6.7	86.10
3	13 48 7.64	22.186	6 9 35.9	110.94	3	15 39 44.62	24.419	14 12 40.7	85.25
4	13 50 20.87	22.224	6 20 40.9	110.71	4	15 42 11.29	24.470	14 21 9.7	84.39
5	13 52 34.33	22.263	6 31 44.4	110.46	5	15 44 38.26	24.519	14 29 33.4	83.51
6	13 54 48.03	22.303	6 42 46.4	110.20	6	15 47 5.52	24.569	14 37 51.8	82.62
7	13 57 1.96	22.343	6 53 46.8	109.93	7	15 49 33.09	24.619	14 46 4.8	81.71
8	13 59 16.14	22.383	7 4 45.6	109.66	8	15 52 0.95	24.668	14 54 12.3	80.78
9	14 1 30.56	22.424	7 15 42.7	109.36	9	15 54 29.10	24.717	15 2 14.2	79.85
10	14 3 45.23	22.465	7 26 37.9	109.05	10	15 56 57.55	24.767	15 10 10.5	78.91
11	14 6 0.14	22.507	7 37 31.3	108.73	11	15 59 26.30	24.815	15 18 1.1	77.94
12	14 8 15.31	22.550	7 48 22.7	108.40	12	16 1 55.33	24.863	15 25 45.8	76.96
13	14 10 30.74	22.593	7 59 12.1	108.06	13	16 4 24.65	24.911	15 33 24.6	75.98
14	14 12 46.42	22.635	8 9 59.4	107.71	14	16 6 54.26	24.959	15 40 57.5	74.98
15	14 15 2.36	22.678	8 20 44.6	107.34	15	16 9 24.16	25.007	15 48 24.4	73.97
16	14 17 18.56	22.722	8 31 27.5	106.95	16	16 11 54.34	25.053	15 55 45.1	72.93
17	14 19 35.02	22.767	8 42 8.0	106.56	17	16 14 24.80	25.100	16 2 59.6	71.89
18	14 21 51.76	22.812	8 52 46.2	106.16	18	16 16 55.54	25.147	16 10 7.8	70.84
19	14 24 8.76	22.856	9 3 21.9	105.74	19	16 19 26.56	25.193	16 17 9.7	69.78
20	14 26 26.03	22.901	9 13 55.1	105.31	20	16 21 57.85	25.238	16 24 5.1	68.69
21	14 28 43.57	22.947	9 24 25.6	104.86	21	16 24 29.41	25.282	16 30 54.0	67.60
22	14 31 1.39	22.993	9 34 53.4	104.40	22	16 27 1.23	25.326	16 37 36.3	66.50
23	14 33 19.49	23.040	9 45 18.4	103.93	23	16 29 33.32	25.371	16 44 12.0	65.38
24	14 35 37.87	23.087	S. 9 55 40.6	103.45	24	16 32 5.68	25.414	S. 16 50 40.9	64.25

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 13.					TUESDAY 15.				
	h m s	s	S. 16° 50' 40".	64".25		h m s	s	S. 19° 30' 46".	0".06
0	16 32 5.68	25.414	16 57 3.0	63.11	0	18 37 31.94	26.459	19 30 42.0	1.50
1	16 34 38.29	25.456	17 3 18.2	61.96	1	18 40 10.68	26.453	19 30 28.7	2.94
2	16 37 11.15	25.498	17 9 26.5	60.80	2	18 42 49.38	26.447	19 30 6.7	4.38
3	16 39 44.27	25.540	17 15 27.8	59.63	3	18 45 28.04	26.438	19 29 36.2	5.81
4	16 42 17.63	25.581	17 21 22.0	58.43	4	18 48 6.64	26.429	19 28 57.0	7.24
5	16 44 51.24	25.622	17 27 9.0	57.23	5	18 50 45.19	26.419	19 28 9.3	8.67
6	16 47 25.09	25.661	17 32 48.8	56.03	6	18 53 23.67	26.407	19 27 13.0	10.10
7	16 49 59.17	25.699	17 38 21.3	54.81	7	18 56 2.07	26.393	19 26 8.1	11.53
8	16 52 33.48	25.738	17 43 46.5	53.58	8	18 58 40.39	26.379	19 24 54.6	12.95
9	16 55 8.02	25.775	17 49 4.2	52.33	9	19 1 18.62	26.363	19 23 32.7	14.36
10	16 57 42.78	25.812	17 54 14.5	51.08	10	19 3 56.75	26.347	19 22 2.3	15.78
11	17 0 17.76	25.848	17 59 17.2	49.82	11	19 6 34.78	26.329	19 20 23.4	17.18
12	17 2 52.95	25.883	18 4 12.3	48.55	12	19 9 12.70	26.310	19 18 36.1	18.59
13	17 5 28.35	25.917	18 8 59.8	47.28	13	19 11 50.50	26.289	19 16 40.3	19.99
14	17 8 3.95	25.950	18 13 39.6	45.98	14	19 14 28.17	26.268	19 14 36.2	21.38
15	17 10 39.75	25.983	18 18 11.6	44.68	15	19 17 5.71	26.245	19 12 23.7	22.77
16	17 13 15.74	26.014	18 22 35.8	43.38	16	19 19 43.11	26.222	19 10 3.0	24.15
17	17 15 51.92	26.045	18 26 52.1	42.06	17	19 22 20.37	26.198	19 7 33.9	25.53
18	17 18 28.28	26.074	18 31 0.5	40.73	18	19 24 57.48	26.171	19 4 56.6	26.90
19	17 21 4.81	26.103	18 35 0.9	39.40	19	19 27 34.42	26.143	18 59 17.5	29.62
20	17 23 41.52	26.132	18 38 53.3	38.06	20	19 30 11.20	26.116	18 56 15.7	30.97
21	17 26 18.39	26.158	18 42 37.6	36.71	21	19 32 47.81	26.086	18 53 5.9	32.30
22	17 28 55.41	26.183	S. 18 46 13.8	35.36	22	19 35 24.23	26.056		
23	17 31 32.59	26.208			23	19 38 0.48	26.025		
MONDAY 14.					WEDNESDAY 16.				
0	17 34 9.91	26.232	S. 18 49 41.9	33.99	0	19 40 36.53	25.992	S. 18 49 48.1	33.63
1	17 36 47.37	26.255	18 53 1.7	32.62	1	19 43 12.38	25.958	18 46 22.3	34.96
2	17 39 24.97	26.277	18 56 13.3	31.25	2	19 45 48.03	25.924	18 42 48.6	36.28
3	17 42 2.69	26.297	18 59 16.7	29.87	3	19 48 23.47	25.889	18 39 7.0	37.58
4	17 44 40.53	26.317	19 2 11.7	28.48	4	19 50 58.70	25.853	18 35 17.6	38.88
5	17 47 18.49	26.336	19 4 58.4	27.08	5	19 53 33.70	25.815	18 31 20.4	40.18
6	17 49 56.56	26.353	19 7 36.7	25.68	6	19 56 8.48	25.778	18 27 15.5	41.45
7	17 52 34.72	26.368	19 10 6.5	24.28	7	19 58 43.03	25.738	18 23 3.0	42.72
8	17 55 12.98	26.383	19 12 28.0	22.88	8	20 1 17.34	25.698	18 18 42.9	43.98
9	17 57 51.32	26.397	19 14 41.0	21.46	9	20 3 51.41	25.658	18 14 15.2	45.23
10	18 0 29.74	26.410	19 16 45.5	20.03	10	20 6 25.23	25.616	18 9 40.1	46.47
11	18 3 8.24	26.421	19 18 41.4	18.61	11	20 8 58.80	25.573	18 4 57.6	47.70
12	18 5 46.79	26.431	19 20 28.8	17.19	12	20 11 32.11	25.530	18 0 7.7	48.92
13	18 8 25.41	26.441	19 22 7.7	15.77	13	20 14 5.16	25.486	17 55 10.6	50.13
14	18 11 4.08	26.448	19 23 38.0	14.33	14	20 16 37.94	25.441	17 50 6.2	51.33
15	18 13 42.79	26.455	19 24 59.7	12.90	15	20 19 10.45	25.395	17 44 54.7	52.51
16	18 16 21.54	26.460	19 26 12.8	11.47	16	20 21 42.68	25.349	17 39 36.1	53.68
17	18 19 0.31	26.464	19 27 17.3	10.03	17	20 24 14.64	25.303	17 34 10.5	54.84
18	18 21 39.11	26.468	19 28 13.1	8.58	18	20 26 46.31	25.255	17 28 38.0	55.99
19	18 24 17.93	26.470	19 29 0.3	7.15	19	20 29 17.70	25.207	17 22 58.6	57.13
20	18 26 56.75	26.470	19 29 38.9	5.71	20	20 31 48.79	25.158	17 17 12.4	58.27
21	18 29 35.57	26.469	19 30 8.8	4.27	21	20 34 19.59	25.108	17 11 19.4	59.38
22	18 32 14.38	26.467	19 30 30.1	2.83	22	20 36 50.08	25.058	16 5 19.9	60.48
23	18 34 53.17	26.463	19 30 42.7	1.38	23	20 39 20.28	25.008	17 59 13.7	61.57
24	18 37 31.94	26.459	S. 19 30 46.7	0.06	24	20 41 50.17	24.956	S. 16 53 1.1	62.64

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 17.					SATURDAY 19.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	20 41 50.17	24.956	S. 16 53 1.1	62 64	0	22 35 13.38	22.277	S. 10 13 35.7	98.60
1	20 44 19.75	24.904	16 46 42.0	63 71	1	22 37 26.88	22.224	10 3 42.8	99.03
2	20 46 49.02	24.853	16 40 16.6	64 76	2	22 39 40.07	22.172	9 53 47.3	99.45
3	20 49 17.98	24 800	16 33 44.9	65.80	3	22 41 52.94	22.119	9 43 49.4	99.84
4	20 51 46.62	24 747	16 27 7.0	66 83	4	22 44 5.50	22.067	9 33 49.2	100.23
5	20 54 14.94	24 693	16 20 23.0	67.83	5	22 46 17.74	22.015	9 23 46.6	100.61
6	20 56 42.93	24.638	16 13 33.0	68 83	6	22 48 29.68	21 963	9 13 41.9	100.98
7	20 59 10.60	24.584	16 6 37.0	69 83	7	22 50 41.30	21.913	9 3 34.9	101.33
8	21 1 37.94	24.530	15 59 35.1	70 80	8	22 52 52.63	21.863	8 53 25.9	101.67
9	21 4 4.96	24.476	15 52 27.4	71.76	9	22 55 3.65	21.812	8 43 14.9	102.00
10	21 6 31.65	24.420	15 45 14.0	72 70	10	22 57 14.37	21.762	8 33 1.9	102.33
11	21 8 58.00	24.364	15 37 55.0	73.63	11	22 59 24.79	21.713	8 22 47.0	102.63
12	21 11 24.02	24.308	15 30 30.4	74.55	12	23 1 34.92	21.664	8 12 30.4	102.92
13	21 13 49.70	24 252	15 23 0.4	75 46	13	23 3 44.76	21.615	8 2 12.0	103.21
14	21 16 15.04	24.196	15 15 24.9	76.35	14	23 5 54.30	21.567	7 51 51.9	103.48
15	21 18 40.05	24.139	15 7 44.2	77.23	15	23 8 3.56	21.520	7 41 30.2	103.75
16	21 21 4.71	24.083	14 59 58.2	78.09	16	23 10 12.54	21.473	7 31 6.9	104.00
17	21 23 29.04	24 026	14 52 7.1	78 94	17	23 12 21.23	21.426	7 20 42.2	104.23
18	21 25 53.02	23.968	14 44 10.9	79 78	18	23 14 20.65	21.380	7 10 16.1	104.46
19	21 28 16.66	23 912	14 36 9.7	80 61	19	23 16 37.79	21.334	6 59 48.7	104.68
20	21 30 39.96	23 854	14 28 3.6	81.42	20	23 18 45.66	21.289	6 49 19.9	104.90
21	21 33 2.91	23 797	14 19 52.7	82 22	21	23 20 53.26	21.244	6 38 49.9	105.09
22	21 35 25.52	23.739	14 11 37.0	83.00	22	23 23 0.59	21.199	6 28 18.8	105.28
23	21 37 47.78	23.682	S. 14 3 16.7	83.76	23	23 25 7.65	21.156	S. 6 17 46.6	105.46
FRIDAY 18.					SUNDAY 20.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	21 40 9.70	23.624	S. 13 54 51.9	84.51	0	23 27 14.46	21.113	S. 6 7 13.3	105.63
1	21 42 31.27	23.567	13 46 22.6	85.25	1	23 29 21.01	21.070	5 56 39.1	105.78
2	21 44 52.50	23.510	13 37 48.9	85.98	2	23 31 27.30	21 028	5 46 3.9	105.93
3	21 47 13.39	23.452	13 29 10.8	86.70	3	23 33 33.34	20.986	5 35 27.9	106.07
4	21 49 33.92	23.394	13 20 28.5	87.40	4	23 35 39.13	20.944	5 24 51.1	106.19
5	21 51 54.12	23.338	13 11 42.0	88 09	5	23 37 44.67	20.903	5 14 13.6	106.31
6	21 54 13.97	23.279	13 2 51.4	88.76	6	23 39 49.97	20.863	5 3 35.4	106.42
7	21 56 33.47	23.222	12 53 56.9	89.42	7	23 41 55.03	20 824	4 52 56.6	106 52
8	21 58 52.63	23.165	12 44 58.4	90 07	8	23 43 59.86	20.785	4 42 17.2	106.61
9	22 1 11.45	23.108	12 35 56.1	90 69	9	23 46 4.45	20.747	4 31 37.3	106.69
10	22 3 29.93	23.052	12 26 50.1	91.31	10	23 48 8.82	20.709	4 20 56.9	106.77
11	22 5 48.07	22.995	12 17 40.4	91.92	11	23 50 12.96	20.671	4 10 16.1	106.83
12	22 8 5.87	22.938	12 8 27.1	92 52	12	23 52 16.87	20.633	3 59 35.0	106.88
13	22 10 23.32	22.881	11 59 10.2	93.09	13	23 54 20.56	20.598	3 48 53.6	106.93
14	22 12 40.44	22.826	11 49 50.0	93.65	14	23 56 24.04	20.562	3 38 11.9	106.96
15	22 14 57.23	22.770	11 40 26.4	94.21	15	23 58 27.30	20.526	3 27 30.1	106.98
16	22 17 13.68	22.713	11 30 59.5	94.75	16	0 0 30.35	20.492	3 16 48.1	107.00
17	22 19 29.79	22.658	11 21 29.4	95.28	17	0 2 33.20	20 458	3 6 6.1	107.01
18	22 21 45.57	22.603	11 11 56.2	95.79	18	0 4 35.84	20.423	2 55 24.0	107.02
19	22 24 1.03	22.548	11 2 19.9	96.29	19	0 6 38.28	20.390	2 44 41.9	107.01
20	22 26 16.15	22.493	10 52 40.7	96.78	20	0 8 40.52	20.358	2 33 59.9	106.99
21	22 28 30.94	22.438	10 42 58.6	97.25	21	0 10 42.57	20.326	2 23 18.0	106.97
22	22 30 45.41	22.385	10 33 13.7	97.72	22	0 12 44.43	20.294	2 12 36.3	106.93
23	22 32 59.56	22.331	10 23 26.0	98.17	23	0 14 46.10	20.263	2 1 54.8	106.89
24	22 35 13.38	22.277	S. 10 13 35.7	98.60	24	0 16 47.59	20.233	S. 1 51 13.6	106.85

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
MONDAY 21.					WEDNESDAY 23.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	0 16 47.59	20 233	S. 1 51 13.6	106.85	0	1 51 27.58	19.418	N. 6 22 46.7	96.57
1	0 18 48.90	20.203	1 40 32.6	106.79	1	1 53 24.07	19.413	6 32 25.1	96.22
2	0 20 50.03	20.173	1 29 52.1	106.73	2	1 55 20.53	19.408	6 42 1.3	95.85
3	0 22 50.98	20.145	1 19 11.9	106.66	3	1 57 16.97	19.405	6 51 35.3	95.48
4	0 24 51.77	20.118	1 8 32.2	106.58	4	1 59 13.39	19.403	7 1 7.0	95.10
5	0 26 52.39	20.089	0 57 52.9	106.49	5	2 1 9.80	19.400	7 10 36.5	94.73
6	0 28 52.84	20.063	0 47 14.3	106.39	6	2 3 6.19	19.398	7 20 3.7	94.34
7	0 30 53.14	20.036	0 36 36.2	106.30	7	2 5 2.57	19.397	7 29 28.6	93.95
8	0 32 53.27	20.010	0 25 58.7	106.19	8	2 6 58.95	19.396	7 38 51.1	93.55
9	0 34 53.26	19.985	0 15 21.9	106.08	9	2 8 55.32	19.394	7 48 11.2	93.15
10	0 36 53.09	19.960	S. 0 4 45.8	105.95	10	2 10 51.68	19.394	7 57 28.9	92.75
11	0 38 52.78	19.936	N. 0 5 49.5	105.83	11	2 12 48.05	19.395	8 6 44.2	92.34
12	0 40 52.32	19.912	0 16 24.1	105.69	12	2 14 44.42	19.396	8 15 57.0	91.93
13	0 42 51.72	19.889	0 26 57.8	105.54	13	2 16 40.80	19.397	8 25 7.3	91.51
14	0 44 50.99	19.867	0 37 30.6	105.38	14	2 18 37.18	19.398	8 34 15.1	91.08
15	0 46 50.12	19.844	0 48 2.4	105.23	15	2 20 33.58	19.401	8 43 20.3	90.65
16	0 48 49.12	19.823	0 58 33.4	105.08	16	2 22 29.99	19.403	8 52 22.9	90.22
17	0 50 47.99	19.802	1 9 3.3	104.89	17	2 24 26.41	19.405	9 1 22.9	89.78
18	0 52 46.74	19.782	1 19 32.1	104.72	18	2 26 22.85	19.409	9 10 20.2	89.33
19	0 54 45.37	19.762	1 29 59.9	104.53	19	2 28 19.32	19.413	9 19 14.9	88.88
20	0 56 44.88	19.743	1 40 26.5	104.34	20	2 30 15.80	19.417	9 28 6.8	88.43
21	0 58 42.28	19.724	1 50 52.0	104.15	21	2 32 12.32	19.422	9 36 56.0	87.97
22	1 0 40.57	19.706	2 1 16.3	103.95	22	2 34 8.86	19.426	9 45 42.4	87.51
23	1 2 38.75	19.688	N. 2 11 39.4	103.73	23	2 36 5.43	19.431	N. 9 54 26.1	87.04
TUESDAY 22.					THURSDAY 24.				
0	1 4 36.82	19.671	N. 2 22 1.1	103.52	0	2 38 2.03	19.437	N. 10 3 6.9	86.57
1	1 6 34.80	19.654	2 32 21.6	103.30	1	2 39 58.67	19.443	10 11 44.9	86.09
2	1 8 32.67	19.638	2 42 40.7	103.07	2	2 41 55.35	19.450	10 20 20.0	85.60
3	1 10 30.46	19.623	2 52 58.4	102.82	3	2 43 52.07	19.457	10 28 52.1	85.12
4	1 12 28.15	19.608	3 3 14.7	102.59	4	2 45 48.83	19.463	10 37 21.4	84.63
5	1 14 25.75	19.593	3 13 29.5	102.34	5	2 47 45.63	19.471	10 45 47.7	84.13
6	1 16 23.26	19.579	3 23 42.8	102.09	6	2 49 42.48	19.479	10 54 10.9	83.63
7	1 18 20.70	19.566	3 33 54.6	101.83	7	2 51 39.38	19.488	11 2 31.2	83.13
8	1 20 18.05	19.553	3 44 4.8	101.57	8	2 53 36.33	19.496	11 10 48.4	82.61
9	1 22 15.33	19.541	3 54 13.4	101.29	9	2 55 33.33	19.505	11 19 2.5	82.09
10	1 24 12.54	19.529	4 4 20.3	101.02	10	2 57 30.39	19.515	11 27 13.5	81.58
11	1 26 9.68	19.518	4 14 25.6	100.74	11	2 59 27.51	19.524	11 35 21.4	81.05
12	1 28 6.76	19.508	4 24 29.2	100.46	12	3 1 24.68	19.534	11 43 26.1	80.52
13	1 30 3.77	19.497	4 34 31.1	100.16	13	3 3 21.92	19.545	11 51 27.6	79.98
14	1 32 0.72	19.487	4 44 31.1	99.86	14	3 5 19.22	19.556	11 59 25.9	79.44
15	1 33 57.61	19.478	4 54 29.4	99.56	15	3 7 16.59	19.567	12 7 20.9	78.89
16	1 35 54.45	19.469	5 4 25.8	99.24	16	3 9 14.02	19.578	12 15 12.6	78.35
17	1 37 51.24	19.461	5 14 20.3	98.93	17	3 11 11.52	19.589	12 23 1.1	77.80
18	1 39 47.98	19.453	5 24 12.9	98.61	18	3 13 9.09	19.602	12 30 46.2	77.23
19	1 41 44.67	19.446	5 34 3.6	98.28	19	3 15 6.74	19.614	12 38 27.9	76.67
20	1 43 41.33	19.439	5 43 52.3	97.95	20	3 17 4.46	19.626	12 46 6.2	76.11
21	1 45 37.94	19.433	5 53 39.0	97.62	21	3 19 2.25	19.639	12 53 41.2	75.53
22	1 47 34.52	19.427	6 3 23.7	97.28	22	3 21 0.13	19.653	13 1 12.6	74.95
23	1 49 31.06	19.422	6 13 6.3	96.92	23	3 22 58.08	19.666	13 8 40.6	74.38
24	1 51 27.58	19.418	N. 6 22 46.7	96.57	24	3 24 56.12	19.679	N. 13 16 5.1	73.79

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 25.					SUNDAY 27.				
	h m s	s	N. 13 16 5	1		h m s	s	N. 17 54 7	5
0	3 24 56	12	19.679	73.79	0	5 1 21	14	20.540	40.37
1	3 26 54	23	19.693	73.20	1	5 3 24	44	20.559	39.57
2	3 28 52	44	19.708	72.00	2	5 5 27	85	20.578	38.77
3	3 30 50	73	19.722	72.00	3	5 7 31	38	20.598	37.96
4	3 32 49	10	19.737	71.39	4	5 9 35	02	20.618	37.14
5	3 34 47	57	19.753	70.78	5	5 11 38	79	20.637	36.32
6	3 36 46	13	19.768	70.18	6	5 13 42	66	20.655	35.50
7	3 38 44	78	19.783	69.56	7	5 15 46	65	20.675	34.68
8	3 40 43	52	19.798	68.93	8	5 17 50	76	20.694	33.85
9	3 42 42	36	19.814	68.31	9	5 19 54	98	20.713	33.02
10	3 44 41	29	19.830	67.68	10	5 21 59	31	20.731	32.18
11	3 46 40	32	19.847	67.03	11	5 24 3	75	20.749	31.35
12	3 48 39	45	19.863	66.40	12	5 26 8	30	20.768	30.51
13	3 50 38	68	19.880	65.75	13	5 28 12	97	20.787	29.66
14	3 52 38	01	19.897	65.10	14	5 30 17	74	20.804	28.81
15	3 54 37	44	19.914	64.45	15	5 32 22	62	20.823	27.96
16	3 56 36	98	19.932	63.78	16	5 34 27	62	20.842	27.10
17	3 58 36	62	19.949	63.13	17	5 36 32	72	20.858	26.24
18	4 0 36	37	19.967	62.46	18	5 38 37	92	20.876	25.38
19	4 2 36	22	19.984	61.78	19	5 40 43	23	20.894	24.52
20	4 4 36	18	20.003	61.11	20	5 42 48	65	20.912	23.65
21	4 6 36	25	20.020	60.42	21	5 44 54	17	20.928	22.78
22	4 8 36	42	20.038	59.73	22	5 46 59	79	20.945	21.89
23	4 10 36	71	20.058	59.05	23	5 49 5	51	20.962	21.02
SATURDAY 26.					MONDAY 28.				
	h m s	s	N. 15 55 10	6		h m s	s	N. 19 7 8	2
0	4 12 37	11	20.076	58.35	0	5 51 11	33	20.978	20.14
1	4 14 37	62	20.094	57.65	1	5 53 17	25	20.995	19.26
2	4 16 38	24	20.113	56.94	2	5 55 23	27	21.012	18.37
3	4 18 38	97	20.131	56.23	3	5 57 29	39	21.028	17.48
4	4 20 39	81	20.150	55.53	4	5 59 35	60	21.043	16.58
5	4 22 40	77	20.170	54.81	5	6 1 41	91	21.059	15.69
6	4 24 41	85	20.189	54.08	6	6 3 48	31	21.073	14.79
7	4 26 43	04	20.208	53.36	7	6 5 54	79	21.088	13.89
8	4 28 44	35	20.228	52.63	8	6 8 1	37	21.104	12.99
9	4 30 45	77	20.247	51.89	9	6 10 8	04	21.118	12.08
10	4 32 47	31	20.266	51.16	10	6 12 14	79	21.133	11.18
11	4 34 48	96	20.285	50.41	11	6 14 21	64	21.148	10.28
12	4 36 50	73	20.305	49.66	12	6 16 28	56	21.160	9.35
13	4 38 52	62	20.324	48.92	13	6 18 35	56	21.174	8.43
14	4 40 54	62	20.343	48.16	14	6 20 42	65	21.188	7.53
15	4 42 56	74	20.363	47.39	15	6 22 49	82	21.201	6.61
16	4 44 58	98	20.383	46.63	16	6 24 57	06	21.213	5.69
17	4 47 1	34	20.403	45.86	17	6 27 4	38	21.227	4.77
18	4 49 3	82	20.423	45.08	18	6 29 11	78	21.238	3.83
19	4 51 6	41	20.442	44.32	19	6 31 19	24	21.250	2.91
20	4 53 9	12	20.462	43.53	20	6 33 26	78	21.263	1.99
21	4 55 11	95	20.482	42.75	21	6 35 34	39	21.273	1.06
22	4 57 14	90	20.501	41.96	22	6 37 42	06	21.284	0.13
23	4 59 17	96	20.520	41.16	23	6 39 49	80	21.295	0.81
24	5 1 21	14	20.540	40.37	24	6 41 57	60	21.306	1.74

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var in rom	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
TUESDAY 29.					THURSDAY 31.				
	h m s	s	N. 19 29 27.8	1.74		h m s	s	N. 17 33 0.2	46.47
0	6 41 57.60	21.306	19 29 14.6	2.68	0	8 24 50.55	21.444	17 28 18.7	47.37
1	6 44 5.47	21.316	19 28 55.7	3.62	1	8 26 59.20	21.440	17 23 31.8	48.26
2	6 46 13.39	21.326	19 28 31.2	4.55	2	8 29 7.83	21.436	17 18 39.6	49.14
3	6 48 21.38	21.336	19 27 25.4	5.48	3	8 31 16.43	21.431	17 13 42.1	50.03
4	6 50 29.42	21.344	19 26 44.0	6.43	4	8 33 25.00	21.426	17 8 39.2	50.92
5	6 52 37.51	21.353	19 25 57.0	7.37	5	8 35 33.54	21.421	17 3 31.1	51.78
6	6 54 45.66	21.363	19 25 4.3	8.31	6	8 37 42.05	21.415	16 58 17.8	52.66
7	6 56 53.86	21.371	19 24 6.0	9.25	7	8 39 50.53	21.411	16 52 59.2	53.53
8	6 59 2.11	21.379	19 23 2.0	10.19	8	8 41 58.98	21.405	16 47 35.4	54.39
9	7 1 10.41	21.387	19 21 52.3	11.14	9	8 44 7.39	21.398	16 42 6.5	55.26
10	7 3 18.75	21.393	19 20 37.0	12.08	10	8 46 15.76	21.393	16 36 32.3	56.12
11	7 5 27.13	21.401	19 19 16.1	13.02	11	8 48 24.10	21.387	16 30 53.1	56.97
12	7 7 35.56	21.408	19 17 49.5	13.96	12	8 50 32.40	21.380	16 25 8.7	57.83
13	7 9 44.02	21.414	19 16 17.2	14.91	13	8 52 40.66	21.373	16 19 19.2	58.68
14	7 11 52.53	21.421	19 14 39.2	15.86	14	8 54 48.88	21.367	16 13 24.6	59.51
15	7 14 1.07	21.426	19 12 55.6	16.80	15	8 56 57.06	21.359	16 7 25.1	60.34
16	7 16 9.64	21.431	19 11 6.3	17.74	16	8 59 5.19	21.353	16 1 20.5	61.18
17	7 18 18.24	21.437	19 9 11.4	18.68	17	9 1 13.29	21.346	15 55 10.9	62.00
18	7 20 26.88	21.442	19 7 10.8	19.63	18	9 3 21.34	21.338	15 48 56.3	62.84
19	7 22 35.54	21.446	19 5 4.6	20.57	19	9 5 29.34	21.330	15 42 36.8	63.66
20	7 24 44.23	21.450	19 2 52.7	21.51	20	9 7 37.30	21.323	15 36 12.4	64.48
21	7 26 52.94	21.454	19 0 35.1	22.46	21	9 9 45.21	21.315	15 29 43.1	65.28
22	7 29 1.68	21.458		23.40	22	9 11 53.08	21.308		66.09
23	7 31 10.44	21.461			23	9 14 0.91	21.300		
WEDNESDAY 30.					FRIDAY, AUG. 1.				
0	7 33 19.21	21.463	18 58 11.9	24.34	0	9 16 8.68	21.291	N. 15 16 30.0	66.90
1	7 35 28.00	21.466	18 55 43.0	25.28					
2	7 37 36.80	21.468	18 53 8.5	26.21					
3	7 39 45.62	21.471	18 47 42.7	27.15					
4	7 41 54.45	21.473	18 44 51.3	28.09					
5	7 44 3.29	21.473	18 41 54.3	29.03					
6	7 46 12.13	21.474	18 38 51.7	29.97					
7	7 48 20.98	21.476	18 35 43.5	30.90					
8	7 50 29.84	21.476	18 32 29.8	31.83					
9	7 52 38.69	21.476	18 29 10.4	32.76					
10	7 54 47.55	21.476	18 25 45.5	33.69					
11	7 56 56.40	21.475	18 22 15.0	34.62					
12	7 59 5.25	21.474	18 18 39.0	35.54					
13	8 1 14.09	21.473	18 14 57.4	36.47					
14	8 3 22.93	21.473	18 11 10.3	37.39					
15	8 5 31.76	21.471	18 7 17.7	38.31					
16	8 7 40.58	21.468	18 3 19.6	39.23					
17	8 9 49.38	21.466	17 59 16.0	40.14					
18	8 11 58.17	21.464	17 55 7.0	41.05					
19	8 14 6.95	21.462	17 46 32.5	41.96					
20	8 16 15.71	21.458	17 42 7.1	42.88					
21	8 18 24.45	21.455	17 37 36.3	43.78					
22	8 20 33.17	21.452		44.68					
23	8 22 41.87	21.448		45.58					
24	8 24 50.55	21.444	N. 17 33 0.2	46.47					

PHASES OF THE MOON.

	h	m
July 1	●	New Moon - - - 17 35.0
9	☽	First Quarter - - - 9 46.0
15	○	Full Moon - - - 23 49.0
23	☾	Last Quarter - - - 4 35.8
31	●	New Moon - - - 7 41.9

	h
July 14	☾ Perigee - - - - - 10.1
26	☾ Apogee - - - - - 12.5

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi-diameter passing the Meridian.*	Equation of Time, to be added to		Var. in hour.			
	Apparent Right Ascension.	Var. in hour.	Apparent Declination.	Var. in hour.		subtracted from Apparent Time.					
	h	m	s	s	°	'	"	m	s	s	
Frid.	1	8 45	26.74	9.712	N.18	1 52.9	37.74	1	6.58	6 9.87	0.144
Sat.	2	8 49	19.53	9.687	17 46	38.2	38.47	1	6.49	6 6.12	0.169
Sun.	3	8 53	11.71	9.661	17 31	6.1	39 19	1	6.41	6 1.75	0.195
Mon.	4	8 57	3.27	9.636	17 15	17.0	39.89	1	6.32	5 56.77	0.220
Tues.	5	9 0	54.22	9.610	16 59	11.2	40.59	1	6.23	5 51.18	0.246
Wed.	6	9 4	44.55	9.584	16 42	48.8	41.27	1	6.15	5 44.97	0.271
Thur.	7	9 8	34.26	9.559	16 26	10.4	41.93	1	6.06	5 38.15	0.297
Frid.	8	9 12	23.36	9.533	16 9	16.1	42.59	1	5.98	5 30.72	0.322
Sat.	9	9 16	11.86	9.508	15 52	6.3	43.23	1	5.89	5 22.68	0.347
Sun.	10	9 19	59.76	9.483	15 34	41.3	43.85	1	5.81	5 14.04	0.372
Mon.	11	9 23	47.06	9.459	15 17	1.4	44.47	1	5.73	5 4.82	0.396
Tues.	12	9 27	33.78	9.435	14 59	6.9	45.07	1	5.65	4 55.02	0.420
Wed.	13	9 31	19.93	9.411	14 40	58.1	45.66	1	5.57	4 44.65	0.444
Thur.	14	9 35	5.53	9.389	14 22	35.2	46.24	1	5.49	4 33.72	0.467
Frid.	15	9 38	50.58	9.366	14 3	58.7	46.80	1	5.41	4 22.25	0.489
Sat.	16	9 42	35.11	9.345	13 45	8.7	47.35	1	5.33	4 10.25	0.511
Sun.	17	9 46	19.12	9.324	13 26	5.7	47.89	1	5.26	3 57.74	0.531
Mon.	18	9 50	2.64	9.303	13 6	49.8	48.42	1	5.18	3 44.74	0.552
Tues.	19	9 53	45.66	9.283	12 47	21.3	48.94	1	5.11	3 31.25	0.572
Wed.	20	9 57	28.22	9.264	12 27	40.7	49.44	1	5.04	3 17.29	0.591
Thur.	21	10 1	10.31	9.245	12 7	48.2	49.93	1	4.97	3 2.87	0.610
Frid.	22	10 4	51.96	9.226	11 47	44.1	50.41	1	4.90	2 48.01	0.628
Sat.	23	10 8	33.18	9.209	11 27	28.7	50.87	1	4.84	2 32.71	0.646
Sun.	24	10 12	13.97	9.191	11 7	2.4	51.32	1	4.78	2 17.00	0.663
Mon.	25	10 15	54.36	9.175	10 46	25.4	51.76	1	4.71	2 0.88	0.680
Tues.	26	10 19	34.36	9.159	10 25	38.1	52.18	1	4.65	1 44.36	0.696
Wed.	27	10 23	13.97	9.143	10 4	40.9	52.59	1	4.60	1 27.47	0.711
Thur.	28	10 26	53.21	9.128	9 43	34.0	52.98	1	4.54	1 10.21	0.727
Frid.	29	10 30	32.10	9.113	9 22	17.7	53.36	1	4.49	0 52.59	0.741
Sat.	30	10 34	10.64	9.099	9 0	52.5	53.73	1	4.44	0 34.63	0.755
Sun.	31	10 37	48.85	9.085	8 39	18.6	54.09	1	4.39	0 16.33	0.769
Mon.	32	10 41	26.74	9.072	N. 8	17 36.4	54.43	1	4.34	0 2.28	0.782

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.18 from the Sidereal Time.

AT MEAN NOON.

		THE SUN'S			Equation of Time, to be added to	Sidereal Time.
		<i>Apparent</i> Right Ascension.	<i>Apparent</i> Declination.	Semi-diameter.*	<i>subtracted</i> from <i>Apparent</i> Time.	
Date.		h m s	N. 18' 56".8	15' 47".08	m s	h m s
Frid.	1	8 45 25.74	17 46 42.1	15 47.21	6 9.89	8 39 15.86
Sat.	2	8 49 18.55	17 31 10.1	15 47.35	6 6.13	8 43 12.41
Sun.	3	8 53 10.74	17 15 21.0	15 47.48	6 1.77	8 47 8.97
Mon.	4	8 57 2.32	16 59 15.1	15 47.63	5 56.79	8 51 5.52
Tues.	5	9 0 53.28	16 42 52.8	15 47.77	5 51.20	8 55 2.08
Wed.	6	9 4 43.63	16 26 14.3	15 47.92	5 45.00	8 58 58.63
Thur.	7	9 8 33.36	16 9 20.0	15 48.08	5 38.18	9 2 55.19
Frid.	8	9 12 22.49	15 52 10.2	15 48.24	5 30.75	9 6 51.74
Sat.	9	9 16 11.01	15 34 45.2	15 48.40	5 22.71	9 10 48.30
Sun.	10	9 19 58.93	15 17 5.2	15 48.57	5 14.08	9 14 44.85
Mon.	11	9 23 46.26	14 59 10.6	15 48.73	5 4.85	9 18 41.40
Tues.	12	9 27 33.01	14 41 1.7	15 48.90	4 55.05	9 22 37.96
Wed.	13	9 31 19.19	14 22 38.8	15 49.08	4 44.68	9 26 34.51
Thur.	14	9 35 4.82	14 4 2.1	15 49.25	4 33.75	9 30 31.07
Frid.	15	9 38 49.90	13 45 12.0	15 49.43	4 22.28	9 34 27.62
Sat.	16	9 42 34.46	13 26 8.8	15 49.61	4 10.29	9 38 24.17
Sun.	17	9 46 18.51	13 6 52.8	15 49.79	3 57.78	9 42 20.73
Mon.	18	9 50 2.06	12 47 24.2	15 49.97	3 44.77	9 46 17.28
Tues.	19	9 53 45.12	12 27 43.4	15 50.16	3 31.28	9 50 13.84
Wed.	20	9 57 27.71	12 7 50.7	15 50.35	3 17.32	9 54 10.39
Thur.	21	10 1 9.84	11 47 46.4	15 50.54	3 2.90	9 58 6.94
Frid.	22	10 4 51.53	11 27 30.9	15 50.74	2 48.04	10 2 3.50
Sat.	23	10 8 32.79	11 7 4.3	15 50.94	2 32.74	10 6 0.05
Sun.	24	10 12 13.62	10 46 27.2	15 51.14	2 17.02	10 9 56.60
Mon.	25	10 15 54.05	10 25 39.7	15 51.35	2 0.90	10 13 53.15
Tues.	26	10 19 34.09	10 4 42.2	15 51.56	1 44.38	10 17 49.71
Wed.	27	10 23 13.75	9 43 35.0	15 51.77	1 27.49	10 21 46.26
Thur.	28	10 26 53.03	9 22 18.5	15 51.99	1 10.22	10 25 42.81
Frid.	29	10 30 31.96	9 0 53.0	15 52.21	0 52.60	10 29 39.37
Sat.	30	10 34 10.55	8 39 18.8	15 52.44	0 34.63	10 33 35.92
Sun.	31	10 37 48.81			0 16.34	10 37 32.47
Mon.	32	10 41 26.74	N. 8 17 36.3	15 52.67	0 2.28	10 41 29.02

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

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S				
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.		
					Noon.	Midnight.	Noon.	Midnight.	
				h m s					
1	128° 55' 28.5	S. 0° 17'	0.0064158	15 18 13.30	15 10.65	15 14.56	55 42.22	55 56.56	
2	129 52 55.0	S. 0.04	.0063574	15 14 17.39	15 18.56	15 22.63	56 11.24	56 26.17	
3	130 50 22.3	N. 0.09	.0062967	15 10 21.48	15 26.75	15 30.90	56 41.29	56 56.52	
4	131 47 50.5	0.21	0.0062337	15 6 25.57	15 35.07	15 39.25	57 11.84	57 27.20	
5	132 45 19.4	0.30	.0061685	15 2 29.67	15 43.44	15 47.60	57 42.55	57 57.84	
6	133 42 49.1	0.38	.0061011	14 58 33.76	15 51.73	15 55.80	58 12.99	58 27.91	
7	134 40 19.5	0.43	0.0060318	14 54 37.85	15 59.77	16 3.59	58 42.48	58 56.52	
8	135 37 50.7	0.45	.0059606	14 50 41.94	16 7.22	16 10.59	59 9.83	59 22.19	
9	136 35 22.7	0.43	.0058877	14 46 46.03	16 13.62	16 16.23	59 33.31	59 42.90	
10	137 32 55.5	0.37	0.0058134	14 42 50.12	16 18.34	16 19.87	59 50.66	59 56.26	
11	138 30 29.2	0.29	.0057376	14 38 54.21	16 20.73	16 20.85	59 59.41	59 59.88	
12	139 28 3.8	0.19	.0056607	14 34 58.31	16 20.19	16 18.71	59 57.45	59 52.01	
13	140 25 39.5	N. 0.06	0.0055826	14 31 2.40	16 16.40	16 13.28	59 13.53	59 32.06	
14	141 23 16.3	S. 0.08	.0055036	14 27 6.49	16 9.39	16 4.80	59 17.78	59 0.94	
15	142 20 54.3	0.22	.0054236	14 23 10.58	15 59.60	15 53.91	58 41.87	58 20.98	
16	143 18 33.7	0.36	0.0053427	14 19 14.68	15 47.84	15 41.53	57 58.72	57 35.57	
17	144 16 14.5	0.48	.0052607	14 15 18.77	15 35.12	15 28.71	57 12.01	56 48.51	
18	145 13 56.8	0.59	.0051777	14 11 22.86	15 22.45	15 16.45	56 25.54	56 3.51	
19	146 11 40.6	0.68	0.0050936	14 7 26.95	15 10.81	15 5.61	55 42.80	55 23.72	
20	147 9 26.1	0.74	.0050083	14 3 31.04	15 0.04	14 56.85	55 6.57	54 51.56	
21	148 7 13.3	0.76	.0049217	13 59 35.14	14 53.39	14 50.61	54 38.88	54 28.66	
22	149 5 2.2	0.76	0.0048337	13 55 39.23	14 48.52	14 47.13	54 20.99	54 15.91	
23	150 2 52.7	0.74	.0047443	13 51 43.32	14 46.45	14 46.47	54 13.41	54 13.48	
24	151 0 45.0	0.69	.0046531	13 47 47.42	14 47.17	14 48.52	54 16.04	54 21.00	
25	151 58 39.1	0.61	0.0045608	13 43 51.51	14 50.49	14 53.02	54 28.21	54 37.51	
26	152 56 34.9	0.51	.0044666	13 39 55.60	14 56.07	14 59.58	54 48.71	55 1.59	
27	153 54 32.4	0.40	.0043707	13 35 59.69	15 3.48	15 7.70	55 15.89	55 31.38	
28	154 52 31.7	0.27	0.0042731	13 32 3.79	15 12.16	15 16.80	55 47.77	56 4.78	
29	155 50 32.6	0.14	.0041736	13 28 7.88	15 21.52	15 26.27	56 22.12	56 39.53	
30	156 48 35.2	S. 0.01	.0040723	13 24 11.97	15 30.95	15 35.52	56 56.73	57 13.49	
31	157 46 39.5	N. 0.11	.0039692	13 20 16.07	15 39.91	15 44.06	57 29.59	57 44.84	
32	158 44 45.3	N. 0.22	0.0038643	13 16 20.16	15 47.95	15 51.54	57 59.11	58 12.29	

MEAN TIME.

THE MOON'S													
Day.	Longitude.			Latitude.			Age.	Meridian Passage.					
	Noon.	Midnight.		Noon.	Midnight.			Noon.	Upper.	Lower.			
		°	'	"	°	'	"		h	m	h	m	
1	136	45	33.7	143	3	50.9	S. 0 34 10.9	N. 0 0 38.0	0.68	0	38.1	13	2.4
2	149	25	15.4	155	49	52.7	N. 0 35 44.5	1 10 42.3	1.68	1	26.6	13	50.6
3	162	17	48.2	168	49	7.1	1 45 4.3	2 18 22.6	2.68	2	14.6	14	38.5
4	175	23	53.5	182	2	11.8	2 50 8.8	3 19 54.9	3.68	3	2.4	15	26.1
5	188	44	5.5	195	29	37.4	3 47 13.3	4 11 37.1	4.68	3	50.5	16	14.9
6	202	18	49.2	209	11	40.4	4 32 41.1	4 50 2.0	5.68	4	39.7	17	4.9
7	216	8	8.5	223	8	8.6	5 3 18.7	5 12 12.9	6.68	5	30.6	17	56.9
8	230	11	32.1	237	18	6.4	5 16 30.2	5 16 0.1	7.68	6	23.8	18	51.5
9	244	27	34.7	251	39	35.3	5 10 36.7	5 0 19.7	8.68	7	19.8	19	48.8
10	258	53	41.8	266	9	23.3	4 45 14.2	4 25 31.6	9.68	8	18.3	20	48.2
11	273	26	4.4	280	43	6.1	4 1 29.4	3 33 31.1	10.68	9	18.3	21	48.4
12	287	59	46.9	295	15	23.5	3 2 6.1	2 27 48.4	11.68	10	18.3	22	47.9
13	302	29	12.5	309	40	31.5	1 51 16.0	N. 1 13 9.2	12.68	11	16.9	23	45.3
14	316	48	40.4	323	53	3.0	N. 0 34 9.6	S. 0 5 1.4	13.68	12	12.9	*	*
15	330	53	7.6	337	48	27.9	S. 0 43 44.2	1 21 21.9	14.68	13	5.8	0	39.8
16	344	38	44.1	351	23	42.5	1 57 21.2	2 31 13.2	15.68	13	55.8	1	31.1
17	358	3	16.2	4 37 24.6			3 2 33.3	3 31 1.7	16.68	14	43.4	2	19.8
18	11	6	13.3	17 29 53.6			3 56 23.2	4 18 26.0	17.68	15	29.2	3	6.5
19	23 48 41.9			30 2 58.7			4 37 2.3	4 52 7.2	18.68	16	14.2	3	51.8
20	36 13 8.9			42 19 40.4			5 3 38.4	5 11 35.6	19.68	16	58.8	4	36.5
21	48 23 3.4			54 23 50.2			5 16 0.0	5 16 54.3	20.68	17	43.8	5	21.2
22	60 22 34.7			66 19 51.2			5 14 22.0	5 8 27.3	21.68	18	29.6	6	6.6
23	72 16 14.5			78 12 19.4			4 59 15.5	4 46 52.3	22.68	19	16.3	6	52.8
24	84 8 40.0			90 5 49.4			4 31 24.4	4 12 59.1	23.68	20	4.2	7	40.1
25	96 4 19.3			102 4 39.9			3 51 44.9	3 27 51.6	24.68	20	52.8	8	28.4
26	108 7 18.9			114 12 41.6			3 1 30.3	2 32 54.1	25.68	21	42.0	9	17.4
27	120 21 11.0			126 33 6.2			2 2 17.8	1 29 58.6	26.68	22	31.4	10	6.7
28	132 48 43.5			139 8 15.2			S. 0 56 15.8	S. 0 21 31.3	27.68	23	20.6	10	56.0
29	145 31 50.0			151 59 32.6			N. 0 13 50.7	N. 0 49 23.9	28.68	*	*	11	45.0
30	158 31 23.8			165 7 20.7			1 24 39.9	1 59 9.0	0.14	0	9.5	12	33.8
31	171 47 16.4			178 31 1.1			2 32 20.4	3 3 42.8	1.14	0	58.2	13	22.6
32	185 18 21.4			192 9 2.0			N. 3 32 45.6	N. 3 58 59.2	2.14	1	47.2	14	11.8

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.	Hour.	Right Ascension.	Var. in rom.	Declination.	Var. in rom.
FRIDAY 1.					SUNDAY 3.				
	h m s	s	N. 15 16 30 0	66 90		h m s	s	N. 8 34 3 4	98 30
0	9 16 8.68	21.291	15 16 30.0	66.90	0	10 57 24.89	20.938	8 34 3.4	98.30
1	9 18 16.40	21.283	15 9 46.2	67.69	1	10 59 30.50	20.934	8 24 12.1	98.78
2	9 20 24.08	21.276	15 2 57.7	68.47	2	11 1 36.10	20.931	8 14 18.0	99.25
3	9 22 31.71	21.267	14 56 4.5	69.27	3	11 3 41.67	20.928	8 4 21.1	99.73
4	9 24 39.28	21.258	14 49 6.5	70.05	4	11 5 47.23	20.924	7 54 21.3	100.19
5	9 26 46.81	21.251	14 42 3.9	70.82	5	11 7 52.76	20.922	7 44 18.8	100.64
6	9 28 54.29	21.242	14 34 56.7	71.59	6	11 9 58.29	20.920	7 34 13.6	101.08
7	9 31 1.71	21.233	14 27 44.8	72.36	7	11 12 3.80	20.918	7 24 5.8	101.53
8	9 33 9.09	21.225	14 20 28.4	73.12	8	11 14 9.30	20.915	7 13 55.3	101.96
9	9 35 16.41	21.216	14 13 7.4	73.87	9	11 16 14.78	20.913	7 3 42.3	102.37
10	9 37 23.68	21.208	14 5 42.0	74.62	10	11 18 20.26	20.911	6 53 26.9	102.78
11	9 39 30.90	21.199	13 58 12.0	75.37	11	11 20 25.74	20.913	6 43 8.9	103.19
12	9 41 38.07	21.191	13 50 37.6	76.10	12	11 22 31.21	20.911	6 32 48.6	103.58
13	9 43 45.19	21.182	13 42 58.8	76.83	13	11 24 36.67	20.911	6 22 25.9	103.98
14	9 45 52.25	21.173	13 35 15.7	77.55	14	11 26 42.14	20.911	6 12 0.8	104.37
15	9 47 59.27	21.165	13 27 28.2	78.28	15	11 28 47.60	20.911	6 1 33.5	104.73
16	9 50 6.23	21.156	13 19 36.4	78.98	16	11 30 53.07	20.913	5 51 4.1	105.09
17	9 52 13.14	21.148	13 11 40.4	79.69	17	11 32 58.55	20.913	5 40 32.4	105.46
18	9 54 20.01	21.140	13 3 40.1	80.39	18	11 35 4.03	20.914	5 29 58.6	105.80
19	9 56 26.82	21.131	12 55 35.7	81.08	19	11 37 9.52	20.916	5 19 22.8	106.13
20	9 58 33.58	21.123	12 47 27.1	81.78	20	11 39 15.02	20.918	5 8 45.0	106.47
21	10 0 40.29	21.114	12 39 14.4	82.46	21	11 41 20.54	20.922	4 58 5.2	106.79
22	10 2 46.95	21.106	12 30 57.6	83.14	22	11 43 26.08	20.924	4 47 23.5	107.10
23	10 4 53.56	21.098	N. 12 22 36.7	83.81	23	11 45 31.63	20.927	N. 4 36 40.0	107.41
SATURDAY 2.					MONDAY 4.				
0	10 7 0.12	21.089	N. 12 14 11.9	84.47	0	11 47 37.20	20.931	N. 4 25 54.6	107.71
1	10 9 6.63	21.082	12 5 43.1	85.13	1	11 49 42.80	20.935	4 15 7.5	107.99
2	10 11 13.10	21.074	11 57 10.4	85.78	2	11 51 48.42	20.939	4 4 18.7	108.27
3	10 13 19.52	21.066	11 48 33.8	86.42	3	11 53 54.07	20.944	3 53 28.3	108.54
4	10 15 25.89	21.058	11 39 53.4	87.05	4	11 55 59.75	20.950	3 42 36.2	108.81
5	10 17 32.21	21.050	11 31 9.2	87.68	5	11 58 5.47	20.955	3 31 42.6	109.06
6	10 19 38.49	21.043	11 22 21.2	88.31	6	12 0 11.21	20.960	3 20 47.5	109.30
7	10 21 44.73	21.036	11 13 29.5	88.93	7	12 2 16.99	20.968	3 9 51.0	109.53
8	10 23 50.92	21.028	11 4 34.1	89.53	8	12 4 22.82	20.975	2 58 53.1	109.77
9	10 25 57.07	21.022	10 55 35.1	90.13	9	12 6 28.69	20.982	2 47 53.8	109.98
10	10 28 3.18	21.014	10 46 32.5	90.73	10	12 8 34.60	20.989	2 36 53.3	110.19
11	10 30 9.24	21.008	10 37 26.4	91.32	11	12 10 40.56	20.998	2 25 51.5	110.39
12	10 32 15.27	21.002	10 28 16.7	91.90	12	12 12 46.57	21.006	2 14 48.6	110.58
13	10 34 21.26	20.995	10 19 3.6	92.47	13	12 14 52.63	21.014	2 3 44.5	110.77
14	10 36 27.21	20.988	10 9 47.1	93.03	14	12 16 58.74	21.024	1 52 39.4	110.93
15	10 38 33.12	20.983	10 0 27.2	93.59	15	12 19 4.92	21.034	1 41 33.3	111.10
16	10 40 39.00	20.977	9 51 4.0	94.15	16	12 21 11.15	21.044	1 30 26.2	111.26
17	10 42 44.84	20.971	9 41 37.4	94.69	17	12 23 17.45	21.055	1 19 18.2	111.40
18	10 44 50.65	20.966	9 32 7.7	95.23	18	12 25 23.81	21.066	1 8 9.4	111.53
19	10 46 56.43	20.960	9 22 34.7	95.76	19	12 27 30.24	21.078	0 56 59.8	111.66
20	10 49 2.17	20.955	9 12 58.6	96.28	20	12 29 36.74	21.089	0 45 49.5	111.78
21	10 51 7.89	20.951	9 3 19.3	96.80	21	12 31 43.31	21.102	0 34 38.4	111.89
22	10 53 13.58	20.947	8 53 37.0	97.30	22	12 33 49.96	21.116	0 23 26.8	111.98
23	10 55 19.25	20.943	8 43 51.7	97.80	23	12 35 56.70	21.129	0 12 14.6	112.08
24	10 57 24.89	20.938	N. 8 34 3.4	98.30	24	12 38 3.51	21.142	N. 0 1 1.9	112.16

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 5.					THURSDAY 7.				
	h m s	s	N. 0 1 1' 0	112 16		h m s	s	S. 8 47 40' 0	104 13
0	12 38 3.51	21.142	N. 0 1 1' 0	112 16	0	14 22 1.51	22.353	S. 8 47 40' 0	104 13
1	12 40 10.40	21.157	S. 0 10 11.3	112 23	1	14 24 15.73	22.388	8 58 3.5	103.69
2	12 42 17.39	21.172	0 21 24.9	112 29	2	14 26 30.16	22.424	9 8 24.3	103.24
3	12 44 24.46	21.187	0 32 38.8	112 34	3	14 28 44.82	22.461	9 18 42.4	102.79
4	12 46 31.63	21.203	0 43 53.0	112 38	4	14 30 59.69	22.497	9 28 57.8	102.33
5	12 48 38.89	21.218	0 55 7.4	112 41	5	14 33 14.78	22.535	9 39 10.4	101.85
6	12 50 46.25	21.235	1 6 21.9	112 43	6	14 35 30.11	22.573	9 49 20.0	101.36
7	12 52 53.71	21.253	1 17 36.6	112 45	7	14 37 45.66	22.610	9 59 26.7	100.86
8	12 55 1.28	21.270	1 28 51.3	112 45	8	14 40 1.43	22.648	10 9 30.3	100.34
9	12 57 8.95	21.288	1 40 6.0	112 45	9	14 42 17.44	22.687	10 19 30.8	99.83
10	12 59 16.73	21.307	1 51 20.7	112 43	10	14 44 33.67	22.725	10 29 28.2	99.29
11	13 1 24.63	21.326	2 2 35.2	112 40	11	14 46 50.14	22.765	10 39 22.3	98.74
12	13 3 32.64	21.345	2 13 49.5	112 37	12	14 49 6.85	22.805	10 49 13.1	98.18
13	13 5 40.77	21.365	2 25 3.6	112 33	13	14 51 23.80	22.844	10 59 0.5	97.62
14	13 7 49.02	21.385	2 36 17.4	112 28	14	14 53 40.98	22.883	11 8 44.5	97.03
15	13 9 57.39	21.407	2 47 30.9	112 21	15	14 55 58.40	22.924	11 18 24.9	96.43
16	13 12 5.90	21.428	2 58 43.9	112 13	16	14 58 16.07	22.965	11 28 1.7	95.83
17	13 14 14.53	21.449	3 9 56.4	112 03	17	15 0 33.98	23.005	11 37 34.8	95.21
18	13 16 23.29	21.472	3 21 8.3	111 94	18	15 2 52.13	23.045	11 47 4.2	94.58
19	13 18 32.19	21.495	3 32 19.7	111 84	19	15 5 10.52	23.087	11 56 29.8	93.94
20	13 20 41.23	21.518	3 43 30.4	111 72	20	15 7 29.17	23.128	12 5 51.5	93.28
21	13 22 50.40	21.541	3 54 40.3	111 59	21	15 9 48.06	23.169	12 15 9.2	92.63
22	13 24 59.72	21.566	4 5 49.5	111 46	22	15 12 7.20	23.212	12 24 23.0	91.95
23	13 27 9.19	21.591	S. 4 16 57.8	111 30	23	15 14 26.60	23.253	S. 12 33 32.6	91.26
WEDNESDAY 6.					FRIDAY 8.				
0	13 29 18.81	21.616	S. 4 28 5.1	111 14	0	15 16 46.24	23.295	S. 12 42 38.1	90.56
1	13 31 28.58	21.642	4 39 11.5	110 98	1	15 19 6.14	23.338	12 51 39.3	89.84
2	13 33 38.51	21.668	4 50 16.9	110 80	2	15 21 26.29	23.379	13 0 36.2	89.12
3	13 35 48.59	21.693	5 1 21.1	110 61	3	15 23 46.69	23.422	13 9 28.7	88.38
4	13 37 58.83	21.721	5 12 24.2	110 41	4	15 26 7.35	23.465	13 18 16.8	87.64
5	13 40 9.24	21.748	5 23 26.0	110 19	5	15 28 28.27	23.507	13 27 0.4	86.88
6	13 42 19.81	21.776	5 34 26.5	109 98	6	15 30 49.43	23.549	13 35 39.3	86.1c
7	13 44 30.55	21.805	5 45 25.7	109 74	7	15 33 10.86	23.593	13 44 13.6	85.33
8	13 46 41.47	21.833	5 56 23.4	109 50	8	15 35 32.54	23.635	13 52 43.2	84.53
9	13 48 52.55	21.863	6 7 19.7	109 25	9	15 37 54.48	23.678	14 1 8.0	83.72
10	13 51 3.82	21.893	6 18 14.4	108 98	10	15 40 16.67	23.720	14 9 27.8	82.9c
11	13 53 15.26	21.923	6 29 7.4	108 70	11	15 42 39.12	23.763	14 17 42.8	82.08
12	13 55 26.89	21.953	6 39 58.8	108 43	12	15 45 1.82	23.806	14 25 52.7	81.23
13	13 57 38.70	21.983	6 50 48.5	108 13	13	15 47 24.79	23.849	14 33 57.5	80.37
14	13 59 50.69	22.015	7 1 36.3	107 82	14	15 49 48.01	23.891	14 41 57.2	79.51
15	14 2 2.88	22.048	7 12 22.3	107 50	15	15 52 11.48	23.933	14 49 51.6	78.63
16	14 4 15.26	22.079	7 23 6.3	107 16	16	15 54 35.21	23.977	14 57 40.7	77.74
17	14 6 27.83	22.112	7 33 48.2	106 82	17	15 56 59.20	24.019	15 5 24.5	76.85
18	14 8 40.60	22.145	7 44 28.1	106 48	18	15 59 23.44	24.061	15 13 2.9	75.93
19	14 10 53.57	22.179	7 55 5.9	106 11	19	16 1 47.93	24.103	15 20 35.7	75.0c
20	14 13 6.75	22.213	8 5 41.4	105 73	20	16 4 12.67	24.145	15 28 2.9	74.08
21	14 15 20.12	22.247	8 16 14.6	105 34	21	16 6 37.67	24.188	15 35 24.6	73.13
22	14 17 33.71	22.282	8 26 45.5	104 95	22	16 9 2.92	24.229	15 42 40.5	72.17
23	14 19 47.50	22.317	8 37 14.0	104 54	23	16 11 28.42	24.270	15 49 50.6	71.2c
24	14 22 1.51	22.353	S. 8 47 40.0	104 13	24	16 13 54.16	24.312	S. 15 56 54.9	70.2c

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 9.					MONDAY 11.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	16 13 54.16	24.312	S. 15 56 54.9	70.22	0	18 14 31.70	25.701	S. 19 22 44.1	12.54
1	16 16 20.16	24.353	16 3 53.2	69.22	1	18 17 5.94	25.711	19 23 55.3	11.19
2	16 18 46.40	24.393	16 10 45.6	68.23	2	18 19 40.23	25.720	19 24 58.4	9.84
3	16 21 12.88	24.434	16 17 32.0	67.23	3	18 22 14.58	25.729	19 25 53.4	8.48
4	16 23 39.61	24.474	16 24 12.3	66.20	4	18 24 48.98	25.736	19 26 40.2	7.13
5	16 26 6.57	24.514	16 30 46.4	65.16	5	18 27 23.41	25.742	19 27 18.9	5.77
6	16 28 33.78	24.554	16 37 14.2	64.12	6	18 29 57.88	25.747	19 27 49.4	4.40
7	16 31 1.22	24.593	16 43 35.8	63.07	7	18 32 32.37	25.751	19 28 11.7	3.03
8	16 33 28.90	24.633	16 49 51.0	62.00	8	18 35 6.89	25.755	19 28 25.8	1.68
9	16 35 56.81	24.671	16 55 59.8	60.93	9	18 37 41.43	25.757	19 28 31.8	0.31
10	16 38 24.95	24.709	17 2 2.1	59.83	10	18 40 15.97	25.757	19 28 29.5	1.06
11	16 40 53.32	24.747	17 7 57.8	58.73	11	18 42 50.51	25.758	19 28 19.1	2.42
12	16 43 21.91	24.784	17 13 46.9	57.63	12	18 45 25.06	25.758	19 28 0.5	3.78
13	16 45 50.73	24.822	17 19 29.4	56.53	13	18 47 59.60	25.755	19 27 33.7	5.15
14	16 48 19.77	24.858	17 25 5.2	55.39	14	18 50 34.12	25.752	19 26 58.7	6.52
15	16 50 49.02	24.893	17 30 34.1	54.26	15	18 53 8.62	25.748	19 26 15.5	7.88
16	16 53 18.49	24.928	17 35 56.3	53.12	16	18 55 43.09	25.743	19 25 24.2	9.23
17	16 55 48.17	24.964	17 41 11.5	51.96	17	18 58 17.54	25.738	19 24 24.7	10.59
18	16 58 18.06	24.998	17 46 19.8	50.80	18	19 0 51.94	25.730	19 23 17.1	11.94
19	17 0 48.15	25.032	17 51 21.1	49.63	19	19 3 26.30	25.723	19 22 1.4	13.30
20	17 3 18.44	25.065	17 56 15.3	48.44	20	19 6 0.61	25.713	19 20 37.5	14.66
21	17 5 48.93	25.098	18 1 2.4	47.26	21	19 8 34.86	25.703	19 19 5.5	16.01
22	17 8 19.62	25.131	18 5 42.4	46.06	22	19 11 9.05	25.693	19 17 25.4	17.36
23	17 10 50.50	25.162	S. 18 10 15.1	44.85	23	19 13 43.17	25.680	S. 19 15 37.2	18.70
SUNDAY 10.					TUESDAY 12.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	17 13 21.56	25.193	S. 18 14 40.6	43.63	0	19 16 17.21	25.667	S. 19 13 41.0	20.03
1	17 15 52.81	25.223	18 18 58.7	42.41	1	19 18 51.17	25.653	19 11 36.8	21.37
2	17 18 24.24	25.253	18 23 9.5	41.18	2	19 21 25.04	25.638	19 9 24.6	22.71
3	17 20 55.84	25.282	18 27 12.9	39.95	3	19 23 58.82	25.622	19 7 4.3	24.03
4	17 23 27.62	25.310	18 31 8.9	38.70	4	19 26 32.50	25.605	19 4 36.2	25.35
5	17 25 59.56	25.337	18 34 57.3	37.44	5	19 29 6.08	25.588	19 2 0.1	26.68
6	17 28 31.66	25.363	18 38 38.2	36.19	6	19 31 39.56	25.570	18 59 16.0	27.99
7	17 31 3.92	25.389	18 42 11.6	34.93	7	19 34 12.92	25.549	18 56 24.2	29.29
8	17 33 36.33	25.414	18 45 37.3	33.64	8	19 36 46.15	25.528	18 53 24.5	30.60
9	17 36 8.89	25.439	18 48 55.3	32.37	9	19 39 19.26	25.507	18 50 17.0	31.90
10	17 38 41.60	25.463	18 52 5.7	31.08	10	19 41 52.23	25.483	18 47 1.7	33.18
11	17 41 14.44	25.485	18 55 8.3	29.78	11	19 44 25.06	25.460	18 43 38.8	34.47
12	17 43 47.42	25.507	18 58 3.2	28.49	12	19 46 57.75	25.436	18 40 8.1	35.75
13	17 46 20.52	25.528	19 0 50.2	27.18	13	19 49 30.29	25.411	18 36 29.8	37.02
14	17 48 53.75	25.548	19 3 29.4	25.88	14	19 52 2.68	25.385	18 32 43.9	38.28
15	17 51 27.10	25.568	19 6 0.7	24.57	15	19 54 34.91	25.358	18 28 50.4	39.54
16	17 54 0.57	25.587	19 8 24.2	23.25	16	19 57 6.98	25.331	18 24 49.4	40.78
17	17 56 34.14	25.603	19 10 39.7	21.92	17	19 59 38.88	25.302	18 20 41.0	42.03
18	17 59 7.81	25.620	19 12 47.2	20.59	18	20 2 10.60	25.273	18 16 25.1	43.27
19	18 1 41.58	25.637	19 14 46.8	19.27	19	20 4 42.15	25.243	18 12 1.8	44.49
20	18 4 15.45	25.652	19 16 38.4	17.93	20	20 7 13.51	25.212	18 7 31.2	45.70
21	18 6 49.40	25.664	19 18 21.9	16.58	21	20 9 44.69	25.180	18 2 53.4	46.91
22	18 9 23.42	25.678	19 19 57.4	15.24	22	20 12 15.67	25.148	17 58 8.3	48.12
23	18 11 57.53	25.690	19 21 24.8	13.89	23	20 14 46.46	25.114	17 53 16.0	49.31
24	18 14 31.70	25.701	S. 19 22 44.1	12.54	24	20 17 17.04	25.080	S. 17 48 16.6	50.48

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 13.					FRIDAY 15.				
	h m s	s	S. ° ' "	° ' "		h m s	s	S. ° ' "	° ' "
0	20 17 17.04	25.080	S. 17 48 16.6	50.48	0	22 12 47.91	22.938	S. 11 50 40.6	93.83
1	20 19 47.42	25.046	17 43 10.2	51.66	1	22 15 5.39	22.890	11 41 15.8	94.43
2	20 22 17.59	25.010	17 37 56.7	52.82	2	22 17 22.59	22.842	11 31 47.5	95.01
3	20 24 47.54	24.974	17 32 36.4	53.97	3	22 19 39.49	22.793	11 22 15.7	95.58
4	20 27 17.28	24.938	17 27 9.1	55.12	4	22 21 56.10	22.744	11 12 40.5	96.13
5	20 29 46.79	24.900	17 21 35.0	56.26	5	22 24 12.42	22.697	11 3 2.1	96.68
6	20 32 16.08	24.863	17 15 54.0	57.38	6	22 26 28.46	22.649	10 53 20.4	97.21
7	20 34 45.14	24.824	17 10 6.4	58.48	7	22 28 44.21	22.602	10 43 35.6	97.72
8	20 37 13.97	24.785	17 4 12.2	59.58	8	22 30 59.68	22.553	10 33 47.8	98.23
9	20 39 42.56	24.745	16 58 11.4	60.68	9	22 33 14.85	22.506	10 23 56.9	98.73
10	20 42 10.91	24.705	16 52 4.1	61.76	10	22 35 29.75	22.460	10 14 3.1	99.20
11	20 44 39.02	24.664	16 45 50.3	62.83	11	22 37 44.37	22.413	10 4 6.5	99.67
12	20 47 6.88	24.623	16 39 30.1	63.88	12	22 39 58.70	22.365	9 54 7.1	100.12
13	20 49 34.50	24.582	16 33 3.7	64.93	13	22 42 12.75	22.319	9 44 5.1	100.56
14	20 52 1.86	24.538	16 26 30.9	65.98	14	22 44 26.53	22.273	9 34 0.4	100.99
15	20 54 28.96	24.496	16 19 52.0	66.99	15	22 46 40.03	22.227	9 23 53.2	101.40
16	20 56 55.81	24.453	16 13 7.0	68.01	16	22 48 53.25	22.181	9 13 43.6	101.81
17	20 59 22.40	24.409	16 6 15.9	69.01	17	22 51 6.20	22.135	9 3 31.5	102.21
18	21 1 48.72	24.365	15 59 18.9	70.00	18	22 53 18.87	22.089	8 53 17.1	102.58
19	21 4 14.78	24.321	15 52 15.9	70.98	19	22 55 31.27	22.045	8 43 0.5	102.94
20	21 6 40.57	24.276	15 45 7.2	71.94	20	22 57 43.41	22.001	8 32 41.8	103.30
21	21 9 6.09	24.231	15 37 52.6	72.90	21	22 59 55.28	21.957	8 22 20.9	103.65
22	21 11 31.34	24.186	15 30 32.4	73.83	22	23 2 6.89	21.913	8 11 58.0	103.98
23	21 13 56.32	24.140	S. 15 23 6.6	74.76	23	23 4 18.23	21.868	S. 8 1 33.1	104.31
THURSDAY 14.					SATURDAY 16.				
	h m s	s	S. ° ' "	° ' "		h m s	s	S. ° ' "	° ' "
0	21 16 21.02	24.093	S. 15 15 35.3	75.68	0	23 6 29.31	21.825	S. 7 51 6.3	104.61
1	21 18 45.44	24.047	15 7 58.5	76.58	1	23 8 40.13	21.783	7 40 37.8	104.90
2	21 21 9.58	24.000	15 0 16.3	77.48	2	23 10 50.70	21.739	7 30 7.5	105.19
3	21 23 33.44	23.953	14 52 28.8	78.36	3	23 13 1.00	21.697	7 19 35.5	105.47
4	21 25 57.02	23.907	14 44 36.0	79.23	4	23 15 11.06	21.655	7 9 1.9	105.73
5	21 28 20.32	23.859	14 36 38.1	80.08	5	23 17 20.86	21.613	6 58 26.8	105.98
6	21 30 43.33	23.811	14 28 35.1	80.92	6	23 19 30.41	21.572	6 47 50.2	106.22
7	21 33 6.05	23.763	14 20 27.1	81.74	7	23 21 39.72	21.532	6 37 12.2	106.45
8	21 35 28.49	23.716	14 12 14.2	82.56	8	23 23 48.79	21.491	6 26 32.8	106.67
9	21 37 50.64	23.668	14 3 56.4	83.36	9	23 25 57.61	21.450	6 15 52.2	106.87
10	21 40 12.50	23.619	13 55 33.9	84.14	10	23 28 6.19	21.410	6 5 10.4	107.06
11	21 42 34.07	23.571	13 47 6.7	84.93	11	23 30 14.53	21.371	5 54 27.5	107.24
12	21 44 55.35	23.523	13 38 34.8	85.69	12	23 32 22.64	21.332	5 43 43.5	107.42
13	21 47 16.34	23.473	13 29 58.4	86.43	13	23 34 30.51	21.293	5 32 58.5	107.58
14	21 49 37.03	23.424	13 21 17.6	87.18	14	23 36 38.16	21.255	5 22 12.5	107.73
15	21 51 57.43	23.377	13 12 32.3	87.91	15	23 38 45.57	21.217	5 11 25.7	107.88
16	21 54 17.55	23.328	13 3 42.7	88.61	16	23 40 52.76	21.180	5 0 38.0	108.01
17	21 56 37.37	23.278	12 54 49.0	89.31	17	23 42 59.73	21.143	4 49 49.6	108.13
18	21 58 56.89	23.230	12 45 51.0	90.00	18	23 45 6.48	21.107	4 39 0.5	108.23
19	22 1 16.13	23.182	12 36 49.0	90.67	19	23 47 13.01	21.070	4 28 10.8	108.33
20	22 3 35.07	23.133	12 27 43.0	91.33	20	23 49 19.32	21.034	4 17 20.5	108.43
21	22 5 53.72	23.083	12 18 33.1	91.98	21	23 51 25.42	20.999	4 6 29.7	108.51
22	22 8 12.07	23.035	12 9 19.3	92.61	22	23 53 31.31	20.964	3 55 38.4	108.58
23	22 10 30.14	22.987	12 0 1.8	93.23	23	23 55 36.99	20.930	3 44 46.8	108.63
24	22 12 47.91	22.938	S. 11 50 40.6	93.83	24	23 57 42.47	20.897	S. 3 33 54.8	108.69

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 17.					TUESDAY 19.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	23 57 42.47	20.897	S. 3 33 54.8	108.69	0	1 34 59.67	19.823	N. 4 56 56.9	101.19
1	23 59 47.75	20.863	3 23 2.5	108.73	1	1 36 58.57	19.812	5 7 3.0	100.85
2	0 1 52.83	20.830	3 12 10.1	108.75	2	1 38 57.41	19.801	5 17 7.1	100.53
3	0 3 57.71	20.797	3 1 17.5	108.78	3	1 40 56.18	19.790	5 27 9.3	100.18
4	0 6 2.39	20.765	2 50 24.7	108.79	4	1 42 54.89	19.781	5 37 9.3	99.82
5	0 8 6.89	20.734	2 39 32.0	108.78	5	1 44 53.55	19.773	5 47 7.1	99.47
6	0 10 11.20	20.703	2 28 39.3	108.78	6	1 46 52.16	19.764	5 57 2.9	99.11
7	0 12 15.32	20.672	2 17 46.6	108.78	7	1 48 50.72	19.756	6 6 56.4	98.73
8	0 14 19.26	20.642	2 6 54.0	108.74	8	1 50 49.23	19.748	6 16 47.7	98.37
9	0 16 23.02	20.612	1 56 1.7	108.71	9	1 52 47.70	19.741	6 26 36.8	97.99
10	0 18 26.60	20.583	1 45 9.5	108.67	10	1 54 46.12	19.733	6 36 23.6	97.60
11	0 20 30.01	20.553	1 34 17.7	108.61	11	1 56 44.50	19.728	6 46 8.0	97.21
12	0 22 33.24	20.525	1 23 26.2	108.56	12	1 58 42.85	19.722	6 55 50.1	96.82
13	0 24 36.31	20.498	1 12 35.0	108.48	13	2 0 41.16	19.716	7 5 29.8	96.41
14	0 26 39.21	20.470	1 1 44.4	108.40	14	2 2 39.44	19.711	7 15 7.0	96.00
15	0 28 41.95	20.443	0 50 54.2	108.33	15	2 4 37.69	19.706	7 24 41.8	95.59
16	0 30 44.53	20.417	0 40 4.5	108.23	16	2 6 35.91	19.702	7 34 14.1	95.18
17	0 32 46.95	20.391	0 29 15.5	108.12	17	2 8 34.11	19.698	7 43 43.9	94.75
18	0 34 49.22	20.365	0 18 27.1	108.01	18	2 10 32.29	19.695	7 53 11.1	94.32
19	0 36 51.33	20.340	S. 0 7 39.4	107.89	19	2 12 30.45	19.692	8 2 35.7	93.88
20	0 38 53.30	20.316	N. 0 3 7.6	107.76	20	2 14 28.59	19.688	8 11 57.7	93.44
21	0 40 55.12	20.292	0 13 53.7	107.63	21	2 16 26.71	19.687	8 21 17.0	93.00
22	0 42 56.80	20.268	0 24 39.1	107.48	22	2 18 24.83	19.685	8 30 33.7	92.55
23	0 44 58.34	20.245	N. 0 35 23.5	107.33	23	2 20 22.93	19.683	N. 8 39 47.6	92.09
MONDAY 18.					WEDNESDAY 20.				
0	0 46 59.74	20.222	N. 0 46 7.1	107.18	0	2 22 21.03	19.683	N. 8 48 58.8	91.63
1	0 49 1.00	20.200	0 56 49.6	107.00	1	2 24 19.12	19.682	8 58 7.2	91.17
2	0 51 2.14	20.179	1 7 31.1	106.83	2	2 26 17.21	19.682	9 7 12.8	90.69
3	0 53 3.15	20.158	1 18 11.5	106.65	3	2 28 15.30	19.682	9 16 15.5	90.22
4	0 55 4.03	20.137	1 28 50.9	106.46	4	2 30 13.39	19.683	9 25 15.4	89.73
5	0 57 4.79	20.116	1 39 29.0	106.26	5	2 32 11.49	19.684	9 34 12.3	89.25
6	0 59 5.42	20.096	1 50 6.0	106.06	6	2 34 9.60	19.685	9 43 6.4	88.77
7	1 1 5.94	20.078	2 0 41.7	105.84	7	2 36 7.71	19.686	9 51 57.5	88.26
8	1 3 6.35	20.059	2 11 16.1	105.63	8	2 38 5.83	19.688	10 0 45.5	87.76
9	1 5 6.65	20.041	2 21 49.2	105.39	9	2 40 3.97	19.691	10 9 30.6	87.26
10	1 7 6.84	20.023	2 32 20.8	105.16	10	2 42 2.12	19.693	10 18 12.6	86.75
11	1 9 6.92	20.005	2 42 51.1	104.93	11	2 44 0.29	19.698	10 26 51.6	86.23
12	1 11 6.90	19.988	2 53 19.9	104.68	12	2 45 58.49	19.701	10 35 27.4	85.71
13	1 13 6.78	19.972	3 3 47.2	104.43	13	2 47 56.70	19.704	10 44 0.1	85.18
14	1 15 6.56	19.956	3 14 13.0	104.17	14	2 49 54.94	19.708	10 52 29.6	84.66
15	1 17 6.25	19.941	3 24 37.2	103.90	15	2 51 53.20	19.713	11 0 56.0	84.12
16	1 19 5.85	19.926	3 34 59.8	103.62	16	2 53 51.49	19.718	11 9 19.1	83.58
17	1 21 5.36	19.911	3 45 20.6	103.33	17	2 55 49.81	19.723	11 17 39.0	83.04
18	1 23 4.78	19.897	3 55 39.8	103.05	18	2 57 48.17	19.729	11 25 55.6	82.48
19	1 25 4.12	19.883	4 5 57.2	102.76	19	2 59 46.56	19.734	11 34 8.8	81.93
20	1 27 3.38	19.870	4 16 12.9	102.46	20	3 1 44.98	19.740	11 42 18.8	81.38
21	1 29 2.56	19.858	4 26 26.7	102.15	21	3 3 43.44	19.748	11 50 25.4	80.82
22	1 31 1.67	19.845	4 36 38.7	101.83	22	3 5 41.95	19.754	11 58 28.6	80.25
23	1 33 0.70	19.833	4 46 48.7	101.52	23	3 7 40.49	19.761	12 6 28.4	79.68
24	1 34 59.67	19.823	N. 4 56 56.9	101.19	24	3 9 39.08	19.769	N. 12 14 24.7	79.10

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 21.					SATURDAY 23.				
	h m s	s	N. 12 14 24 7	79 10		h m s	s	N. 17 19 33 5	46 46
0	3 9 39.08	19.769	12 22 17.6	78.52	0	4 45 53.01	20.401	17 24 9.9	45.68
1	3 11 37.72	19.777	12 30 6.9	77.93	1	4 47 55.47	20.418	17 28 41.7	44.91
2	3 13 36.40	19.785	12 37 52.8	77.35	2	4 49 58.02	20.434	17 33 8.8	44.12
3	3 15 35.14	19.793	12 45 35.1	76.75	3	4 52 0.68	20.451	17 37 31.1	43.33
4	3 17 33.92	19.802	12 53 13.8	76.15	4	4 54 3.43	20.468	17 41 48.7	42.54
5	3 19 32.76	19.811	13 0 48.9	75.55	5	4 56 6.29	20.485	17 46 1.6	41.74
6	3 21 31.65	19.820	13 8 20.4	74.94	6	4 58 9.25	20.502	17 50 9.6	40.94
7	3 23 30.60	19.830	13 15 48.2	74.33	7	5 0 12.31	20.518	17 54 12.9	40.14
8	3 25 29.61	19.839	13 23 12.4	73.73	8	5 2 15.47	20.535	17 58 11.3	39.33
9	3 27 28.67	19.849	13 30 32.9	73.10	9	5 4 18.73	20.553	18 2 4.9	38.53
10	3 29 27.80	19.860	13 37 49.6	72.47	10	5 6 22.10	20.569	18 5 53.6	37.71
11	3 31 26.99	19.871	13 45 2.5	71.84	11	5 8 25.56	20.586	18 9 37.4	36.89
12	3 33 26.25	19.882	13 52 11.7	71.22	12	5 10 29.13	20.603	18 13 16.3	36.07
13	3 35 25.57	19.893	13 59 17.1	70.58	13	5 12 32.80	20.620	18 16 50.2	35.24
14	3 37 24.96	19.903	14 6 18.6	69.92	14	5 14 36.57	20.638	18 20 19.2	34.42
15	3 39 24.41	19.915	14 13 16.2	69.28	15	5 16 40.45	20.654	18 23 43.2	33.59
16	3 41 23.94	19.928	14 20 10.0	68.63	16	5 18 44.42	20.670	18 27 2.3	32.76
17	3 43 23.55	19.940	14 26 59.8	67.98	17	5 20 48.49	20.688	18 30 16.3	31.92
18	3 45 23.22	19.952	14 33 45.8	67.33	18	5 22 52.67	20.705	18 33 25.3	31.08
19	3 47 22.97	19.964	14 40 27.7	66.66	19	5 24 56.95	20.721	18 36 29.3	30.24
20	3 49 22.79	19.977	14 53 5.7	65.99	20	5 27 1.32	20.738	18 39 28.2	29.39
21	3 51 22.69	19.990	14 57 39.6	65.32	21	5 29 5.80	20.754	18 42 22.0	28.53
22	3 53 22.67	20.003		64.65	22	5 31 10.37	20.771		27.68
23	3 55 22.73	20.017	N. 15 0 9.5		23	5 33 15.05	20.788	N. 18 45 10.6	
FRIDAY 22.					SUNDAY 24.				
	h m s	s	N. 15 6 35.4	63.97		h m s	s	N. 18 47 54.2	26.83
0	3 57 22.87	20.030	15 12 57.1	63.28	0	5 35 19.82	20.803	18 50 32.6	25.97
1	3 59 23.09	20.044	15 19 14.8	62.60	1	5 37 24.69	20.820	18 53 5.8	25.11
2	4 1 23.40	20.058	15 25 28.3	61.90	2	5 39 29.66	20.837	18 55 33.9	24.25
3	4 3 23.79	20.072	15 31 37.6	61.21	3	5 41 34.73	20.853	18 57 56.8	23.38
4	4 5 24.26	20.086	15 37 42.8	60.51	4	5 43 39.89	20.868	19 0 14.4	22.50
5	4 7 24.82	20.101	15 43 43.7	59.80	5	5 45 45.15	20.885	19 2 26.8	21.63
6	4 9 25.47	20.116	15 49 40.4	59.10	6	5 47 50.51	20.901	19 4 34.0	20.76
7	4 11 26.21	20.131	15 55 32.9	58.38	7	5 49 55.96	20.916	19 6 35.9	19.88
8	4 13 27.04	20.145	16 1 21.0	57.67	8	5 52 1.50	20.932	19 8 32.5	18.99
9	4 15 27.95	20.160	16 7 4.9	56.95	9	5 54 7.14	20.948	19 10 23.8	18.11
10	4 17 28.96	20.176	16 12 44.4	56.23	10	5 56 12.87	20.963	19 12 9.8	17.23
11	4 19 30.06	20.191	16 18 19.6	55.50	11	5 58 18.69	20.978	19 13 50.5	16.33
12	4 21 31.25	20.206	16 23 50.4	54.77	12	6 0 24.60	20.993	19 15 25.8	15.44
13	4 23 32.53	20.222	16 29 16.8	54.03	13	6 2 30.60	21.008	19 16 55.8	14.55
14	4 25 33.91	20.238	16 34 38.8	53.29	14	6 4 36.70	21.023	19 18 20.4	13.65
15	4 27 35.38	20.253	16 39 56.3	52.54	15	6 6 42.88	21.037	19 19 39.6	12.75
16	4 29 36.95	20.270	16 45 9.3	51.80	16	6 8 49.14	21.052	19 20 53.4	11.84
17	4 31 38.62	20.286	16 50 17.9	51.05	17	6 10 55.50	21.067	19 22 1.7	10.94
18	4 33 40.38	20.302	16 55 21.9	50.29	18	6 13 1.94	21.080	19 23 4.7	10.04
19	4 35 42.24	20.318	17 0 21.4	49.53	19	6 15 8.46	21.094	19 24 2.2	9.13
20	4 37 44.20	20.334	17 5 16.3	48.77	20	6 17 15.07	21.108	19 24 54.2	8.22
21	4 39 46.25	20.351	17 10 6.7	48.01	21	6 19 21.76	21.122	19 25 40.8	7.31
22	4 41 48.41	20.368	17 14 52.4	47.23	22	6 21 28.53	21.135	19 26 21.9	6.38
23	4 43 50.66	20.383		46.46	23	6 23 35.38	21.148		5.47
24	4 45 53.01	20.401	N. 17 19 33.5		24	6 25 42.31	21.162	N. 19 26 57.4	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 25.					WEDNESDAY 27.				
	h m s	s	N. 19 26 57.4	5.47		h m s	s	N. 18 5 24.8	39.54
0	6 25 42.31	21.162	19 27 27.5	4.55	0	8 8 21.80	21.520	18 1 24.7	40.48
1	6 27 49.32	21.175	19 27 52.0	3.63	1	8 10 31.01	21.523	17 57 19.1	41.39
2	6 29 56.41	21.188	19 28 11.1	2.72	2	8 12 40.15	21.524	17 53 8.0	42.31
3	6 32 3.57	21.200	19 28 24.6	1.78	3	8 14 49.29	21.525	17 48 51.4	43.23
4	6 34 10.81	21.213	19 28 32.5	0.86	4	8 16 58.44	21.525	17 44 29.2	44.16
5	6 36 18.12	21.224	19 28 34.9	0.07	5	8 19 7.59	21.526	17 40 1.5	45.08
6	6 38 25.50	21.236	19 28 31.7	1.00	6	8 21 16.74	21.527	17 35 28.3	45.98
7	6 40 32.95	21.248	19 28 22.0	1.93	7	8 23 25.90	21.526	17 30 49.7	46.90
8	6 42 40.47	21.259	19 28 8.5	2.86	8	8 25 35.06	21.526	17 26 5.5	47.82
9	6 44 48.06	21.271	19 27 48.6	3.79	9	8 27 44.21	21.526	17 21 15.9	48.72
10	6 46 55.72	21.282	19 27 23.0	4.73	10	8 29 53.37	21.525	17 16 20.9	49.63
11	6 49 3.44	21.293	19 26 51.8	5.67	11	8 32 2.52	21.524	17 11 20.4	50.53
12	6 51 11.23	21.303	19 26 15.0	6.60	12	8 34 11.67	21.523	17 6 14.5	51.43
13	6 53 19.07	21.313	19 25 32.6	7.53	13	8 36 20.81	21.521	17 1 3.3	52.32
14	6 55 26.98	21.323	19 24 44.6	8.48	14	8 38 29.95	21.519	16 55 46.7	53.22
15	6 57 34.95	21.333	19 23 50.9	9.43	15	8 40 39.08	21.518	16 50 24.7	54.11
16	6 59 42.98	21.343	19 22 51.5	10.37	16	8 42 48.20	21.517	16 44 57.4	54.99
17	7 1 51.07	21.352	19 21 46.5	11.30	17	8 44 57.31	21.515	16 39 24.8	55.88
18	7 3 59.20	21.361	19 20 35.9	12.23	18	8 47 6.41	21.513	16 33 46.9	56.76
19	7 6 7.40	21.371	19 19 19.7	13.18	19	8 49 15.49	21.512	16 28 3.7	57.63
20	7 8 15.65	21.379	19 17 57.7	14.13	20	8 51 24.57	21.509	16 22 15.3	58.51
21	7 10 23.95	21.387	19 16 30.1	15.08	21	8 53 33.63	21.507	16 16 21.6	59.38
22	7 12 32.29	21.395	19 15 56.8	16.02	22	8 55 42.68	21.503	N. 16 10 22.8	60.24
23	7 14 40.69	21.403			23	8 57 51.71			
TUESDAY 26.					THURSDAY 28.				
0	7 16 49.13	21.411	N. 19 13 17.9	16.96	0	9 0 0.72	21.501	N. 16 4 18.7	61.11
1	7 18 57.62	21.418	19 11 33.3	17.91	1	9 2 9.72	21.498	15 58 9.5	61.96
2	7 21 6.15	21.426	19 9 43.0	18.86	2	9 4 18.69	21.494	15 51 55.2	62.82
3	7 23 14.73	21.433	19 7 47.0	19.80	3	9 6 27.65	21.492	15 45 35.7	63.67
4	7 25 23.34	21.438	19 5 45.4	20.74	4	9 8 36.59	21.488	15 39 11.2	64.52
5	7 27 31.99	21.445	19 3 38.1	21.69	5	9 10 45.51	21.485	15 32 41.5	65.36
6	7 29 40.68	21.452	19 1 25.1	22.64	6	9 12 54.41	21.482	15 26 6.9	66.18
7	7 31 49.41	21.458	18 50 6.4	23.58	7	9 15 3.29	21.478	15 19 27.3	67.03
8	7 33 58.18	21.463	18 56 42.1	24.53	8	9 17 12.14	21.473	15 12 42.6	67.86
9	7 36 6.97	21.468	18 54 12.1	25.48	9	9 19 20.97	21.470	15 5 53.0	68.68
10	7 38 15.80	21.474	18 51 36.4	26.42	10	9 21 29.78	21.466	14 58 58.5	69.49
11	7 40 24.66	21.478	18 48 55.1	27.36	11	9 23 38.56	21.462	14 51 59.1	70.31
12	7 42 33.54	21.483	18 46 8.1	28.31	12	9 25 47.32	21.458	14 44 54.8	71.12
13	7 44 42.46	21.488	18 43 15.4	29.25	13	9 27 56.06	21.454	14 37 45.7	71.92
14	7 46 51.40	21.492	18 40 17.1	30.18	14	9 30 4.77	21.449	14 30 31.7	72.73
15	7 49 0.36	21.496	18 37 13.2	31.13	15	9 32 13.45	21.445	14 23 13.0	73.51
16	7 51 9.35	21.500	18 34 3.6	32.07	16	9 34 22.11	21.441	14 15 49.6	74.30
17	7 53 18.36	21.503	18 30 48.4	33.00	17	9 36 30.74	21.436	14 8 21.4	75.09
18	7 55 27.38	21.506	18 27 27.6	33.94	18	9 38 39.34	21.432	14 0 48.5	75.87
19	7 57 36.43	21.509	18 24 1.1	34.88	19	9 40 47.92	21.428	13 53 11.0	76.63
20	7 59 45.49	21.512	18 20 29.1	35.81	20	9 42 56.47	21.423	13 45 28.9	77.41
21	8 1 54.57	21.514	18 16 51.4	36.75	21	9 45 4.99	21.418	13 37 42.1	78.17
22	8 4 3.66	21.517	18 13 8.1	37.68	22	9 47 13.49	21.414	13 29 50.9	78.92
23	8 6 12.77	21.519	18 9 19.2	38.61	23	9 49 21.96	21.409	13 21 55.1	79.67
24	8 8 21.89	21.520	N. 18 5 24.8	39.54	24	9 51 30.40	21.404	N. 13 13 54.9	80.41

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in ^{ro^m} .	Declination.	Var. in ^{ro^m} .	Hour.	Right Ascension.	Var. in ^{ro^m} .	Declination.	Var. in ^{ro^m} .
FRIDAY 29.					SUNDAY 31.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	9 51 30.40	21.404	N. 13 13 54.9	80.41	0	11 33 51.33	21.297	N. 5 35 26.5	107.62
1	9 53 38.81	21.400	13 5 50.2	81.15	1	11 35 59.12	21.299	5 24 39.7	107.98
2	9 55 47.20	21.395	12 57 41.1	81.88	2	11 38 6.92	21.302	5 13 50.8	108.33
3	9 57 55.55	21.390	12 49 27.6	82.61	3	11 40 14.74	21.304	5 2 59.8	108.68
4	10 0 3.88	21.387	12 41 9.8	83.33	4	11 42 22.57	21.308	4 52 6.7	109.01
5	10 2 12.19	21.383	12 32 47.7	84.04	5	11 44 30.43	21.312	4 41 11.7	109.33
6	10 4 20.47	21.378	12 24 21.3	84.75	6	11 46 38.31	21.316	4 30 14.8	109.64
7	10 6 28.72	21.373	12 15 50.7	85.44	7	11 48 46.22	21.320	4 19 16.0	109.95
8	10 8 36.94	21.368	12 7 16.0	86.13	8	11 50 54.15	21.324	4 8 15.4	110.25
9	10 10 45.14	21.364	11 58 37.1	86.83	9	11 53 2.11	21.328	3 57 13.0	110.53
10	10 12 53.31	21.360	11 49 54.1	87.51	10	11 55 10.09	21.333	3 46 9.0	110.81
11	10 15 1.46	21.356	11 41 7.0	88.18	11	11 57 18.11	21.340	3 35 3.3	111.08
12	10 17 9.58	21.351	11 32 16.0	88.83	12	11 59 26.17	21.345	3 23 56.1	111.33
13	10 19 17.67	21.347	11 23 21.0	89.50	13	12 1 34.25	21.351	3 12 47.4	111.58
14	10 21 25.74	21.343	11 14 22.0	90.16	14	12 3 42.38	21.358	3 1 37.2	111.81
15	10 23 33.79	21.339	11 5 19.1	90.80	15	12 5 50.54	21.364	2 50 25.7	112.03
16	10 25 41.81	21.335	10 56 12.4	91.43	16	12 7 58.75	21.372	2 39 12.8	112.26
17	10 27 49.81	21.332	10 47 1.9	92.06	17	12 10 7.00	21.378	2 27 58.6	112.46
18	10 29 57.79	21.328	10 37 47.7	92.68	18	12 12 15.29	21.386	2 16 43.3	112.65
19	10 32 5.75	21.324	10 28 20.7	93.30	19	12 14 23.63	21.393	2 5 26.8	112.85
20	10 34 13.68	21.321	10 19 8.1	93.91	20	12 16 32.01	21.402	1 54 9.1	113.03
21	10 36 21.60	21.318	10 9 42.8	94.52	21	12 18 40.45	21.412	1 42 50.5	113.18
22	10 38 29.50	21.315	10 0 13.9	95.11	22	12 20 48.95	21.420	1 31 31.0	113.33
23	10 40 37.38	21.312	N. 9 50 41.5	95.68	23	12 22 57.50	21.429	N. 1 20 10.5	113.48
SATURDAY 30.					MONDAY, SEPT. 1.				
0	10 42 45.24	21.308	N. 9 41 5.7	96.26	0	12 25 6.10	21.439	N. 1 8 49.2	113.62
1	10 44 53.08	21.306	9 31 26.4	96.84					
2	10 47 0.91	21.303	9 21 43.6	97.40					
3	10 49 8.72	21.301	9 11 57.6	97.94					
4	10 51 16.52	21.299	9 2 8.3	98.49					
5	10 53 24.31	21.297	8 52 15.7	99.03					
6	10 55 32.08	21.294	8 42 19.9	99.57					
7	10 57 39.84	21.293	8 32 20.9	100.08					
8	10 59 47.60	21.292	8 22 18.9	100.59					
9	11 1 55.34	21.290	8 12 13.8	101.10					
10	11 4 3.08	21.289	8 2 5.7	101.59					
11	11 6 10.81	21.288	7 51 54.7	102.08					
12	11 8 18.53	21.287	7 41 40.7	102.57					
13	11 10 26.25	21.287	7 31 23.9	103.03					
14	11 12 33.97	21.287	7 21 4.3	103.49					
15	11 14 41.69	21.287	7 10 42.0	103.94					
16	11 16 49.41	21.287	7 0 17.0	104.39					
17	11 18 57.13	21.287	6 49 49.3	104.83					
18	11 21 4.85	21.288	6 39 19.1	105.25					
19	11 23 12.58	21.288	6 28 46.3	105.67					
20	11 25 20.31	21.289	6 18 11.1	106.07					
21	11 27 28.05	21.291	6 7 33.5	106.48					
22	11 29 35.80	21.293	5 56 53.4	106.87					
23	11 31 43.56	21.294	5 46 11.1	107.24					
24	11 33 51.33	21.297	N. 5 35 26.5	107.62					

PHASES OF THE MOON.

		h	m
Aug. 7	☽ First Quarter	15	41.3
14	☾ Full Moon	8	19.0
21	☾ Last Quarter	21	10.4
29	● New Moon	20	36.8

		h
Aug. 11	☾ Perigee	7.9
23	☾ Apogee	5.7

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi-diameter passing the Meridian.*	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.		m	s	
Mon.	1	h m s	s	N. ° ' "	"	m s	m s	s
Tues.	2	10 41 26.74	9.072	8 17 36.4	54.43	1 4.34	0 2.28	0.782
Wed.	3	10 45 4.32	9.060	7 55 46.2	54.75	1 4.30	0 21.20	0.794
		10 48 41.61	9.048	7 33 48.4	55.06	1 4.26	0 40.41	0.806
Thur.	4	10 52 18.62	9.036	7 11 43.3	55.36	1 4.22	0 59.90	0.817
Frid.	5	10 55 55.36	9.026	6 49 31.2	55.64	1 4.19	1 19.65	0.828
Sat.	6	10 59 31.86	9.016	6 27 12.5	55.91	1 4.16	1 39.65	0.838
Sun.	7	11 3 8.13	9.007	6 4 47.5	56.16	1 4.13	1 59.88	0.847
Mon.	8	11 6 44.18	8.998	5 42 16.6	56.41	1 4.10	2 20.32	0.856
Tues.	9	11 10 20.05	8.991	5 19 40.0	56.63	1 4.08	2 40.95	0.863
Wed.	10	11 13 55.75	8.984	4 56 58.2	56.85	1 4.06	3 1.75	0.870
Thur.	11	11 17 31.30	8.979	4 34 11.3	57.05	1 4.04	3 22.60	0.876
Frid.	12	11 21 6.73	8.974	4 11 19.7	57.24	1 4.02	3 43.76	0.880
Sat.	13	11 24 42.06	8.970	3 48 23.7	57.42	1 4.00	4 4.92	0.883
Sun.	14	11 28 17.31	8.968	3 25 23.6	57.58	1 4.00	4 26.16	0.886
Mon.	15	11 31 52.52	8.966	3 2 19.8	57.73	1 3.99	4 47.45	0.888
Tues.	16	11 35 27.69	8.965	2 39 12.5	57.87	1 3.99	5 8.77	0.888
Wed.	17	11 39 2.86	8.966	2 16 2.1	57.99	1 3.99	5 30.09	0.888
Thur.	18	11 42 38.05	8.967	1 52 48.9	58.10	1 3.99	5 51.40	0.887
Frid.	19	11 46 13.28	8.969	1 29 33.2	58.20	1 3.99	6 12.67	0.885
Sat.	20	11 49 48.56	8.972	1 6 15.3	58.29	1 4.00	6 33.88	0.882
Sun.	21	11 53 23.92	8.976	0 42 55.5	58.35	1 4.01	6 55.01	0.878
Mon.	22	11 56 59.39	8.980	N. 0 19 34.3	58.41	1 4.02	7 16.04	0.874
Tues.	23	12 0 34.98	8.986	S. 0 3 48.1	58.45	1 4.04	7 36.94	0.868
Wed.	24	12 4 10.70	8.992	0 27 11.3	58.48	1 4.06	7 57.71	0.862
Thur.	25	12 7 46.59	8.999	0 50 35.0	58.49	1 4.08	8 18.32	0.855
Frid.	26	12 11 22.65	9.007	1 13 58.8	58.49	1 4.11	8 38.75	0.847
Sat.	27	12 14 58.91	9.015	1 37 22.4	58.47	1 4.14	8 58.99	0.839
Sun.	28	12 18 35.39	9.025	2 0 45.4	58.44	1 4.17	9 19.01	0.830
Mon.	29	12 22 12.09	9.034	2 24 7.4	58.39	1 4.21	9 38.81	0.820
Tues.	30	12 25 49.03	9.045	2 47 28.1	58.33	1 4.25	9 58.36	0.809
Wed.	31	12 29 26.24	9.056	S. 3 10 47.1	58.25	1 4.29	10 17.65	0.798

* Mean Time of the Semidiameter passing may be found by subtracting 0.18 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be subtracted from Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi-diameter.*		
		h m s	N. ° ' "	' "	m s	h m s
Mon.	1	10 41 26.74	N. 8 17 36.3	15 52.67	0 2.28	10 41 29.02
Tues.	2	10 45 4.37	7 55 45.9	15 52.90	0 21.20	10 45 25.58
Wed.	3	10 48 41.71	7 33 47.8	15 53.14	0 40.42	10 49 22.13
Thur.	4	10 52 18.77	7 11 42.3	15 53.38	0 59.91	10 53 18.68
Frid.	5	10 55 55.56	6 49 30.0	15 53.62	1 19.67	10 57 15.23
Sat.	6	10 59 32.11	6 27 11.0	15 53.87	1 39.68	11 1 11.79
Sun.	7	11 3 8.43	6 4 45.7	15 54.12	1 59.91	11 5 8.34
Mon.	8	11 6 44.53	5 42 14.4	15 54.37	2 20.36	11 9 4.89
Tues.	9	11 10 20.45	5 19 37.5	15 54.62	2 40.99	11 13 1.44
Wed.	10	11 13 56.20	4 56 55.3	15 54.88	3 1.79	11 16 58.00
Thur.	11	11 17 31.81	4 34 8.1	15 55.13	3 22.74	11 20 54.55
Frid.	12	11 21 7.29	4 11 16.1	15 55.38	3 43.81	11 24 51.10
Sat.	13	11 24 42.67	3 48 19.8	15 55.64	4 4.98	11 28 47.65
Sun.	14	11 28 17.98	3 25 19.4	15 55.90	4 26.23	11 32 44.20
Mon.	15	11 31 53.23	3 2 15.2	15 56.15	4 47.52	11 36 40.76
Tues.	16	11 35 28.46	2 39 7.6	15 56.41	5 8.85	11 40 37.31
Wed.	17	11 39 3.69	2 15 56.8	15 56.67	5 30.17	11 44 33.86
Thur.	18	11 42 38.93	1 52 43.2	15 56.92	5 51.48	11 48 30.41
Frid.	19	11 46 14.20	1 29 27.1	15 57.18	6 12.76	11 52 26.96
Sat.	20	11 49 49.54	1 6 8.9	15 57.44	6 33.97	11 56 23.52
Sun.	21	11 53 24.96	0 42 48.8	15 57.70	6 55.11	12 0 20.07
Mon.	22	11 57 0.48	N. 0 19 27.2	15 57.97	7 16.14	12 4 16.62
Tues.	23	12 0 36.12	S. 0 3 55.5	15 58.23	7 37.05	12 8 13.17
Wed.	24	12 4 11.90	0 27 19.0	15 58.50	7 57.83	12 12 9.72
Thur.	25	12 7 47.84	0 50 43.1	15 58.77	8 18.44	12 16 6.28
Frid.	26	12 11 23.95	1 14 7.2	15 59.04	8 38.87	12 20 2.83
Sat.	27	12 15 0.26	1 37 31.1	15 59.31	8 59.11	12 23 59.38
Sun.	28	12 18 36.79	2 0 54.4	15 59.58	9 19.14	12 27 55.93
Mon.	29	12 22 13.54	2 24 16.8	15 59.86	9 38.94	12 31 52.48
Tues.	30	12 25 50.54	2 47 37.8	16 0.13	9 58.49	12 35 49.03
Wed.	31	12 29 27.80	S. 3 10 57.1	16 0.41	10 17.79	12 39 45.59

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

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
					Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	158° 44' 45".3	N. 0°.22	0.0038643	13 16 20.16	15 47.95	15 51.54	57 59.11	58 12.29
2	159 42 52.7	0.30	.0037577	13 12 24.25	15 54.82	15 57.76	58 24.31	58 35.13
3	160 41 1.6	0.36	.0036494	13 8 28.35	16 0.38	16 2.67	58 44.73	58 53.14
4	161 39 11.9	0.39	0.0035396	13 4 32.44	16 4.64	16 6.28	59 0.35	59 6.40
5	162 37 23.7	0.39	.0034285	13 0 36.53	16 7.62	16 8.64	59 11.29	59 15.04
6	163 35 36.9	0.35	.0033163	12 56 40.63	16 9.34	16 9.72	59 17.62	59 19.00
7	164 33 51.6	0.28	0.0032030	12 52 44.72	16 9.75	16 9.41	59 19.11	59 17.88
8	165 32 7.8	0.18	.0030889	12 48 48.81	16 8.69	16 7.56	59 15.24	59 11.08
9	166 30 25.5	N. 0.06	.0029742	12 44 52.91	16 5.99	16 3.96	59 5.31	58 57.88
10	167 28 44.8	S. 0.07	0.0028589	12 40 57.00	16 1.47	15 58.52	58 48.74	58 37.89
11	168 27 5.7	0.21	.0027433	12 37 1.10	15 55.11	15 51.26	58 25.37	58 11.27
12	169 25 28.3	0.35	.0026274	12 33 5.19	15 47.03	15 42.45	57 55.73	57 38.94
13	170 23 52.8	0.48	0.0025112	12 29 9.28	15 37.60	15 32.55	57 21.13	57 2.59
14	171 22 19.1	0.60	.0023949	12 25 13.38	15 27.38	15 22.18	56 43.62	56 24.54
15	172 20 47.4	0.69	.0022784	12 21 17.47	15 17.04	15 12.06	56 5.68	55 47.38
16	173 19 17.8	0.76	0.0021617	12 17 21.56	15 7.32	15 2.90	55 29.98	55 13.77
17	174 17 50.2	0.80	.0020447	12 13 25.66	14 58.89	14 55.35	54 59.04	54 46.06
18	175 16 24.8	0.80	.0019274	12 9 29.75	14 52.35	14 49.94	54 35.05	54 26.22
19	176 15 1.6	0.78	0.0018097	12 5 33.85	14 48.17	14 47.07	54 19.72	54 15.67
20	177 13 40.5	0.74	.0016916	12 1 37.94	14 46.66	14 46.97	54 14.19	54 15.30
21	178 12 21.7	0.68	.0015730	11 57 42.03	14 47.99	14 49.72	54 19.04	54 25.38
22	179 11 5.1	0.59	0.0014538	11 53 46.13	14 52.14	14 55.22	54 34.26	54 45.58
23	180 9 50.7	0.47	.0013340	11 49 50.22	14 58.93	15 3.21	54 59.19	55 14.90
24	181 8 38.6	0.35	.0012135	11 45 54.32	15 8.00	15 13.22	55 32.48	55 51.65
25	182 7 28.7	0.23	0.0010923	11 41 58.41	15 18.79	15 24.61	56 12.09	56 33.44
26	183 6 21.0	S. 0.10	.0009702	11 38 2.50	15 30.57	15 36.55	56 55.31	57 17.28
27	184 5 15.4	N. 0.02	.0008472	11 34 6.60	15 42.45	15 48.14	57 38.92	57 59.79
28	185 4 12.0	0.13	0.0007234	11 30 10.69	15 53.50	15 58.44	58 19.48	58 37.60
29	186 3 10.6	0.23	.0005986	11 26 14.79	16 2.85	16 6.67	58 53.80	59 7.82
30	187 2 11.2	0.29	.0004730	11 22 18.88	16 9.84	16 12.31	59 19.44	59 28.53
31	188 1 13.7	N. 0.32	0.0003465	11 18 22.97	16 14.09	16 15.18	59 35.06	59 39.05

MEAN TIME.

Day	THE MOON'S						
	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
					d	h m	h m
1	185° 18' 21.4"	192° 9' 2.0"	N. 3° 32' 45.6"	N. 3° 58' 59.2"	2.14	1 47.2	14 11.8
2	199 2 45.5	205 59 12.7	4 21 56.0	4 41 11.0	3.14	2 36.8	15 2.0
3	212 58 3.6	219 58 58.2	4 56 22.7	5 7 13.2	4.14	3 27.6	15 53.7
4	227 1 36.1	234 5 37.7	5 13 29.2	5 15 2.1	5.14	4 20.3	16 47.4
5	241 10 43.6	248 16 35.7	5 11 48.1	5 3 48.6	6.14	5 15.0	17 43.2
6	255 22 56.0	262 29 27.4	4 51 9.7	4 34 2.5	7.14	6 11.8	18 40.8
7	269 35 53.4	276 41 57.2	4 12 43.1	3 47 31.9	8.14	7 9.9	19 39.2
8	283 47 22.2	290 51 51.3	3 18 53.6	2 47 16.4	9.14	8 8.4	20 37.4
9	297 55 6.6	304 56 49.8	2 13 11.9	1 37 14.0	10.14	9 6.0	21 34.1
10	311 56 41.7	318 54 22.8	N. 0 59 58.4	N. 0 22 1.7	11.14	10 1.6	22 28.5
11	325 49 33.3	332 41 53.4	S. 0 15 59.5	S. 0 53 29.5	12.14	10 54.8	23 20.4
12	339 31 4.2	346 16 48.2	1 29 54.3	2 4 42.5	13.14	11 45.5	* *
13	352 58 49.5	359 36 55.1	2 37 25.8	3 7 39.7	14.14	12 33.9	0 9.9
14	6 10 55.0	12 40 42.5	3 35 3.2	3 59 19.9	15.14	13 20.7	0 57.5
15	19 6 15.4	25 27 35.5	4 20 16.9	4 37 45.1	16.14	14 6.4	1 43.6
16	31 44 49.0	37 58 6.6	4 51 39.1	5 1 56.0	17.14	14 51.6	2 29.0
17	44 7 43.0	50 13 57.3	5 8 36.0	5 11 41.2	18.14	15 37.0	3 14.3
18	56 17 12.1	62 17 53.7	5 11 15.3	5 7 23.4	19.14	16 22.7	3 59.8
19	68 16 31.0	74 13 35.9	5 0 11.9	4 49 47.6	20.14	17 9.2	4 45.9
20	80 9 42.2	86 5 25.6	4 36 18.5	4 19 52.6	21.14	17 56.6	5 32.8
21	92 1 22.7	97 58 11.0	4 0 38.7	3 38 46.5	22.14	18 44.6	6 20.5
22	103 56 28.1	109 56 51.5	3 14 26.4	2 47 49.5	23.14	19 33.2	7 8.8
23	115 59 57.2	122 6 20.2	2 19 8.7	1 48 38.0	24.14	20 22.1	7 57.6
24	128 16 32.8	134 31 4.5	1 16 33.4	S. 0 43 13.1	25.14	21 11.1	8 46.6
25	140 50 20.8	147 14 42.8	S. 0 8 57.6	N. 0 25 50.3	26.14	22 0.1	9 35.6
26	153 44 26.0	160 19 39.8	N. 1 0 44.8	1 35 18.0	27.14	22 49.2	10 24.6
27	167 0 26.8	173 46 42.0	2 8 59.5	2 41 17.3	28.14	23 38.8	11 13.9
28	180 38 12.9	187 34 39.5	3 11 38.3	3 39 29.3	29.14	* *	12 3.8
29	194 35 34.6	201 40 24.4	4 4 18.2	4 25 35.1	0.66	0 29.2	12 54.8
30	208 48 29.9	215 59 8.3	4 42 53.0	4 55 49.8	1.66	1 20.9	13 47.3
31	223 11 34.7	230 25 3.9	N. 5 4 8.3	N. 5 7 37.6	2.66	2 14.3	14 41.8

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 1.					WEDNESDAY 3.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	12 25 6.10	21.439	N. 1 8 49.2	113.62	0	14 9 49.90	22.338	S. 7 51 30.2	107.24
1	12 27 14.77	21.450	0 57 27.1	113.74	1	14 12 4.01	22.366	8 2 12.5	106.83
2	12 29 23.50	21.460	0 46 4.3	113.85	2	14 14 18.29	22.393	8 12 52.2	106.41
3	12 31 32.29	21.470	0 34 40.9	113.96	3	14 16 32.73	22.420	8 23 29.4	105.98
4	12 33 41.14	21.482	0 23 16.8	114.05	4	14 18 47.33	22.448	8 34 4.0	105.54
5	12 35 50.07	21.494	0 11 52.3	114.13	5	14 21 2.11	22.478	8 44 35.9	105.08
6	12 37 59.07	21.505	N. 0 0 27.3	114.20	6	14 23 17.06	22.506	8 55 5.0	104.61
7	12 40 8.13	21.518	S. 0 10 58.1	114.27	7	14 25 32.18	22.535	9 5 31.2	104.13
8	12 42 17.28	21.531	0 22 23.9	114.32	8	14 27 47.48	22.564	9 15 54.6	103.65
9	12 44 26.50	21.543	0 33 49.9	114.35	9	14 30 2.95	22.593	9 26 15.0	103.14
10	12 46 35.80	21.557	0 45 16.1	114.38	10	14 32 18.60	22.623	9 36 32.3	102.63
11	12 48 45.18	21.571	0 56 42.4	114.40	11	14 34 34.43	22.653	9 46 46.5	102.11
12	12 50 54.65	21.585	1 8 8.9	114.41	12	14 36 50.44	22.684	9 56 57.6	101.58
13	12 53 4.20	21.599	1 19 35.3	114.40	13	14 39 6.64	22.714	10 7 5.4	101.03
14	12 55 13.84	21.614	1 31 1.7	114.38	14	14 41 23.01	22.744	10 17 9.9	100.47
15	12 57 23.57	21.629	1 42 27.9	114.36	15	14 43 39.57	22.776	10 27 11.0	99.90
16	12 59 33.39	21.645	1 53 54.0	114.33	16	14 45 56.32	22.808	10 37 8.7	99.32
17	13 1 43.31	21.661	2 5 19.8	114.28	17	14 48 13.26	22.838	10 47 2.8	98.72
18	13 3 53.32	21.678	2 16 45.3	114.23	18	14 50 30.38	22.870	10 56 53.3	98.12
19	13 6 3.44	21.694	2 28 10.5	114.15	19	14 52 47.70	22.902	11 6 40.2	97.51
20	13 8 13.65	21.711	2 39 35.1	114.07	20	14 55 5.20	22.933	11 16 23.4	96.88
21	13 10 23.97	21.729	2 50 59.3	113.98	21	14 57 22.90	22.966	11 26 2.7	96.23
22	13 12 34.40	21.747	3 2 22.9	113.88	22	14 59 40.79	22.998	11 35 38.2	95.58
23	13 14 44.93	21.765	S. 3 13 45.8	113.76	23	15 1 58.87	23.030	S. 11 45 9.7	94.93
TUESDAY 2.					THURSDAY 4.				
0	13 16 55.58	21.784	S. 3 25 8.0	113.63	0	15 4 17.15	23.063	S. 11 54 37.3	94.26
1	13 19 6.34	21.803	3 36 29.4	113.50	1	15 6 35.62	23.095	12 4 0.8	93.57
2	13 21 17.21	21.822	3 47 50.0	113.35	2	15 8 54.29	23.128	12 13 20.1	92.87
3	13 23 28.20	21.842	3 59 9.6	113.19	3	15 11 13.16	23.161	12 22 35.2	92.17
4	13 25 39.31	21.862	4 10 28.3	113.03	4	15 13 32.22	23.193	12 31 46.1	91.45
5	13 27 50.54	21.883	4 21 46.0	112.85	5	15 15 51.48	23.227	12 40 52.6	90.73
6	13 30 1.90	21.903	4 33 2.5	112.65	6	15 18 10.94	23.260	12 49 54.8	89.98
7	13 32 13.38	21.924	4 44 17.8	112.44	7	15 20 30.60	23.293	12 58 52.4	89.23
8	13 34 24.99	21.946	4 55 31.8	112.23	8	15 22 50.46	23.327	13 7 45.5	88.48
9	13 36 36.73	21.968	5 6 44.6	112.01	9	15 25 10.52	23.360	13 16 34.1	87.70
10	13 38 48.60	21.990	5 17 55.9	111.77	10	15 27 30.78	23.393	13 25 17.9	86.91
11	13 41 0.61	22.013	5 29 5.8	111.52	11	15 29 51.24	23.427	13 33 57.0	86.12
12	13 43 12.75	22.035	5 40 14.1	111.26	12	15 32 11.90	23.461	13 42 31.3	85.32
13	13 45 25.03	22.059	5 51 20.9	110.99	13	15 34 32.77	23.494	13 51 0.8	84.50
14	13 47 37.46	22.083	6 2 26.0	110.70	14	15 36 53.83	23.527	13 59 25.3	83.67
15	13 49 50.02	22.107	6 13 29.3	110.41	15	15 39 15.09	23.560	14 7 44.8	82.83
16	13 52 2.74	22.132	6 24 30.9	110.11	16	15 41 36.55	23.594	14 15 59.3	81.98
17	13 54 15.60	22.156	6 35 30.6	109.78	17	15 43 58.22	23.628	14 24 8.6	81.13
18	13 56 28.61	22.181	6 46 28.3	109.46	18	15 46 20.08	23.660	14 32 12.8	80.26
19	13 58 41.77	22.206	6 57 24.1	109.12	19	15 48 42.14	23.693	14 40 11.7	79.38
20	14 0 55.08	22.232	7 8 17.7	108.76	20	15 51 4.40	23.727	14 48 5.3	78.48
21	14 3 8.55	22.258	7 19 9.2	108.41	21	15 53 26.86	23.759	14 55 53.5	77.58
22	14 5 22.18	22.284	7 29 58.6	108.03	22	15 55 49.51	23.793	15 3 36.3	76.68
23	14 7 35.96	22.310	7 40 45.6	107.63	23	15 58 12.37	23.826	15 11 13.6	75.76
24	14 9 49.90	22.338	S. 7 51 30.2	107.24	24	16 0 35.42	23.858	S. 15 18 45.4	74.83

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 5.					SUNDAY 7.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	16 0 35.42	23 858	S. 15 18 45.4	74.83	0	17 58 18.13	25.011	S. 19 14 4.7	20.48
1	16 2 58.67	23 891	15 26 11.5	73.88	1	18 0 48.23	25.022	19 16 3.7	19.20
2	16 5 22.11	23 923	15 33 32.0	72.94	2	18 3 18.39	25.032	19 17 55.1	17.93
3	16 7 45.74	23 955	15 40 46.8	71.98	3	18 5 48.61	25.040	19 19 38.8	16.65
4	16 10 9.57	23.988	15 47 55.7	71.00	4	18 8 18.87	25.048	19 21 14.9	15.37
5	16 12 33.59	24 019	15 54 58.8	70.02	5	18 10 49.18	25.056	19 22 43.2	14.07
6	16 14 57.80	24 051	16 1 56.0	69.04	6	18 13 19.54	25.063	19 24 3.7	12.78
7	16 17 22.20	24.082	16 8 47.3	68.04	7	18 15 49.93	25.068	19 25 16.6	11.50
8	16 19 46.78	24.113	16 15 32.5	67.03	8	18 18 20.35	25.073	19 26 21.7	10.21
9	16 22 11.55	24.144	16 22 11.6	66.01	9	18 20 50.80	25.078	19 27 19.1	8.92
10	16 24 36.51	24.175	16 28 44.6	64.98	10	18 23 21.28	25.081	19 28 8.7	7.62
11	16 27 1.65	24 205	16 35 11.4	63.95	11	18 25 51.77	25.083	19 28 50.5	6.33
12	16 29 26.97	24.235	16 41 32.0	62.91	12	18 28 22.28	25.086	19 29 24.6	5.03
13	16 31 52.47	24 265	16 47 46.3	61.86	13	18 30 52.80	25.087	19 29 50.8	3.73
14	16 34 18.15	24 294	16 53 54.3	60.79	14	18 33 23.32	25.087	19 30 9.3	2.43
15	16 36 44.00	24 323	16 59 55.8	59.72	15	18 35 53.84	25.087	19 30 20.0	1.14
16	16 39 10.03	24.353	17 5 50.9	58.64	16	18 38 24.36	25.086	19 30 23.0	0.16
17	16 41 36.23	24.381	17 11 39.5	57.55	17	18 40 54.87	25.084	19 30 18.1	1.46
18	16 44 2.60	24.408	17 17 21.5	56.46	18	18 43 25.37	25.081	19 30 5.5	2.75
19	16 46 29.13	24.436	17 22 57.0	55.36	19	18 45 55.84	25.078	19 29 45.1	4.05
20	16 48 55.83	24.463	17 28 25.8	54.24	20	18 48 26.30	25.073	19 29 16.9	5.35
21	16 51 22.69	24.490	17 33 47.9	53.13	21	18 50 56.72	25.068	19 28 40.9	6.64
22	16 53 49.71	24.517	17 39 3.3	52.00	22	18 53 27.11	25.063	19 27 57.2	7.93
23	16 56 16.89	24.543	S. 17 44 11.9	50.86	23	18 55 57.47	25.056	S. 19 27 5.8	9.22
SATURDAY 6.					MONDAY 8.				
0	16 58 44.22	24.568	S. 17 49 13.6	49.71	0	18 58 27.78	25.048	S. 19 26 6.6	10.51
1	17 1 11.70	24.593	17 54 8.4	48.57	1	19 0 58.04	25.039	19 24 59.7	11.80
2	17 3 39.33	24 618	17 58 56.4	47.41	2	19 3 28.25	25.031	19 23 45.0	13.08
3	17 6 7.11	24 642	18 3 37.3	46.24	3	19 5 58.41	25.021	19 22 22.7	14.37
4	17 8 35.03	24 665	18 8 11.3	45.08	4	19 8 28.50	25.010	19 20 52.6	15.65
5	17 11 3.09	24 688	18 12 38.3	43.90	5	19 10 58.53	24.999	19 19 14.9	16.92
6	17 13 31.28	24 710	18 16 58.1	42.71	6	19 13 28.49	24.988	19 17 29.6	18.19
7	17 15 59.61	24 733	18 21 10.8	41.53	7	19 15 58.38	24.974	19 15 36.6	19.47
8	17 18 28.07	24.754	18 25 16.4	40.33	8	19 18 28.18	24.960	19 13 36.0	20.74
9	17 20 56.66	24.775	18 29 14.8	39.13	9	19 20 57.90	24.946	19 11 27.7	22.01
10	17 23 25.37	24.795	18 33 5.9	37.92	10	19 23 27.53	24.931	19 9 11.9	23.26
11	17 25 54.20	24 814	18 36 49.8	36.71	11	19 25 57.07	24.915	19 6 48.6	24.51
12	17 28 23.14	24 833	18 40 26.4	35.48	12	19 28 26.51	24.898	19 4 17.8	25.77
13	17 30 52.20	24.852	18 43 55.6	34.25	13	19 30 55.84	24.880	19 1 39.4	27.02
14	17 33 21.36	24 869	18 47 17.4	33.03	14	19 33 25.07	24.863	18 58 53.6	28.26
15	17 35 50.63	24 887	18 50 31.9	31.79	15	19 35 54.20	24.844	18 56 0.3	29.50
16	17 38 20.00	24.903	18 53 38.9	30.55	16	19 38 23.20	24.824	18 52 59.6	30.73
17	17 40 49.47	24.920	18 56 38.5	29.31	17	19 40 52.09	24.805	18 49 51.5	31.96
18	17 43 19.04	24.935	18 59 30.6	28.06	18	19 43 20.86	24.784	18 46 36.1	33.18
19	17 45 48.69	24.948	19 2 15.2	26.81	19	19 45 49.50	24.762	18 43 13.3	34.40
20	17 48 18.42	24.963	19 4 52.3	25.55	20	19 48 18.00	24.739	18 39 43.3	35.61
21	17 50 48.24	24.976	19 7 21.8	24.28	21	19 50 46.37	24.717	18 36 6.0	36.82
22	17 53 18.13	24.988	19 9 43.7	23.02	22	19 53 14.60	24.693	18 32 21.5	38.01
23	17 55 48.10	25.000	19 11 58.0	21.75	23	19 55 42.69	24.669	18 28 29.9	39.20
24	17 58 18.13	25.011	S. 19 14 4.7	20.48	24	19 58 10.63	24.644	S. 18 24 31.1	40.39

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 9.					THURSDAY 11.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	19 58 10.63	24.644	S. 18 24 31.1	40.39	0	21 52 41.91	22.950	S. 13 9 57.3	86.89
1	20 0 38.42	24.619	18 20 25.2	41.58	1	21 54 59.49	22.909	13 1 13.8	87.60
2	20 3 6.06	24.593	18 16 12.2	42.74	2	21 57 16.82	22.868	12 52 26.1	88.30
3	20 5 33.53	24.566	18 11 52.3	43.90	3	21 59 33.91	22.828	12 43 34.2	88.99
4	20 8 0.85	24.539	18 7 25.4	45.07	4	22 1 50.76	22.788	12 34 38.2	89.67
5	20 10 28.00	24.511	18 2 51.5	46.22	5	22 4 7.37	22.748	12 25 38.2	90.33
6	20 12 54.98	24.483	17 58 10.8	47.36	6	22 6 23.73	22.707	12 16 34.3	90.98
7	20 15 21.79	24.454	17 53 23.2	48.50	7	22 8 39.85	22.667	12 7 26.5	91.62
8	20 17 48.43	24.425	17 48 28.8	49.63	8	22 10 55.73	22.626	11 58 14.9	92.25
9	20 20 14.89	24.394	17 43 27.7	50.74	9	22 13 11.36	22.586	11 48 59.5	92.88
10	20 22 41.16	24.363	17 38 19.9	51.85	10	22 15 26.76	22.546	11 39 40.4	93.48
11	20 25 7.25	24.333	17 33 5.5	52.96	11	22 17 41.91	22.506	11 30 17.8	94.06
12	20 27 33.16	24.302	17 27 44.4	54.06	12	22 19 56.83	22.466	11 20 51.7	94.64
13	20 29 58.87	24.269	17 22 16.8	55.14	13	22 22 11.50	22.426	11 11 22.1	95.22
14	20 32 24.39	24.237	17 16 42.7	56.22	14	22 24 25.94	22.387	11 1 49.1	95.78
15	20 34 49.71	24.203	17 11 2.2	57.28	15	22 26 40.14	22.347	10 52 12.8	96.32
16	20 37 14.83	24.170	17 5 15.3	58.35	16	22 28 54.10	22.308	10 42 33.3	96.85
17	20 39 39.75	24.137	16 59 22.0	59.40	17	22 31 7.83	22.268	10 32 50.6	97.38
18	20 42 4.47	24.103	16 53 22.5	60.43	18	22 33 21.32	22.228	10 23 4.7	97.89
19	20 44 28.98	24.068	16 47 16.8	61.47	19	22 35 34.57	22.189	10 13 15.9	98.38
20	20 46 53.29	24.033	16 41 4.9	62.49	20	22 37 47.59	22.151	10 3 24.1	98.88
21	20 49 17.38	23.998	16 34 46.9	63.51	21	22 40 0.38	22.113	9 53 29.3	99.36
22	20 51 41.26	23.962	16 28 22.8	64.52	22	22 42 12.94	22.074	9 43 31.8	99.82
23	20 54 4.92	23.926	S. 16 21 52.7	65.51	23	22 44 25.27	22.037	S. 9 33 31.5	100.28
WEDNESDAY 10.					FRIDAY 12.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	20 56 28.37	23.889	S. 16 15 16.7	66.48	0	22 46 37.38	21.998	S. 9 23 28.5	100.72
1	20 58 51.59	23.853	16 8 34.9	67.46	1	22 48 49.25	21.960	9 13 22.9	101.14
2	21 1 14.60	23.816	16 1 47.2	68.43	2	22 51 0.90	21.923	9 3 14.8	101.57
3	21 3 37.38	23.778	15 54 53.8	69.38	3	22 53 12.32	21.885	8 53 4.1	101.98
4	21 5 59.94	23.741	15 47 54.7	70.32	4	22 55 23.52	21.848	8 42 51.1	102.37
5	21 8 22.27	23.703	15 40 50.0	71.25	5	22 57 34.50	21.812	8 32 35.7	102.75
6	21 10 44.37	23.664	15 33 39.7	72.18	6	22 59 45.26	21.775	8 22 18.1	103.13
7	21 13 6.24	23.626	15 26 23.8	73.09	7	23 1 55.80	21.738	8 11 58.2	103.49
8	21 15 27.88	23.588	15 19 2.6	73.98	8	23 4 6.12	21.703	8 1 36.2	103.84
9	21 17 49.29	23.549	15 11 36.0	74.88	9	23 6 16.23	21.667	7 51 12.1	104.18
10	21 20 10.47	23.510	15 4 4.1	75.76	10	23 8 26.12	21.631	7 40 46.1	104.50
11	21 22 31.41	23.471	14 56 26.9	76.63	11	23 10 35.80	21.596	7 30 18.1	104.83
12	21 24 52.12	23.432	14 48 44.6	77.48	12	23 12 45.27	21.561	7 19 48.2	105.13
13	21 27 12.59	23.392	14 40 57.2	78.33	13	23 14 54.53	21.526	7 9 16.5	105.43
14	21 29 32.82	23.352	14 33 4.7	79.17	14	23 17 3.58	21.492	6 58 43.1	105.71
15	21 31 52.81	23.313	14 25 7.2	79.98	15	23 19 12.43	21.458	6 48 8.0	105.98
16	21 34 12.57	23.273	14 17 4.9	80.79	16	23 21 21.07	21.424	6 37 31.3	106.24
17	21 36 32.08	23.232	14 8 57.7	81.60	17	23 23 29.52	21.391	6 26 53.1	106.48
18	21 38 51.35	23.193	14 0 45.7	82.39	18	23 25 37.76	21.357	6 16 13.5	106.73
19	21 41 10.39	23.153	13 52 29.0	83.18	19	23 27 45.80	21.324	6 5 32.4	106.97
20	21 43 29.18	23.112	13 44 7.6	83.94	20	23 29 53.65	21.293	5 54 49.9	107.18
21	21 45 47.73	23.071	13 35 41.7	84.69	21	23 32 1.31	21.260	5 44 6.2	107.38
22	21 48 6.03	23.030	13 27 11.3	85.43	22	23 34 8.77	21.228	5 33 21.3	107.58
23	21 50 24.09	22.990	13 18 36.5	86.17	23	23 36 16.04	21.197	5 22 35.2	107.77
24	21 52 41.91	22.950	S. 13 9 57.3	86.89	24	23 38 23.13	21.166	S. 5 11 48.1	107.94

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 13.					MONDAY 15.				
	h m s	s				h m s	s		
0	23 38 23.13	21.166	S. 5 11 48.1	107.94	0	1 17 6.03	20.116	N. 3 27 58.8	105.17
1	23 40 30.03	21.135	5 0 59.9	108.12	1	1 19 6.69	20.103	3 38 29.0	104.90
2	23 42 36.75	21.104	4 50 10.7	108.27	2	1 21 7.27	20.091	3 48 57.6	104.63
3	23 44 43.28	21.073	4 39 20.7	108.41	3	1 23 7.78	20.080	3 59 24.5	104.35
4	23 46 49.63	21.044	4 28 29.8	108.54	4	1 25 8.23	20.069	4 9 49.8	104.07
5	23 48 55.81	21.015	4 17 38.2	108.67	5	1 27 8.61	20.058	4 20 13.3	103.77
6	23 51 1.81	20.986	4 6 45.8	108.78	6	1 29 8.92	20.047	4 30 35.0	103.46
7	23 53 7.64	20.958	3 55 52.8	108.88	7	1 31 9.17	20.038	4 40 54.8	103.15
8	23 55 13.30	20.929	3 44 59.2	108.98	8	1 33 9.37	20.028	4 51 12.8	102.84
9	23 57 18.79	20.901	3 34 5.1	109.07	9	1 35 9.51	20.019	5 1 28.9	102.52
10	23 59 24.11	20.873	3 23 10.4	109.14	10	1 37 9.60	20.010	5 11 43.0	102.18
11	0 1 29.27	20.847	3 12 15.4	109.19	11	1 39 9.63	20.002	5 21 55.1	101.85
12	0 3 34.27	20.820	3 1 20.1	109.25	12	1 41 9.62	19.993	5 32 5.2	101.51
13	0 5 39.11	20.793	2 50 24.4	109.30	13	1 43 9.55	19.985	5 42 13.2	101.16
14	0 7 43.79	20.767	2 39 28.5	109.33	14	1 45 9.44	19.978	5 52 19.1	100.79
15	0 9 48.31	20.742	2 28 32.4	109.36	15	1 47 9.29	19.972	6 2 22.7	100.43
16	0 11 52.69	20.717	2 17 36.2	109.37	16	1 49 9.10	19.965	6 12 24.2	100.07
17	0 13 56.91	20.691	2 6 40.0	109.38	17	1 51 8.87	19.958	6 22 23.5	99.68
18	0 16 0.98	20.667	1 55 43.7	109.37	18	1 53 8.60	19.953	6 32 20.4	99.30
19	0 18 4.91	20.643	1 44 47.6	109.35	19	1 55 8.30	19.947	6 42 15.1	98.91
20	0 20 8.69	20.619	1 33 51.5	109.34	20	1 57 7.96	19.941	6 52 7.3	98.51
21	0 22 12.34	20.596	1 22 55.5	109.31	21	1 59 7.59	19.937	7 1 57.2	98.12
22	0 24 15.84	20.573	1 11 59.8	109.26	22	2 1 7.20	19.933	7 11 44.7	97.70
23	0 26 19.21	20.550	S. 1 1 4.4	109.21	23	2 3 6.78	19.928	N. 7 21 29.6	97.28
SUNDAY 14.					TUESDAY 16.				
0	0 28 22.44	20.528	S. 0 50 9.3	109.15	0	2 5 6.34	19.925	N. 7 31 12.1	96.87
1	0 30 25.55	20.507	0 39 14.6	109.08	1	2 7 5.88	19.921	7 40 52.0	96.43
2	0 32 28.52	20.485	0 28 20.3	109.01	2	2 9 5.39	19.918	7 50 29.3	96.00
3	0 34 31.37	20.464	0 17 26.5	108.92	3	2 11 4.89	19.915	8 0 4.0	95.56
4	0 36 34.09	20.443	S. 0 6 33.3	108.83	4	2 13 4.37	19.913	8 9 36.0	95.12
5	0 38 36.69	20.423	N. 0 4 19.4	108.73	5	2 15 3.84	19.910	8 19 5.4	94.67
6	0 40 39.17	20.403	0 15 11.4	108.60	6	2 17 3.29	19.908	8 28 32.0	94.20
7	0 42 41.53	20.384	0 26 2.6	108.48	7	2 19 2.74	19.908	8 37 55.8	93.74
8	0 44 43.78	20.365	0 36 53.2	108.36	8	2 21 2.18	19.906	8 47 16.9	93.28
9	0 46 45.91	20.346	0 47 42.9	108.22	9	2 23 1.61	19.905	8 56 35.1	92.79
10	0 48 47.93	20.328	0 58 31.8	108.07	10	2 25 1.04	19.905	9 5 50.4	92.32
11	0 50 49.85	20.311	1 9 19.7	107.92	11	2 27 0.47	19.904	9 15 2.9	91.83
12	0 52 51.66	20.293	1 20 6.8	107.76	12	2 28 59.89	19.904	9 24 12.4	91.33
13	0 54 53.37	20.277	1 30 52.8	107.58	13	2 30 59.32	19.905	9 33 18.9	90.83
14	0 56 54.98	20.260	1 41 37.7	107.40	14	2 32 58.75	19.906	9 42 22.4	90.33
15	0 58 56.49	20.243	1 52 21.6	107.22	15	2 34 58.19	19.907	9 51 22.9	89.83
16	1 0 57.90	20.228	2 3 4.3	107.02	16	2 36 57.63	19.908	10 0 20.3	89.31
17	1 2 59.22	20.213	2 13 45.8	106.81	17	2 38 57.08	19.909	10 9 14.6	88.79
18	1 5 0.45	20.198	2 24 26.0	106.60	18	2 40 56.54	19.912	10 18 5.8	88.27
19	1 7 1.59	20.183	2 35 5.0	106.38	19	2 42 56.02	19.914	10 26 53.8	87.73
20	1 9 2.64	20.168	2 45 42.6	106.15	20	2 44 55.51	19.916	10 35 38.6	87.20
21	1 11 3.61	20.155	2 56 18.8	105.92	21	2 46 55.01	19.919	10 44 20.2	86.66
22	1 13 4.50	20.141	3 6 53.6	105.68	22	2 48 54.54	19.923	10 52 58.5	86.11
23	1 15 5.30	20.128	3 17 27.0	105.43	23	2 50 54.08	19.925	11 1 33.5	85.56
24	1 17 6.03	20.116	N. 3 27 58.8	105.17	24	2 52 53.64	19.929	N. 11 10 5.2	85.01

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 17.					FRIDAY 19.				
	h m s	s	N. 11 10 5 2	85 01		h m s	s	N. 16 45 5 6	52 94
0	2 52 53.64	19.929			0	4 29 24.33	20.353		
1	2 54 53.23	19.933	11 18 33.6	84.44	1	4 31 26.48	20.365	16 50 21.0	52.18
2	2 56 52.84	19.938	11 26 58.5	83.88	2	4 33 28.71	20.378	16 55 31.7	51.40
3	2 58 52.48	19.942	11 35 20.1	83.31	3	4 35 31.01	20.390	17 0 37.8	50.63
4	3 0 52.14	19.946	11 43 38.2	82.73	4	4 37 33.39	20.403	17 5 39.3	49.86
5	3 2 51.83	19.951	11 51 52.8	82.14	5	4 39 35.84	20.415	17 10 36.1	49.08
6	3 4 51.55	19.957	12 0 3.9	81.56	6	4 41 38.37	20.428	17 15 28.2	48.29
7	3 6 51.31	19.963	12 8 11.5	80.97	7	4 43 40.97	20.440	17 20 15.6	47.51
8	3 8 51.10	19.968	12 16 15.5	80.37	8	4 45 43.65	20.453	17 24 58.3	46.72
9	3 10 50.92	19.973	12 24 15.9	79.77	9	4 47 46.41	20.466	17 29 36.2	45.93
10	3 12 50.78	19.980	12 32 12.7	79.17	10	4 49 49.24	20.478	17 34 9.4	45.13
11	3 14 50.68	19.987	12 40 5.9	78.56	11	4 51 52.15	20.492	17 38 37.7	44.33
12	3 16 50.62	19.993	12 47 55.4	77.93	12	4 53 55.14	20.505	17 43 1.3	43.53
13	3 18 50.59	19.999	12 55 41.1	77.32	13	4 55 58.21	20.518	17 47 20.0	42.72
14	3 20 50.61	20.008	13 3 23.2	76.70	14	4 58 1.35	20.530	17 51 33.9	41.90
15	3 22 50.68	20.014	13 11 1.5	76.06	15	5 0 4.57	20.543	17 55 42.8	41.08
16	3 24 50.78	20.022	13 18 35.9	75.43	16	5 2 7.87	20.557	17 59 46.9	40.28
17	3 26 50.94	20.030	13 26 6.6	74.79	17	5 4 11.25	20.569	18 3 46.1	39.46
18	3 28 51.14	20.038	13 33 33.4	74.15	18	5 6 14.70	20.582	18 7 40.4	38.63
19	3 30 51.39	20.046	13 40 56.4	73.51	19	5 8 18.23	20.595	18 11 29.7	37.81
20	3 32 51.69	20.054	13 48 15.5	72.85	20	5 10 21.84	20.608	18 15 14.1	36.98
21	3 34 52.04	20.063	13 55 30.6	72.19	21	5 12 25.52	20.621	18 18 53.5	36.15
22	3 36 52.44	20.071	14 2 41.8	71.53	22	5 14 29.29	20.634	18 22 27.9	35.32
23	3 38 52.89	20.080	N. 14 9 49.0	70.87	23	5 16 33.13	20.647	N. 18 25 57.3	34.48
THURSDAY 18.					SATURDAY 20.				
	h m s	s	N. 14 16 52.2	70.20		h m s	s	N. 18 29 21.7	33.64
0	3 40 53.40	20.089			0	5 18 37.05	20.659		
1	3 42 53.96	20.098	14 23 51.4	69.53	1	5 20 41.04	20.673	18 32 41.0	32.80
2	3 44 54.58	20.108	14 30 46.6	68.85	2	5 22 45.12	20.686	18 35 55.3	31.95
3	3 46 55.26	20.118	14 37 37.6	68.17	3	5 24 49.27	20.698	18 39 4.4	31.10
4	3 48 56.00	20.128	14 44 24.6	67.48	4	5 26 53.49	20.711	18 42 8.5	30.26
5	3 50 56.80	20.138	14 51 7.4	66.79	5	5 28 57.80	20.724	18 45 7.5	29.41
6	3 52 57.65	20.148	14 57 46.1	66.10	6	5 31 2.18	20.736	18 48 1.4	28.55
7	3 54 58.57	20.158	15 4 20.6	65.40	7	5 33 6.63	20.748	18 50 50.1	27.68
8	3 56 59.55	20.168	15 10 50.9	64.70	8	5 35 11.16	20.762	18 53 33.6	26.83
9	3 59 0.59	20.179	15 17 17.0	64.00	9	5 37 15.77	20.774	18 56 12.0	25.97
10	4 1 1.70	20.190	15 23 38.9	63.28	10	5 39 20.45	20.786	18 58 45.2	25.10
11	4 3 2.87	20.201	15 29 56.4	62.57	11	5 41 25.20	20.798	19 1 13.2	24.23
12	4 5 4.11	20.212	15 36 9.7	61.86	12	5 43 30.03	20.811	19 3 36.0	23.36
13	4 7 5.41	20.223	15 42 18.7	61.13	13	5 45 34.93	20.823	19 5 53.5	22.48
14	4 9 6.78	20.234	15 48 23.3	60.40	14	5 47 39.91	20.836	19 8 5.8	21.62
15	4 11 8.22	20.246	15 54 23.5	59.68	15	5 49 44.96	20.848	19 10 12.9	20.73
16	4 13 9.73	20.257	16 0 19.4	58.94	16	5 51 50.08	20.859	19 12 14.6	19.85
17	4 15 11.30	20.268	16 6 10.8	58.20	17	5 53 55.27	20.871	19 14 11.1	18.98
18	4 17 12.95	20.281	16 11 57.8	57.47	18	5 56 0.53	20.883	19 16 2.3	18.08
19	4 19 14.67	20.292	16 17 40.4	56.73	19	5 58 5.86	20.894	19 17 48.1	17.20
20	4 21 16.45	20.303	16 23 18.5	55.98	20	6 0 11.26	20.906	19 19 28.7	16.32
21	4 23 18.31	20.316	16 28 52.1	55.22	21	6 2 16.73	20.918	19 21 3.9	15.42
22	4 25 20.24	20.328	16 34 21.1	54.47	22	6 4 22.27	20.929	19 22 33.7	14.53
23	4 27 22.25	20.341	16 39 45.7	53.71	23	6 6 27.88	20.941	19 23 58.2	13.63
24	4 29 24.33	20.353	N. 16 45 5.6	52.94	24	6 8 33.56	20.952	N. 19 25 17.3	12.73

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 21.					TUESDAY 23.				
	h m s	"	N. 19 25 17.3	12.73		h m s	"	N. 18 40 34.5	31.63
0	6 8 33.56	20.952	19 26 31.0	11.83	0	7 50 9.26	21.322	18 37 21.9	32.56
1	6 10 39.30	20.963	19 27 39.3	10.93	1	7 52 17.20	21.325	18 34 3.8	33.48
2	6 12 45.11	20.973	19 28 42.2	10 03	2	7 54 25.16	21.329	18 30 40.1	34.41
3	6 14 50.98	20.984	19 29 39.7	9.13	3	7 56 33.15	21.333	18 27 10.9	35.33
4	6 16 56.92	20.995	19 30 31.8	8.23	4	7 58 41.15	21.336	18 23 36.1	36.27
5	6 19 2.92	21.006	19 31 18.4	7.32	5	8 0 49.18	21.340	18 19 55.7	37.19
6	6 21 8.99	21.017	19 31 59.6	6.41	6	8 2 57.23	21.343	18 16 9.8	38.11
7	6 23 15.12	21.027	19 32 35.3	5.49	7	8 5 5.29	21.346	18 12 18.4	39.03
8	6 25 21.31	21.037	19 33 5.5	4.58	8	8 7 13.38	21.349	18 8 21.4	39.95
9	6 27 27.56	21.047	19 33 49.6	3.68	9	8 9 21.48	21.352	18 4 19.0	40.87
10	6 29 33.87	21.057	19 34 11.6	2.76	10	8 11 29.60	21.354	18 0 11.0	41.79
11	6 31 40.24	21.067	19 34 14.4	1.83	11	8 13 37.73	21.357	17 55 57.5	42.71
12	6 33 46.67	21.076	19 34 11.7	0.92	12	8 15 45.88	21.359	17 51 38.5	43.62
13	6 35 53.15	21.085	19 34 11.6	0.01	13	8 17 54.04	21.361	17 47 14.1	44.53
14	6 37 59.69	21.095	19 34 3.4	0.92	14	8 20 2.21	21.363	17 42 44.1	45.45
15	6 40 6.29	21.104	19 33 49.6	1.84	15	8 22 10.40	21.366	17 38 8.7	46.35
16	6 42 12.94	21.113	19 33 30.2	2.77	16	8 24 18.60	21.368	17 33 27.9	47.26
17	6 44 19.65	21.123	19 33 11.7	3.68	17	8 26 26.81	21.369	17 28 41.6	48.17
18	6 46 26.41	21.131	19 33 5.4	4.61	18	8 28 35.03	21.371	17 23 49.9	49.07
19	6 48 33.22	21.139	19 32 34.9	5.54	19	8 30 43.26	21.373	17 18 52.8	49.97
20	6 50 40.08	21.148	19 31 58.9	6.46	20	8 32 51.50	21.374	17 13 50.3	50.87
21	6 52 47.00	21.157	19 31 17.4	7.39	21	8 34 59.75	21.376	17 8 42.4	51.77
22	6 54 53.96	21.164	19 30 30.2	8.33	22	8 37 8.01	21.377	N. 17 3 29.1	52.66
23	6 57 0.97	21.173			23	8 39 16.27	21.378		
MONDAY 22.					WEDNESDAY 24.				
	h m s	"	N. 19 29 37.5	9.25		h m s	"	N. 16 58 10.5	53.55
0	6 59 8.03	21.181	19 28 39.2	10.18	0	8 41 24.54	21.379	16 52 46.5	54.44
1	7 1 15.14	21.188	19 27 35.4	11.11	1	8 43 32.82	21.380	16 47 17.2	55.33
2	7 3 22.29	21.195	19 26 25.9	12.04	2	8 45 41.10	21.381	16 41 42.6	56.22
3	7 5 29.48	21.203	19 25 10.9	12.97	3	8 47 49.39	21.383	16 36 2.6	57.10
4	7 7 36.72	21.211	19 23 50.3	13.91	4	8 49 57.69	21.383	16 30 17.4	57.97
5	7 9 44.01	21.218	19 22 24.0	14.84	5	8 52 5.99	21.383	16 24 27.0	58.84
6	7 11 51.33	21.224	19 20 52.2	15.77	6	8 54 14.29	21.384	16 18 31.3	59.73
7	7 13 58.70	21.232	19 19 14.8	16.70	7	8 56 22.60	21.385	16 12 30.3	60.59
8	7 16 6.11	21.238	19 17 31.8	17.63	8	8 58 30.91	21.386	16 6 24.2	61.45
9	7 18 13.55	21.244	19 15 43.2	18.57	9	9 0 39.23	21.387	15 0 12.9	62.32
10	7 20 21.04	21.251	19 13 49.0	19.51	10	9 2 47.55	21.387	15 53 56.4	63.18
11	7 22 28.56	21.256	19 11 49.1	20.44	11	9 4 55.87	21.387	15 47 34.7	64.04
12	7 24 36.11	21.263	19 9 43.7	21.37	12	9 7 4.19	21.387	15 41 7.9	64.88
13	7 26 43.71	21.268	19 7 32.7	22.31	13	9 9 12.51	21.388	15 34 36.1	65.73
14	7 28 51.33	21.273	19 5 16.0	23.24	14	9 11 20.84	21.388	15 27 59.1	66.58
15	7 30 58.99	21.279	19 2 53.8	24.18	15	9 13 29.17	21.388	15 21 17.1	67.42
16	7 33 6.68	21.284	19 0 25.9	25.11	16	9 15 37.49	21.388	15 14 30.1	68.26
17	7 35 14.40	21.290	18 57 52.5	26.03	17	9 17 45.82	21.388	15 7 38.0	69.10
18	7 37 22.16	21.295	18 55 13.5	26.97	18	9 19 54.15	21.389	15 0 40.9	69.93
19	7 39 29.94	21.299	18 52 28.9	27.91	19	9 22 2.49	21.389	14 53 38.9	70.75
20	7 41 37.75	21.304	18 49 38.6	28.84	20	9 24 10.82	21.388	14 46 31.9	71.58
21	7 43 45.59	21.308	18 46 42.8	29.77	21	9 26 19.15	21.389	14 39 20.0	72.39
22	7 45 53.45	21.313	18 43 41.4	30.69	22	9 28 27.49	21.390	14 32 3.2	73.21
23	7 48 1.34	21.318			23	9 30 35.83	21.389	N. 14 24 41.5	74.02
24	7 50 9.26	21.322			24	9 32 44.16	21.389		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 25.					SATURDAY 27.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	9 32 44.16	21.389	N. 14 24 41.5	74.02	0	11 15 33.92	21.506	N. 7 6 43.7	105.92
1	9 34 52.50	21.390	14 17 15.0	74.82	1	11 17 42.97	21.513	6 56 6.7	106.41
2	9 37 0.84	21.391	14 9 43.7	75.62	2	11 19 52.07	21.520	6 45 26.8	106.88
3	9 39 9.19	21.391	14 2 7.6	76.41	3	11 22 1.21	21.527	6 34 44.1	107.35
4	9 41 17.53	21.390	13 54 26.8	77.20	4	11 24 10.39	21.533	6 23 58.6	107.81
5	9 43 25.87	21.391	13 46 41.2	77.99	5	11 26 19.61	21.541	6 13 10.4	108.25
6	9 45 34.22	21.392	13 38 50.9	78.77	6	11 28 28.88	21.549	6 2 19.6	108.68
7	9 47 42.57	21.392	13 30 56.0	79.55	7	11 30 38.20	21.558	5 51 26.2	109.12
8	9 49 50.92	21.393	13 22 56.3	80.33	8	11 32 47.57	21.565	5 40 30.2	109.54
9	9 51 59.28	21.393	13 14 52.1	81.08	9	11 34 56.98	21.573	5 29 31.7	109.95
10	9 54 7.64	21.393	13 6 43.3	81.84	10	11 37 6.45	21.583	5 18 30.8	110.35
11	9 56 16.00	21.393	12 58 30.0	82.59	11	11 39 15.98	21.593	5 7 27.5	110.74
12	9 58 24.36	21.394	12 50 12.2	83.34	12	11 41 25.56	21.601	4 56 21.9	111.12
13	10 0 32.73	21.396	12 41 49.9	84.09	13	11 43 35.19	21.611	4 45 14.1	111.49
14	10 2 41.11	21.397	12 33 23.1	84.83	14	11 45 44.89	21.621	4 34 4.0	111.86
15	10 4 49.49	21.397	12 24 52.0	85.56	15	11 47 54.64	21.631	4 22 51.8	112.21
16	10 6 57.87	21.398	12 16 16.4	86.29	16	11 50 4.46	21.642	4 11 37.5	112.55
17	10 9 6.26	21.399	12 7 36.5	87.01	17	11 52 14.34	21.653	4 0 21.2	112.88
18	10 11 14.66	21.401	11 58 52.3	87.72	18	11 54 24.29	21.663	3 49 3.0	113.19
19	10 13 23.07	21.403	11 50 3.9	88.43	19	11 56 34.30	21.674	3 37 42.9	113.51
20	10 15 31.49	21.403	11 41 11.2	89.13	20	11 58 44.38	21.687	3 26 20.9	113.82
21	10 17 39.91	21.404	11 32 14.3	89.83	21	12 0 54.54	21.698	3 14 57.1	114.10
22	10 19 48.34	21.407	11 23 13.2	90.53	22	12 3 4.76	21.710	3 3 31.7	114.38
23	10 21 56.79	21.408	N. 11 14 8.0	91.20	23	12 5 15.06	21.723	N. 2 52 4.6	114.65
FRIDAY 26.					SUNDAY 28.				
0	10 24 5.24	21.410	N. 11 4 58.8	91.88	0	12 7 25.44	21.736	N. 2 40 35.9	114.91
1	10 26 13.71	21.413	10 55 45.5	92.55	1	12 9 35.89	21.749	2 29 5.7	115.15
2	10 28 22.19	21.414	10 46 28.2	93.21	2	12 11 46.43	21.763	2 17 34.1	115.38
3	10 30 30.68	21.417	10 37 7.0	93.87	3	12 13 57.05	21.777	2 6 1.1	115.61
4	10 32 39.19	21.419	10 27 41.8	94.52	4	12 16 7.75	21.790	1 54 26.8	115.83
5	10 34 47.71	21.422	10 18 12.8	95.16	5	12 18 18.53	21.804	1 42 51.2	116.03
6	10 36 56.25	21.425	10 8 39.9	95.80	6	12 20 29.40	21.819	1 31 14.4	116.23
7	10 39 4.81	21.428	9 59 3.2	96.43	7	12 22 40.36	21.835	1 19 36.5	116.41
8	10 41 13.38	21.430	9 49 22.8	97.05	8	12 24 51.42	21.850	1 7 57.5	116.58
9	10 43 21.97	21.434	9 39 38.6	97.67	9	12 27 2.56	21.865	0 56 17.6	116.73
10	10 45 30.59	21.438	9 29 50.8	98.27	10	12 29 13.80	21.882	0 44 36.8	116.88
11	10 47 39.22	21.441	9 19 59.4	98.86	11	12 31 25.14	21.898	0 32 55.1	117.01
12	10 49 47.88	21.445	9 10 4.5	99.45	12	12 33 36.58	21.915	0 21 12.7	117.13
13	10 51 56.56	21.448	9 0 6.0	100.04	13	12 35 48.12	21.932	N. 0 9 29.5	117.25
14	10 54 5.26	21.453	8 50 4.0	100.62	14	12 37 59.76	21.948	S. 0 2 14.3	117.34
15	10 56 13.99	21.458	8 39 58.6	101.18	15	12 40 11.50	21.966	0 13 58.6	117.43
16	10 58 22.75	21.462	8 29 49.8	101.74	16	12 42 23.35	21.983	0 25 43.4	117.51
17	11 0 31.53	21.467	8 19 37.7	102.29	17	12 44 35.30	22.002	0 37 28.7	117.58
18	11 2 40.35	21.472	8 9 22.3	102.83	18	12 46 47.37	22.021	0 49 14.3	117.63
19	11 4 49.19	21.477	7 59 3.7	103.37	19	12 48 59.55	22.040	1 1 0.2	117.67
20	11 6 58.07	21.483	7 48 41.9	103.90	20	12 51 11.85	22.059	1 12 46.3	117.69
21	11 9 6.98	21.488	7 38 16.9	104.43	21	12 53 24.26	22.078	1 24 32.5	117.71
22	11 11 15.92	21.493	7 27 48.8	104.93	22	12 55 36.78	22.098	1 36 18.8	117.72
23	11 13 24.90	21.500	7 17 17.7	105.43	23	12 57 49.43	22.118	1 48 5.1	117.70
24	11 15 33.92	21.506	N. 7 6 43.7	105.92	24	13 0 2.20	22.138	S. 1 59 51.2	117.68

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 29.					TUESDAY 30.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	13 0 2.20	22 138	S. 1 59 51.2	117.68	0	13 53 49.68	22.715	S. 6 38 35.6	113.36
1	13 2 15.09	22.158	2 11 37.2	117.65	1	13 56 6.05	22.743	6 49 54.7	113.02
2	13 4 28.10	22.180	2 23 23.0	117.60	2	13 58 22.59	22.771	7 1 11.8	112.66
3	13 6 41.25	22.202	2 35 8.4	117.54	3	14 0 39.30	22.798	7 12 26.6	112.29
4	13 8 54.52	22.223	2 46 53.5	117.48	4	14 2 56.17	22.826	7 23 39.3	111.92
5	13 11 7.92	22.244	2 58 38.1	117.39	5	14 5 13.21	22.854	7 34 49.6	111.52
6	13 13 21.45	22.267	3 10 22.2	117.29	6	14 7 30.42	22.883	7 45 57.5	111.11
7	13 15 35.12	22.290	3 22 5.6	117.18	7	14 9 47.80	22.911	7 57 2.9	110.68
8	13 17 48.93	22.313	3 33 48.4	117.07	8	14 12 5.35	22.940	8 8 5.7	110.25
9	13 20 2.87	22.335	3 45 30.4	116.93	9	14 14 23.08	22.969	8 19 5.9	109.80
10	13 22 16.95	22.358	3 57 11.5	116.78	10	14 16 40.98	22.998	8 30 3.3	109.34
11	13 24 31.17	22.383	4 8 51.8	116.63	11	14 18 59.06	23.028	8 40 58.0	108.87
12	13 26 45.54	22.407	4 20 31.0	116.44	12	14 21 17.31	23.057	8 51 49.7	108.38
13	13 29 0.05	22.431	4 32 9.1	116.26	13	14 23 35.74	23.087	9 2 38.5	107.88
14	13 31 14.71	22.455	4 43 46.1	116.07	14	14 25 54.35	23.117	9 13 24.3	107.37
15	13 33 29.51	22.480	4 55 21.9	115.86	15	14 28 13.14	23.147	9 24 6.9	106.83
16	13 35 44.47	22.505	5 6 56.4	115.63	16	14 30 32.11	23.177	9 34 46.3	106.30
17	13 37 59.57	22.530	5 18 29.4	115.38	17	14 32 51.26	23.207	9 45 22.5	105.75
18	13 40 14.83	22.556	5 30 1.0	115.14	18	14 35 10.59	23.237	9 55 55.3	105.18
19	13 42 30.24	22.582	5 41 31.1	114.88	19	14 37 30.10	23.268	10 6 24.7	104.60
20	13 44 45.81	22.608	5 52 59.6	114.60	20	14 39 49.80	23.298	10 16 50.5	104.01
21	13 47 1.54	22.635	6 4 26.3	114.31	21	14 42 9.68	23.329	10 27 12.8	103.41
22	13 49 17.43	22.661	6 15 51.3	114.01	22	14 44 29.75	23.360	10 37 31.4	102.78
23	13 51 33.47	22.688	6 27 14.4	113.69	23	14 46 50.00	23.390	10 47 46.2	102.15
24	13 53 49.68	22.715	S. 6 38 35.6	113.36	24	14 49 10.43	23.421	S. 10 57 57.2	101.51

PHASES OF THE MOON.

Sept.	h m
5	) First Quarter - - - - - 20 45.5
12	○ Full Moon - - - - - 19 0.0
20	(Last Quarter - - - - - 15 35.3
28	● New Moon - - - - - 8 15.9

Sept.	h
6	(Perigee - - - - - 19.0
20	(Apogee - - - - - 0.9

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semidiameter passing the Meridian.*	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.				
	h m s	s	° ' "	"	m s	m s	s	
Wed.	1	12 29 26.24	9.056	S. 3 10 47.1	58.25	1 4.29	10 17.65	0.798
Thur.	2	12 33 3.73	9.068	3 34 4.0	58.15	1 4.33	10 36.67	0.786
Frid.	3	12 36 41.51	9.081	3 57 18.4	58.04	1 4.38	10 55.39	0.774
Sat.	4	12 40 19.60	9.094	4 20 30.0	57.92	1 4.43	11 13.80	0.760
Sun.	5	12 43 58.02	9.108	4 43 38.4	57.78	1 4.48	11 31.88	0.746
Mon.	6	12 47 36.79	9.123	5 6 43.2	57.62	1 4.54	11 49.61	0.731
Tues.	7	12 51 15.94	9.139	5 29 44.1	57.45	1 4.60	12 6.97	0.715
Wed.	8	12 54 55.48	9.156	5 52 40.7	57.26	1 4.66	12 23.91	0.698
Thur.	9	12 58 35.43	9.174	6 15 32.6	57.06	1 4.73	12 40.49	0.681
Frid.	10	13 2 15.81	9.192	6 38 19.5	56.84	1 4.80	12 56.62	0.662
Sat.	11	13 5 56.66	9.212	7 1 1.0	56.61	1 4.87	13 12.28	0.642
Sun.	12	13 9 37.99	9.233	7 23 36.8	56.36	1 4.94	13 27.46	0.622
Mon.	13	13 13 19.83	9.254	7 46 6.5	56.10	1 5.02	13 42.13	0.600
Tues.	14	13 17 2.19	9.276	8 8 29.8	55.83	1 5.09	13 56.28	0.578
Wed.	15	13 20 45.10	9.300	8 30 46.3	55.54	1 5.17	14 9.89	0.555
Thur.	16	13 24 28.58	9.324	8 52 55.6	55.23	1 5.26	14 22.92	0.531
Frid.	17	13 28 12.66	9.349	9 14 57.5	54.91	1 5.34	14 35.37	0.506
Sat.	18	13 31 57.34	9.375	9 36 51.4	54.57	1 5.43	14 47.21	0.480
Sun.	19	13 35 42.65	9.401	9 58 37.0	54.22	1 5.52	14 58.42	0.454
Mon.	20	13 39 28.60	9.429	10 20 13.9	53.85	1 5.61	15 8.99	0.427
Tues.	21	13 43 15.22	9.457	10 41 41.9	53.47	1 5.71	15 18.90	0.399
Wed.	22	13 47 2.52	9.485	11 3 0.4	53.06	1 5.80	15 28.13	0.370
Thur.	23	13 50 50.51	9.514	11 24 9.0	52.65	1 5.90	15 36.67	0.341
Frid.	24	13 54 39.21	9.544	11 45 7.5	52.21	1 6.00	15 44.50	0.311
Sat.	25	13 58 28.63	9.574	12 5 55.3	51.76	1 6.11	15 51.62	0.281
Sun.	26	14 2 18.78	9.605	12 26 32.1	51.29	1 6.21	15 58.00	0.251
Mon.	27	14 6 9.67	9.636	12 46 57.4	50.81	1 6.32	16 3.65	0.220
Tues.	28	14 10 1.31	9.668	13 7 10.8	50.30	1 6.43	16 8.54	0.188
Wed.	29	14 13 53.72	9.699	13 27 12.0	49.78	1 6.54	16 12.68	0.157
Thur.	30	14 17 46.88	9.731	13 47 0.4	49.24	1 6.65	16 16.06	0.125
Frid.	31	14 21 40.82	9.764	14 6 35.7	48.69	1 6.76	16 18.67	0.093
Sat.	32	14 25 35.53	9.796	S. 14 25 57.4	48.11	1 6.87	16 20.51	0.060

* Mean Time of the Semidiameter passing may be found by subtracting 0.18 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be subtracted from Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi-diameter.*		
		h m s	° ' "	' "	m s	h m s
Wed.	1	12 29 27.80	S. 3 10 57.1	16 0.41	10 17.79	12 39 45.59
Thur.	2	12 33 5.33	3 34 14.3	16 0.70	10 36.81	12 43 42.14
Frid.	3	12 36 43.16	3 57 29.0	16 0.98	10 55.53	12 47 38.69
Sat.	4	12 40 21.30	4 20 40.8	16 1.26	11 13.94	12 51 35.24
Sun.	5	12 43 59.77	4 43 49.5	16 1.55	11 32.02	12 55 31.79
Mon.	6	12 47 38.59	5 6 54.6	16 1.83	11 49.75	12 59 28.35
Tues.	7	12 51 17.79	5 29 55.7	16 2.11	12 7.11	13 3 24.90
Wed.	8	12 54 57.37	5 52 52.5	16 2.40	12 24.08	13 7 21.45
Thur.	9	12 58 37.37	6 15 44.6	16 2.68	12 40.64	13 11 18.00
Frid.	10	13 2 17.80	6 38 31.7	16 2.96	12 56.76	13 15 14.56
Sat.	11	13 5 58.69	7 1 13.5	16 3.24	13 12.42	13 19 11.11
Sun.	12	13 9 40.06	7 23 49.4	16 3.52	13 27.60	13 23 7.66
Mon.	13	13 13 21.94	7 46 19.3	16 3.80	13 42.27	13 27 4.21
Tues.	14	13 17 4.35	8 8 42.8	16 4.07	13 56.42	13 31 0.77
Wed.	15	13 20 47.30	8 30 59.4	16 4.35	14 10.02	13 34 57.32
Thur.	16	13 24 30.82	8 53 8.9	16 4.62	14 23.05	13 38 53.87
Frid.	17	13 28 14.93	9 15 10.8	16 4.89	14 35.49	13 42 50.42
Sat.	18	13 31 59.65	9 37 4.8	16 5.15	14 47.33	13 46 46.98
Sun.	19	13 35 45.00	9 58 50.5	16 5.42	14 58.54	13 50 43.53
Mon.	20	13 39 30.99	10 20 27.5	16 5.69	15 9.10	13 54 40.08
Tues.	21	13 43 17.64	10 41 55.5	16 5.95	15 19.00	13 58 36.64
Wed.	22	13 47 4.96	11 3 14.0	16 6.21	15 28.23	14 2 33.19
Thur.	23	13 50 52.98	11 24 22.7	16 6.47	15 36.76	14 6 29.74
Frid.	24	13 54 41.71	11 45 21.1	16 6.73	15 44.58	14 10 26.30
Sat.	25	13 58 31.16	12 6 8.9	16 6.99	15 51.69	14 14 22.85
Sun.	26	14 2 21.34	12 26 45.7	16 7.25	15 58.07	14 18 19.40
Mon.	27	14 6 12.25	12 47 11.0	16 7.52	16 3.71	14 22 15.96
Tues.	28	14 10 3.92	13 7 24.4	16 7.77	16 8.60	14 26 12.51
Wed.	29	14 13 56.34	13 27 25.4	16 8.03	16 12.73	14 30 9.06
Thur.	30	14 17 49.52	13 47 13.8	16 8.29	16 16.10	14 34 5.62
Frid.	31	14 21 43.47	14 6 48.9	16 8.55	16 18.70	14 38 2.17
Sat.	32	14 25 38.20	S. 14 26 10.5	16 8.81	16 20.53	14 41 58.73

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

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
				h m s				
1	188° 1' 13.7	N. 0.32	0.0003465	11 18 22.97	16 14.09	16 15.18	59 35.06	59 39.05
2	189 0 18.0	0.33	.0002193	11 14 27.07	16 15.61	16 15.41	59 40.61	59 39.89
3	189 59 24.2	0.30	0.0000915	11 10 31.16	16 14.65	16 13.38	59 37.09	59 32.43
4	190 58 32.1	0.24	9.9999634	11 6 35.26	16 11.67	16 9.58	59 26.16	59 18.50
5	191 57 41.8	0.15	.9998350	11 2 39.35	16 7.17	16 4.49	59 9.66	58 59.83
6	192 56 53.3	N. 0.03	.9997065	10 58 43.44	16 1.59	15 58.49	58 49.17	58 37.80
7	193 56 6.4	S. 0.09	9.9995782	10 54 47.54	15 55.23	15 51.82	58 25.83	58 13.32
8	194 55 21.4	0.22	.9994502	10 50 51.63	15 48.28	15 44.62	58 0.33	57 46.88
9	195 54 38.1	0.36	.9993227	10 46 55.72	15 40.84	15 36.96	57 33.02	57 18.77
10	196 53 56.8	0.49	9.9991958	10 42 59.82	15 32.98	15 28.93	57 4.18	56 49.29
11	197 53 17.3	0.61	.9990696	10 39 3.91	15 24.81	15 20.67	56 34.20	56 18.99
12	198 52 39.8	0.70	.9989441	10 35 8.01	15 16.53	15 12.43	56 3.79	55 48.75
13	199 52 4.3	0.76	9.9988195	10 31 12.10	15 8.42	15 4.55	55 34.03	55 19.82
14	200 51 31.0	0.80	.9986957	10 27 16.19	15 0.87	14 57.44	55 6.32	54 53.75
15	201 50 59.7	0.82	.9985728	10 23 20.29	14 54.33	14 51.58	54 42.30	54 32.21
16	202 50 30.7	0.81	9.9984507	10 19 24.38	14 49.25	14 47.40	54 23.67	54 16.89
17	203 50 3.8	0.77	.9983294	10 15 28.47	14 46.09	14 45.34	54 12.06	54 9.33
18	204 49 39.2	0.71	.9982088	10 11 32.56	14 45.22	14 45.74	54 8.87	54 10.80
19	205 49 16.8	0.62	9.9980890	10 7 36.66	14 46.94	14 48.84	54 15.21	54 22.17
20	206 48 56.7	0.52	.9979697	10 3 40.75	14 51.44	14 54.74	54 31.70	54 43.81
21	207 48 38.9	0.41	.9978511	9 59 44.84	14 58.72	15 3.37	54 58.44	55 15.51
22	208 48 23.3	0.30	9.9977330	9 55 48.94	15 8.64	15 14.48	55 34.85	55 56.26
23	209 48 10.0	0.17	.9976154	9 51 53.03	15 20.80	15 27.53	56 19.47	56 44.15
24	210 47 58.9	S. 0.04	.9974981	9 47 57.12	15 34.54	15 41.72	57 9.90	57 36.24
25	211 47 50.0	N. 0.07	9.9973812	9 44 1.21	15 48.92	15 55.99	58 2.66	58 28.63
26	212 47 43.3	0.16	.9972645	9 40 5.31	16 2.77	16 9.10	58 53.52	59 16.73
27	213 47 38.6	0.23	.9971479	9 36 9.40	16 14.81	16 19.77	59 37.70	59 55.88
28	214 47 36.0	0.27	9.9970315	9 32 13.49	16 23.84	16 26.93	60 10.82	60 22.16
29	215 47 35.2	0.28	.9969152	9 28 17.58	16 28.97	16 29.95	60 29.67	60 33.27
30	216 47 36.3	0.26	.9967992	9 24 21.67	16 29.88	16 28.79	60 32.98	60 28.99
31	217 47 39.1	0.20	.9966835	9 20 25.76	16 26.77	16 23.91	60 21.57	60 11.11
32	218 47 43.5	N. 0.12	9.9965682	9 16 29.86	16 20.35	16 16.20	59 58.02	59 42.80

MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
	° ′ ″	° ′ ″	N. ° ′ ″	N. ° ′ ″	d	h m	h m
1	223 11 34.7	230 25 3.9	N. 5 4 8.3	N. 5 7 37.6	2.66	2 14.3	14 41.8
2	237 38 52.0	244 52 18.2	5 6 12.9	4 59 56.0	3.66	3 9.7	15 38.1
3	252 4 45.9	259 15 43.6	4 48 54.7	4 33 22.5	4.66	4 6.9	16 36.0
4	266 24 45.8	273 31 32.5	4 13 37.8	3 50 3.3	5.66	5 5.2	17 34.4
5	280 35 49.3	287 37 26.6	3 23 5.2	2 53 12.3	6.66	6 3.5	18 32.4
6	294 36 19.1	301 32 24.4	2 20 55.3	1 46 46.1	7.66	7 0.8	19 28.7
7	308 25 42.4	315 16 14.4	N. 1 11 17.7	N. 0 35 2.6	8.66	7 56.1	20 22.8
8	322 4 2.0	328 49 6.5	S. 0 1 26.4	S. 0 37 37.7	9.66	8 48.8	21 14.3
9	335 31 28.5	342 11 7.3	1 13 0.8	1 47 6.9	10.66	9 39.1	22 3.5
10	348 48 1.3	355 22 7.3	2 19 29.2	2 49 43.5	11.66	10 27.3	22 50.8
11	1 53 21.6	8 21 39.7	3 17 28.2	3 42 24.4	12.66	11 14.0	23 36.9
12	14 46 57.1	21 9 9.9	4 4 17.0	4 22 53.6	13.66	11 59.7	* *
13	27 28 15.3	33 44 12.2	4 38 5.2	4 49 46.1	14.66	12 44.9	0 22.3
14	39 57 2.2	46 6 49.2	4 57 53.4	5 2 26.9	15.66	13 30.3	1 7.6
15	52 13 40.4	58 17 46.8	5 3 28.9	5 1 3.6	16.66	14 16.1	1 53.1
16	64 19 22.5	70 18 45.7	4 55 17.0	4 46 16.5	17.66	15 2.5	2 39.2
17	76 16 18.0	82 12 24.6	4 34 10.8	4 19 9.3	18.66	15 49.6	3 26.0
18	88 7 34.0	94 2 17.7	4 1 22.2	3 41 0.1	19.66	16 37.3	4 13.4
19	99 57 10.0	105 52 47.3	3 18 14.4	2 53 17.0	20.66	17 25.3	5 1.3
20	111 49 48.1	117 48 52.2	2 26 20.1	1 57 37.2	21.66	18 13.4	5 49.3
21	123 50 40.3	129 55 53.0	1 27 22.6	S. 0 55 51.6	22.66	19 1.5	6 37.5
22	136 5 10.2	142 19 10.4	S. 0 23 21.3	N. 0 9 49.3	23.66	19 49.6	7 25.5
23	148 38 29.2	155 3 38.6	N. 0 43 19.4	1 16 45.5	24.66	20 37.9	8 13.7
24	161 35 5.4	168 13 9.6	1 49 42.1	2 21 40.8	25.66	21 26.6	9 2.2
25	174 58 3.5	181 49 50.0	2 52 11.4	3 20 41.6	26.66	22 16.5	9 51.4
26	188 48 21.4	195 53 19.1	3 46 38.5	4 9 28.8	27.66	23 7.9	10 42.0
27	203 4 12.5	210 20 19.8	4 28 40.9	4 43 45.6	28.66	* *	11 34.5
28	217 40 49.2	225 4 40.6	4 54 18.5	5 0 0.6	0.21	0 1.6	12 29.3
29	232 30 47.6	239 58 1.3	5 0 40.0	4 56 12.8	1.21	0 57.7	13 26.7
30	247 25 12.8	254 51 16.5	4 46 42.9	4 32 22.5	2.21	1 56.3	14 26.2
31	262 15 12.7	269 36 10.2	4 13 30.4	3 50 32.0	3.21	2 56.4	15 26.6
32	276 53 27.2	284 6 31.9	N. 3 23 57.4	N. 2 54 19.9	4.21	3 56.8	16 26.6

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY I.					FRIDAY 3.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	14 49 10.43	23.421	S. 10 57 57.2	101.51	0	16 44 59.93	24.753	S. 17 28 22.0	57.03
1	14 51 31.05	23.452	11 8 4.3	100.86	1	16 47 28.51	24.773	17 34 0.7	55.87
2	14 53 51.85	23.483	11 18 7.5	100.19	2	16 49 57.21	24.793	17 39 32.4	54.70
3	14 56 12.84	23.514	11 28 6.6	99.50	3	16 52 26.02	24.810	17 44 57.1	53.53
4	14 58 34.02	23.545	11 38 1.5	98.81	4	16 54 54.93	24.828	17 50 14.7	52.33
5	15 0 55.38	23.576	11 47 52.3	98.11	5	16 57 23.96	24.847	17 55 25.1	51.14
6	15 3 16.93	23.607	11 57 38.8	97.38	6	16 59 53.09	24.863	18 0 28.4	49.95
7	15 5 38.66	23.638	12 7 20.9	96.65	7	17 2 22.32	24.880	18 5 24.5	48.74
8	15 8 0.58	23.669	12 16 58.6	95.91	8	17 4 51.65	24.895	18 10 13.3	47.53
9	15 10 22.69	23.700	12 26 31.8	95.15	9	17 7 21.06	24.910	18 14 54.8	46.31
10	15 12 44.98	23.730	12 36 0.4	94.38	10	17 9 50.57	24.925	18 19 29.0	45.09
11	15 15 7.45	23.761	12 45 24.3	93.60	11	17 12 20.16	24.939	18 23 55.9	43.87
12	15 17 30.11	23.792	12 54 43.6	92.81	12	17 14 49.84	24.953	18 28 15.4	42.63
13	15 19 52.95	23.823	13 3 58.0	92.00	13	17 17 19.59	24.965	18 32 27.4	41.38
14	15 22 15.98	23.853	13 13 7.6	91.18	14	17 19 49.42	24.978	18 36 32.0	40.14
15	15 24 39.19	23.884	13 22 12.2	90.35	15	17 22 19.32	24.988	18 40 29.1	38.89
16	15 27 2.59	23.914	13 31 11.8	89.52	16	17 24 49.28	24.999	18 44 18.7	37.64
17	15 29 26.16	23.944	13 40 6.4	88.67	17	17 27 19.31	25.010	18 48 0.8	36.38
18	15 31 49.92	23.975	13 48 55.8	87.79	18	17 29 49.40	25.019	18 51 35.3	35.13
19	15 34 13.86	24.004	13 57 39.9	86.92	19	17 32 19.54	25.028	18 55 2.3	33.86
20	15 36 37.97	24.034	14 6 18.8	86.03	20	17 34 49.73	25.035	18 58 21.6	32.58
21	15 39 2.27	24.064	14 14 52.3	85.13	21	17 37 19.96	25.043	19 1 33.3	31.32
22	15 41 26.74	24.093	14 23 20.4	84.23	22	17 39 50.24	25.049	19 4 37.4	30.04
23	15 43 51.38	24.123	S. 14 31 43.0	83.31	23	17 42 20.55	25.055	S. 19 7 33.8	28.76
THURSDAY 2.					SATURDAY 4.				
0	15 46 16.21	24.152	S. 14 40 0.1	82.38	0	17 44 50.90	25.061	S. 19 10 22.5	27.47
1	15 48 41.20	24.180	14 48 11.5	81.43	1	17 47 21.28	25.065	19 13 3.4	26.18
2	15 51 6.37	24.209	14 56 17.2	80.48	2	17 49 51.68	25.068	19 15 36.7	24.90
3	15 53 31.71	24.238	15 4 17.2	79.52	3	17 52 22.10	25.072	19 18 2.2	23.61
4	15 55 57.22	24.266	15 12 11.4	78.54	4	17 54 52.54	25.074	19 20 20.0	22.33
5	15 58 22.90	24.293	15 19 59.7	77.55	5	17 57 22.99	25.076	19 22 30.1	21.03
6	16 0 48.74	24.321	15 27 42.0	76.56	6	17 59 53.45	25.077	19 24 32.3	19.73
7	16 3 14.75	24.348	15 35 18.4	75.56	7	18 2 23.91	25.077	19 26 26.8	18.43
8	16 5 40.91	24.374	15 42 48.7	74.53	8	18 4 54.37	25.076	19 28 13.5	17.13
9	16 8 7.24	24.402	15 50 12.8	73.51	9	18 7 24.82	25.074	19 29 52.4	15.83
10	16 10 33.73	24.428	15 57 30.8	72.48	10	18 9 55.26	25.072	19 31 23.4	14.53
11	16 13 0.38	24.454	16 4 42.5	71.43	11	18 12 25.68	25.069	19 32 46.7	13.23
12	16 15 27.18	24.479	16 11 47.9	70.38	12	18 14 56.09	25.066	19 34 2.2	11.93
13	16 17 54.13	24.504	16 18 47.0	69.32	13	18 17 26.47	25.061	19 35 9.9	10.63
14	16 20 21.23	24.529	16 25 39.7	68.24	14	18 19 56.82	25.056	19 36 9.7	9.32
15	16 22 48.48	24.553	16 32 25.9	67.15	15	18 22 27.14	25.050	19 37 1.7	8.03
16	16 25 15.87	24.578	16 39 5.5	66.06	16	18 24 57.42	25.043	19 37 46.0	6.73
17	16 27 43.41	24.602	16 45 38.6	64.97	17	18 27 27.66	25.036	19 38 22.4	5.42
18	16 30 11.09	24.624	16 52 5.1	63.86	18	18 29 57.85	25.028	19 38 51.0	4.12
19	16 32 38.90	24.647	16 58 24.9	62.74	19	18 32 27.99	25.019	19 39 11.8	2.83
20	16 35 6.85	24.669	17 4 38.0	61.62	20	18 34 58.08	25.009	19 39 24.9	1.53
21	16 37 34.93	24.691	17 10 44.3	60.48	21	18 37 28.10	24.998	19 39 30.1	0.23
22	16 40 3.14	24.713	17 16 43.7	59.33	22	18 39 58.06	24.988	19 39 27.6	1.07
23	16 42 31.48	24.733	17 22 36.3	58.19	23	18 42 27.95	24.976	19 39 17.3	2.37
24	16 44 59.93	24.753	S. 17 28 22.0	57.03	24	18 44 57.77	24.963	S. 19 38 59.2	3.66

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 5.					TUESDAY 7.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	18 44 57.77	24.963	S. 19 38 59.2	3.66	0	20 42 7.23	23.653	S. 17 0 53.6	59.81
1	18 47 27.51	24.950	19 38 33.4	4.94	1	20 44 29.04	23.615	16 54 51.8	60.80
2	18 49 57.17	24.936	19 37 59.9	6.23	2	20 46 50.61	23.577	16 48 44.0	61.79
3	18 52 26.74	24.921	19 37 18.7	7.52	3	20 49 11.96	23.539	16 42 30.3	62.76
4	18 54 56.22	24.906	19 36 29.7	8.80	4	20 51 33.08	23.500	16 36 10.9	63.72
5	18 57 25.61	24.889	19 35 33.1	10.07	5	20 53 53.96	23.462	16 29 45.7	64.68
6	18 59 54.89	24.872	19 34 28.9	11.34	6	20 56 14.62	23.423	16 23 14.8	65.62
7	19 2 24.07	24.855	19 33 17.0	12.62	7	20 58 35.04	23.384	16 16 38.3	66.55
8	19 4 53.15	24.838	19 31 57.5	13.88	8	21 0 55.23	23.345	16 9 56.2	67.48
9	19 7 22.12	24.818	19 30 30.4	15.16	9	21 3 15.18	23.306	16 3 8.6	68.39
10	19 9 50.97	24.798	19 28 55.6	16.42	10	21 5 34.90	23.267	15 56 15.5	69.30
11	19 12 19.70	24.778	19 27 13.4	17.66	11	21 7 54.38	23.228	15 49 17.0	70.19
12	19 14 48.30	24.757	19 25 23.7	18.92	12	21 10 13.63	23.188	15 42 13.2	71.08
13	19 17 16.78	24.736	19 23 26.4	20.17	13	21 12 32.64	23.148	15 35 4.1	71.95
14	19 19 45.13	24.713	19 21 21.7	21.41	14	21 14 51.41	23.108	15 27 49.8	72.82
15	19 22 13.34	24.691	19 19 9.5	22.65	15	21 17 9.94	23.069	15 20 30.3	73.68
16	19 24 41.42	24.668	19 16 49.9	23.88	16	21 19 28.24	23.030	15 13 5.7	74.52
17	19 27 9.35	24.643	19 14 22.9	25.11	17	21 21 46.30	22.990	15 5 36.1	75.35
18	19 29 37.13	24.618	19 11 48.6	26.33	18	21 24 4.12	22.949	14 58 1.5	76.18
19	19 32 4.77	24.593	19 9 7.0	27.54	19	21 26 21.69	22.909	14 50 22.0	76.99
20	19 34 32.25	24.567	19 6 18.1	28.76	20	21 28 39.03	22.870	14 42 37.6	77.80
21	19 36 59.57	24.541	19 3 21.9	29.96	21	21 30 56.13	22.831	14 34 48.4	78.60
22	19 39 26.74	24.514	19 0 18.6	31.16	22	21 33 13.00	22.791	14 26 54.4	79.38
23	19 41 53.74	24.487	S. 18 57 8.0	32.36	23	21 35 29.62	22.751	S. 14 18 55.8	80.15
MONDAY 6.					WEDNESDAY 8.				
0	19 44 20.58	24.458	S. 18 53 50.3	33.54	0	21 37 46.01	22.711	S. 14 10 52.6	80.92
1	19 46 47.24	24.429	18 50 25.5	34.73	1	21 40 2.15	22.671	14 2 44.8	81.67
2	19 49 13.73	24.400	18 46 53.6	35.89	2	21 42 18.06	22.632	13 54 32.6	82.41
3	19 51 40.04	24.371	18 43 14.8	37.06	3	21 44 33.73	22.592	13 46 15.9	83.15
4	19 54 6.18	24.341	18 39 28.9	38.23	4	21 46 49.16	22.553	13 37 54.8	83.88
5	19 56 32.13	24.310	18 35 36.0	39.38	5	21 49 4.36	22.513	13 29 29.4	84.58
6	19 58 57.90	24.279	18 31 36.3	40.53	6	21 51 19.32	22.473	13 20 59.8	85.28
7	20 1 23.48	24.248	18 27 29.7	41.67	7	21 53 34.04	22.435	13 12 26.0	85.98
8	20 3 48.87	24.216	18 23 16.3	42.79	8	21 55 48.54	22.396	13 3 48.1	86.66
9	20 6 14.07	24.183	18 18 56.2	43.92	9	21 58 2.79	22.356	12 55 6.1	87.33
10	20 8 39.07	24.150	18 14 29.3	45.04	10	22 0 16.81	22.318	12 46 20.2	87.98
11	20 11 3.87	24.117	18 9 55.7	46.15	11	22 2 30.60	22.279	12 37 30.3	88.63
12	20 13 28.47	24.083	18 5 15.5	47.25	12	22 4 44.16	22.241	12 28 36.6	89.28
13	20 15 52.87	24.049	18 0 28.7	48.34	13	22 6 57.49	22.202	12 19 39.0	89.91
14	20 18 17.06	24.015	17 55 35.4	49.43	14	22 9 10.58	22.163	12 10 37.7	90.52
15	20 20 41.05	23.980	17 50 35.6	50.51	15	22 11 23.45	22.126	12 1 32.8	91.13
16	20 23 4.82	23.944	17 45 29.3	51.58	16	22 13 36.09	22.088	11 52 24.2	91.73
17	20 25 28.38	23.909	17 40 16.7	52.63	17	22 15 48.50	22.050	11 43 12.1	92.32
18	20 27 51.73	23.874	17 34 57.7	53.69	18	22 18 0.69	22.013	11 33 56.4	92.89
19	20 30 14.87	23.838	17 29 32.4	54.73	19	22 20 12.66	21.976	11 24 37.4	93.45
20	20 32 37.78	23.801	17 24 0.9	55.77	20	22 22 24.40	21.938	11 15 15.0	94.01
21	20 35 0.48	23.764	17 18 23.2	56.79	21	22 24 35.92	21.902	11 5 49.3	94.56
22	20 37 22.95	23.727	17 12 39.4	57.81	22	22 26 47.22	21.865	10 56 20.3	95.09
23	20 39 45.20	23.690	17 6 49.5	58.82	23	22 28 58.30	21.828	10 46 48.2	95.61
24	20 42 7.23	23.653	S. 17 0 53.6	59.81	24	22 31 9.16	21.792	S. 10 37 13.0	96.12

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 9.					SATURDAY 11.				
	h m s	s	S. ° ' "	" "		h m s	s	S. ° ' "	" "
0	22 31 9.16	21.792	10 37 13.0	96.12	0	0 12 10.27	20.433	2 16 4.6	108.89
1	22 33 19.80	21.756	10 27 34.8	96.63	1	0 14 12.81	20.413	2 5 11.1	108.93
2	22 35 30.23	21.721	10 17 53.5	97.13	2	0 16 15.23	20.394	1 54 17.5	108.94
3	22 37 40.45	21.686	10 8 9.3	97.60	3	0 18 17.54	20.376	1 43 23.8	108.95
4	22 39 50.46	21.651	9 58 22.3	98.08	4	0 20 19.74	20.358	1 32 30.1	108.96
5	22 42 0.26	21.616	9 48 32.4	98.54	5	0 22 21.83	20.339	1 21 36.3	108.96
6	22 44 9.85	21.581	9 38 39.8	98.98	6	0 24 23.81	20.322	1 10 42.6	108.94
7	22 46 19.23	21.547	9 28 44.6	99.43	7	0 26 25.69	20.305	0 59 49.0	108.92
8	22 48 28.41	21.513	9 18 46.7	99.86	8	0 28 27.47	20.288	0 48 55.6	108.88
9	22 50 37.38	21.479	9 8 46.3	100.28	9	0 30 29.15	20.272	0 38 2.4	108.84
10	22 52 46.16	21.446	8 58 43.4	100.68	10	0 32 30.73	20.256	0 27 9.5	108.79
11	22 54 54.73	21.413	8 48 38.1	101.08	11	0 34 32.22	20.241	0 16 16.9	108.74
12	22 57 3.11	21.380	8 38 30.4	101.48	12	0 36 33.62	20.226	S. 0 5 24.6	108.68
13	22 59 11.29	21.348	8 28 20.4	101.86	13	0 38 34.93	20.211	N. 0 5 27.2	108.59
14	23 1 19.28	21.315	8 18 8.1	102.23	14	0 40 36.15	20.197	0 16 18.5	108.51
15	23 3 27.07	21.283	8 7 53.7	102.58	15	0 42 37.29	20.183	0 27 9.3	108.43
16	23 5 34.67	21.252	7 57 37.2	102.93	16	0 44 38.35	20.169	0 37 59.6	108.33
17	23 7 42.09	21.221	7 47 18.6	103.27	17	0 46 39.32	20.155	0 48 49.2	108.21
18	23 9 49.32	21.190	7 36 58.0	103.60	18	0 48 40.21	20.143	0 59 38.1	108.09
19	23 11 56.37	21.159	7 26 35.4	103.92	19	0 50 41.03	20.131	1 10 26.3	107.97
20	23 14 3.23	21.129	7 16 11.0	104.22	20	0 52 41.78	20.118	1 21 13.7	107.83
21	23 16 9.92	21.099	7 5 44.8	104.52	21	0 54 42.45	20.107	1 32 0.3	107.69
22	23 18 16.42	21.069	6 55 16.8	104.81	22	0 56 43.06	20.096	1 42 46.0	107.54
23	23 20 22.75	21.041	S. 6 44 47.1	105.08	23	0 58 43.60	20.084	N. 1 53 30.8	107.38
FRIDAY 10.					SUNDAY 12.				
	h m s	s	S. ° ' "	" "		h m s	s	S. ° ' "	" "
0	23 22 28.91	21.013	S. 6 34 15.8	105.35	0	1 0 44.07	20.074	N. 2 4 14.6	107.21
1	23 24 34.90	20.983	6 23 42.9	105.61	1	1 2 44.49	20.064	2 14 57.3	107.04
2	23 26 40.71	20.955	6 13 8.5	105.86	2	1 4 44.84	20.053	2 25 39.0	106.86
3	23 28 46.36	20.928	6 2 32.6	106.10	3	1 6 45.13	20.044	2 36 19.6	106.67
4	23 30 51.85	20.901	5 51 55.3	106.33	4	1 8 45.37	20.035	2 46 59.0	106.47
5	23 32 57.17	20.873	5 41 16.7	106.54	5	1 10 45.55	20.027	2 57 37.2	106.27
6	23 35 2.32	20.846	5 30 36.8	106.75	6	1 12 45.69	20.018	3 8 14.2	106.05
7	23 37 7.32	20.821	5 19 55.7	106.95	7	1 14 45.77	20.010	3 18 49.8	105.83
8	23 39 12.17	20.795	5 9 13.4	107.14	8	1 16 45.81	20.002	3 29 24.1	105.59
9	23 41 16.86	20.769	4 58 30.0	107.33	9	1 18 45.80	19.995	3 39 56.9	105.35
10	23 43 21.40	20.744	4 47 45.5	107.50	10	1 20 45.75	19.988	3 50 28.3	105.11
11	23 45 25.79	20.719	4 37 0.0	107.66	11	1 22 45.66	19.981	4 0 58.2	104.86
12	23 47 30.03	20.695	4 26 13.6	107.80	12	1 24 45.52	19.974	4 11 26.6	104.60
13	23 49 34.13	20.671	4 15 26.4	107.94	13	1 26 45.35	19.969	4 21 53.4	104.33
14	23 51 38.08	20.647	4 4 38.3	108.08	14	1 28 45.15	19.964	4 32 18.5	104.05
15	23 53 41.89	20.624	3 53 49.5	108.20	15	1 30 44.92	19.958	4 42 42.0	103.78
16	23 55 45.57	20.602	3 42 59.9	108.32	16	1 32 44.65	19.953	4 53 3.8	103.48
17	23 57 49.11	20.578	3 32 9.7	108.42	17	1 34 44.36	19.949	5 3 23.8	103.18
18	23 59 52.51	20.557	3 21 18.9	108.52	18	1 36 44.04	19.944	5 13 42.0	102.88
19	0 1 55.79	20.535	3 10 27.5	108.60	19	1 38 43.69	19.940	5 23 58.3	102.56
20	0 3 58.93	20.513	2 59 35.7	108.68	20	1 40 43.32	19.937	5 34 12.7	102.23
21	0 6 1.95	20.493	2 48 43.4	108.74	21	1 42 42.93	19.934	5 44 25.1	101.91
22	0 8 4.85	20.473	2 37 50.8	108.80	22	1 44 42.53	19.931	5 54 35.6	101.58
23	0 10 7.62	20.452	2 26 57.8	108.85	23	1 46 42.10	19.928	6 4 44.1	101.23
24	0 12 10.27	20.433	S. 2 16 4.6	108.89	24	1 48 41.66	19.926	N. 6 14 50.4	100.88

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	
MONDAY 13.					WEDNESDAY 15.					
	h m s	s	N.	° ' "		h m s	s	N.	° ' "	
0	1 48 41.66	19.926	N.	6 14 50.4	100.88	0	3 24 35.45	20.119	N. 13 26 21.6	76.59
1	1 50 41.21	19.924		6 24 54.7	100.53	1	3 26 36.19	20.128	13 33 59.2	75.94
2	1 52 40.75	19.922		6 34 56.8	100.17	2	3 28 36.98	20.137	13 41 32.9	75.29
3	1 54 40.27	19.920		6 44 56.7	99.79	3	3 30 37.83	20.147	13 49 2.7	74.63
4	1 56 39.79	19.920		6 54 54.3	99.42	4	3 32 38.74	20.156	13 56 28.5	73.97
5	1 58 39.31	19.919		7 4 49.7	99.03	5	3 34 39.70	20.165	14 3 50.3	73.31
6	2 0 38.82	19.918		7 14 42.7	98.64	6	3 36 40.72	20.174	14 11 8.2	72.64
7	2 2 38.32	19.918		7 24 33.4	98.25	7	3 38 41.79	20.183	14 18 22.0	71.96
8	2 4 37.83	19.918		7 34 21.7	97.84	8	3 40 42.92	20.193	14 25 31.7	71.28
9	2 6 37.34	19.918		7 44 7.5	97.43	9	3 42 44.11	20.203	14 32 37.4	70.60
10	2 8 36.85	19.919		7 53 50.8	97.01	10	3 44 45.36	20.213	14 39 38.9	69.91
11	2 10 36.37	19.920		8 3 31.6	96.59	11	3 46 46.67	20.223	14 46 36.3	69.22
12	2 12 35.89	19.922		8 13 9.9	96.16	12	3 48 48.04	20.233	14 53 29.5	68.52
13	2 14 35.43	19.923		8 22 45.5	95.72	13	3 50 49.46	20.243	15 0 18.5	67.82
14	2 16 34.97	19.924		8 32 18.5	95.28	14	3 52 50.95	20.253	15 7 3.3	67.11
15	2 18 34.52	19.927		8 41 48.8	94.82	15	3 54 52.50	20.264	15 13 43.8	66.39
16	2 20 34.09	19.929		8 51 16.3	94.36	16	3 56 54.12	20.274	15 20 20.0	65.68
17	2 22 33.67	19.931		9 0 41.1	93.90	17	3 58 55.79	20.284	15 26 51.9	64.96
18	2 24 33.26	19.934		9 10 3.1	93.43	18	4 0 57.53	20.295	15 33 19.5	64.23
19	2 26 32.88	19.938		9 19 22.3	92.96	19	4 2 59.33	20.305	15 39 42.7	63.51
20	2 28 32.51	19.941		9 28 38.6	92.48	20	4 5 1.19	20.316	15 46 1.6	62.78
21	2 30 32.17	19.945		9 37 52.0	91.98	21	4 7 3.12	20.326	15 52 16.0	62.03
22	2 32 31.85	19.948		9 47 2.4	91.48	22	4 9 5.10	20.336	15 58 26.0	61.30
23	2 34 31.55	19.952	N.	9 56 9.8	90.98	23	4 11 7.15	20.348	N. 16 4 31.6	60.55
TUESDAY 14.					THURSDAY 16.					
	h m s	s	N.	° ' "		h m s	s	N.	° ' "	
0	2 36 31.27	19.956	N.	10 5 14.2	90.48	0	4 13 9.27	20.358	N. 16 10 32.6	59.79
1	2 38 31.02	19.961		10 14 15.6	89.97	1	4 15 11.45	20.369	16 16 29.1	59.04
2	2 40 30.80	19.966		10 23 13.8	89.45	2	4 17 13.70	20.380	16 22 21.1	58.29
3	2 42 30.61	19.971		10 32 9.0	88.93	3	4 19 16.01	20.391	16 28 8.6	57.53
4	2 44 30.45	19.976		10 41 0.9	88.38	4	4 21 18.39	20.402	16 33 51.5	56.77
5	2 46 30.32	19.981		10 49 49.6	87.85	5	4 23 20.83	20.413	16 39 29.8	55.99
6	2 48 30.22	19.987		10 58 35.1	87.32	6	4 25 23.34	20.423	16 45 3.4	55.22
7	2 50 30.16	19.993		11 7 17.4	86.77	7	4 27 25.91	20.433	16 50 32.4	54.44
8	2 52 30.13	19.998		11 15 56.3	86.21	8	4 29 28.54	20.444	16 55 56.7	53.67
9	2 54 30.14	20.005		11 24 31.9	85.64	9	4 31 31.24	20.455	17 1 16.4	52.88
10	2 56 30.19	20.012		11 33 4.0	85.08	10	4 33 34.00	20.466	17 6 31.3	52.09
11	2 58 30.28	20.018		11 41 32.8	84.52	11	4 35 36.83	20.478	17 11 41.5	51.31
12	3 0 30.41	20.024		11 49 58.2	83.93	12	4 37 39.73	20.488	17 16 47.0	50.51
13	3 2 30.57	20.031		11 58 20.0	83.35	13	4 39 42.69	20.498	17 21 47.6	49.71
14	3 4 30.78	20.039		12 6 38.4	82.77	14	4 41 45.71	20.509	17 26 43.5	48.92
15	3 6 31.04	20.047		12 14 53.2	82.17	15	4 43 48.80	20.520	17 31 34.6	48.11
16	3 8 31.34	20.053		12 23 4.4	81.57	16	4 45 51.95	20.530	17 36 20.8	47.29
17	3 10 31.68	20.061		12 31 12.0	80.97	17	4 47 55.16	20.541	17 41 2.1	46.48
18	3 12 32.07	20.069		12 39 16.0	80.36	18	4 49 58.44	20.552	17 45 38.6	45.68
19	3 14 32.51	20.078		12 47 16.3	79.74	19	4 52 1.78	20.562	17 50 10.2	44.85
20	3 16 33.00	20.085		12 55 12.9	79.12	20	4 54 5.18	20.573	17 54 36.8	44.03
21	3 18 33.53	20.093		13 3 5.7	78.49	21	4 56 8.65	20.583	17 58 58.6	43.22
22	3 20 34.12	20.103		13 10 54.8	77.87	22	4 58 12.18	20.593	18 3 15.4	42.38
23	3 22 34.76	20.111		13 18 40.1	77.23	23	5 0 15.77	20.604	18 7 27.2	41.55
24	3 24 35.45	20.119	N.	13 26 21.6	76.59	24	5 2 19.43	20.614	N. 18 11 34.0	40.73

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 17.					SUNDAY 19.				
	h m s	s	N. 18 11 34.0	40 73		h m s	s	N. 19 46 43.6	1 73
0	5 2 19.43	20.614	18 15 35.9	39.89	0	6 42 15.82	20.979	19 46 30.5	2.65
1	5 4 23.14	20.624	18 19 32.7	39.05	1	6 44 21.71	20.983	19 46 11.8	3.58
2	5 6 26.92	20.634	18 23 24.5	38.21	2	6 46 27.62	20.988	19 45 47.6	4.49
3	5 8 30.75	20.644	18 27 11.2	37.36	3	6 48 33.56	20.992	19 45 17.9	5.41
4	5 10 34.65	20.655	18 30 52.8	36.52	4	6 50 39.52	20.996	19 44 42.7	6.33
5	5 12 38.61	20.664	18 34 29.4	35.68	5	6 52 45.51	20.999	19 44 2.0	7.24
6	5 14 42.62	20.673	18 38 0.9	34.82	6	6 54 51.51	21.002	19 43 15.8	8.16
7	5 16 46.69	20.683	18 41 27.2	33.96	7	6 56 57.54	21.006	19 42 24.1	9.08
8	5 18 50.82	20.693	18 44 48.4	33.11	8	6 59 3.58	21.009	19 41 26.9	10.00
9	5 20 55.01	20.703	18 48 4.5	32.25	9	7 1 9.65	21.013	19 40 24.1	10.93
10	5 22 59.26	20.713	18 51 15.4	31.38	10	7 3 15.73	21.015	19 39 15.8	11.84
11	5 25 3.56	20.722	18 54 21.1	30.53	11	7 5 21.83	21.018	19 38 2.0	12.76
12	5 27 7.92	20.731	18 57 21.7	29.66	12	7 7 27.95	21.021	19 36 42.7	13.68
13	5 29 12.33	20.740	19 0 17.0	28.78	13	7 9 34.08	21.023	19 35 17.9	14.59
14	5 31 16.80	20.749	19 3 7.1	27.92	14	7 11 40.23	21.026	19 33 47.6	15.52
15	5 33 21.32	20.758	19 5 52.0	27.05	15	7 13 46.39	21.028	19 32 11.7	16.44
16	5 35 25.90	20.768	19 8 31.7	26.18	16	7 15 52.56	21.030	19 30 30.3	17.35
17	5 37 30.53	20.775	19 11 6.1	25.29	17	7 17 58.75	21.033	19 28 43.5	18.27
18	5 39 35.20	20.783	19 13 35.2	24.41	18	7 20 4.95	21.034	19 26 51.1	19.19
19	5 41 39.93	20.793	19 15 59.0	23.53	19	7 22 11.16	21.036	19 24 53.2	20.11
20	5 43 44.71	20.801	19 18 17.6	22.66	20	7 24 17.38	21.038	19 22 49.8	21.03
21	5 45 49.54	20.809	19 20 30.9	21.77	21	7 26 23.61	21.039	19 20 40.9	21.94
22	5 47 54.42	20.818	N. 19 22 38.8	20.88	22	7 28 29.85	21.041	N. 19 18 26.5	22.86
23	5 49 59.35	20.826			23	7 30 36.10	21.042		
SATURDAY 18.					MONDAY 20.				
0	5 52 4.33	20.833	N. 19 24 41.4	19.99	0	7 32 42.35	21.043	N. 19 16 6.6	23.78
1	5 54 9.35	20.840	19 26 38.7	19.10	1	7 34 48.61	21.044	19 13 41.2	24.68
2	5 56 14.41	20.848	19 28 30.6	18.21	2	7 36 54.88	21.045	19 11 10.4	25.60
3	5 58 19.53	20.857	19 30 17.2	17.32	3	7 39 1.15	21.045	19 8 34.0	26.52
4	6 0 24.69	20.863	19 31 58.4	16.42	4	7 41 7.42	21.046	19 5 52.2	27.43
5	6 2 29.89	20.870	19 33 34.2	15.53	5	7 43 13.70	21.048	19 3 4.9	28.34
6	6 4 35.13	20.877	19 35 4.7	14.63	6	7 45 19.99	21.048	19 0 12.1	29.25
7	6 6 40.41	20.884	19 36 29.7	13.73	7	7 47 26.27	21.048	18 57 13.9	30.16
8	6 8 45.74	20.892	19 37 49.4	12.83	8	7 49 32.56	21.048	18 54 10.2	31.07
9	6 10 51.11	20.898	19 39 3.6	11.92	9	7 51 38.85	21.048	18 51 1.1	31.98
10	6 12 56.51	20.903	19 40 12.4	11.02	10	7 53 45.14	21.049	18 47 46.5	32.88
11	6 15 1.95	20.910	19 41 15.8	10.12	11	7 55 51.44	21.049	18 44 26.5	33.79
12	6 17 7.43	20.917	19 42 13.8	9.22	12	7 57 57.73	21.048	18 41 1.0	34.69
13	6 19 12.95	20.923	19 43 6.4	8.31	13	8 0 4.02	21.048	18 37 30.2	35.59
14	6 21 18.51	20.929	19 43 53.5	7.39	14	8 2 10.31	21.048	18 33 53.9	36.50
15	6 23 24.10	20.934	19 44 35.1	6.48	15	8 4 16.60	21.048	18 30 12.2	37.40
16	6 25 29.72	20.940	19 45 11.3	5.58	16	8 6 22.89	21.048	18 26 25.1	38.30
17	6 27 35.38	20.945	19 45 42.0	4.66	17	8 8 29.18	21.048	18 22 32.6	39.19
18	6 29 41.06	20.950	19 46 7.2	3.75	18	8 10 35.47	21.048	18 18 34.8	40.09
19	6 31 46.78	20.956	19 46 27.0	2.84	19	8 12 41.75	21.047	18 14 31.5	40.99
20	6 33 52.53	20.961	19 46 41.3	1.93	20	8 14 48.03	21.047	18 10 22.9	41.88
21	6 35 58.31	20.966	19 46 50.1	1.02	21	8 16 54.31	21.046	18 6 9.0	42.77
22	6 38 4.12	20.971	19 46 53.5	0.10	22	8 19 0.58	21.045	18 1 49.7	43.66
23	6 40 9.96	20.975	19 46 51.3	0.83	23	8 21 6.85	21.044	17 57 25.1	44.54
24	6 42 15.82	20.979	N. 19 46 43.6	1.73	24	8 23 13.11	21.043	N. 17 52 55.2	45.43

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 21.					THURSDAY 23.				
	h m s	s	'	"		h m s	s	'	"
0	8 23 13.11	21.043	N. 17 52 55.2	45.43	0	10 4 11.50	21.059	N. 12 37 38.8	84.68
1	8 25 19.37	21.043	17 48 20.0	46.32	1	10 6 17.86	21.062	12 29 8.5	85.41
2	8 27 25.63	21.043	17 43 39.4	47.20	2	10 8 24.24	21.065	12 20 33.9	86.13
3	8 29 31.88	21.042	17 38 53.6	48.08	3	10 10 30.64	21.068	12 11 55.0	86.84
4	8 31 38.13	21.042	17 34 2.5	48.95	4	10 12 37.06	21.073	12 3 11.8	87.55
5	8 33 44.38	21.041	17 29 6.2	49.83	5	10 14 43.51	21.078	11 54 24.4	88.25
6	8 35 50.62	21.039	17 24 4.6	50.70	6	10 16 49.99	21.082	11 45 32.8	88.96
7	8 37 56.85	21.038	17 18 57.8	51.58	7	10 18 56.49	21.085	11 36 36.9	89.65
8	8 40 3.08	21.038	17 13 45.7	52.44	8	10 21 3.01	21.090	11 27 37.0	90.33
9	8 42 9.30	21.037	17 8 28.5	53.31	9	10 23 9.57	21.096	11 18 32.9	91.03
10	8 44 15.52	21.037	17 3 6.0	54.18	10	10 25 16.16	21.101	11 9 24.7	91.71
11	8 46 21.74	21.036	16 57 38.4	55.03	11	10 27 22.78	21.106	11 0 12.4	92.38
12	8 48 27.95	21.034	16 52 5.6	55.90	12	10 29 29.43	21.112	10 50 56.2	93.04
13	8 50 34.15	21.033	16 46 27.6	56.75	13	10 31 36.12	21.118	10 41 35.9	93.71
14	8 52 40.35	21.033	16 40 44.6	57.60	14	10 33 42.84	21.123	10 32 11.7	94.36
15	8 54 46.55	21.033	16 34 56.4	58.46	15	10 35 49.60	21.131	10 22 43.6	95.01
16	8 56 52.74	21.032	16 29 3.1	59.31	16	10 37 56.41	21.138	10 13 11.6	95.65
17	8 58 58.93	21.032	16 23 4.7	60.15	17	10 40 3.25	21.143	10 3 35.8	96.28
18	9 1 5.12	21.031	16 17 1.3	60.99	18	10 42 10.13	21.151	9 53 56.2	96.92
19	9 3 11.30	21.030	16 10 52.8	61.84	19	10 44 17.06	21.159	9 44 12.8	97.55
20	9 5 17.48	21.030	16 4 39.2	62.68	20	10 46 24.04	21.167	9 34 25.6	98.17
21	9 7 23.66	21.029	15 58 20.7	63.51	21	10 48 31.06	21.175	9 24 34.8	98.78
22	9 9 29.83	21.029	15 51 57.1	64.34	22	10 50 38.14	21.183	9 14 40.3	99.38
23	9 11 36.01	21.029	N. 15 45 28.6	65.17	23	10 52 45.26	21.192	N. 9 4 42.2	99.97
WEDNESDAY 22.					FRIDAY 24.				
	h m s	s	'	"		h m s	s	'	"
0	9 13 42.18	21.028	N. 15 38 55.1	65.99	0	10 54 52.44	21.201	N. 8 54 40.6	100.57
1	9 15 48.35	21.028	15 32 16.7	66.82	1	10 56 59.67	21.210	8 44 35.4	101.16
2	9 17 54.52	21.028	15 25 33.3	67.63	2	10 59 6.96	21.220	8 34 26.7	101.73
3	9 20 0.68	21.028	15 18 45.1	68.45	3	11 1 14.31	21.229	8 24 14.6	102.31
4	9 22 6.85	21.029	15 11 51.9	69.27	4	11 3 21.71	21.239	8 13 59.0	102.88
5	9 24 13.03	21.029	15 4 53.9	70.07	5	11 5 20.18	21.250	8 3 40.1	103.43
6	9 26 19.20	21.029	14 57 51.1	70.88	6	11 7 36.71	21.261	7 53 17.9	103.98
7	9 28 25.38	21.030	14 50 43.4	71.68	7	11 9 44.31	21.273	7 42 52.4	104.52
8	9 30 31.56	21.030	14 43 31.0	72.47	8	11 11 51.98	21.283	7 32 23.7	105.05
9	9 32 37.74	21.031	14 36 13.8	73.27	9	11 13 59.71	21.295	7 21 51.8	105.58
10	9 34 43.93	21.032	14 28 51.8	74.06	10	11 16 7.52	21.308	7 11 16.7	106.11
11	9 36 50.12	21.033	14 21 25.1	74.84	11	11 18 15.40	21.320	7 0 38.5	106.62
12	9 38 56.32	21.033	14 13 53.7	75.63	12	11 20 23.36	21.333	6 49 57.3	107.12
13	9 41 2.52	21.035	14 6 17.6	76.41	13	11 22 31.39	21.345	6 39 13.1	107.62
14	9 43 8.74	21.037	13 58 36.8	77.18	14	11 24 39.50	21.359	6 28 25.9	108.11
15	9 45 14.96	21.038	13 50 51.4	77.95	15	11 26 47.70	21.373	6 17 35.8	108.58
16	9 47 21.19	21.039	13 43 1.4	78.71	16	11 28 55.98	21.387	6 6 42.9	109.05
17	9 49 27.43	21.041	13 35 6.9	79.47	17	11 31 4.34	21.401	5 55 47.2	109.52
18	9 51 33.68	21.043	13 27 7.8	80.23	18	11 33 12.79	21.417	5 44 48.7	109.97
19	9 53 39.95	21.046	13 19 4.1	80.98	19	11 35 21.34	21.432	5 33 47.5	110.42
20	9 55 46.23	21.048	13 10 56.0	81.73	20	11 37 29.97	21.447	5 22 43.7	110.86
21	9 57 52.52	21.050	13 2 43.3	82.48	21	11 39 38.70	21.463	5 11 37.2	111.28
22	9 59 58.83	21.053	12 54 26.2	83.22	22	11 41 47.53	21.480	5 0 28.3	111.70
23	10 2 5.15	21.056	12 46 4.7	83.95	23	11 43 56.46	21.496	4 49 16.8	112.12
24	10 4 11.50	21.059	N. 12 37 38.8	84.68	24	11 46 5.48	21.513	N. 4 38 2.9	112.53

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 25.					MONDAY 27.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	11 46 5.48	21 513	N. 4 38 2.9	112 53	0	13 32 1.71	22 769	S. 4 48 28.6	119.00
1	11 48 14.61	21 531	4 26 46.5	112 92	1	13 34 18.43	22 804	5 0 22.1	118.83
2	11 50 23.85	21 548	4 15 27.9	113 29	2	13 36 35.36	22 839	5 12 14.5	118.64
3	11 52 33.19	21 566	4 4 7.0	113 67	3	13 38 52.50	22 875	5 24 5.8	118.44
4	11 54 42.64	21 584	3 52 43.9	114 03	4	13 41 9.86	22 911	5 35 55.8	118.23
5	11 56 52.20	21 603	3 41 18.6	114 39	5	13 43 27.43	22 946	5 47 44.5	118.00
6	11 59 1.88	21 623	3 29 51.2	114 73	6	13 45 45.21	22 982	5 59 31.8	117.75
7	12 1 11.68	21 643	3 18 21.8	115 07	7	13 48 3.21	23 018	6 11 17.5	117.48
8	12 3 21.59	21 663	3 6 50.4	115 40	8	13 50 21.43	23 056	6 23 1.6	117.21
9	12 5 31.63	21 683	2 55 17.0	115 72	9	13 52 39.88	23 093	6 34 44.0	116.93
10	12 7 41.79	21 703	2 43 41.8	116 02	10	13 54 58.54	23 129	6 46 24.7	116.62
11	12 9 52.07	21 724	2 32 4.8	116 31	11	13 57 17.43	23 167	6 58 3.4	116.29
12	12 12 2.48	21 747	2 20 26.1	116 59	12	13 59 36.54	23 204	7 9 40.2	115.97
13	12 14 13.03	21 768	2 8 45.7	116 87	13	14 1 55.88	23 243	7 21 15.0	115.62
14	12 16 23.70	21 790	1 57 3.7	117 13	14	14 4 15.45	23 280	7 32 47.6	115.25
15	12 18 34.51	21 813	1 45 20.1	117 38	15	14 6 35.24	23 318	7 44 18.0	114.88
16	12 20 45.46	21 836	1 33 35.1	117 63	16	14 8 55.27	23 357	7 55 46.1	114.48
17	12 22 56.54	21 859	1 21 48.6	117 86	17	14 11 15.52	23 395	8 7 11.8	114.08
18	12 25 7.77	21 883	1 10 0.8	118 08	18	14 13 36.01	23 434	8 18 35.0	113.65
19	12 27 19.14	21 908	0 58 11.7	118 28	19	14 15 56.73	23 473	8 29 55.6	113.22
20	12 29 30.66	21 933	0 46 21.4	118 48	20	14 18 17.68	23 512	8 41 13.6	112.76
21	12 31 42.33	21 958	0 34 30.0	118 66	21	14 20 38.87	23 551	8 52 28.7	112.28
22	12 33 54.15	21 983	0 22 37.5	118 84	22	14 23 0.29	23 589	9 3 41.0	111.81
23	12 36 6.12	22 008	N. 0 10 43.9	119 01	23	14 25 21.94	23 629	S. 9 14 50.4	111.31
SUNDAY 26.					TUESDAY 28.				
0	12 38 18.25	22 034	S. 0 1 10.6	119 16	0	14 27 43.84	23 669	S. 9 25 56.7	110.79
1	12 40 30.53	22 061	0 13 6.0	119 30	1	14 30 5.97	23 708	9 36 59.9	110.26
2	12 42 42.98	22 088	0 25 2.2	119 43	2	14 32 28.34	23 748	9 47 59.8	109.72
3	12 44 55.59	22 115	0 36 59.1	119 53	3	14 34 50.95	23 788	9 58 56.5	109.17
4	12 47 8.36	22 143	0 48 56.6	119 64	4	14 37 13.79	23 827	10 9 49.8	108.58
5	12 49 21.30	22 171	1 0 54.8	119 73	5	14 39 36.87	23 868	10 20 39.5	107.99
6	12 51 34.41	22 199	1 12 53.4	119 81	6	14 42 0.20	23 908	10 31 25.7	107.39
7	12 53 47.69	22 228	1 24 52.5	119 88	7	14 44 23.76	23 946	10 42 8.2	106.77
8	12 56 1.14	22 257	1 36 51.9	119 93	8	14 46 47.55	23 986	10 52 46.9	106.13
9	12 58 14.77	22 287	1 48 51.7	119 98	9	14 49 11.59	24 027	11 3 21.8	105.48
10	13 0 28.58	22 316	2 0 51.6	120 00	10	14 51 35.87	24 066	11 13 52.7	104.82
11	13 2 42.56	22 346	2 12 51.7	120 02	11	14 54 0.38	24 105	11 24 19.6	104.13
12	13 4 56.73	22 378	2 24 51.8	120 02	12	14 56 25.13	24 145	11 34 42.3	103.43
13	13 7 11.09	22 408	2 36 51.9	120 01	13	14 58 50.12	24 185	11 45 0.8	102.73
14	13 9 25.63	22 438	2 48 51.9	119 98	14	15 1 15.35	24 224	11 55 15.1	102.01
15	13 11 40.35	22 470	3 0 51.7	119 95	15	15 3 40.81	24 263	12 5 24.9	101.26
16	13 13 55.27	22 503	3 12 51.3	119 90	16	15 6 6.51	24 303	12 15 30.2	100.50
17	13 16 10.38	22 535	3 24 50.5	119 83	17	15 8 32.44	24 342	12 25 30.9	99.73
18	13 18 25.69	22 568	3 36 49.3	119 76	18	15 10 58.61	24 381	12 35 27.0	98.95
19	13 20 41.19	22 600	3 48 47.6	119 67	19	15 13 25.01	24 420	12 45 18.3	98.15
20	13 22 56.89	22 633	4 0 45.3	119 56	20	15 15 51.65	24 458	12 55 4.8	97.34
21	13 25 12.79	22 667	4 12 42.3	119 44	21	15 18 18.51	24 497	13 4 46.4	96.51
22	13 27 28.80	22 701	4 24 38.6	119 32	22	15 20 45.61	24 535	13 14 22.9	95.66
23	13 29 45.20	22 735	4 36 34.1	119 17	23	15 23 12.93	24 573	13 23 54.3	94.81
24	13 32 1.71	22 769	S. 4 48 28.6	119 00	24	15 25 40.48	24 611	S. 13 33 20.6	93.93

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 29.					FRIDAY 31.				
	h m s	s	S.	"		h m s	s	S.	"
0	15 25 40.48	24.611	S. 13 33 20.6	93.93	0	17 27 18.36	25.822	S. 19 0 8.9	38.33
1	15 28 8.26	24.648	13 42 41.5	93.04	1	17 29 53.31	25.828	19 3 54.8	36.97
2	15 30 36.26	24.686	13 51 57.1	92.15	2	17 32 28.30	25.835	19 7 32.5	35.61
3	15 33 4.49	24.723	14 1 7.3	91.24	3	17 35 3.33	25.840	19 11 2.1	34.24
4	15 35 32.93	24.759	14 10 12.0	90.31	4	17 37 38.38	25.843	19 14 23.4	32.87
5	15 38 1.60	24.796	14 19 11.0	89.37	5	17 40 13.45	25.847	19 17 36.5	31.49
6	15 40 30.48	24.831	14 28 4.4	88.42	6	17 42 48.54	25.849	19 20 41.3	30.11
7	15 42 59.57	24.867	14 36 52.0	87.44	7	17 45 23.64	25.849	19 23 37.8	28.73
8	15 45 28.88	24.903	14 45 33.7	86.46	8	17 47 58.73	25.849	19 26 26.0	27.34
9	15 47 58.40	24.938	14 54 9.5	85.47	9	17 50 33.83	25.849	19 29 5.9	25.96
10	15 50 28.13	24.972	15 2 39.3	84.46	10	17 53 8.92	25.847	19 31 37.5	24.58
11	15 52 58.06	25.005	15 11 3.0	83.43	11	17 55 43.99	25.843	19 34 0.8	23.18
12	15 55 28.19	25.039	15 19 20.5	82.40	12	17 58 19.04	25.840	19 36 15.7	21.79
13	15 57 58.53	25.073	15 27 31.8	81.36	13	18 0 54.07	25.835	19 38 22.3	20.40
14	16 0 29.06	25.105	15 35 36.8	80.30	14	18 3 29.06	25.829	19 40 20.5	19.00
15	16 2 59.79	25.138	15 43 35.4	79.23	15	18 6 4.02	25.823	19 42 10.3	17.61
16	16 5 30.71	25.168	15 51 27.6	78.15	16	18 8 38.94	25.815	19 43 51.8	16.22
17	16 8 1.82	25.200	15 59 13.2	77.05	17	18 11 13.80	25.806	19 45 24.9	14.82
18	16 10 33.11	25.231	16 6 52.2	75.94	18	18 13 48.61	25.797	19 46 49.6	13.43
19	16 13 4.59	25.261	16 14 24.5	74.83	19	18 16 23.36	25.786	19 48 6.0	12.03
20	16 15 36.24	25.290	16 21 50.1	73.70	20	18 18 58.04	25.774	19 49 14.0	10.64
21	16 18 8.07	25.319	16 29 8.9	72.56	21	18 21 32.65	25.762	19 50 13.7	9.26
22	16 20 40.07	25.348	16 36 20.8	71.40	22	18 24 7.18	25.748	19 51 5.1	7.87
23	16 23 12.24	25.375	S. 16 43 25.7	70.24	23	18 26 41.62	25.733	S. 19 51 48.1	6.48
THURSDAY 30.					SATURDAY, NOV. 1.				
0	16 25 44.57	25.402	S. 16 50 23.7	69.07	0	18 29 15.98	25.718	S. 19 52 22.8	5.09
1	16 28 17.06	25.428	16 57 14.5	67.88					
2	16 30 49.71	25.454	17 3 58.3	66.69					
3	16 33 22.51	25.479	17 10 34.8	65.48					
4	16 35 55.46	25.503	17 17 4.1	64.28					
5	16 38 28.55	25.527	17 23 26.1	63.05					
6	16 41 1.78	25.549	17 29 40.7	61.82					
7	16 43 35.14	25.572	17 35 47.9	60.58					
8	16 46 8.64	25.593	17 41 47.6	59.33					
9	16 48 42.26	25.614	17 47 39.8	58.08					
10	16 51 16.01	25.634	17 53 24.5	56.81					
11	16 53 49.87	25.653	17 59 1.5	55.53					
12	16 56 23.84	25.671	18 4 30.8	54.24					
13	16 58 57.92	25.688	18 9 52.4	52.95					
14	17 1 32.10	25.704	18 15 6.2	51.66					
15	17 4 6.37	25.720	18 20 12.3	50.36					
16	17 6 40.74	25.736	18 25 10.5	49.03					
17	17 9 15.20	25.749	18 30 0.7	47.72					
18	17 11 49.73	25.763	18 34 43.1	46.40					
19	17 14 24.35	25.775	18 39 17.5	45.07					
20	17 16 59.03	25.786	18 43 43.9	43.73					
21	17 19 33.78	25.796	18 48 2.3	42.39					
22	17 22 8.58	25.806	18 52 12.6	41.04					
23	17 24 43.45	25.815	18 56 14.8	39.69					
24	17 27 18.36	25.822	S. 19 0 8.9	38.33					

PHASES OF THE MOON.

		h	m
Oct. 5	) First Quarter	2	30.0
12	○ Full Moon	8	21.2
20	(Last Quarter	10	54.4
27	● New Moon	18	57.0

		h
Oct. 2	(Perigee	2.2
17	(Apogee	20.3
29	(Perigee	17.1

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi-diameter passing the Meridian.*	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.				
	h m s	s	° ' "	"	m s	m s	s	
Sat.	1	14 25 35.53	9.796	S.14 25 57.4	48.11	I 6.87	16 20.51	0.060
Sun.	2	14 29 31.02	9.829	14 45 5.0	47.52	I 6.99	16 21.57	0.028
Mon.	3	14 33 27.31	9.862	15 3 58.2	46.91	I 7.11	16 21.84	0.005
Tues.	4	14 37 24.39	9.895	15 22 36.6	46.28	I 7.22	16 21.31	0.039
Wed.	5	14 41 22.28	9.929	15 40 59.8	45.64	I 7.34	16 19.98	0.072
Thur.	6	14 45 20.98	9.963	15 59 7.3	44.98	I 7.46	16 17.84	0.106
Frid.	7	14 49 20.50	9.997	16 16 58.7	44.30	I 7.58	16 14.88	0.141
Sat.	8	14 53 20.85	10.032	16 34 33.7	43.61	I 7.70	16 11.09	0.175
Sun.	9	14 57 22.04	10.067	16 51 51.8	42.90	I 7.82	16 6.48	0.210
Mon.	10	15 1 24.07	10.102	17 8 52.7	42.17	I 7.94	16 1.02	0.245
Tues.	11	15 5 26.95	10.137	17 25 36.0	41.43	I 8.06	15 54.71	0.280
Wed.	12	15 9 30.67	10.173	17 42 1.3	40.67	I 8.18	15 47.56	0.316
Thur.	13	15 13 35.26	10.209	17 58 8.2	39.90	I 8.29	15 39.55	0.351
Frid.	14	15 17 40.70	10.245	18 13 56.3	39.10	I 8.41	15 30.69	0.387
Sat.	15	15 21 47.00	10.280	18 29 25.2	38.30	I 8.53	15 20.97	0.423
Sun.	16	15 25 54.16	10.316	18 44 34.7	37.48	I 8.65	15 10.39	0.459
Mon.	17	15 30 2.18	10.352	18 59 24.2	36.64	I 8.76	14 58.96	0.494
Tues.	18	15 34 11.05	10.387	19 13 53.4	35.79	I 8.88	14 46.68	0.529
Wed.	19	15 38 20.77	10.423	19 28 2.0	34.92	I 8.99	14 33.55	0.565
Thur.	20	15 42 31.34	10.458	19 41 49.6	34.04	I 9.11	14 19.58	0.599
Frid.	21	15 46 42.74	10.492	19 55 15.8	33.14	I 9.22	14 4.78	0.634
Sat.	22	15 50 54.96	10.527	20 8 20.2	32.22	I 9.33	13 49.15	0.668
Sun.	23	15 55 8.00	10.560	20 21 2.5	31.29	I 9.44	13 32.72	0.701
Mon.	24	15 59 21.83	10.593	20 33 22.3	30.35	I 9.54	13 15.49	0.734
Tues.	25	16 3 36.45	10.625	20 45 19.3	29.39	I 9.65	12 57.48	0.766
Wed.	26	16 7 51.83	10.656	20 56 53.0	28.42	I 9.75	12 38.70	0.798
Thur.	27	16 12 7.95	10.687	21 8 3.3	27.43	I 9.85	12 19.19	0.828
Frid.	28	16 16 24.79	10.716	21 18 49.7	26.43	I 9.95	11 58.96	0.857
Sat.	29	16 20 42.33	10.745	21 29 11.8	25.41	I 10.04	11 38.03	0.886
Sun.	30	16 25 0.55	10.772	21 39 9.5	24.39	I 10.13	11 16.44	0.913
Mon.	31	16 29 19.41	10.799	S.21 48 42.3	23.34	I 10.22	10 54.19	0.940

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.19 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be subtracted from Apparent Time.	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi-diameter.*		
Sat.	1	h m s 14 25 38.20	S. 14 26 10.5	16 8.81	m s 16 20.53	h m s 14 41 58.73
Sun.	2	14 29 33.70	14 45 18.0	16 9.06	16 21.58	14 45 55.28
Mon.	3	14 33 30.00	15 4 11.0	16 9.32	16 21.84	14 49 51.84
Tues.	4	14 37 27.09	15 22 49.3	16 9.57	16 21.30	14 53 48.39
Wed.	5	14 41 24.98	15 41 12.2	16 9.82	16 19.96	14 57 44.94
Thur.	6	14 45 23.69	15 59 19.5	16 10.06	16 17.81	15 1 41.50
Frid.	7	14 49 23.21	16 17 10.7	16 10.31	16 14.84	15 5 38.05
Sat.	8	14 53 23.56	16 34 45.4	16 10.55	16 11.05	15 9 34.61
Sun.	9	14 57 24.74	16 52 3.3	16 10.78	16 6.42	15 13 31.16
Mon.	10	15 1 26.77	17 9 4.0	16 11.01	16 0.95	15 17 27.72
Tues.	11	15 5 29.63	17 25 47.0	16 11.24	15 54.64	15 21 24.27
Wed.	12	15 9 33.35	17 42 12.0	16 11.47	15 47.48	15 25 20.83
Thur.	13	15 13 37.92	17 58 18.6	16 11.69	15 39.46	15 29 17.38
Frid.	14	15 17 43.35	18 14 6.4	16 11.90	15 30.59	15 33 13.94
Sat.	15	15 21 49.63	18 29 35.0	16 12.11	15 20.86	15 37 10.49
Sun.	16	15 25 56.77	18 44 44.1	16 12.32	15 10.28	15 41 7.05
Mon.	17	15 30 4.76	18 59 33.3	16 12.52	14 58.84	15 45 3.60
Tues.	18	15 34 13.61	19 14 2.2	16 12.72	14 46.55	15 49 0.16
Wed.	19	15 38 23.30	19 28 10.5	16 12.92	14 33.42	15 52 56.72
Thur.	20	15 42 33.83	19 41 57.7	16 13.11	14 19.44	15 56 53.27
Frid.	21	15 46 45.20	19 55 23.5	16 13.30	14 4.63	16 0 49.83
Sat.	22	15 50 57.38	20 8 27.6	16 13.48	13 49.00	16 4 46.38
Sun.	23	15 55 10.38	20 21 9.5	16 13.67	13 32.56	16 8 42.94
Mon.	24	15 59 24.17	20 33 29.0	16 13.85	13 15.33	16 12 39.50
Tues.	25	16 3 38.74	20 45 25.6	16 14.02	12 57.31	16 16 36.05
Wed.	26	16 7 54.08	20 56 59.0	16 14.20	12 38.53	16 20 32.61
Thur.	27	16 12 10.15	21 8 8.9	16 14.37	12 19.02	16 24 29.17
Frid.	28	16 16 26.93	21 18 54.9	16 14.54	11 58.79	16 28 25.72
Sat.	29	16 20 44.42	21 29 16.7	16 14.71	11 37.86	16 32 22.28
Sun.	30	16 25 2.57	21 39 14.0	16 14.87	11 16.27	16 36 18.84
Mon.	31	16 29 21.37	S. 21 48 46.5	16 15.04	10 54.02	16 40 15.39

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

MEAN TIME.

Day.	THE SUN'S		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	<i>Apparent</i>				Semidiameter.		Horizontal Parallax.	
	Longitude.	Latitude.			Noon.	Noon.	Noon.	Midnight.
				h m s				
1	218° 47' 43".5	N. 0°.12	.99965682	9 16 29.86	16 20.35	16 16.20	59 58.02	59 42.80
2	219 47 49.6	N. 0°.01	.9964536	9 12 33.95	16 11.60	16 6.66	59 25.90	59 7.79.
3	220 47 57.2	S. 0°.11	.9963397	9 8 38.04	16 1.51	15 56.25	58 48.88	58 29.56
4	221 48 6.3	0.24	.99962269	9 4 42.13	15 50.96	15 45.71	58 10.14	57 50.88
5	222 48 16.9	0.37	.9961152	9 0 46.22	15 40.56	15 35.55	57 31.98	57 13.60
6	223 48 29.1	0.50	.9960048	8 56 50.31	15 30.71	15 26.06	56 55.83	56 38.76
7	224 48 42.8	0.61	.99958959	8 52 54.40	15 21.60	15 17.35	56 22.41	56 6.82
8	225 48 58.0	0.70	.9957886	8 48 58.50	15 13.31	15 9.47	55 51.97	55 37.88
9	226 49 14.9	0.77	.9956831	8 45 2.59	15 5.83	15 2.41	55 24.54	55 11.97
10	227 49 33.3	0.81	.99955793	8 41 6.68	14 59.20	14 56.22	55 0.19	54 49.23
11	228 49 53.4	0.83	.9954773	8 37 10.77	14 53.47	14 50.98	54 39.16	54 30.04
12	229 50 15.2	0.82	.9953773	8 33 14.86	14 48.78	14 46.89	54 21.96	54 15.02
13	230 50 38.7	0.78	.99952791	8 29 18.95	14 45.34	14 44.18	54 9.31	54 5.06
14	231 51 4.0	0.72	.9951828	8 25 23.04	14 43.43	14 43.14	54 2.32	54 1.26
15	232 51 31.0	0.64	.9950884	8 21 27.13	14 43.35	14 44.09	54 2.02	54 4.73
16	233 51 59.8	0.54	.99949959	8 17 31.22	14 45.40	14 47.31	54 9.53	54 16.54
17	234 52 30.3	0.43	.9919051	8 13 35.31	14 49.85	14 53.03	54 25.86	54 37.54
18	235 53 2.7	0.30	.9948161	8 9 39.40	14 56.87	15 1.37	54 51.64	55 8.16
19	236 53 36.8	0.18	.99047287	8 5 43.49	15 6.52	15 12.30	55 27.06	55 48.25
20	237 54 12.7	S. 0°.06	.9946430	8 1 47.58	15 18.65	15 25.53	56 11.59	56 36.84
21	238 54 50.4	N. 0°.05	.9945588	7 57 51.67	15 32.86	15 40.52	57 3.72	57 31.85
22	239 55 29.8	0.15	.99944760	7 53 55.76	15 48.40	15 56.35	58 0.77	58 29.94
23	240 56 10.9	0.23	.9943945	7 49 59.85	16 4.20	16 11.78	58 58.77	59 26.56
24	241 56 53.5	0.27	.9943143	7 46 3.94	16 18.87	16 25.30	59 52.60	60 16.17
25	242 57 37.7	0.28	.99942352	7 42 8.03	16 30.86	16 35.38	60 36.58	60 53.20
26	243 58 23.4	0.27	.9941571	7 38 12.12	16 38.73	16 40.81	61 5.50	61 13.10
27	244 59 10.3	0.22	.9940802	7 34 16.21	16 41.54	16 40.94	61 15.80	61 13.59
28	245 59 58.5	0.13	.99940043	7 30 20.30	16 39.04	16 35.93	61 6.61	60 55.20
29	247 0 47.8	N. 0°.03	.9939297	7 26 24.39	16 31.75	16 26.65	60 39.85	60 21.14
30	248 1 38.1	S. 0°.09	.9938563	7 22 28.48	16 20.81	16 14.40	59 59.70	59 36.20
31	249 2 29.3	S. 0.22	.99937844	7 18 32.57	16 7.62	16 0.62	59 11.31	58 45.63

MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
					d	h m	h m
1	276° 53' 27.2	284° 6' 31.9	N. 3° 23' 57.4	N. 2° 54' 19.9	4.21	3 56.8	16 26.6
2	291 15 2.8	298 18 48.0	2 22 14.7	1 48 17.8	5.21	4 55.9	17 24.6
3	305 17 43.5	312 11 52.6	1 13 5.1	N. 0 37 11.1	6.21	5 52.6	18 19.8
4	319 1 23.8	325 46 29.6	N. 0 1 8.9	S. 0 34 30.5	7.21	6 46.3	19 11.9
5	332 27 24.9	339 4 25.8	S. 1 9 18.3	1 42 48.1	8.21	7 36.9	20 1.2
6	345 37 49.0	352 7 49.9	2 14 35.7	2 44 19.4	9.21	8 25.0	20 48.3
7	358 34 42.5	4 58 39.6	3 11 40.0	3 36 20.4	10.21	9 11.2	21 33.9
8	11 19 51.8	17 38 27.5	3 58 6.4	4 16 46.1	11.21	9 56.3	22 18.7
9	23 54 33.8	30 8 15.6	4 32 9.9	4 44 11.1	12.21	10 41.0	23 3.4
10	36 19 37.6	42 28 43.1	4 52 45.0	4 57 49.8	13.21	11 25.8	23 48.4
11	48 35 35.9	54 40 20.0	4 59 25.8	4 57 35.5	14.21	12 11.2	* *
12	60 43 1.0	66 43 46.0	4 52 23.6	4 43 56.7	15.21	12 57.4	0 34.2
13	72 42 43.9	78 40 6.9	4 32 22.9	4 17 51.7	16.21	13 44.3	1 20.7
14	84 36 9.3	90 31 9.0	4 0 34.1	3 40 41.6	17.21	14 31.9	2 8.0
15	96 25 27.1	102 19 27.5	3 18 26.9	2 54 3.4	18.21	15 19.7	2 55.8
16	108 13 38.0	114 8 28.8	2 27 44.9	1 59 45.7	19.21	16 7.5	3 43.6
17	120 4 33.4	126 2 27.8	1 30 20.8	S. 0 59 45.8	20.21	16 55.0	4 31.3
18	132 2 50.1	138 6 20.2	S. 0 28 17.0	N. 0 3 48.3	21.21	17 42.1	5 18.6
19	144 13 38.7	150 25 26.5	N. 0 36 11.7	1 8 33.3	22.21	18 29.0	6 5.5
20	156 42 24.1	163 5 9.6	1 40 31.8	2 11 44.0	23.21	19 16.0	6 52.5
21	169 34 18.2	176 10 20.0	2 41 44.7	3 10 7.0	24.21	20 3.9	7 39.8
22	182 53 38.8	189 44 29.9	3 36 22.0	3 59 59.6	25.21	20 53.2	8 28.3
23	196 42 58.3	203 48 57.4	4 20 29.2	4 37 20.2	26.21	21 44.9	9 18.7
24	211 2 7.4	218 21 54.2	4 50 3.8	4 58 14.3	27.21	22 39.6	10 11.8
25	225 47 30.4	233 17 55.4	5 1 30.6	4 59 38.3	28.21	23 37.6	11 8.2
26	240 51 57.8	248 28 18.4	4 52 30.7	4 40 10.1	29.21	* *	12 7.8
27	256 5 33.4	263 42 19.0	4 22 48.2	4 0 45.5	0.78	0 38.6	13 9.8
28	271 17 14.6	278 49 7.4	3 34 30.5	3 4 38.5	1.78	1 41.3	14 12.6
29	286 16 54.0	293 39 43.2	2 31 49.3	1 56 45.5	2.78	2 43.7	15 14.2
30	300 56 56.4	308 8 7.7	1 20 10.1	N. 0 42 45.3	3.78	3 43.9	16 12.8
31	315 13 2.9	322 11 38.8	N. 0 5 11.0	S. 0 31 56.2	4.78	4 40.7	17 7.7

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 1.					MONDAY 3.				
	h m s	s		"		h m s	s		"
0	18 29 15.98	25.718	S. 19 52 22.8	5.09	0	20 29 22.60	24.078	S. 17 46 9.7	54.95
1	18 31 50.24	25.702	19 52 49.2	3.70	1	20 31 46.92	24.030	17 40 36.8	56.00
2	18 34 24.40	25.684	19 53 7.2	2.32	2	20 34 10.96	23.983	17 34 57.7	57.03
3	18 36 58.45	25.666	19 53 17.0	0.94	3	20 36 34.72	23.936	17 29 12.5	58.05
4	18 39 32.39	25.647	19 53 18.5	0.43	4	20 38 58.19	23.888	17 23 21.1	59.08
5	18 42 6.21	25.627	19 53 11.8	1.81	5	20 41 21.37	23.840	17 17 23.6	60.08
6	18 44 39.91	25.606	19 52 56.8	3.18	6	20 43 44.27	23.793	17 11 20.1	61.08
7	18 47 13.48	25.584	19 52 33.7	4.54	7	20 46 6.88	23.744	17 5 10.7	62.06
8	18 49 46.92	25.562	19 52 2.3	5.91	8	20 48 29.20	23.696	16 58 55.4	63.03
9	18 52 20.22	25.538	19 51 22.8	7.26	9	20 50 51.23	23.648	16 52 34.3	63.99
10	18 54 53.37	25.513	19 50 35.2	8.62	10	20 53 12.97	23.599	16 46 7.5	64.94
11	18 57 26.38	25.488	19 49 39.4	9.97	11	20 55 34.42	23.551	16 39 35.0	65.89
12	18 59 59.23	25.461	19 48 35.6	11.31	12	20 57 55.58	23.502	16 32 56.8	66.83
13	19 2 31.91	25.434	19 47 23.7	12.65	13	21 0 16.44	23.453	16 26 13.1	67.73
14	19 5 4.44	25.407	19 46 3.8	13.98	14	21 2 37.01	23.404	16 19 24.0	68.64
15	19 7 36.79	25.378	19 44 35.9	15.31	15	21 4 57.29	23.355	16 12 29.4	69.55
16	19 10 8.97	25.348	19 43 0.1	16.63	16	21 7 17.27	23.306	16 5 29.4	70.43
17	19 12 40.97	25.318	19 41 16.4	17.95	17	21 9 36.96	23.258	15 58 24.2	71.31
18	19 15 12.79	25.288	19 39 24.7	19.27	18	21 11 56.36	23.208	15 51 13.7	72.18
19	19 17 44.42	25.256	19 37 25.2	20.57	19	21 14 15.46	23.159	15 43 58.0	73.03
20	19 20 15.86	25.223	19 35 17.9	21.86	20	21 16 34.27	23.111	15 36 37.3	73.88
21	19 22 47.10	25.190	19 33 2.9	23.15	21	21 18 52.79	23.062	15 29 11.5	74.72
22	19 25 18.14	25.157	19 30 40.1	24.44	22	21 21 11.01	23.013	15 21 40.7	75.54
23	19 27 48.98	25.122	S. 19 28 9.6	25.72	23	21 23 28.95	22.965	S. 15 14 5.0	76.35
SUNDAY 2.					TUESDAY 4.				
0	19 30 19.60	25.086	S. 19 25 31.5	26.98	0	21 25 46.59	22.916	S. 15 6 24.5	77.14
1	19 32 50.01	25.050	19 22 45.8	28.25	1	21 28 3 94	22.868	14 58 39.3	77.93
2	19 35 20.20	25.013	19 19 52.5	29.51	2	21 30 21.00	22.819	14 50 49.3	78.73
3	19 37 50.17	24.976	19 16 51.7	30.75	3	21 32 37.77	22.771	14 42 54.6	79.49
4	19 40 19.91	24.938	19 13 43.5	31.99	4	21 34 54.25	22.723	14 34 55.4	80.24
5	19 42 49.43	24.900	19 10 27.8	33.23	5	21 37 10.44	22.675	14 26 51.7	80.98
6	19 45 18.71	24.861	19 7 4.7	34.45	6	21 39 26.35	22.628	14 18 43.6	81.73
7	19 47 47.76	24.822	19 3 34.4	35.67	7	21 41 41.97	22.579	14 10 31.0	82.45
8	19 50 16.57	24.782	18 59 56.7	36.88	8	21 43 57.30	22.532	14 2 14.2	83.16
9	19 52 45.14	24.741	18 56 11.9	38.07	9	21 46 12.35	22.485	13 53 53.1	83.88
10	19 55 13.46	24.699	18 52 19.9	39.27	10	21 48 27.12	22.438	13 45 27.7	84.57
11	19 57 41.53	24.658	18 48 20.7	40.45	11	21 50 41.60	22.391	13 36 58.3	85.24
12	20 0 9.35	24.615	18 44 14.5	41.62	12	21 52 55.81	22.345	13 28 24.8	85.92
13	20 2 36.91	24.573	18 40 1.3	42.78	13	21 55 9.74	22.298	13 19 47.3	86.58
14	20 5 4.22	24.529	18 35 41.2	43.93	14	21 57 23.39	22.252	13 11 5.9	87.22
15	20 7 31.26	24.486	18 31 14.1	45.08	15	21 59 36.76	22.206	13 2 20.7	87.86
16	20 9 58.05	24.443	18 26 40.2	46.22	16	22 1 49.86	22.161	12 53 31.6	88.49
17	20 12 24.57	24.398	18 21 59.5	47.34	17	22 4 2.69	22.115	12 44 38.8	89.11
18	20 14 50.82	24.353	18 17 12.1	48.45	18	22 6 15.24	22.070	12 35 42.3	89.72
19	20 17 16.80	24.308	18 12 18.1	49.56	19	22 8 27.53	22.026	12 26 42.2	90.32
20	20 19 42.51	24.262	18 7 17.4	50.67	20	22 10 39.55	21.981	12 17 38.5	90.90
21	20 22 7.94	24.217	18 2 10.1	51.75	21	22 12 51.30	21.937	12 8 31.4	91.48
22	20 24 33.11	24.171	17 56 56.4	52.83	22	22 15 2.79	21.893	11 59 20.8	92.04
23	20 26 57.99	24.124	17 51 36.2	53.89	23	22 17 14.02	21.850	11 50 6.9	92.59
24	20 29 22.60	24.078	S. 17 46 9.7	54.95	24	22 19 24.99	21.807	S. 11 40 49.7	93.14

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 5.					FRIDAY 7.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	22 19 24.99	21.807	S. 11 40 49.7	93.14	0	23 59 52.41	20.221	S. 3 29 45.6	107.88
1	22 21 35.70	21.763	11 31 29.2	93.68	1	0 1 53.67	20.198	3 18 58.1	107.96
2	22 23 46.15	21.721	11 22 5.6	94.20	2	0 3 54.79	20.177	3 8 10.1	108.04
3	22 25 56.35	21.679	11 12 38.8	94.72	3	0 5 55.79	20.157	2 57 21.6	108.11
4	22 28 6.30	21.638	11 3 9.0	95.22	4	0 7 56.67	20.137	2 46 32.8	108.17
5	22 30 16.00	21.596	10 53 36.2	95.71	5	0 9 57.43	20.116	2 35 43.6	108.23
6	22 32 25.45	21.554	10 44 0.5	96.18	6	0 11 58.06	20.097	2 24 54.1	108.27
7	22 34 34.65	21.514	10 34 22.0	96.66	7	0 13 58.59	20.078	2 14 4.4	108.30
8	22 36 43.62	21.474	10 24 40.6	97.13	8	0 15 59.00	20.059	2 3 14.5	108.33
9	22 38 52.34	21.433	10 14 56.4	97.58	9	0 17 59.30	20.041	1 52 24.5	108.35
10	22 41 0.82	21.394	10 5 9.6	98.03	10	0 19 59.49	20.023	1 41 34.3	108.37
11	22 43 9.07	21.356	9 55 20.1	98.46	11	0 21 59.58	20.007	1 30 44.1	108.37
12	22 45 17.09	21.318	9 45 28.1	98.88	12	0 23 59.57	19.990	1 19 53.9	108.36
13	22 47 24.88	21.278	9 35 33.6	99.29	13	0 25 59.46	19.973	1 9 3.8	108.35
14	22 49 32.43	21.240	9 25 36.6	99.70	14	0 27 59.25	19.958	0 58 13.7	108.33
15	22 51 39.76	21.203	9 15 37.2	100.09	15	0 29 58.96	19.943	0 47 23.9	108.29
16	22 53 46.87	21.167	9 5 35.5	100.48	16	0 31 58.57	19.928	0 36 34.2	108.27
17	22 55 53.76	21.130	8 55 31.5	100.85	17	0 33 58.09	19.913	0 25 44.7	108.23
18	22 58 0.43	21.094	8 45 25.3	101.22	18	0 35 57.53	19.900	0 14 55.5	108.17
19	23 0 6.89	21.058	8 35 16.9	101.58	19	0 37 56.89	19.887	S. 0 4 6.7	108.10
20	23 2 13.13	21.023	8 25 6.4	101.92	20	0 39 56.17	19.873	N. 0 6 41.7	108.03
21	23 4 19.16	20.988	8 14 53.9	102.25	21	0 41 55.37	19.861	0 17 29.7	107.97
22	23 6 24.98	20.953	8 4 39.4	102.58	22	0 43 54.50	19.849	0 28 17.3	107.88
23	23 8 30.60	20.919	S. 7 54 23.0	102.89	23	0 45 53.56	19.837	N. 0 39 4.3	107.78
THURSDAY 6.					SATURDAY 8.				
0	23 10 36.01	20.886	S. 7 44 4.7	103.21	0	0 47 52.54	19.826	N. 0 49 50.7	107.69
1	23 12 41.23	20.853	7 33 44.5	103.51	1	0 49 51.47	19.816	1 0 36.6	107.58
2	23 14 46.25	20.820	7 23 22.6	103.79	2	0 51 50.33	19.804	1 11 21.7	107.47
3	23 16 51.07	20.788	7 12 59.0	104.07	3	0 53 49.12	19.794	1 22 6.2	107.35
4	23 18 55.71	20.757	7 2 33.8	104.34	4	0 55 47.86	19.786	1 32 49.9	107.22
5	23 21 0.15	20.724	6 52 6.9	104.60	5	0 57 46.55	19.777	1 43 32.8	107.08
6	23 23 4.40	20.694	6 41 38.6	104.85	6	0 59 45.18	19.768	1 54 14.9	106.94
7	23 25 8.48	20.664	6 31 8.7	105.10	7	1 1 43.76	19.760	2 4 56.1	106.78
8	23 27 12.37	20.634	6 20 37.4	105.33	8	1 3 42.30	19.753	2 15 36.3	106.63
9	23 29 16.09	20.605	6 10 4.7	105.56	9	1 5 40.79	19.744	2 26 15.6	106.46
10	23 31 19.63	20.576	5 59 30.7	105.78	10	1 7 39.23	19.738	2 36 53.8	106.28
11	23 33 23.00	20.548	5 48 55.4	105.98	11	1 9 37.64	19.732	2 47 31.0	106.10
12	23 35 26.20	20.519	5 38 19.0	106.18	12	1 11 36.01	19.725	2 58 7.0	105.91
13	23 37 29.23	20.492	5 27 41.3	106.37	13	1 13 34.34	19.719	3 8 41.9	105.73
14	23 39 32.10	20.465	5 17 2.6	106.54	14	1 15 32.64	19.715	3 19 15.7	105.52
15	23 41 34.81	20.438	5 6 22.8	106.72	15	1 17 30.92	19.711	3 29 48.1	105.30
16	23 43 37.36	20.412	4 55 42.0	106.88	16	1 19 29.16	19.705	3 40 19.3	105.09
17	23 45 39.75	20.386	4 45 0.2	107.03	17	1 21 27.38	19.701	3 50 49.2	104.86
18	23 47 41.99	20.361	4 34 17.6	107.18	18	1 23 25.57	19.697	4 1 17.6	104.63
19	23 49 44.08	20.337	4 23 34.1	107.32	19	1 25 23.74	19.693	4 11 44.7	104.39
20	23 51 46.03	20.313	4 12 49.8	107.45	20	1 27 21.89	19.691	4 22 10.3	104.14
21	23 53 47.83	20.289	4 2 4.7	107.57	21	1 29 20.03	19.689	4 32 34.4	103.88
22	23 55 49.50	20.266	3 51 19.0	107.68	22	1 31 18.16	19.687	4 42 56.9	103.63
23	23 57 51.02	20.243	3 40 32.6	107.78	23	1 33 16.27	19.684	4 53 17.9	103.36
24	23 59 52.41	20.221	S. 3 29 45.6	107.88	24	1 35 14.37	19.683	N. 5 3 37.2	103.08

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
SUNDAY 9.					TUESDAY 11.				
	h m s		° ' "			h m s		° ' "	
0	1 35 14.37	19.683	N. 5 3 37.2	103.08	0	3 10 10.01	19.971	N. 12 33 44.4	81.98
1	1 37 12.47	19.683	5 13 54.8	102.79	1	3 12 9.87	19.983	12 41 54.5	81.38
2	1 39 10.56	19.681	5 24 10.7	102.51	2	3 14 9.81	19.995	12 50 1.0	80.79
3	1 41 8.65	19.681	5 34 24.9	102.22	3	3 16 9.81	20.006	12 58 4.0	80.19
4	1 43 6.73	19.681	5 44 37.3	101.91	4	3 18 9.88	20.018	13 6 3.3	79.58
5	1 45 4.82	19.681	5 54 47.8	101.59	5	3 20 10.02	20.030	13 13 58.9	78.96
6	1 47 2.91	19.683	6 4 56.4	101.28	6	3 22 10.24	20.043	13 21 50.8	78.34
7	1 49 1.01	19.683	6 15 3.1	100.95	7	3 24 10.53	20.054	13 29 39.0	77.72
8	1 50 59.11	19.685	6 25 7.8	100.62	8	3 26 10.89	20.066	13 37 23.4	77.08
9	1 52 57.23	19.687	6 35 10.5	100.28	9	3 28 11.32	20.078	13 45 4.0	76.44
10	1 54 55.35	19.688	6 45 11.2	99.94	10	3 30 11.83	20.092	13 52 40.7	75.80
11	1 56 53.49	19.692	6 55 9.8	99.58	11	3 32 12.42	20.104	14 0 13.6	75.16
12	1 58 51.65	19.694	7 5 6.2	99.23	12	3 34 13.08	20.117	14 7 42.6	74.50
13	2 0 49.82	19.698	7 15 0.5	98.87	13	3 36 13.82	20.130	14 15 7.6	73.84
14	2 2 48.03	19.701	7 24 52.6	98.49	14	3 38 14.64	20.143	14 22 28.7	73.18
15	2 4 46.23	19.704	7 34 42.4	98.11	15	3 40 15.53	20.155	14 29 45.8	72.51
16	2 6 44.47	19.708	7 44 29.9	97.72	16	3 42 16.50	20.168	14 36 58.8	71.83
17	2 8 42.73	19.713	7 54 15.0	97.33	17	3 44 17.54	20.181	14 44 7.7	71.15
18	2 10 41.02	19.718	8 3 57.8	96.93	18	3 46 18.67	20.194	14 51 12.6	70.47
19	2 12 39.34	19.723	8 13 38.2	96.53	19	3 48 19.87	20.207	14 58 13.3	69.78
20	2 14 37.69	19.728	8 23 16.1	96.12	20	3 50 21.15	20.220	15 5 9.9	69.08
21	2 16 36.07	19.733	8 32 51.6	95.70	21	3 52 22.51	20.233	15 12 2.3	68.38
22	2 18 34.49	19.739	8 42 24.5	95.27	22	3 54 23.95	20.247	15 18 50.5	67.68
23	2 20 32.94	19.744	N. 8 51 54.8	94.83	23	3 56 25.47	20.260	N. 15 25 34.4	66.97
MONDAY 10.					WEDNESDAY 12.				
	h m s		° ' "			h m s		° ' "	
0	2 22 31.42	19.751	N. 9 1 22.5	94.40	0	3 58 27.07	20.273	N. 15 32 14.1	66.25
1	2 24 29.95	19.758	9 10 47.6	93.96	1	4 0 28.74	20.286	15 38 49.4	65.53
2	2 26 28.52	19.765	9 20 10.0	93.50	2	4 2 30.50	20.299	15 45 20.5	64.81
3	2 28 27.13	19.772	9 29 29.6	93.03	3	4 4 32.33	20.313	15 51 47.1	64.08
4	2 30 25.78	19.778	9 38 46.4	92.58	4	4 6 34.25	20.326	15 58 9.4	63.35
5	2 32 24.47	19.787	9 48 0.5	92.11	5	4 8 36.24	20.338	16 4 27.3	62.61
6	2 34 23.22	19.795	9 57 11.7	91.63	6	4 10 38.31	20.352	16 10 40.7	61.86
7	2 36 22.01	19.803	10 6 20.0	91.14	7	4 12 40.46	20.365	16 16 49.6	61.12
8	2 38 20.85	19.811	10 15 25.4	90.66	8	4 14 42.69	20.378	16 22 54.1	60.37
9	2 40 19.74	19.819	10 24 27.9	90.16	9	4 16 44.99	20.391	16 28 54.0	59.60
10	2 42 18.68	19.828	10 33 27.3	89.66	10	4 18 47.38	20.404	16 34 49.3	58.84
11	2 44 17.68	19.838	10 42 23.8	89.15	11	4 20 49.84	20.417	16 40 40.1	58.08
12	2 46 16.73	19.847	10 51 17.1	88.63	12	4 22 52.38	20.430	16 46 26.3	57.32
13	2 48 15.84	19.856	11 0 7.3	88.11	13	4 24 55.00	20.443	16 52 7.9	56.53
14	2 50 15.00	19.865	11 8 54.4	87.58	14	4 26 57.69	20.455	16 57 44.7	55.75
15	2 52 14.22	19.875	11 17 38.3	87.05	15	4 29 0.46	20.468	17 3 16.9	54.98
16	2 54 13.50	19.885	11 26 19.0	86.52	16	4 31 3.31	20.481	17 8 44.4	54.19
17	2 56 12.84	19.896	11 34 56.5	85.97	17	4 33 6.23	20.493	17 14 7.2	53.40
18	2 58 12.25	19.906	11 43 30.6	85.41	18	4 35 9.22	20.505	17 19 25.2	52.61
19	3 0 11.71	19.916	11 52 1.4	84.86	19	4 37 12.29	20.518	17 24 38.5	51.81
20	3 2 11.24	19.927	12 0 28.9	84.29	20	4 39 15.44	20.531	17 29 46.9	51.00
21	3 4 10.83	19.938	12 8 52.9	83.73	21	4 41 18.66	20.543	17 34 50.5	50.20
22	3 6 10.49	19.949	12 17 13.6	83.15	22	4 43 21.95	20.554	17 39 49.3	49.39
23	3 8 10.22	19.960	12 25 30.7	82.57	23	4 45 25.31	20.566	17 44 43.2	48.58
24	3 10 10.01	19.971	N. 12 33 44.4	81.98	24	4 47 28.74	20.578	N. 17 49 32.2	47.76

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 13.					SATURDAY 15.				
	h m s	s	N. ° ' "	"		h m s	s	N. ° ' "	"
0	4 47 28.74	20.578	N.17 49 32.2	47.76	0	6 27 18.34	20.939	N.19 59 14.9	5.49
1	4 49 32.25	20.590	17 54 16.3	46.94	1	6 29 23.98	20.941	19 59 45.1	4.57
2	4 51 35.82	20.602	17 58 55.5	46.12	2	6 31 29.63	20.943	20 0 9.7	3.64
3	4 53 39.47	20.613	18 3 29.7	45.29	3	6 33 35.30	20.945	20 0 28.8	2.73
4	4 55 43.18	20.624	18 7 59.0	44.46	4	6 35 40.97	20.947	20 0 42.4	1.81
5	4 57 46.96	20.636	18 12 23.2	43.62	5	6 37 46.66	20.948	20 0 50.5	0.89
6	4 59 50.81	20.647	18 16 42.4	42.78	6	6 39 52.35	20.948	20 0 53.1	0.02
7	5 1 54.72	20.658	18 20 56.6	41.95	7	6 41 58.04	20.950	20 0 50.2	0.95
8	5 3 58.70	20.668	18 25 5.8	41.10	8	6 44 3.75	20.951	20 0 41.7	1.88
9	5 6 2.74	20.678	18 29 9.8	40.25	9	6 46 9.45	20.951	20 0 27.7	2.80
10	5 8 6.84	20.689	18 33 8.8	39.41	10	6 48 15.16	20.951	20 0 8.1	3.72
11	5 10 11.01	20.700	18 37 2.7	38.55	11	6 50 20.86	20.951	19 59 43.1	4.63
12	5 12 15.24	20.709	18 40 51.4	37.69	12	6 52 26.57	20.952	19 59 12.5	5.56
13	5 14 19.52	20.719	18 44 35.0	36.84	13	6 54 32.28	20.951	19 58 36.4	6.48
14	5 16 23.87	20.730	18 48 13.5	35.98	14	6 56 37.98	20.949	19 57 54.8	7.39
15	5 18 28.28	20.739	18 51 46.8	35.11	15	6 58 43.67	20.949	19 57 7.7	8.32
16	5 20 32.74	20.748	18 55 14.8	34.24	16	7 0 49.37	20.948	19 56 15.0	9.23
17	5 22 37.26	20.758	18 58 37.7	33.38	17	7 2 55.05	20.946	19 55 16.9	10.15
18	5 24 41.83	20.766	19 1 55.3	32.50	18	7 5 0.72	20.945	19 54 13.2	11.08
19	5 26 46.45	20.775	19 5 7.7	31.63	19	7 7 6.39	20.944	19 53 4.0	11.99
20	5 28 51.13	20.784	19 8 14.9	30.76	20	7 9 12.05	20.942	19 51 49.3	12.90
21	5 30 55.86	20.793	19 11 16.8	29.88	21	7 11 17.69	20.939	19 50 29.2	13.82
22	5 33 0.64	20.801	19 14 13.4	28.99	22	7 13 23.32	20.938	19 49 3.5	14.74
23	5 35 5.47	20.809	N.19 17 4.7	28.11	23	7 15 28.94	20.935	N.19 47 32.3	15.66
FRIDAY 14.					SUNDAY 16.				
0	5 37 10.35	20.817	N.19 19 50.7	27.23	0	7 17 34.54	20.932	N.19 45 55.6	16.57
1	5 39 15.27	20.824	19 22 31.4	26.33	1	7 19 40.12	20.929	19 44 13.5	17.48
2	5 41 20.24	20.832	19 25 6.7	25.44	2	7 21 45.69	20.926	19 42 25.9	18.39
3	5 43 25.25	20.839	19 27 36.7	24.56	3	7 23 51.23	20.923	19 40 32.8	19.30
4	5 45 30.31	20.846	19 30 1.4	23.66	4	7 25 56.76	20.920	19 38 34.3	20.21
5	5 47 35.40	20.853	19 32 20.6	22.76	5	7 28 2.27	20.917	19 36 30.3	21.13
6	5 49 40.54	20.859	19 34 34.5	21.87	6	7 30 7.76	20.913	19 34 20.8	22.03
7	5 51 45.71	20.866	19 36 43.0	20.97	7	7 32 13.22	20.908	19 32 5.9	22.93
8	5 53 50.93	20.873	19 38 46.1	20.07	8	7 34 18.66	20.904	19 29 45.6	23.84
9	5 55 56.18	20.878	19 40 43.8	19.17	9	7 36 24.07	20.900	19 27 19.8	24.74
10	5 58 1.46	20.883	19 42 36.1	18.27	10	7 38 29.46	20.897	19 24 48.7	25.64
11	6 0 6.78	20.889	19 44 23.0	17.36	11	7 40 34.83	20.892	19 22 12.1	26.55
12	6 2 12.13	20.894	19 46 4.4	16.45	12	7 42 40.16	20.887	19 19 30.1	27.45
13	6 4 17.51	20.899	19 47 40.4	15.54	13	7 44 45.47	20.883	19 16 42.7	28.34
14	6 6 22.92	20.904	19 49 10.9	14.63	14	7 46 50.76	20.878	19 13 50.0	29.23
15	6 8 28.36	20.908	19 50 36.0	13.73	15	7 48 56.01	20.873	19 10 51.9	30.13
16	6 10 33.82	20.913	19 51 55.6	12.81	16	7 51 1.23	20.868	19 7 48.4	31.03
17	6 12 39.31	20.918	19 53 9.7	11.90	17	7 53 6.42	20.863	19 4 39.5	31.92
18	6 14 44.83	20.921	19 54 18.4	10.98	18	7 55 11.58	20.857	19 1 25.4	32.80
19	6 16 50.36	20.924	19 55 21.5	10.07	19	7 57 16.70	20.852	18 58 5.9	33.69
20	6 18 55.92	20.928	19 56 19.2	9.16	20	7 59 21.80	20.847	18 54 41.1	34.58
21	6 21 1.50	20.932	19 57 11.4	8.24	21	8 1 26.86	20.841	18 51 10.9	35.47
22	6 23 7.10	20.934	19 57 58.1	7.32	22	8 3 31.89	20.835	18 47 35.5	36.34
23	6 25 12.71	20.937	19 58 39.2	6.40	23	8 5 36.88	20.828	18 43 54.8	37.23
24	6 27 18.34	20.939	N.19 59 14.9	5.49	24	8 7 41.83	20.823	N.18 40 8.8	38.10

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 17.					WEDNESDAY 19.				
	h m s	s	N. 18° 40' 8".	38.10		h m s	s	N. 14° 1' 9".	76.95
0	8 7 41.83	20.823	18 36 17.6	38.98	0	9 46 57.97	20.566	13 53 25.4	77.67
1	8 9 46.76	20.818	18 32 21.1	39.85	1	9 49 1.36	20.564	13 45 37.2	78.40
2	8 11 51.64	20.811	18 28 19.4	40.73	2	9 51 4.74	20.562	13 29 47.8	79.12
3	8 13 56.49	20.805	18 24 12.4	41.59	3	9 53 8.10	20.559	13 21 46.8	79.82
4	8 16 1.30	20.799	18 20 0.3	42.45	4	9 55 11.45	20.558	13 13 41.5	80.53
5	8 18 6.08	20.793	18 15 43.0	43.32	5	9 57 14.79	20.557	13 5 31.9	81.24
6	8 20 10.82	20.787	18 11 20.5	44.18	6	9 59 18.13	20.555	12 57 18.2	81.94
7	8 22 15.52	20.780	18 6 52.8	45.04	7	10 1 21.45	20.554	12 49 0.4	82.63
8	8 24 20.18	20.774	18 2 20.0	45.90	8	10 3 24.78	20.554	12 40 38.4	83.32
9	8 26 24.81	20.768	17 57 42.0	46.75	9	10 5 28.10	20.553	12 32 12.2	84.02
10	8 28 29.40	20.762	17 52 59.0	47.60	10	10 7 31.41	20.553	12 23 42.0	84.70
11	8 30 33.95	20.755	17 48 10.8	48.46	11	10 9 34.73	20.553	12 15 7.8	85.37
12	8 32 38.46	20.749	17 43 17.5	49.30	12	10 11 38.05	20.553	12 6 29.6	86.03
13	8 34 42.94	20.743	17 38 19.2	50.14	13	10 13 41.37	20.554	11 57 47.3	86.71
14	8 36 47.37	20.736	17 33 15.8	50.98	14	10 15 44.70	20.556	11 49 1.1	87.38
15	8 38 51.77	20.730	17 28 7.4	51.82	15	10 17 48.04	20.557	11 40 10.9	88.03
16	8 40 56.13	20.723	17 22 54.0	52.65	16	10 19 51.38	20.558	11 31 16.8	88.69
17	8 43 0.45	20.718	17 17 35.6	53.49	17	10 21 54.73	20.560	11 22 18.9	89.33
18	8 45 4.74	20.712	17 12 12.1	54.33	18	10 23 58.10	20.563	11 13 17.1	89.97
19	8 47 8.99	20.705	17 6 43.7	55.14	19	10 26 1.48	20.564	11 4 11.4	90.63
20	8 49 13.20	20.699	16 55 32.1	55.97	20	10 28 4.87	20.568	10 55 2.0	91.26
21	8 51 17.38	20.693	16 49 48.9	56.79	21	10 30 8.29	20.571	10 45 48.8	91.88
22	8 53 21.51	20.686		57.61	22	10 32 11.72	20.574		92.52
23	8 55 25.61	20.680			23	10 34 15.18	20.578		
TUESDAY 18.					THURSDAY 20.				
0	8 57 29.67	20.674	N. 16° 44' 0.8	58.43	0	10 36 18.66	20.583	N. 10° 36' 31.8	93.13
1	8 59 33.70	20.669	16 38 7.8	59.23	1	10 38 22.17	20.587	10 27 11.2	93.74
2	9 1 37.70	20.663	16 32 10.0	60.04	2	10 40 25.70	20.592	10 17 46.9	94.35
3	9 3 41.66	20.657	16 26 7.3	60.85	3	10 42 29.27	20.598	10 8 19.0	94.95
4	9 5 45.58	20.651	16 19 59.8	61.65	4	10 44 32.87	20.603	9 58 47.5	95.56
5	9 7 49.47	20.646	16 13 47.5	62.44	5	10 46 36.50	20.608	9 49 12.3	96.15
6	9 9 53.33	20.640	16 7 30.5	63.24	6	10 48 40.17	20.615	9 39 33.7	96.73
7	9 11 57.15	20.634	16 1 8.6	64.04	7	10 50 43.88	20.622	9 29 51.5	97.32
8	9 14 0.94	20.629	15 54 42.0	64.83	8	10 52 47.63	20.629	9 20 5.9	97.89
9	9 16 4.70	20.625	15 48 10.7	65.61	9	10 54 51.43	20.637	9 10 16.8	98.47
10	9 18 8.44	20.620	15 41 34.7	66.39	10	10 56 55.27	20.645	9 0 24.3	99.03
11	9 20 12.14	20.614	15 34 54.0	67.17	11	10 58 59.17	20.653	8 50 28.4	99.59
12	9 22 15.81	20.610	15 28 8.7	67.94	12	11 1 3.11	20.662	8 40 29.2	100.14
13	9 24 19.46	20.605	15 21 18.7	68.72	13	11 3 7.11	20.671	8 30 26.7	100.68
14	9 26 23.07	20.600	15 14 24.1	69.48	14	11 5 11.16	20.680	8 20 21.0	101.23
15	9 28 26.66	20.597	15 7 24.9	70.24	15	11 7 15.27	20.690	8 10 12.0	101.77
16	9 30 30.23	20.593	15 0 21.2	71.00	16	11 9 19.44	20.701	7 59 59.8	102.29
17	9 32 33.77	20.588	14 53 12.9	71.77	17	11 11 23.68	20.712	7 49 44.5	102.82
18	9 34 37.29	20.584	14 46 0.0	72.52	18	11 13 27.98	20.723	7 39 26.0	103.33
19	9 36 40.78	20.581	14 38 42.7	73.26	19	11 15 32.36	20.735	7 29 4.5	103.83
20	9 38 44.26	20.578	14 31 20.9	74.01	20	11 17 36.80	20.746	7 18 40.0	104.34
21	9 40 47.72	20.574	14 23 54.6	74.75	21	11 19 41.31	20.759	7 8 12.4	104.85
22	9 42 51.15	20.571	14 16 23.9	75.48	22	11 21 45.91	20.773	6 57 41.8	105.33
23	9 44 54.57	20.568	14 8 48.8	76.23	23	11 23 50.58	20.786	6 47 8.4	105.82
24	9 46 57.97	20.566	N. 14° 1' 9.2	76.95	24	11 25 55.34	20.800	N. 6° 36' 32.0	106.30

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 21.					SUNDAY 23.				
	h m s	s	N. ° ' "	"		h m s	s	S. ° ' "	"
0	11 25 55.34	20.800	6 36 32.0	106.30	0	13 8 16.77	22.043	2 33 37.2	119.39
1	11 28 0.18	20.813	6 25 52.8	106.77	1	13 10 29.14	22.081	2 45 33.6	119.42
2	11 30 5.10	20.828	6 15 10.8	107.23	2	13 12 41.74	22.120	2 57 30.2	119.44
3	11 32 10.12	20.844	6 4 26.1	107.68	3	13 14 54.58	22.159	3 9 26.9	119.44
4	11 34 15.23	20.859	5 53 38.6	108.13	4	13 17 7.65	22.198	3 21 23.5	119.43
5	11 36 20.43	20.876	5 42 48.5	108.58	5	13 19 20.96	22.238	3 33 20.0	119.40
6	11 38 25.74	20.893	5 31 55.7	109.02	6	13 21 34.51	22.279	3 45 16.3	119.36
7	11 40 31.14	20.909	5 21 0.3	109.44	7	13 23 48.31	22.321	3 57 12.3	119.31
8	11 42 36.65	20.928	5 10 2.4	109.86	8	13 26 2.36	22.362	4 9 8.0	119.25
9	11 44 42.27	20.945	4 59 2.0	110.28	9	13 28 16.65	22.403	4 21 3.3	119.18
10	11 46 47.99	20.963	4 47 59.1	110.68	10	13 30 31.20	22.447	4 32 58.1	119.08
11	11 48 53.83	20.983	4 36 53.9	111.08	11	13 32 46.01	22.489	4 44 52.3	118.98
12	11 50 59.79	21.003	4 25 46.2	111.47	12	13 35 1.07	22.533	4 56 45.8	118.86
13	11 53 5.86	21.023	4 14 36.3	111.84	13	13 37 16.40	22.577	5 8 38.6	118.73
14	11 55 12.06	21.043	4 3 24.1	112.22	14	13 39 31.99	22.621	5 20 30.6	118.59
15	11 57 18.38	21.064	3 52 9.7	112.58	15	13 41 47.85	22.665	5 32 21.7	118.43
16	11 59 24.83	21.086	3 40 53.1	112.94	16	13 44 3.97	22.710	5 44 11.8	118.26
17	12 1 31.41	21.108	3 29 34.4	113.29	17	13 46 20.37	22.756	5 56 0.8	118.08
18	12 3 38.12	21.130	3 18 13.6	113.63	18	13 48 37.04	22.801	6 7 48.7	117.88
19	12 5 44.97	21.153	3 6 50.8	113.97	19	13 50 53.98	22.848	6 19 35.4	117.67
20	12 7 51.96	21.177	2 55 26.0	114.29	20	13 53 11.21	22.894	6 31 20.7	117.43
21	12 9 59.09	21.201	2 43 59.3	114.60	21	13 55 28.71	22.941	6 43 4.6	117.19
22	12 12 6.37	21.226	2 32 30.8	114.91	22	13 57 46.50	22.988	6 54 47.0	116.93
23	12 14 13.80	21.250	N. 2 21 0.4	115.21	23	14 0 4.57	23.036	S. 7 6 27.8	116.67
SATURDAY 22.					MONDAY 24.				
	h m s	s	N. ° ' "	"		h m s	s	S. ° ' "	"
0	12 16 21.37	21.276	2 9 28.3	115.49	0	14 2 22.93	23.084	7 18 7.0	116.38
1	12 18 29.11	21.303	1 57 54.5	115.78	1	14 4 41.58	23.133	7 29 44.4	116.08
2	12 20 37.00	21.328	1 46 19.0	116.04	2	14 7 0.52	23.181	7 41 19.9	115.76
3	12 22 45.05	21.356	1 34 42.0	116.30	3	14 9 19.75	23.230	7 52 53.5	115.43
4	12 24 53.27	21.383	1 23 3.4	116.56	4	14 11 39.28	23.279	8 4 25.1	115.08
5	12 27 1.65	21.411	1 11 23.3	116.80	5	14 13 59.10	23.328	8 15 54.5	114.73
6	12 29 10.20	21.440	0 59 41.8	117.03	6	14 16 19.22	23.378	8 27 21.8	114.35
7	12 31 18.93	21.469	0 47 59.0	117.25	7	14 18 39.64	23.428	8 38 46.7	113.95
8	12 33 27.83	21.498	0 36 14.8	117.47	8	14 21 0.36	23.479	8 50 9.2	113.54
9	12 35 36.91	21.529	0 24 29.4	117.66	9	14 23 21.39	23.530	9 1 29.2	113.13
10	12 37 46.18	21.560	0 12 42.9	117.85	10	14 25 42.72	23.581	9 12 46.7	112.68
11	12 39 55.63	21.591	N. 0 0 55.2	118.04	11	14 28 4.36	23.632	9 24 1.4	112.23
12	12 42 5.27	21.623	S. 0 10 53.6	118.21	12	14 30 26.30	23.683	9 35 13.4	111.76
13	12 44 15.10	21.654	0 22 43.3	118.37	13	14 32 48.55	23.734	9 46 22.5	111.28
14	12 46 25.12	21.688	0 34 34.0	118.52	14	14 35 11.11	23.787	9 57 28.7	110.77
15	12 48 35.35	21.721	0 46 25.5	118.65	15	14 37 33.99	23.838	10 8 31.7	110.24
16	12 50 45.77	21.754	0 58 17.8	118.78	16	14 39 57.17	23.889	10 19 31.6	109.72
17	12 52 56.40	21.789	1 10 10.9	118.90	17	14 42 20.66	23.942	10 30 28.3	109.17
18	12 55 7.24	21.824	1 22 4.6	119.00	18	14 44 44.47	23.994	10 41 21.6	108.60
19	12 57 18.29	21.859	1 33 58.9	119.10	19	14 47 8.59	24.047	10 52 11.5	108.02
20	12 59 29.55	21.894	1 45 53.8	119.18	20	14 49 33.03	24.099	11 2 57.8	107.42
21	13 1 41.02	21.931	1 57 49.1	119.25	21	14 51 57.78	24.151	11 13 40.5	106.80
22	13 3 52.72	21.968	2 9 44.8	119.32	22	14 54 22.84	24.203	11 24 19.4	106.17
23	13 6 4.63	22.004	2 21 40.9	119.37	23	14 56 48.22	24.256	11 34 54.5	105.52
24	13 8 16.77	22.043	S. 2 33 37.2	119.39	24	14 59 13.91	24.308	S. 11 45 25.6	104.85

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 25.					THURSDAY 27.				
	h m s	s	S. ° ' "	° ' "		h m s	s	S. ° ' "	° ' "
0	14 59 13.91	24.308	S. 11 45 25.6	104.85	0	17 1 29.74	26.434	S. 18 21 48.4	54.68
1	15 1 39.92	24.362	11 55 52.7	104.17	1	17 4 8.43	26.461	18 27 12.3	53.30
2	15 4 6.25	24.414	12 6 15.6	103.47	2	17 6 47.27	26.487	18 32 28.0	51.93
3	15 6 32.89	24.466	12 16 34.3	102.76	3	17 9 26.27	26.512	18 37 35.5	50.54
4	15 8 59.84	24.518	12 26 48.7	102.03	4	17 12 5.41	26.535	18 42 34.5	49.14
5	15 11 27.11	24.571	12 36 58.7	101.28	5	17 14 44.69	26.558	18 47 25.2	47.74
6	15 13 54.69	24.623	12 47 4.1	100.52	6	17 17 24.11	26.580	18 52 7.4	46.33
7	15 16 22.59	24.676	12 57 4.9	99.73	7	17 20 3.65	26.599	18 56 41.2	44.92
8	15 18 50.80	24.727	13 7 0.9	98.93	8	17 22 43.30	26.618	19 1 6.4	43.48
9	15 21 19.31	24.778	13 16 52.1	98.13	9	17 25 23.07	26.637	19 5 23.0	42.04
10	15 23 48.14	24.831	13 26 38.4	97.30	10	17 28 2.94	26.653	19 9 30.9	40.60
11	15 26 17.28	24.882	13 36 19.7	96.45	11	17 30 42.90	26.668	19 13 30.2	39.16
12	15 28 46.72	24.933	13 45 55.8	95.58	12	17 33 22.96	26.683	19 17 20.8	37.70
13	15 31 16.47	24.984	13 55 26.7	94.71	13	17 36 3.10	26.696	19 21 2.6	36.23
14	15 33 46.53	25.035	14 4 52.3	93.82	14	17 38 43.31	26.708	19 24 35.6	34.77
15	15 36 16.89	25.085	14 14 12.5	92.91	15	17 41 23.59	26.718	19 27 59.8	33.30
16	15 38 47.55	25.135	14 23 27.2	91.98	16	17 44 3.93	26.728	19 31 15.2	31.83
17	15 41 18.51	25.185	14 32 36.2	91.03	17	17 46 44.32	26.736	19 34 21.7	30.34
18	15 43 49.77	25.234	14 41 39.6	90.08	18	17 49 24.76	26.743	19 37 19.3	28.86
19	15 46 21.32	25.283	14 50 37.2	89.10	19	17 52 5.24	26.748	19 40 8.0	27.37
20	15 48 53.16	25.332	14 59 28.8	88.11	20	17 54 45.74	26.753	19 42 47.7	25.88
21	15 51 25.30	25.380	15 8 14.5	87.11	21	17 57 26.27	26.756	19 45 18.5	24.38
22	15 53 57.72	25.428	15 16 54.1	86.09	22	18 0 6.81	26.757	19 47 40.3	22.88
23	15 56 30.43	25.475	S. 15 25 27.6	85.06	23	18 2 47.35	26.757	S. 19 49 53.1	21.38
WEDNESDAY 26.					FRIDAY 28.				
	h m s	s	S. ° ' "	° ' "		h m s	s	S. ° ' "	° ' "
0	15 59 3.42	25.521	S. 15 33 54.8	84.00	0	18 5 27.89	26.756	S. 19 51 56.9	19.88
1	16 1 36.68	25.568	15 42 15.6	82.93	1	18 8 8.42	26.754	19 53 51.7	18.38
2	16 4 10.23	25.614	15 50 30.0	81.86	2	18 10 48.94	26.751	19 55 37.5	16.88
3	16 6 44.05	25.658	15 58 37.9	80.76	3	18 13 29.43	26.746	19 57 14.2	15.37
4	16 9 18.13	25.703	16 6 39.1	79.65	4	18 16 9.89	26.740	19 58 41.9	13.86
5	16 11 52.49	25.748	16 14 33.7	78.53	5	18 18 50.31	26.733	20 0 0.5	12.35
6	16 14 27.10	25.790	16 22 21.4	77.38	6	18 21 30.68	26.723	20 1 10.1	10.85
7	16 17 1.97	25.833	16 30 2.3	76.23	7	18 24 10.99	26.713	20 2 10.7	9.35
8	16 19 37.09	25.875	16 37 36.2	75.07	8	18 26 51.24	26.703	20 3 2.3	7.84
9	16 22 12.47	25.916	16 45 3.1	73.88	9	18 29 31.42	26.689	20 3 44.8	6.33
10	16 24 48.08	25.956	16 52 22.8	72.68	10	18 32 11.51	26.675	20 4 18.3	4.83
11	16 27 23.94	25.997	16 59 35.3	71.48	11	18 34 51.52	26.661	20 4 42.8	3.34
12	16 30 0.04	26.036	17 6 40.6	70.27	12	18 37 31.44	26.644	20 4 58.4	1.84
13	16 32 36.37	26.073	17 13 38.5	69.03	13	18 40 11.25	26.626	20 5 4.9	0.34
14	16 35 12.92	26.111	17 20 28.9	67.78	14	18 42 50.95	26.607	20 5 2.5	1.14
15	16 37 49.70	26.148	17 27 11.8	66.53	15	18 45 30.53	26.587	20 4 51.2	2.63
16	16 40 26.69	26.183	17 33 47.2	65.26	16	18 48 9.99	26.566	20 4 30.9	4.12
17	16 43 3.89	26.218	17 40 14.9	63.97	17	18 50 49.32	26.543	20 4 1.8	5.60
18	16 45 41.30	26.251	17 46 34.8	62.68	18	18 53 28.51	26.519	20 3 23.7	7.08
19	16 48 18.90	26.284	17 52 47.0	61.38	19	18 56 7.55	26.494	20 2 36.9	8.54
20	16 50 56.71	26.317	17 58 51.3	60.05	20	18 58 46.44	26.468	20 1 41.2	10.02
21	16 53 34.70	26.347	18 4 47.6	58.72	21	19 1 25.17	26.440	20 0 36.7	11.48
22	16 56 12.87	26.377	18 10 35.9	57.38	22	19 4 3.72	26.412	19 59 23.5	12.93
23	16 58 51.22	26.406	18 16 16.2	56.04	23	19 6 42.11	26.383	19 58 1.6	14.38
24	17 1 29.74	26.434	S. 18 21 48.4	54.68	24	19 9 20.31	26.351	S. 19 56 31.0	15.82

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 29.					SUNDAY 30.				
	h m s	s	S. ° ' "	"		h m s	s	S. ° ' "	"
0	19 9 20.31	26.351	19 56 31.0	15.82	0	20 11 26.99	25.324	18 38 55.5	47.93
1	19 11 58.32	26.318	19 54 51.8	17.26	1	20 13 58.78	25.273	18 34 4.2	49.15
2	19 14 36.14	26.287	19 53 3.9	18.69	2	20 16 30.26	25.220	18 29 5.7	50.34
3	19 17 13.76	26.253	19 51 7.5	20.11	3	20 19 1.42	25.166	18 24 0.1	51.53
4	19 19 51.17	26.217	19 49 2.6	21.53	4	20 21 32.25	25.111	18 18 47.4	52.70
5	19 22 28.36	26.181	19 46 49.2	22.94	5	20 24 2.75	25.057	18 13 27.7	53.86
6	19 25 5.34	26.144	19 44 27.3	24.34	6	20 26 32.93	25.003	18 8 1.1	55.01
7	19 27 42.09	26.106	19 41 57.1	25.73	7	20 29 2.78	24.947	18 2 27.6	56.15
8	19 30 18.61	26.067	19 39 18.6	27.11	8	20 31 32.29	24.891	17 56 47.3	57.28
9	19 32 54.89	26.027	19 36 31.8	28.48	9	20 34 1.47	24.835	17 51 0.2	58.39
10	19 35 30.93	25.986	19 33 36.8	29.85	10	20 36 30.31	24.778	17 45 6.6	59.48
11	19 38 6.72	25.943	19 30 33.6	31.21	11	20 38 58.80	24.720	17 39 6.4	60.58
12	19 40 42.25	25.900	19 27 22.3	32.56	12	20 41 26.95	24.663	17 32 59.7	61.65
13	19 43 17.52	25.857	19 24 2.9	33.89	13	20 43 54.76	24.606	17 26 46.6	62.71
14	19 45 52.53	25.813	19 20 35.6	35.22	14	20 46 22.22	24.548	17 20 27.2	63.76
15	19 48 27.27	25.767	19 17 0.3	36.54	15	20 48 49.33	24.489	17 14 1.5	64.80
16	19 51 1.73	25.720	19 13 17.1	37.85	16	20 51 16.09	24.431	17 7 29.6	65.82
17	19 53 35.91	25.673	19 9 26.1	39.15	17	20 53 42.50	24.373	17 0 51.7	66.83
18	19 56 9.81	25.626	19 5 27.3	40.43	18	20 56 8.56	24.313	16 54 7.7	67.83
19	19 58 43.42	25.578	19 1 20.9	41.71	19	20 58 34.26	24.254	16 47 17.7	68.82
20	20 1 16.74	25.528	18 57 6.8	42.98	20	21 0 59.61	24.195	16 40 21.9	69.78
21	20 3 49.76	25.478	18 52 45.1	44.23	21	21 3 24.60	24.136	16 33 20.3	70.74
22	20 6 22.48	25.428	18 48 16.0	45.48	22	21 5 49.24	24.077	16 26 13.0	71.68
23	20 8 54.89	25.376	18 43 39.4	46.71	23	21 8 13.52	24.017	16 19 0.1	72.62
24	20 11 26.99	25.324	S. 18 38 55.5	47.93	24	21 10 37.44	23.957	S. 16 11 41.6	73.54

PHASES OF THE MOON.

		h m
Nov. 3	) First Quarter	10 18.5
11	○ Full Moon	0 30.7
19	(Last Quarter	5 38.5
26	● New Moon	5 15.5

		h
Nov. 14	(Apogee	13.0
27	(Perigee	0.6

AT APPARENT NOON.

Date.	THE SUN'S				Sidereal Time of the Semi-diameter passing the Meridian.*	Equation of Time, to be subtracted from		Var. in 1 hour.
	Apparent Right Ascension.	Var. in 1 hour.	Apparent Declination.	Var. in 1 hour.		added to Apparent Time.		
	h m s	s	° ' "	"	m s	m s	s	
Mon.	1	16 29 19.41	10.799	S.21 48 42.3	23.34	1 10.22	10 54.19	0.940
Tues.	2	16 33 38.90	10.825	21 57 49.9	22.29	1 10.31	10 31.32	0.965
Wed.	3	16 37 58.99	10.849	22 6 32.1	21.23	1 10.39	10 7.85	0.990
Thur.	4	16 42 19.66	10.873	22 14 48.7	20.15	1 10.47	9 43.80	1.014
Frid.	5	16 46 40.89	10.896	22 22 39.3	19.06	1 10.55	9 19.20	1.036
Sat.	6	16 51 2.65	10.917	22 30 3.7	17.97	1 10.63	8 54.06	1.058
Sun.	7	16 55 24.93	10.938	22 37 1.7	16.86	1 10.70	8 28.41	1.079
Mon.	8	16 59 47.69	10.958	22 43 33.1	15.75	1 10.76	8 2.28	1.098
Tues.	9	17 4 10.91	10.977	22 49 37.6	14.63	1 10.82	7 35.69	1.117
Wed.	10	17 8 34.57	10.994	22 55 15.1	13.50	1 10.88	7 8.66	1.135
Thur.	11	17 12 58.64	11.011	23 0 25.5	12.36	1 10.93	6 41.22	1.151
Frid.	12	17 17 23.10	11.026	23 5 8.5	11.22	1 10.98	6 13.40	1.166
Sat.	13	17 21 47.91	11.040	23 9 24.0	10.07	1 11.03	5 45.23	1.181
Sun.	14	17 26 13.04	11.054	23 13 11.8	8.91	1 11.07	5 16.73	1.194
Mon.	15	17 30 38.48	11.066	23 16 31.8	7.75	1 11.11	4 47.92	1.206
Tues.	16	17 35 4.19	11.076	23 19 24.0	6.59	1 11.14	4 18.85	1.216
Wed.	17	17 39 30.14	11.085	23 21 48.2	5.42	1 11.17	3 49.54	1.225
Thur.	18	17 43 56.29	11.093	23 23 44.3	4.25	1 11.19	3 20.03	1.233
Frid.	19	17 48 22.62	11.100	23 25 12.3	3.08	1 11.21	2 50.34	1.240
Sat.	20	17 52 49.10	11.105	23 26 12.1	1.90	1 11.22	2 20.50	1.245
Sun.	21	17 57 15.68	11.109	23 26 43.6	0.73	1 11.23	1 50.56	1.249
Mon.	22	18 1 42.34	11.111	23 26 46.9	0.45	1 11.23	1 20.54	1.251
Tues.	23	18 6 9.03	11.112	23 26 21.9	1.63	1 11.23	0 50.49	1.252
Wed.	24	18 10 35.72	11.111	23 25 28.6	2.81	1 11.23	0 20.44	1.251
Thur.	25	18 15 2.37	11.109	23 24 7.0	3.99	1 11.22	0 9.58	1.249
Frid.	26	18 19 28.94	11.105	23 22 17.2	5.16	1 11.21	0 39.51	1.244
Sat.	27	18 23 55.39	11.098	23 19 59.2	6.34	1 11.19	1 9.31	1.239
Sun.	28	18 28 21.68	11.091	23 17 13.0	7.51	1 11.17	1 38.96	1.231
Mon.	29	18 32 47.76	11.082	23 13 58.8	8.68	1 11.14	2 8.41	1.222
Tues.	30	18 37 13.61	11.071	23 10 16.6	9.84	1 11.11	2 37.62	1.211
Wed.	31	18 41 39.19	11.059	23 6 6.5	11.00	1 11.07	3 6.56	1.200
Thur.	32	18 46 4.46	11.046	S.23 1 28.7	12.15	1 11.03	3 35.20	1.186

* Mean Time of the Semidiameter passing may be found by subtracting 0^s.19 from the Sidereal Time.

AT MEAN NOON.

Date.		THE SUN'S			Equation of Time, to be subtracted from	Sidereal Time.
		Apparent Right Ascension.	Apparent Declination.	Semi-diameter.*	added to Apparent Time.	
Mon.	1	h m s 16 29 21.37	S. 21 48 46.5	16 15.04	m s 10 54.02	h m s 16 40 15.39
Tues.	2	16 33 40.80	21 57 53.8	16 15.19	10 31.15	16 44 11.95
Wed.	3	16 38 0.82	22 6 35.7	16 15.35	10 7.69	16 48 8.51
Thur.	4	16 42 21.42	22 14 51.9	16 15.50	9 43.64	16 52 5.06
Frid.	5	16 46 42.58	22 22 42.2	16 15.64	9 19.04	16 56 1.62
Sat.	6	16 51 4.27	22 30 6.3	16 15.78	8 53.91	16 59 58.18
Sun.	7	16 55 26.47	22 37 4.1	16 15.92	8 28.26	17 3 54.74
Mon.	8	16 59 49.16	22 43 35.2	16 16.04	8 2.13	17 7 51.29
Tues.	9	17 4 12.30	22 49 39.5	16 16.17	7 35.55	17 11 47.85
Wed.	10	17 8 35.88	22 55 16.8	16 16.29	7 8.53	17 15 44.41
Thur.	11	17 12 59.87	23 0 26.9	16 16.40	6 41.10	17 19 40.96
Frid.	12	17 17 24.24	23 5 9.6	16 16.51	6 13.28	17 23 37.52
Sat.	13	17 21 48.96	23 9 24.9	16 16.60	5 45.11	17 27 34.08
Sun.	14	17 26 14.02	23 13 12.6	16 16.70	5 16.62	17 31 30.64
Mon.	15	17 30 39.37	23 16 32.5	16 16.79	4 47.83	17 35 27.19
Tues.	16	17 35 4.98	23 19 24.5	16 16.87	4 18.77	17 39 23.75
Wed.	17	17 39 30.84	23 21 48.5	16 16.95	3 49.47	17 43 20.31
Thur.	18	17 43 56.91	23 23 44.5	16 17.02	3 19.96	17 47 16.87
Frid.	19	17 48 23.15	23 25 12.4	16 17.09	2 50.28	17 51 13.42
Sat.	20	17 52 49.53	23 26 12.1	16 17.15	2 20.45	17 55 9.98
Sun.	21	17 57 16.02	23 26 43.6	16 17.21	1 50.52	17 59 6.54
Mon.	22	18 1 42.59	23 26 46.9	16 17.26	1 20.51	18 3 3.10
Tues.	23	18 6 9.19	23 26 21.9	16 17.31	0 50.47	18 6 59.66
Wed.	24	18 10 35.78	23 25 28.6	16 17.35	0 20.43	18 10 56.21
Thur.	25	18 15 2.34	23 24 7.0	16 17.39	0 9.57	18 14 52.77
Frid.	26	18 19 28.82	23 22 17.2	16 17.43	0 39.49	18 18 49.33
Sat.	27	18 23 55.18	23 19 59.3	16 17.46	1 9.29	18 22 45.88
Sun.	28	18 28 21.37	23 17 13.2	16 17.49	1 38.93	18 26 42.44
Mon.	29	18 32 47.37	23 13 59.1	16 17.52	2 8.37	18 30 39.00
Tues.	30	18 37 13.13	23 10 17.0	16 17.54	2 37.57	18 34 35.56
Wed.	31	18 41 38.62	23 6 7.1	16 17.56	3 6.50	18 38 32.12
Thur.	32	18 46 3.80	S. 23 1 29.5	16 17.58	3 35.13	18 42 28.67

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

MEAN TIME.

Day.	THE SUN'S <i>Apparent</i>		Logarithm of the Radius Vector of the Earth.	Transit of the First Point of Aries.	THE MOON'S			
	Longitude.	Latitude.			Semidiameter.		Horizontal Parallax.	
	Noon.	Noon.			Noon.	Midnight.	Noon.	Midnight.
1	249° 2 29.3	S. 0.22	9.9937844	^h 7 18 ^m 32.57 ^s	16 7.62	16 0.62	59 11.31	58 45.63
2	250 3 21.3	0.36	.9937141	7 14 36.65	15 53.57	15 46.58	58 19.72	57 54.07
3	251 4 14.2	0.49	.9936456	7 10 40.74	15 39.77	15 33.22	57 29.08	57 5.06
4	252 5 7.9	0.60	9.9935790	7 6 44.83	15 27.01	15 21.18	56 42.27	56 20.88
5	253 6 2.3	0.69	.9935145	7 2 48.92	15 15.77	15 10.79	56 1.01	55 42.72
6	254 6 57.5	0.76	.9934523	6 58 53.01	15 6.24	15 2.13	55 26.03	55 10.95
7	255 7 53.5	0.81	9.9933924	6 54 57.10	14 58.45	14 55.17	54 57.42	54 45.41
8	256 8 50.3	0.82	.9933350	6 51 1.19	14 52.29	14 49.80	54 34.84	54 25.68
9	257 9 47.8	0.80	.9932800	6 47 5.28	14 47.66	14 45.88	54 17.84	54 11.30
10	258 10 46.1	0.76	9.9932277	6 43 9.36	14 44.44	14 43.34	54 6.02	54 1.97
11	259 11 45.3	0.69	.9931779	6 39 13.45	14 42.57	14 42.14	53 59.15	53 57.58
12	260 12 45.3	0.60	.9931308	6 35 17.54	14 42.06	14 42.35	53 57.29	53 58.35
13	261 13 46.1	0.50	9.9930863	6 31 21.63	14 43.02	14 44.10	54 0.81	54 4.76
14	262 14 47.7	0.38	.9930444	6 27 25.72	14 45.60	14 47.56	54 10.28	54 17.48
15	263 15 50.3	0.25	.9930051	6 23 29.81	14 50.01	14 52.96	54 26.46	54 37.30
16	264 16 53.7	S. 0.12	9.9929683	6 19 33.90	14 56.44	15 0.47	54 50.08	55 4.87
17	265 17 57.9	0.00	.9929340	6 15 37.98	15 5.06	15 10.21	55 21.70	55 40.59
18	266 19 3.0	N. 0.11	.9929021	6 11 42.07	15 15.90	15 22.12	56 1.49	56 24.32
19	267 20 9.0	0.22	9.9928725	6 7 46.16	15 28.82	15 35.95	56 48.92	57 15.07
20	268 21 15.8	0.30	.9928450	6 3 50.25	15 43.42	15 51.12	57 42.48	58 10.75
21	269 22 23.4	0.35	.9928197	5 59 54.34	15 58.93	16 6.70	58 39.43	59 7.94
22	270 23 31.7	0.38	9.9927963	5 55 58.43	16 14.26	16 21.40	59 35.66	60 1.88
23	271 24 40.7	0.37	.9927747	5 52 2.51	16 27.93	16 33.66	60 25.86	60 46.88
24	272 25 50.3	0.32	.9927547	5 48 6.60	16 38.39	16 41.94	61 4.22	61 17.27
25	273 27 0.3	0.25	9.9927364	5 44 10.69	16 44.20	16 45.05	61 25.54	61 28.69
26	274 28 10.8	0.15	.9927196	5 40 14.78	16 44.48	16 42.50	61 26.59	61 19.31
27	275 29 21.4	N. 0.03	.9927044	5 36 18.87	16 39.17	16 34.63	61 7.11	60 50.44
28	276 30 32.2	S. 0.11	9.9926908	5 32 22.96	16 29.03	16 22.56	60 29.89	60 6.13
29	277 31 43.0	0.24	.9926788	5 28 27.04	16 15.42	16 7.81	59 39.92	59 11.99
30	278 32 53.7	0.37	.9926686	5 24 31.13	15 59.93	15 51.97	58 43.09	58 13.87
31	279 34 4.2	0.48	.9926604	5 20 35.22	15 44.09	15 36.43	57 44.95	57 16.82
32	280 35 14.5	S. 0.58	9.9926543	5 16 39.31	15 29.10	15 22.19	56 49.91	56 24.58

MEAN TIME.

THE MOON'S							
Day.	Longitude.		Latitude.		Age.	Meridian Passage.	
	Noon.	Midnight.	Noon.	Midnight.	Noon.	Upper.	Lower.
					d	h m	h m
1	315° 13' 2.9	322° 11' 38.8	N. 0° 5' 11.0	S. 0° 31' 56.2	4.78	4 40.7	17 7.7
2	329 4 1.0	335 50 21.9	S. 1 8 3.4	1 42 41.6	5.78	5 33.8	17 59.0
3	342 30 59.9	349 6 16.8	2 15 25.7	2 45 54.2	6.78	6 23.4	18 47.1
4	355 36 36.8	2 2 25.4	3 13 49.3	3 38 56.0	7.78	7 10.3	19 33.1
5	8 24 8.1	14 42 9.5	4 1 2.0	4 19 57.6	8.78	7 55.5	20 17.7
6	20 56 52.8	27 8 39.6	4 35 35.4	4 47 50.0	9.78	8 39.8	21 1.9
7	33 17 49.5	39 24 39.9	4 56 37.9	5 1 57.5	10.78	9 24.0	21 46.2
8	45 29 26.4	51 32 22.3	5 3 49.0	5 2 14.4	11.78	10 8.6	22 31.3
9	57 33 40.0	63 33 30.2	4 57 17.4	4 49 3.4	12.78	10 54.2	23 17.3
10	69 32 2.7	75 29 27.6	4 37 39.6	4 23 14.5	13.78	11 40.7	* *
11	81 25 54.5	87 21 34.1	4 5 58.3	3 46 2.6	14.78	12 28.1	0 4.3
12	93 16 38.0	99 11 19.2	3 23 40.2	2 59 5.0	15.78	13 16.0	0 52.0
13	105 5 52.6	111 0 35.3	2 32 31.8	2 4 16.4	16.78	14 4.0	1 40.0
14	116 55 46.8	122 51 49.2	1 34 35.4	S. 1 3 45.7	17.78	14 51.6	2 27.8
15	128 49 7.0	134 48 7.2	S. 0 32 5.1	N. 0 0 8.2	18.78	15 38.5	3 15.1
16	140 49 19.9	146 53 16.5	N. 0 32 35.3	1 4 56.8	19.78	16 24.8	4 1.7
17	153 0 31.0	159 11 38.2	1 36 52.6	2 8 1.4	20.78	17 10.7	4 47.7
18	165 27 14.0	171 47 53.8	2 38 1.4	3 6 29.7	21.78	17 56.6	5 33.6
19	178 14 11.8	184 46 40.0	3 33 2.2	3 57 13.8	22.78	18 43.5	6 19.9
20	191 25 46.1	198 11 52.6	4 18 39.0	4 36 51.0	23.78	19 32.0	7 7.5
21	205 5 14.6	212 5 58.0	4 51 24.0	5 1 52.6	24.78	20 23.2	7 57.2
22	219 13 58.1	226 28 57.8	5 7 53.6	5 9 7.1	25.78	21 17.9	8 50.1
23	233 50 27.2	241 17 42.9	5 5 17.9	4 56 17.2	26.78	22 16.4	9 46.7
24	248 49 48.6	256 25 36.9	4 42 3.9	4 22 45.7	27.78	23 18.3	10 47.0
25	264 3 51.2	271 43 9.7	3 58 39.4	3 30 11.1	28.78	* *	11 50.0
26	279 22 8.3	286 59 24.6	2 57 55.4	2 22 33.3	0.34	0 22.0	12 53.9
27	294 33 41.8	302 3 51.5	1 44 50.9	N. 1 5 36.7	1.34	1 25.4	13 56.3
28	309 28 55.7	316 48 8.6	N. 0 25 39.3	S. 0 14 14.8	2.34	2 26.3	14 55.4
29	324 0 57.0	331 6 59.8	S. 0 53 22.1	1 31 4.5	3.34	3 23.4	15 50.4
30	338 6 7.5	344 58 20.6	2 6 48.9	2 40 7.8	4.34	4 16.5	16 41.7
31	351 43 48.1	358 22 46.3	3 10 39.0	3 38 5.5	5.34	5 6.1	17 29.8
32	4 55 37.0	11 22 45.6	S. 4 2 14.2	S. 4 22 56.1	6.34	5 53.0	18 15.7

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.	Hour.	Right Ascension.	Var. in 10m.	Declination.	Var. in 10m.
MONDAY 1.					WEDNESDAY 3.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	21 10 37.44	23.957	S. 16 11 41.6	73.54	0	22 59 1.32	21.328	S. 8 57 1.7	102.93
1	21 13 1.00	23.897	16 4 17.6	74.45	1	23 1 9.15	21.283	8 46 43.1	103.27
2	21 15 24.20	23.838	15 56 48.2	75.33	2	23 3 16.72	21.239	8 36 22.5	103.58
3	21 17 47.05	23.778	15 49 13.6	76.22	3	23 5 24.02	21.194	8 26 0.1	103.89
4	21 20 9.54	23.718	15 41 33.6	77.09	4	23 7 31.05	21.151	8 15 35.8	104.20
5	21 22 31.67	23.658	15 33 48.5	77.93	5	23 9 37.83	21.108	8 5 9.7	104.48
6	21 24 53.44	23.599	15 25 58.4	78.78	6	23 11 44.35	21.066	7 54 42.0	104.77
7	21 27 14.86	23.540	15 18 3.2	79.61	7	23 13 50.62	21.024	7 44 12.5	105.04
8	21 29 35.92	23.480	15 10 3.1	80.43	8	23 15 56.64	20.983	7 33 41.5	105.29
9	21 31 56.62	23.420	15 1 58.1	81.23	9	23 18 2.41	20.942	7 23 9.0	105.55
10	21 34 16.96	23.361	14 53 48.4	82.01	10	23 20 7.94	20.902	7 12 34.9	105.79
11	21 36 36.95	23.303	14 45 34.0	82.79	11	23 22 13.23	20.863	7 1 59.5	106.02
12	21 38 56.59	23.243	14 37 14.9	83.55	12	23 24 18.29	20.823	6 51 22.7	106.25
13	21 41 15.87	23.184	14 28 51.4	84.29	13	23 26 23.11	20.784	6 40 44.5	106.46
14	21 43 34.80	23.126	14 20 23.4	85.03	14	23 28 27.70	20.747	6 30 5.2	106.66
15	21 45 53.38	23.068	14 11 51.0	85.77	15	23 30 32.07	20.710	6 19 24.6	106.86
16	21 48 11.61	23.009	14 3 14.2	86.48	16	23 32 36.22	20.673	6 8 42.9	107.04
17	21 50 29.49	22.951	13 54 33.3	87.17	17	23 34 40.14	20.636	5 58 0.1	107.23
18	21 52 47.02	22.893	13 45 48.2	87.86	18	23 36 43.85	20.601	5 47 16.2	107.39
19	21 55 4.20	22.835	13 36 59.0	88.53	19	23 38 47.35	20.566	5 36 31.4	107.54
20	21 57 21.04	22.778	13 28 5.8	89.19	20	23 40 50.64	20.531	5 25 45.7	107.69
21	21 59 37.54	22.722	13 19 8.7	89.84	21	23 42 53.72	20.497	5 14 59.1	107.84
22	22 1 53.70	22.665	13 10 7.7	90.48	22	23 44 56.60	20.464	5 4 11.6	107.98
23	22 4 9.52	22.608	S. 13 1 2.9	91.11	23	23 46 59.29	20.432	S. 4 53 23.4	108.09
TUESDAY 2.					THURSDAY 4.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	22 6 25.00	22.552	S. 12 51 54.4	91.72	0	23 49 1.78	20.398	S. 4 42 34.5	108.21
1	22 8 40.14	22.497	12 42 42.3	92.31	1	23 51 4.07	20.367	4 31 44.9	108.32
2	22 10 54.96	22.442	12 33 26.7	92.90	2	23 53 6.18	20.337	4 20 54.7	108.41
3	22 13 9.44	22.386	12 24 7.5	93.48	3	23 55 8.11	20.306	4 10 4.0	108.50
4	22 15 23.59	22.331	12 14 44.9	94.04	4	23 57 9.85	20.276	3 59 12.7	108.59
5	22 17 37.41	22.277	12 5 19.0	94.59	5	23 59 11.42	20.247	3 48 20.9	108.66
6	22 19 50.91	22.223	11 55 49.8	95.13	6	0 1 12.81	20.218	3 37 28.8	108.72
7	22 22 4.09	22.170	11 46 17.4	95.67	7	0 3 14.03	20.190	3 26 36.3	108.78
8	22 24 16.95	22.116	11 36 41.8	96.18	8	0 5 15.09	20.163	3 15 43.5	108.83
9	22 26 29.48	22.063	11 27 3.2	96.69	9	0 7 15.98	20.135	3 4 50.4	108.87
10	22 28 41.71	22.012	11 17 21.5	97.18	10	0 9 16.71	20.108	2 53 57.1	108.90
11	22 30 53.62	21.959	11 7 37.0	97.66	11	0 11 17.28	20.082	2 43 3.6	108.93
12	22 33 5.22	21.908	10 57 49.6	98.13	12	0 13 17.70	20.058	2 32 10.0	108.94
13	22 35 16.52	21.858	10 47 59.4	98.60	13	0 15 17.97	20.033	2 21 16.3	108.96
14	22 37 27.51	21.808	10 38 6.4	99.05	14	0 17 18.10	20.009	2 10 22.5	108.96
15	22 39 38.20	21.758	10 28 10.8	99.48	15	0 19 18.08	19.985	1 59 28.8	108.94
16	22 41 48.60	21.708	10 18 12.7	99.90	16	0 21 17.92	19.962	1 48 35.2	108.93
17	22 43 58.69	21.658	10 8 12.0	100.33	17	0 23 17.62	19.939	1 37 41.7	108.91
18	22 46 8.49	21.609	9 58 8.8	100.73	18	0 25 17.19	19.918	1 26 48.3	108.88
19	22 48 18.00	21.562	9 48 3.2	101.13	19	0 27 16.64	19.897	1 15 55.1	108.84
20	22 50 27.23	21.514	9 37 55.3	101.51	20	0 29 15.95	19.876	1 5 2.2	108.80
21	22 52 36.17	21.467	9 27 45.1	101.88	21	0 31 15.15	19.856	0 54 9.5	108.75
22	22 54 44.83	21.420	9 17 32.8	102.23	22	0 33 14.22	19.836	0 43 17.2	108.68
23	22 56 53.21	21.374	9 7 18.3	102.59	23	0 35 13.18	19.817	0 32 25.3	108.62
24	22 59 1.32	21.328	S. 8 57 1.7	102.93	24	0 37 12.02	19.798	S. 0 21 33.8	108.55

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
FRIDAY 5.					SUNDAY 7.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	0 37 12.02	19.798	S. 0 21 33.8	108.55	0	2 11 5.14	19.503	N. 7 57 53.1	97.04
1	0 39 10.76	19.781	S. 0 10 42.7	108.48	1	2 13 2.17	19.508	8 7 34.1	96.64
2	0 41 9.39	19.763	N. 0 0 7.9	108.38	2	2 14 59.23	19.513	8 17 12.8	96.25
3	0 43 7.92	19.747	0 10 57.8	108.28	3	2 16 56.33	19.519	8 26 49.1	95.84
4	0 45 6.35	19.730	0 21 47.2	108.18	4	2 18 53.46	19.524	8 36 22.9	95.43
5	0 47 4.68	19.713	0 32 36.0	108.08	5	2 20 50.62	19.530	8 45 54.2	95.00
6	0 49 2.91	19.698	0 43 24.1	107.95	6	2 22 47.82	19.537	8 55 22.9	94.58
7	0 51 1.06	19.684	0 54 11.4	107.83	7	2 24 45.06	19.543	9 4 49.1	94.15
8	0 52 59.12	19.670	1 4 58.0	107.70	8	2 26 42.34	19.551	9 14 12.7	93.71
9	0 54 57.10	19.657	1 15 43.8	107.56	9	2 28 39.67	19.558	9 23 33.6	93.27
10	0 56 55.00	19.643	1 26 28.7	107.42	10	2 30 37.04	19.566	9 32 51.9	92.82
11	0 58 52.82	19.631	1 37 12.8	107.27	11	2 32 34.46	19.574	9 42 7.4	92.36
12	1 0 50.57	19.619	1 47 55.9	107.10	12	2 34 31.93	19.583	9 51 20.2	91.90
13	1 2 48.25	19.608	1 58 38.0	106.93	13	2 36 29.45	19.592	10 0 30.2	91.43
14	1 4 45.86	19.596	2 9 19.1	106.77	14	2 38 27.03	19.601	10 9 37.4	90.96
15	1 6 43.40	19.585	2 19 59.2	106.59	15	2 40 24.66	19.610	10 18 41.7	90.48
16	1 8 40.88	19.576	2 30 38.2	106.40	16	2 42 22.35	19.620	10 27 43.1	89.99
17	1 10 38.31	19.567	2 41 16.0	106.21	17	2 44 20.10	19.629	10 36 41.6	89.50
18	1 12 35.68	19.558	2 51 52.7	106.01	18	2 46 17.90	19.639	10 45 37.1	89.01
19	1 14 33.00	19.548	3 2 28.1	105.80	19	2 48 15.77	19.651	10 54 29.7	88.51
20	1 16 30.26	19.540	3 13 2.3	105.59	20	2 50 13.71	19.662	11 3 19.2	87.99
21	1 18 27.48	19.533	3 23 35.2	105.38	21	2 52 11.71	19.672	11 12 5.6	87.48
22	1 20 24.66	19.527	3 34 6.8	105.15	22	2 54 9.77	19.683	11 20 48.9	86.96
23	1 22 21.80	19.520	N. 3 44 37.0	104.91	23	2 56 7.90	19.695	N. 11 29 29.1	86.43
SATURDAY 6.					MONDAY 8.				
0	1 24 18.90	19.513	N. 3 55 5.7	104.68	0	2 58 6.11	19.707	N. 11 38 6.1	85.90
1	1 26 15.96	19.508	4 5 33.1	104.43	1	3 0 4.38	19.718	11 46 39.9	85.36
2	1 28 12.99	19.503	4 15 58.9	104.18	2	3 2 2.73	19.731	11 55 10.4	84.82
3	1 30 10.00	19.498	4 26 23.2	103.93	3	3 4 1.15	19.743	12 3 37.7	84.27
4	1 32 6.97	19.494	4 36 46.0	103.66	4	3 5 59.65	19.757	12 12 1.6	83.71
5	1 34 3.93	19.491	4 47 7.1	103.38	5	3 7 58.23	19.769	12 20 22.2	83.16
6	1 36 0.86	19.487	4 57 26.6	103.11	6	3 9 56.88	19.782	12 28 39.5	82.59
7	1 37 57.77	19.484	5 7 44.4	102.83	7	3 11 55.61	19.795	12 36 53.3	82.02
8	1 39 54.67	19.483	5 18 0.5	102.53	8	3 13 54.42	19.808	12 45 3.7	81.44
9	1 41 51.56	19.481	5 28 14.8	102.24	9	3 15 53.31	19.823	12 53 10.6	80.85
10	1 43 48.44	19.479	5 38 27.4	101.94	10	3 17 52.29	19.837	13 1 13.9	80.26
11	1 45 45.31	19.478	5 48 38.1	101.63	11	3 19 51.35	19.851	13 9 13.7	79.68
12	1 47 42.18	19.478	5 58 46.9	101.31	12	3 21 50.50	19.865	13 17 10.0	79.08
13	1 49 39.04	19.478	6 8 53.8	100.99	13	3 23 49.73	19.879	13 25 2.6	78.47
14	1 51 35.91	19.478	6 18 58.8	100.67	14	3 25 49.05	19.893	13 32 51.6	77.86
15	1 53 32.78	19.478	6 29 1.8	100.33	15	3 27 48.45	19.908	13 40 36.9	77.23
16	1 55 29.65	19.479	6 39 2.7	99.98	16	3 29 47.95	19.923	13 48 18.4	76.62
17	1 57 26.53	19.481	6 49 1.6	99.64	17	3 31 47.53	19.938	13 55 56.3	75.99
18	1 59 23.42	19.483	6 58 58.4	99.29	18	3 33 47.20	19.953	14 3 30.3	75.35
19	2 1 20.33	19.486	7 8 53.1	98.93	19	3 35 46.97	19.969	14 11 0.5	74.72
20	2 3 17.25	19.488	7 18 45.6	98.56	20	3 37 46.83	19.984	14 18 26.9	74.08
21	2 5 14.19	19.492	7 28 35.8	98.19	21	3 39 46.78	19.999	14 25 49.4	73.43
22	2 7 11.15	19.495	7 38 23.9	97.82	22	3 41 46.82	20.014	14 33 8.0	72.77
23	2 9 8.13	19.499	7 48 9.6	97.43	23	3 43 46.95	20.030	14 40 22.6	72.11
24	2 11 5.14	19.503	N. 7 57 53.1	97.04	24	3 45 47.18	20.046	N. 14 47 33.3	71.45

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
TUESDAY 9.					THURSDAY 11.				
	h m s	s	N. ° ' "	" "		h m s	s	N. ° ' "	" "
0	3 45 47.18	20.046	N. 14 47 33.3	71.45	0	5 23 48.75	20.766	N. 19 4 43.5	34.06
1	3 47 47.50	20.062	14 54 40.0	70.78	1	5 25 53.38	20.777	19 8 5.2	33.18
2	3 49 47.92	20.078	15 1 42.6	70.10	2	5 27 58.07	20.788	19 11 21.7	32.32
3	3 51 48.44	20.094	15 8 41.2	69.43	3	5 30 2.84	20.800	19 14 33.0	31.43
4	3 53 49.05	20.109	15 15 35.7	68.74	4	5 32 7.67	20.810	19 17 38.9	30.55
5	3 55 49.75	20.125	15 22 26.1	68.04	5	5 34 12.56	20.821	19 20 39.6	29.67
6	3 57 50.55	20.142	15 29 12.2	67.34	6	5 36 17.52	20.832	19 23 34.9	28.77
7	3 59 51.45	20.158	15 35 54.2	66.65	7	5 38 22.54	20.842	19 26 24.8	27.88
8	4 1 52.45	20.174	15 42 32.0	65.94	8	5 40 27.62	20.851	19 29 9.5	27.00
9	4 3 53.54	20.190	15 49 5.5	65.23	9	5 42 32.75	20.860	19 31 48.8	26.10
10	4 5 54.73	20.206	15 55 34.8	64.52	10	5 44 37.94	20.870	19 34 22.7	25.20
11	4 7 56.01	20.223	16 1 59.7	63.79	11	5 46 43.19	20.880	19 36 51.2	24.31
12	4 9 57.40	20.239	16 8 20.3	63.07	12	5 48 48.50	20.888	19 39 14.4	23.41
13	4 11 58.88	20.254	16 14 36.5	62.33	13	5 50 53.85	20.896	19 41 32.1	22.50
14	4 14 0.45	20.271	16 20 48.3	61.60	14	5 52 59.25	20.905	19 43 44.4	21.59
15	4 16 2.13	20.288	16 26 55.7	60.86	15	5 55 4.71	20.913	19 45 51.2	20.68
16	4 18 3.90	20.303	16 32 58.6	60.12	16	5 57 10.21	20.920	19 47 52.6	19.78
17	4 20 5.77	20.319	16 38 57.1	59.37	17	5 59 15.75	20.928	19 49 48.6	18.88
18	4 22 7.73	20.335	16 44 51.0	58.61	18	6 1 21.34	20.935	19 51 39.1	17.96
19	4 24 9.79	20.351	16 50 40.4	57.85	19	6 3 26.97	20.942	19 53 24.1	17.04
20	4 26 11.94	20.368	16 56 25.2	57.09	20	6 5 32.64	20.948	19 55 3.6	16.13
21	4 28 14.20	20.383	17 2 5.5	56.33	21	6 7 38.34	20.953	19 56 37.6	15.21
22	4 30 16.54	20.398	17 7 41.1	55.54	22	6 9 44.08	20.960	19 58 6.1	14.28
23	4 32 18.98	20.415	N. 17 13 12.0	54.77	23	6 11 49.86	20.966	N. 19 59 29.0	13.37
WEDNESDAY 10.					FRIDAY 12.				
	h m s	s	N. ° ' "	" "		h m s	s	N. ° ' "	" "
0	4 34 21.52	20.431	N. 17 18 38.3	53.99	0	6 13 55.67	20.971	N. 20 0 46.5	12.45
1	4 36 24.15	20.446	17 23 59.9	53.21	1	6 16 1.51	20.976	20 1 58.4	11.53
2	4 38 26.87	20.462	17 29 16.8	52.42	2	6 18 7.38	20.980	20 3 4.8	10.61
3	4 40 29.69	20.477	17 34 28.9	51.62	3	6 20 13.27	20.984	20 4 5.7	9.68
4	4 42 32.59	20.492	17 39 36.2	50.83	4	6 22 19.19	20.988	20 5 1.0	8.75
5	4 44 35.59	20.508	17 44 38.8	50.03	5	6 24 25.13	20.993	20 5 50.7	7.82
6	4 46 38.68	20.523	17 49 36.5	49.21	6	6 26 31.10	20.996	20 6 34.8	6.89
7	4 48 41.86	20.538	17 54 29.3	48.40	7	6 28 37.08	20.998	20 7 13.4	5.98
8	4 50 45.13	20.552	17 59 17.3	47.59	8	6 30 43.08	21.002	20 7 46.5	5.04
9	4 52 48.48	20.567	18 4 0.4	46.77	9	6 32 49.10	21.004	20 8 13.9	4.11
10	4 54 51.93	20.582	18 8 38.5	45.94	10	6 34 55.13	21.005	20 8 35.8	3.18
11	4 56 55.46	20.595	18 13 11.7	45.13	11	6 37 1.17	21.008	20 8 52.1	2.26
12	4 58 59.07	20.609	18 17 40.0	44.29	12	6 39 7.22	21.009	20 9 2.9	1.33
13	5 1 2.77	20.624	18 22 3.2	43.46	13	6 41 13.28	21.010	20 9 8.0	0.39
14	5 3 6.56	20.638	18 26 21.5	42.63	14	6 43 19.34	21.011	20 9 7.6	0.53
15	5 5 10.43	20.651	18 30 34.7	41.78	15	6 45 25.41	21.012	20 9 1.6	1.47
16	5 7 14.37	20.664	18 34 42.8	40.93	16	6 47 31.48	21.012	20 8 50.0	2.40
17	5 9 18.40	20.678	18 38 45.9	40.09	17	6 49 37.55	21.012	20 8 32.8	3.33
18	5 11 22.51	20.691	18 42 43.9	39.23	18	6 51 43.62	21.012	20 8 10.0	4.26
19	5 13 26.69	20.704	18 46 36.7	38.38	19	6 53 49.69	21.011	20 7 41.7	5.18
20	5 15 30.96	20.717	18 50 24.4	37.53	20	6 55 55.75	21.010	20 7 7.8	6.13
21	5 17 35.29	20.728	18 54 7.0	36.66	21	6 58 1.81	21.008	20 6 28.2	7.06
22	5 19 39.70	20.742	18 57 44.3	35.79	22	7 0 7.85	21.007	20 5 43.1	7.98
23	5 21 44.19	20.754	19 1 16.5	34.93	23	7 2 13.89	21.005	20 4 52.5	8.90
24	5 23 48.75	20.766	N. 19 4 43.5	34.06	24	7 4 19.91	21.003	N. 20 3 56.3	9.84

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SATURDAY 13.					MONDAY 15.				
	h m s	s	N. 20° 3 56.3	9.84		h m s	s	N. 17° 32' 39.4	52.32
0	7 4 19.91	21.003	20 2 54.4	10.77	0	8 44 24.62	20.624	17 27 23.1	53.13
1	7 6 25.92	21.000	20 1 47.1	11.68	1	8 46 28.33	20.613	17 22 1.8	53.95
2	7 8 31.91	20.998	20 0 34.2	12.62	2	8 48 31.97	20.601	17 16 35.7	54.76
3	7 10 37.89	20.994	19 59 15.7	13.54	3	8 50 35.54	20.589	17 11 4.7	55.57
4	7 12 43.84	20.991	19 57 51.7	14.47	4	8 52 39.04	20.578	17 5 28.9	56.37
5	7 14 49.78	20.988	19 56 22.1	15.39	5	8 54 42.48	20.568	16 59 48.3	57.16
6	7 16 55.69	20.983	19 54 47.0	16.31	6	8 56 45.85	20.555	16 54 3.0	57.96
7	7 19 1.58	20.979	19 53 6.4	17.23	7	8 58 49.14	20.543	16 48 12.8	58.75
8	7 21 7.44	20.974	19 51 20.2	18.15	8	9 0 52.37	20.533	16 42 18.0	59.53
9	7 23 13.27	20.969	19 49 28.6	19.07	9	9 2 55.53	20.522	16 36 18.4	60.33
10	7 25 19.07	20.964	19 47 31.4	19.98	10	9 4 58.63	20.511	16 30 14.1	61.10
11	7 27 24.84	20.959	19 45 28.8	20.90	11	9 7 1.66	20.499	16 24 5.2	61.88
12	7 29 30.58	20.954	19 43 20.6	21.82	12	9 9 4.62	20.488	16 17 51.6	62.65
13	7 31 36.29	20.948	19 41 7.0	22.73	13	9 11 7.51	20.476	16 11 33.4	63.42
14	7 33 41.96	20.942	19 38 47.9	23.63	14	9 13 10.33	20.465	16 5 10.6	64.18
15	7 35 47.59	20.935	19 36 23.4	24.54	15	9 15 13.09	20.454	15 58 43.3	64.93
16	7 37 53.18	20.928	19 33 53.4	25.45	16	9 17 15.78	20.443	15 52 11.4	65.69
17	7 39 58.73	20.923	19 31 18.0	26.35	17	9 19 18.41	20.433	15 45 35.0	66.44
18	7 42 4.25	20.916	19 28 37.2	27.26	18	9 21 20.97	20.421	15 38 54.1	67.18
19	7 44 9.72	20.908	19 25 50.9	28.16	19	9 23 23.46	20.410	15 32 8.8	67.93
20	7 46 15.14	20.900	19 22 59.3	29.05	20	9 25 25.89	20.400	15 18 24.7	68.68
21	7 48 20.52	20.893	19 20 2.3	29.95	21	9 27 28.26	20.390	15 11 26.1	69.41
22	7 50 25.85	20.885	19 16 59.9	30.85	22	9 29 30.57	20.379		70.13
23	7 52 31.14	20.877			23	9 31 32.81	20.369		
SUNDAY 14.					TUESDAY 16.				
0	7 54 36.37	20.868	N. 19 13 52.1	31.74	0	9 33 35.00	20.359	N. 15 4 23.2	70.85
1	7 56 41.55	20.859	19 10 39.0	32.63	1	9 35 37.12	20.348	14 57 15.9	71.58
2	7 58 46.68	20.851	19 7 20.6	33.52	2	9 37 39.18	20.338	14 50 4.3	72.29
3	8 0 51.76	20.843	19 3 56.8	34.41	3	9 39 41.18	20.329	14 42 48.4	73.01
4	8 2 56.79	20.833	19 0 27.7	35.28	4	9 41 43.13	20.320	14 35 28.2	73.71
5	8 5 1.76	20.823	18 56 53.4	36.16	5	9 43 45.02	20.310	14 28 3.9	74.41
6	8 7 6.67	20.814	18 53 13.8	37.03	6	9 45 46.85	20.301	14 20 35.3	75.12
7	8 9 11.53	20.805	18 49 29.0	37.91	7	9 47 48.63	20.293	14 13 2.5	75.81
8	8 11 16.33	20.795	18 45 38.9	38.79	8	9 49 50.36	20.283	14 5 25.6	76.49
9	8 13 21.07	20.785	18 41 43.5	39.66	9	9 51 52.03	20.274	13 57 44.6	77.18
10	8 15 25.75	20.775	18 37 43.0	40.52	10	9 53 53.65	20.266	13 49 59.5	77.85
11	8 17 30.37	20.765	18 33 37.3	41.38	11	9 55 55.22	20.258	13 42 10.4	78.53
12	8 19 34.93	20.755	18 29 26.4	42.24	12	9 57 56.75	20.250	13 34 17.2	79.20
13	8 21 39.43	20.744	18 25 10.4	43.10	13	9 59 58.22	20.242	13 26 20.0	79.87
14	8 23 43.86	20.733	18 20 49.2	43.96	14	10 1 59.65	20.235	13 18 18.8	80.53
15	8 25 48.23	20.723	18 16 22.9	44.80	15	10 4 1.04	20.228	13 10 13.6	81.18
16	8 27 52.54	20.713	18 11 51.6	45.65	16	10 6 2.39	20.221	13 2 4.6	81.83
17	8 29 56.78	20.702	18 7 15.1	46.50	17	10 8 3.69	20.213	12 53 51.6	82.48
18	8 32 0.96	20.691	18 2 33.6	47.34	18	10 10 4.95	20.207	12 45 34.8	83.12
19	8 34 5.07	20.679	17 57 47.0	48.18	19	10 12 6.17	20.201	12 37 14.2	83.75
20	8 36 9.11	20.668	17 52 55.5	49.01	20	10 14 7.36	20.195	12 28 49.8	84.38
21	8 38 13.09	20.658	17 47 58.9	49.84	21	10 16 8.51	20.189	12 20 21.6	85.02
22	8 40 17.00	20.646	17 42 57.4	50.67	22	10 18 9.63	20.184	12 11 49.6	85.64
23	8 42 20.84	20.635	17 37 50.9	51.50	23	10 20 10.72	20.178	12 3 13.9	86.25
24	8 44 24.62	20.624	N. 17 32 39.4	52.32	24	10 22 11.77	20.173	N. 11 54 34.6	86.86

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
WEDNESDAY 17.					FRIDAY 19.				
	h m s	s	N. ° ' "	"		h m s	s	N. ° ' "	"
0	10 22 11.77	20.173	N. 11 54 34.6	86.86	0	11 59 11.28	20.409	N. 3 57 31.3	109.65
1	10 24 12.80	20.170	11 45 51.6	87.48	1	12 1 13.78	20.426	3 46 32.4	109.97
2	10 26 13.81	20.165	11 37 4.9	88.08	2	12 3 16.39	20.443	3 35 31.7	110.28
3	10 28 14.78	20.161	11 28 14.7	88.67	3	12 5 19.10	20.460	3 24 29.1	110.58
4	10 30 15.74	20.158	11 19 20.9	89.26	4	12 7 21.91	20.478	3 13 24.7	110.88
5	10 32 16.68	20.154	11 10 23.6	89.84	5	12 9 24.84	20.498	3 2 18.5	111.18
6	10 34 17.59	20.151	11 1 22.8	90.43	6	12 11 27.89	20.518	2 51 10.6	111.46
7	10 36 18.49	20.149	10 52 18.5	91.00	7	12 13 31.05	20.538	2 40 1.0	111.73
8	10 38 19.38	20.148	10 43 10.8	91.57	8	12 15 34.34	20.558	2 28 49.8	112.00
9	10 40 20.26	20.145	10 33 59.7	92.13	9	12 17 37.75	20.579	2 17 37.0	112.27
10	10 42 21.12	20.143	10 24 45.2	92.69	10	12 19 41.29	20.601	2 6 22.6	112.53
11	10 44 21.98	20.143	10 15 27.4	93.25	11	12 21 44.96	20.623	1 55 6.7	112.77
12	10 46 22.83	20.142	10 6 6.2	93.80	12	12 23 48.76	20.646	1 43 49.4	113.00
13	10 48 23.68	20.142	9 56 41.8	94.34	13	12 25 52.71	20.670	1 32 30.7	113.23
14	10 50 24.53	20.142	9 47 14.1	94.88	14	12 27 56.80	20.693	1 21 10.6	113.45
15	10 52 25.38	20.142	9 37 43.3	95.41	15	12 30 1.03	20.718	1 9 49.3	113.67
16	10 54 26.23	20.143	9 28 9.2	95.94	16	12 32 5.41	20.743	0 58 26.6	113.88
17	10 56 27.09	20.143	9 18 32.0	96.46	17	12 34 9.95	20.769	0 47 2.8	114.07
18	10 58 27.95	20.145	9 8 51.7	96.98	18	12 36 14.64	20.796	0 35 37.8	114.26
19	11 0 28.83	20.148	8 59 8.3	97.48	19	12 38 19.50	20.823	0 24 11.7	114.43
20	11 2 29.72	20.150	8 49 21.9	97.99	20	12 40 24.52	20.850	0 12 44.6	114.61
21	11 4 30.63	20.153	8 39 32.4	98.49	21	12 42 29.70	20.878	N. 0 1 16.4	114.78
22	11 6 31.56	20.157	8 29 40.0	98.98	22	12 44 35.06	20.908	S. 0 10 12.7	114.93
23	11 8 32.51	20.160	N. 8 19 44.7	99.47	23	12 46 40.59	20.936	S. 0 21 42.7	115.08
THURSDAY 18.					SATURDAY 20.				
	h m s	s	N. ° ' "	"		h m s	s	N. ° ' "	"
0	11 10 33.48	20.164	N. 8 9 46.4	99.95	0	12 48 46.29	20.966	S. 0 33 13.6	115.22
1	11 12 34.48	20.168	7 59 45.3	100.43	1	12 50 52.18	20.998	0 44 45.3	115.34
2	11 14 35.50	20.173	7 49 41.3	100.90	2	12 52 58.26	21.028	0 56 17.7	115.46
3	11 16 36.56	20.180	7 39 34.5	101.36	3	12 55 4.52	21.060	1 7 50.8	115.57
4	11 18 37.66	20.186	7 29 25.0	101.82	4	12 57 10.98	21.093	1 19 24.5	115.67
5	11 20 38.79	20.192	7 19 12.7	102.27	5	12 59 17.63	21.125	1 30 58.8	115.76
6	11 22 39.96	20.198	7 8 57.8	102.71	6	13 1 24.48	21.158	1 42 33.6	115.83
7	11 24 41.17	20.207	6 58 40.2	103.15	7	13 3 31.53	21.193	1 54 8.8	115.90
8	11 26 42.44	20.215	6 48 20.0	103.58	8	13 5 38.80	21.228	2 5 44.4	115.97
9	11 28 43.75	20.223	6 37 57.2	104.02	9	13 7 46.27	21.263	2 17 20.4	116.03
10	11 30 45.11	20.231	6 27 31.8	104.44	10	13 9 53.95	21.299	2 28 56.7	116.07
11	11 32 46.52	20.241	6 17 3.9	104.85	11	13 12 1.86	21.336	2 40 33.2	116.09
12	11 34 48.00	20.251	6 6 33.6	105.26	12	13 14 9.98	21.373	2 52 9.8	116.11
13	11 36 49.53	20.261	5 56 0.8	105.66	13	13 16 18.33	21.411	3 3 46.5	116.13
14	11 38 51.13	20.272	5 45 25.7	106.05	14	13 18 26.91	21.449	3 15 23.3	116.13
15	11 40 52.79	20.283	5 34 48.2	106.44	15	13 20 35.72	21.488	3 27 0.0	116.11
16	11 42 54.53	20.295	5 24 8.4	106.83	16	13 22 44.76	21.527	3 38 36.6	116.09
17	11 44 56.33	20.307	5 13 26.3	107.21	17	13 24 54.04	21.568	3 50 13.1	116.07
18	11 46 58.21	20.320	5 2 41.9	107.58	18	13 27 3.57	21.608	4 1 49.4	116.02
19	11 49 0.17	20.334	4 51 55.4	107.93	19	13 29 13.34	21.649	4 13 25.3	115.96
20	11 51 2.22	20.348	4 41 6.7	108.29	20	13 31 23.36	21.691	4 25 0.9	115.90
21	11 53 4.35	20.362	4 30 15.9	108.63	21	13 33 33.63	21.733	4 36 36.1	115.83
22	11 55 6.56	20.377	4 19 23.1	108.98	22	13 35 44.16	21.777	4 48 10.8	115.74
23	11 57 8.87	20.393	4 8 28.2	109.32	23	13 37 54.95	21.820	4 59 45.0	115.64
24	11 59 11.28	20.409	N. 3 57 31.3	109.65	24	13 40 6.00	21.864	S. 5 11 18.5	115.53

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
SUNDAY 21.					TUESDAY 23.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	13 40 6.00	21.864	S. 5 11 18.5	115.53	0	15 31 1.85	24.490	S. 13 48 19.3	94.38
1	13 42 17.32	21.909	5 22 51.3	115.40	1	15 33 28.97	24.550	13 57 43.2	93.57
2	13 44 28.91	21.954	5 34 23.3	115.27	2	15 35 56.45	24.610	14 7 2.1	92.73
3	13 46 40.77	21.999	5 45 54.5	115.13	3	15 38 24.29	24.670	14 16 16.0	91.90
4	13 48 52.90	22.046	5 57 24.8	114.97	4	15 40 52.49	24.730	14 25 24.9	91.04
5	13 51 5.32	22.093	6 8 54.1	114.80	5	15 43 21.05	24.790	14 34 28.5	90.17
6	13 53 18.02	22.140	6 20 22.4	114.62	6	15 45 49.97	24.850	14 43 26.9	89.28
7	13 55 31.00	22.188	6 31 49.5	114.42	7	15 48 19.25	24.909	14 52 19.8	88.37
8	13 57 44.27	22.237	6 43 15.4	114.22	8	15 50 48.88	24.968	15 1 7.3	87.44
9	13 59 57.84	22.286	6 54 40.1	113.99	9	15 53 18.87	25.028	15 9 49.1	86.50
10	14 2 11.70	22.335	7 6 3.3	113.76	10	15 55 49.21	25.087	15 18 25.3	85.56
11	14 4 25.86	22.385	7 17 25.2	113.52	11	15 58 19.91	25.145	15 26 55.8	84.58
12	14 6 40.32	22.436	7 28 45.5	113.25	12	16 0 50.95	25.203	15 35 20.3	83.59
13	14 8 55.09	22.487	7 40 4.2	112.98	13	16 3 22.34	25.261	15 43 38.9	82.59
14	14 11 10.16	22.538	7 51 21.3	112.70	14	16 5 54.08	25.318	15 51 51.4	81.58
15	14 13 25.54	22.589	8 2 36.6	112.40	15	16 8 26.16	25.375	15 59 57.8	80.54
16	14 15 41.23	22.642	8 13 50.1	112.09	16	16 10 58.58	25.432	16 7 57.9	79.49
17	14 17 57.24	22.695	8 25 1.7	111.77	17	16 13 31.34	25.488	16 15 51.7	78.43
18	14 20 13.57	22.748	8 36 11.3	111.43	18	16 16 4.44	25.544	16 23 39.1	77.35
19	14 22 30.22	22.803	8 47 18.8	111.07	19	16 18 37.87	25.599	16 31 19.9	76.26
20	14 24 47.20	22.857	8 58 24.1	110.70	20	16 21 11.63	25.654	16 38 54.2	75.15
21	14 27 4.50	22.911	9 9 27.2	110.33	21	16 23 45.72	25.708	16 46 21.7	74.02
22	14 29 22.13	22.965	9 20 28.0	109.93	22	16 26 20.13	25.762	16 53 42.4	72.88
23	14 31 40.08	23.020	S. 9 31 26.4	109.52	23	16 28 54.86	25.815	S. 17 0 56.2	71.72
MONDAY 22.					WEDNESDAY 24.				
0	14 33 58.37	23.077	S. 9 42 22.2	109.09	0	16 31 29.91	25.868	S. 17 8 3.0	70.55
1	14 36 17.00	23.133	9 53 15.5	108.66	1	16 34 5.27	25.919	17 15 2.8	69.37
2	14 38 35.97	23.189	10 4 6.1	108.20	2	16 36 40.94	25.971	17 21 55.4	68.17
3	14 40 55.27	23.245	10 14 53.9	107.73	3	16 39 16.92	26.021	17 28 40.8	66.96
4	14 43 14.91	23.303	10 25 38.9	107.26	4	16 41 53.19	26.070	17 35 18.9	65.73
5	14 45 34.90	23.360	10 36 21.0	106.76	5	16 44 29.76	26.119	17 41 49.6	64.49
6	14 47 55.23	23.418	10 47 0.0	106.24	6	16 47 6.62	26.168	17 48 12.8	63.23
7	14 50 15.91	23.476	10 57 35.9	105.72	7	16 49 43.77	26.215	17 54 28.4	61.97
8	14 52 36.94	23.534	11 8 8.6	105.18	8	16 52 21.20	26.261	18 0 36.4	60.69
9	14 54 58.32	23.593	11 18 38.0	104.62	9	16 54 58.90	26.306	18 6 36.7	59.39
10	14 57 20.05	23.652	11 29 4.0	104.04	10	16 57 36.87	26.351	18 12 29.1	58.08
11	14 59 42.14	23.711	11 39 26.5	103.45	11	17 0 15.11	26.394	18 18 13.7	56.77
12	15 2 4.58	23.770	11 49 45.4	102.84	12	17 2 53.60	26.437	18 23 50.3	55.43
13	15 4 27.38	23.829	12 0 0.6	102.23	13	17 5 32.35	26.479	18 29 18.9	54.09
14	15 6 50.53	23.888	12 10 12.1	101.60	14	17 8 11.35	26.520	18 34 39.4	52.73
15	15 9 14.04	23.948	12 20 19.8	100.95	15	17 10 50.59	26.560	18 39 51.7	51.37
16	15 11 37.91	24.008	12 30 23.5	100.28	16	17 13 30.07	26.598	18 44 55.8	49.99
17	15 14 2.14	24.068	12 40 23.1	99.59	17	17 16 9.77	26.636	18 49 51.6	48.61
18	15 16 26.73	24.128	12 50 18.6	98.90	18	17 18 49.70	26.673	18 54 39.1	47.21
19	15 18 51.68	24.188	13 0 9.9	98.19	19	17 21 29.84	26.708	18 59 18.1	45.79
20	15 21 16.99	24.248	13 9 56.9	97.46	20	17 24 10.19	26.742	19 3 48.6	44.38
21	15 23 42.66	24.308	13 19 39.4	96.71	21	17 26 50.74	26.775	19 8 10.6	42.94
22	15 26 8.69	24.369	13 29 17.4	95.94	22	17 29 31.49	26.807	19 12 23.9	41.50
23	15 28 35.09	24.430	13 38 50.7	95.16	23	17 32 12.42	26.837	19 16 28.6	40.05
24	15 31 1.85	24.490	S. 13 48 19.3	94.38	24	17 34 53.53	26.867	S. 19 20 24.5	38.59

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
THURSDAY 25.					SATURDAY 27.				
	h m s	s				h m s	s		
0	17 34 53	53	S. 19° 20' 24"	5 38" 59	0	19 44 36	43	S. 19° 29' 48"	1 34" 43
1	17 37 34	82	19 24 11	7 37 13	1	19 47 16	12	19 26 17	2 35 87
2	17 40 16	27	19 27 50	1 35 66	2	19 49 55	59	19 22 37	7 37 29
3	17 42 57	88	19 31 19	6 34 18	3	19 52 34	81	19 18 49	7 38 70
4	17 45 39	64	19 34 40	2 32 68	4	19 55 13	79	19 14 53	3 40 10
5	17 48 21	54	19 37 51	8 31 18	5	19 57 52	52	19 10 48	5 41 48
6	17 51 3	58	19 40 54	4 29 68	6	20 0 30	99	19 6 35	5 42 86
7	17 53 45	74	19 43 48	0 28 18	7	20 3 9	19	19 2 14	2 44 23
8	17 56 28	02	19 46 32	5 26 66	8	20 5 47	13	18 57 44	7 45 59
9	17 59 10	41	19 49 7	9 25 13	9	20 8 24	78	18 53 7	1 46 93
10	18 1 52	89	19 51 34	1 23 61	10	20 11 2	15	18 48 21	5 48 26
11	18 4 35	47	19 53 51	2 22 0	11	20 13 39	24	18 43 28	0 49 58
12	18 7 18	13	19 55 59	0 20 53	12	20 16 16	03	18 38 26	6 50 89
13	18 10 0	87	19 57 57	6 19 00	13	20 18 52	52	18 33 17	3 52 18
14	18 12 43	68	19 59 47	0 17 46	14	20 21 28	70	18 28 0	4 53 47
15	18 15 26	54	20 1 27	1 15 91	15	20 24 4	58	18 22 35	7 54 74
16	18 18 9	45	20 2 57	9 14 35	16	20 26 40	14	18 17 3	5 55 99
17	18 20 52	41	20 4 19	3 12 80	17	20 29 15	38	18 11 23	8 57 24
18	18 23 35	40	20 5 31	5 11 25	18	20 31 50	30	18 5 36	6 58 48
19	18 26 18	41	20 6 34	3 9 69	19	20 34 24	90	17 59 42	1 59 68
20	18 29 1	43	20 7 27	8 8 13	20	20 36 59	16	17 53 40	4 60 89
21	18 31 44	46	20 8 11	9 6 57	21	20 39 33	08	17 47 31	4 62 08
22	18 34 27	48	20 8 46	6 5 01	22	20 42 6	67	17 41 15	4 63 25
23	18 37 10	49	S. 20 9 12	0 3 46	23	20 44 39	91	S. 17 34 52	4 64 42
FRIDAY 26.					SUNDAY 28.				
0	18 39 53	48	S. 20 9 28	1 1 90	0	20 47 12	81	S. 17 28 22	4 65 57
1	18 42 36	44	20 9 34	8 0 33	1	20 49 45	36	17 21 45	6 66 69
2	18 45 19	37	20 9 32	1 1 23	2	20 52 17	55	17 15 2	1 67 81
3	18 48 2	24	20 9 20	1 2 78	3	20 54 49	39	17 8 11	9 68 92
4	18 50 45	06	20 8 58	8 4 33	4	20 57 20	87	17 1 15	1 70 01
5	18 53 27	81	20 8 28	1 5 89	5	20 59 51	98	16 54 11	8 71 09
6	18 56 10	49	20 7 48	1 7 44	6	21 2 22	73	16 47 2	0 72 15
7	18 58 53	08	20 6 58	8 8 98	7	21 4 53	12	16 39 46	0 73 18
8	19 1 35	59	20 6 0	3 10 52	8	21 7 23	13	16 32 23	8 74 22
9	19 4 17	99	20 4 52	6 12 06	9	21 9 52	78	16 24 55	4 75 24
10	19 7 0	29	20 3 35	6 13 60	10	21 12 22	06	16 17 20	9 76 24
11	19 9 42	47	20 2 9	4 15 13	11	21 14 50	96	16 9 40	5 77 22
12	19 12 24	52	20 0 34	1 16 65	12	21 17 19	49	16 1 54	3 78 19
13	19 15 6	44	19 58 40	6 18 18	13	21 19 47	64	15 54 2	2 79 15
14	19 17 48	21	19 56 56	0 19 69	14	21 22 15	41	15 46 4	5 80 08
15	19 20 29	84	19 54 53	3 21 20	15	21 24 42	80	15 38 1	2 81 02
16	19 23 11	31	19 52 41	6 22 70	16	21 27 9	81	15 29 52	3 81 93
17	19 25 52	61	19 50 20	9 24 19	17	21 29 36	44	15 21 38	1 82 82
18	19 28 33	74	19 47 51	3 25 68	18	21 32 2	69	15 13 18	5 83 70
19	19 31 14	68	19 45 12	7 27 17	19	21 34 28	55	15 4 53	7 84 57
20	19 33 55	44	19 42 25	3 28 63	20	21 36 54	04	14 56 23	7 85 42
21	19 36 36	00	19 39 29	1 30 10	21	21 39 19	14	14 47 48	7 86 25
22	19 39 16	36	19 36 24	1 31 56	22	21 41 43	85	14 39 8	7 87 07
23	19 41 56	50	19 33 10	4 33 00	23	21 44 8	19	14 30 23	9 87 87
24	19 44 36	43	S. 19 29 48	1 34 43	24	21 46 32	14	S. 14 21 34	3 88 66

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .	Hour.	Right Ascension.	Var. in 10 ^m .	Declination.	Var. in 10 ^m .
MONDAY 29.					WEDNESDAY 31.				
	h m s	s	° ' "	"		h m s	s	° ' "	"
0	21 46 32	14	23 960	S. 14 21 34	3	23 34 39	52	21 247	S. 6 11 59
1	21 48 55	71	23 897	14 12 40	0	23 36 46	86	21 202	6 0 57
2	21 51 18	90	23 833	14 3 41	1	23 38 53	94	21 158	5 49 53
3	21 53 41	70	23 769	13 54 37	2	23 41 0	75	21 114	5 38 49
4	21 56 4	13	23 706	13 45 29	3	23 43 7	31	21 072	5 27 44
5	21 58 26	17	23 642	13 36 17	4	23 45 13	61	21 028	5 16 39
6	22 0 47	83	23 579	13 27 1	5	23 47 19	65	20 987	5 5 32
7	22 3 9	12	23 517	13 17 40	6	23 49 25	45	20 946	4 54 26
8	22 5 30	03	23 453	13 8 16	7	23 51 31	00	20 905	4 43 18
9	22 7 50	56	23 390	12 58 47	8	23 53 36	31	20 865	4 32 10
10	22 10 10	71	23 328	12 49 14	9	23 55 41	38	20 826	4 21 2
11	22 12 30	50	23 267	12 39 38	10	23 57 46	22	20 788	4 9 53
12	22 14 49	91	23 203	12 29 58	11	23 59 50	83	20 749	3 58 44
13	22 17 8	94	23 142	12 20 14	12	0 1 55	21	20 712	3 47 35
14	22 19 27	61	23 081	12 10 27	13	0 3 59	37	20 675	3 36 26
15	22 21 45	91	23 020	12 0 37	14	0 6 3	31	20 638	3 25 16
16	22 24 3	85	22 960	11 50 42	15	0 8 7	03	20 603	3 14 6
17	22 26 21	43	22 899	11 40 45	16	0 10 10	55	20 568	3 2 57
18	22 28 38	64	22 838	11 30 45	17	0 12 13	85	20 533	2 51 47
19	22 30 55	49	22 778	11 20 41	18	0 14 16	95	20 500	2 40 37
20	22 33 11	98	22 719	11 10 34	19	0 16 19	85	20 467	2 29 28
21	22 35 28	12	22 660	11 0 24	20	0 18 22	55	20 434	2 18 19
22	22 37 43	90	22 602	10 50 12	21	0 20 25	06	20 403	2 7 9
23	22 39 59	34	22 544	S. 10 39 56	22	0 22 27	38	20 371	S. 1 56 1
TUESDAY 30.					THURSDAY, JAN. 1, 1925.				
0	22 42 14	43	22 486	S. 10 29 38	0	0 24 29	51	20 340	S. 1 44 52
1	22 44 29	17	22 428	10 19 17					
2	22 46 43	57	22 372	10 8 54					
3	22 48 57	63	22 315	9 58 28					
4	22 51 11	35	22 259	9 48 0					
5	22 53 24	74	22 203	9 37 29					
6	22 55 37	79	22 148	9 26 56					
7	22 57 50	52	22 094	9 16 21					
8	23 0 2	92	22 040	9 5 44					
9	23 2 15	00	21 986	8 55 5					
10	23 4 26	75	21 933	8 44 24					
11	23 6 38	19	21 881	8 33 41					
12	23 8 49	32	21 828	8 22 56					
13	23 11 0	13	21 777	8 12 9					
14	23 13 10	64	21 726	8 1 21					
15	23 15 20	84	21 675	7 50 31					
16	23 17 30	74	21 626	7 39 39					
17	23 19 40	35	21 577	7 28 46					
18	23 21 49	66	21 527	7 17 52					
19	23 23 58	67	21 478	7 6 56					
20	23 26 7	40	21 432	6 55 59					
21	23 28 15	85	21 385	6 45 1					
22	23 30 24	02	21 338	6 34 1					
23	23 32 31	90	21 292	6 23 1					
24	23 34 39	52	21 247	S. 6 11 59					

PHASES OF THE MOON.

Dec.	Phase	h m
2	☽ First Quarter	21 10.3
10	☾ Full Moon	19 3.4
18	☾ Last Quarter	22 11.4
25	● New Moon	15 45.8
h		
Dec. 11	☾ Apogee	20.6
25	☾ Perigee	13.2

MEAN TIME.

Date.	Apparent Right Ascension.				Sid. Time of Semid. pass ^s Merid.				Apparent Declination.				Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.				Meridian Passage.	Heliocentric Longitude.				Heliocentric Latitude.				Log. of Rad. Vect.							
	Noon.				Noon.				Noon.						Noon.					Noon.				Noon.											
	h	m	s	s	°	'	"	"	°	'	"	"	°	'	"	h	m	s	s	°	'	"	"	°	'	"	"	°	'	"	"	°	'	"	"
Jan. 1	20	2	4.90	0.27	S. 20	51	0.5		3	8.3	10.11	9.9398932	1 22 4	39 29	51.8	S. 0	58	16.6		9.5028917															
2	20	3	25.67	0.28	20	30	55.5		3	9.5	10.41	.9269143	1 19.8	45 26	16.8	S. 0	14	41.0		.4984566															
3	20	4	2.81	0.29	20	11	52.7		4	0.7	10.73	.9138585	1 16.4	51 29	26.8	N. 0	29	54.1		.4947069															
4	20	3	53.57	0.30	19	54	10.2		4	1.9	11.06	.9008870	1 12.3	57 38	23.2		1	14	50.4		.4917171														
5	20	2	55.89	0.31	19	38	5.0		4	3.2	11.38	.8881935	1 7.4	63 51	57.1		1	59	26.2		.4895494														
6	20	1	8.85	0.32	19	23	51.7		4	4.4	11.71	.8759998	1 1.6	70 8	51.0		2	42	57.8		.4882508														
7	19	58	32.92	0.32	S. 19	11	42.3		4	5.6	12.02	9.8645499	0 55.1	76 27	40.3	N. 3	24	41.5		9.4878501															
8	19	55	10.31	0.33	19	1	44.6		4	6.7	12.31	.8541013	0 47.8	82 46	56.0		4	3	55.9		.4883565														
9	19	51	5.16	0.34	18	54	2.0		4	7.7	12.58	.8449081	0 39.8	89 5 6.9			4	40	3.5		.4897587														
10	19	46	23.58	0.34	18	48	33.4		4	8.6	12.80	.8372044	0 31.2	95 20	43.3		5	12	32.9		.4920253														
11	19	41	13.54	0.35	18	45	13.7		4	9.3	12.98	.8311858	0 22.2	101 32	19.4		5	40	59.8		.4951076														
12	19	35	44.42	0.35	18	43	54.6		4	9.8	13.11	.8269915	0 12.8	107 38	36.1		6	5 7.7		.4989416															
13	19	30	6.52	0.35	S. 18	44	25.7		5	0.0	13.18	9.8246934	{ 0 33 23 53.8 }	113 38	23.2	N. 6	24	48.2		9.5034518															
14	19	24	30.31	0.35	18	46	35.0		5	0.0	13.19	.8242894	23 44.5	119 30	41.1		6	40 0.2		.5085553															
15	19	19	5.74	0.35	18	50	10.8		4	9.9	13.15	.8257074	23 35.5	125 14	41.6		6	50	49.3		.5141649														
16	19	14	1.63	0.35	18	55	1.7		4	9.5	13.05	.8288144	23 27.0	130 49	47.9		6	57	26.5		.5201930														
17	19	9	25.28	0.35	19	0	56.9		4	9.0	12.91	.8334331	23 19.1	136 15	34.6		7	0 6.8		.5265535															
18	19	5	22.19	0.34	19	7	46.4		4	8.4	12.74	.8393576	23 11.7	141 31	46.7		6	59 8.1		.5331652															
19	19	1	56.11	0.34	S. 19	15	20.7		4	7.6	12.53	9.8463702	23 5.0	146 38	18.5	N. 6	54	50.3		9.5399522															
20	18	59	9.15	0.33	19	23	30.8		4	6.7	12.31	.8542564	22 58.9	151 35	12.2		6	47	33.7		.5468454														
21	18	57	2.03	0.32	19	32	7.9		4	5.8	12.07	.8628140	22 53.5	156 22	37.0		6	37	38.6		.5537833														
22	18	55	34.36	0.32	19	41	3.7		4	4.9	11.82	.8718603	22 48.8	161 0	47.0		6	25	24.9		.5607110														
23	18	54	44.91	0.31	19	50	9.8		4	3.9	11.57	.8812364	22 44.6	165 30	0.8		6	11	11.1		.5675813														
24	18	54	31.90	0.31	19	59	18.0		4	3.0	11.32	.8908063	22 41.0	169 50	39.9		5	55	14.5		.5743535														
25	18	54	53.18	0.30	S. 20	8	21.0		4	2.0	11.07	9.9004575	22 37.9	174 3 8.0		N. 5	37	51.0		9.5809932															
26	18	55	46.42	0.30	20	17	11.3		4	1.1	10.82	.9100987	22 35.3	178 7	50.1		5	19	14.8		.5874710														
27	18	57	9.19	0.29	20	25	42.2		4	0.2	10.59	.9196568	22 33.2	182 5 11.9			4	59	38.7		.5937631														
28	18	58	59.15	0.28	20	33	47.4		3	9.3	10.36	.9290753	22 31.5	185 55	39.3		4	39	14.0		.5998496														
29	19	1	13.98	0.27	20	41	20.9		3	8.5	10.14	.9383112	22 30.1	189 39	38.0		4	18	10.6		.6057144														
30	19	3	51.52	0.27	20	48	17.3		3	7.7	9.93	.9473323	22 29.1	193 17	33.4		3	56	37.4		.6113449														
31	19	6	49.73	0.26	S. 20	54	32.3		3	7.0	9.74	9.9561158	22 28.4	196 49	50.1	N. 3	34	41.8		9.6167310															
Feb. 1	19	10	6.76	0.26	21	0	1.0		3	6.3	9.55	.9646464	22 28.0	200 16	52.0		3	12	30.5		.6218649														
2	19	13	40.86	0.25	21	4	39.6		3	5.6	9.37	.9729141	22 27.9	203 39	1.9		2	50 9.1		.6267407															
3	19	17	30.49	0.25	21	8	24.7		3	4.9	9.20	.9809139	22 28.0	206 56	42.0		2	27	42.6		.6313544														
4	19	21	34.20	0.24	21	11	13.1		3	4.3	9.03	.9886445	22 28.3	210 10	13.4		2	5 15.2		.6357025															
5	19	25	50.72	0.24	21	13	2.0		3	3.7	8.88	9.9961072	22 28.8	213 19	56.1		1	42	50.6		.6397834														
6	19	30	18.86	0.24	S. 21	13	49.2		3	3.2	8.73	0.0033048	22 29.5	216 26	9.4	N. 1	20	32.0		9.6435960															
7	19	34	57.58	0.24	21	13	32.0		3	2.6	8.59	.0102428	22 30.4	219 29	11.7		0	58	22.0		.6471399														
8	19	39	45.90	0.23	21	12	8.7		3	2.1	8.46	.0169267	22 31.4	222 29	20.5		0	36	23.0		.6504148														
9	19	44	42.99	0.23	21	9	37.8		3	1.6	8.34	.0233634	22 32.5	225 26	52.7		N. 0	14	37.1		.6534215														
10	19	49	48.05	0.22	21	5	57.7		3	1.2	8.22	.0295599	22 33.8	228 22	4.3		S. 0	6	54.0		.6561606														
11	19	55	0.40	0.22	21	1	7.0		3	0.8	8.11	.0355233	22 35.2	231 15	10.7		0	28	8.6		.6586331														
12	20	0	19.39	0.22	S. 20	55	4.6		3	0.4	8.00	0.0412615	22 36.6	234 6	26.9		S. 0	49	5.4		9.6608398														
13	20	5	44.45	0.22	20	47	49.4		3	0.0	7.90	.0467815	22 38.2	236 56	7.0		1	9	43.0		.6627816														
14	20	11	15.07	0.21	20	39	20.6		2	9.7	7.81	.0520911	22 39.9	239 44	25.2		1	30	0.3		.6644595														
15	20	16	50.77	0.21	20	29	37.5		2	9.3	7.72	.0571968	22 41.6	242 31	34.8		1	69	56.1		.6658747														
16	20	22	31.14	0.21	S. 20	18	39.3		2	9.0	7.63	0.0621059	22 43.4	245 17	48.9		S. 2	9	29.5		9.6670280														

MERCURY, 1924.

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MEAN TIME.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass ^d Merid.	Apparent Declination.			Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.		Meridian Passage.	Heliocentric Longitude.			Heliocentric Latitude.			Log. of Rad. Vect.			
	Noon.				Noon.					Noon.			Noon.			Noon.			Noon.			
	h	m	s	s	°	'	"	"	"	°	'	h	m	°	'	"	°	'	"	°	'	"
Feb. 16	20	22	31.14	0.21	S. 20	18	39.3	2.90	7.63	0.0621059	22 43.4	245 17 48.9	S. 2	9	29.5	9.6670280						
17	20	28	15.80	0.20	20	6	25.5	2.87	7.55	.0668247	22 45.2	248 3 20.3	2	28	39.3	.6679199						
18	20	34	4.41	0.20	19	52	55.6	2.84	7.47	.0713591	22 47.1	250 48 21.7	2	47	24.6	.6685511						
19	20	39	56.65	0.20	19	38	9.2	2.81	7.39	.0757154	22 49.1	253 33 5.5	3	5	44.2	.6689220						
20	20	45	52.27	0.20	19	22	5.7	2.78	7.32	.0798984	22 51.2	256 17 43.9	3	23	37.1	.6690328						
21	20	51	50.99	0.19	19	4	45.1	2.75	7.25	.0839136	22 53.3	259 2 29.2	3	41	2.1	.6688837						
22	20	57	52.61	0.19	S. 18	46	6.9	2.73	7.19	0.0877652	22 55.4	261 47 33.6	S. 3	57	58.1	9.6684745						
23	21	3	56.95	0.19	18	26	11.0	2.70	7.13	.0914572	22 57.6	264 33 9.3	4	14	23.6	.6678049						
24	21	10	3.81	0.19	18	4	57.3	2.68	7.07	.0949936	22 59.8	267 19 28.6	4	30	17.2	.6668747						
25	21	16	13.06	0.19	17	42	25.6	2.66	7.01	.0983772	23 2.0	270 6 44.0	4	45	37.4	.6656827						
26	21	22	24.59	0.18	17	18	35.9	2.64	6.96	.1016110	23 4.3	272 55 8.1	5	0	22.4	.6642288						
27	21	28	38.22	0.18	16	53	28.0	2.62	6.91	.1046968	23 6.6	275 44 53.7	5	14	30.4	.6625119						
28	21	34	53.92	0.18	S. 16	27	1.8	2.61	6.87	0.1076366	23 9.0	278 36 14.0	S. 5	27	59.3	9.66605312						
29	21	41	11.60	0.18	15	59	17.5	2.59	6.82	.1104319	23 11.4	281 29 22.4	5	40	46.8	.6582855						
Mar. 1	21	47	31.20	0.18	15	30	15.2	2.58	6.78	.1130832	23 13.8	284 24 32.8	5	52	50.2	.6557738						
2	21	53	52.67	0.18	14	59	54.9	2.56	6.74	.1155905	23 16.2	287 21 59.5	6	4	7.0	.6529952						
3	22	0	15.99	0.18	14	28	16.6	2.55	6.71	.1179537	23 18.7	290 21 57.2	6	14	33.9	.6499490						
4	22	6	41.16	0.17	13	55	20.5	2.53	6.67	.1201721	23 21.2	293 24 41.1	6	24	7.5	.6466344						
5	22	13	8.15	0.17	S. 13	21	7.0	2.52	6.64	0.1222437	23 23.8	296 30 27.2	S. 6	32	44.2	9.6430509						
6	22	19	36.99	0.17	12	45	36.0	2.50	6.61	.1241665	23 26.4	299 39 32.0	6	40	19.7	.6391988						
7	22	26	7.71	0.17	12	8	48.0	2.49	6.58	.1259377	23 29.0	302 52 12.5	6	46	49.7	.6350784						
8	22	32	40.36	0.17	11	30	43.1	2.48	6.56	.1275533	23 31.6	306 8 46.6	6	52	9.1	.6306909						
9	22	39	14.96	0.17	10	51	22.1	2.48	6.54	.1290091	23 34.3	309 29 32.7	6	56	12.6	.6260386						
10	22	45	51.61	0.17	10	10	45.0	2.47	6.52	.1302998	23 37.0	312 54 50.1	6	58	54.4	.6211244						
11	22	52	30.36	0.17	S. 9	28	52.7	2.47	6.50	0.1314184	23 39.7	316 24 58.7	S. 7	0	8.0	9.6159529						
12	22	59	11.28	0.17	8	45	45.9	2.46	6.49	.1323584	23 42.5	320 0 19.2	6	59	46.8	.6105304						
13	23	5	54.46	0.17	8	1	25.4	2.46	6.48	.1331109	23 45.3	323 41 12.7	6	57	43.4	.6048645						
14	23	12	39.97	0.17	7	15	52.3	2.46	6.47	.1336663	23 48.2	327 28 1.1	6	53	50.1	.5989661						
15	23	19	27.92	0.16	6	29	7.7	2.45	6.46	.1340142	23 51.1	331 21 6.6	6	47	58.7	.5928484						
16	23	26	18.35	0.16	5	41	13.3	2.45	6.46	.1341417	23 54.0	335 20 51.7	6	40	0.9	.5865275						
17	23	33	11.36	0.16	S. 4	52	10.8	2.45	6.46	0.1340363	23 57.0	339 27 39.0	S. 6	29	47.9	9.5800243						
18	23	40	7.00	0.16	4	2	2.5	2.46	6.47	.1336821	* * *	343 41 50.6	6	17	11.1	.5733631						
19	23	47	5.31	0.16	3	10	50.8	2.46	6.48	.1330636	0 0.1	348 3 48.2	6	2	2.2	.5665741						
20	23	54	6.31	0.16	2	18	38.8	2.47	6.49	.1321624	0 3.2	352 33 52.2	5	44	13.2	.5596925						
21	0	1	9.98	0.16	1	25	30.2	2.47	6.51	.1309596	0 6.3	357 12 21.6	5	23	37.1	.5527601						
22	0	8	16.26	0.17	S. 0	31	29.3	2.48	6.53	.1294345	0 9.5	1 59 32.6	5	0	8.3	.5458253						
23	0	15	25.06	0.17	N. 0	23	19.0	2.49	6.56	0.1275651	0 12.7	6 55 38.5	S. 4	33	43.0	9.5389437						
24	0	22	36.19	0.17	1	18	48.9	2.50	6.59	.1253286	0 15.9	12 0 48.2	4	4	20.4	.5321780						
25	0	29	49.43	0.17	2	14	53.8	2.52	6.63	.1227012	0 19.2	17 15 5.9	3	32	2.5	.5255984						
26	0	37	4.46	0.17	3	11	25.6	2.54	6.68	.1196589	0 22.5	22 38 28.9	2	56	55.5	.5192816						
27	0	44	20.85	0.17	4	8	16.1	2.56	6.73	.1161782	0 25.8	28 10 47.7	2	19	10.6	.5133096						
28	0	51	38.07	0.17	5	5	15.4	2.58	6.79	.1122357	0 29.2	33 51 44.0	1	39	4.0	.5077690						
29	0	58	55.52	0.18	N. 6	2	13.0	2.61	6.86	0.1078101	0 32.6	39 40 50.1	S. 0	56	57.8	9.5027474						
30	1	6	12.42	0.18	6	58	57.3	2.64	6.94	.1028817	0 35.9	45 37 28.2	S. 0	13	19.8	.4983318						
31	1	13	27.93	0.18	7	55	15.4	2.67	7.03	.0974340	0 39.2	51 40 49.7	N. 0	31	16.5	.4946043						
Apr. 1	1	20	41.05	0.18	8	50	54.6	2.71	7.13	.0914551	0 42.5	57 49 55.6	1	16	12.7	.4916385						
2	1	27	50.72	0.19	N. 9	45	41.3	2.75	7.24	0.0849371	0 45.7	64 3 36.8	N. 2	0	47.2	9.4894965						

MEAN TIME.

Date.	Apparent Right Ascension.				Sid. Time of Semid. pass ^d Merid.	Apparent Declination.				Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.	Meridian Passage.	Heliocentric Longitude.	Heliocentric Latitude.	Log. of Rad. Veht.	
	Noon.					Noon.						Noon.		Noon.	Noon.	Noon.	
	h	m	s	s	N.	°	'	"	"	"	"	h	m	°	'	"	
Apr. 2	1 27	50	72	0.19	N. 9 45	41	3	2.75	7.24	0.0849371	0 45.7	64	3	36.8	N. 2	0 47.2	9.4894965
3	1 34	55	74	0.19	10 39	21	5	2.79	7.35	.0778769	0 48.9	70	20	35.5	2 44	16.2	.4882249
4	1 41	54	87	0.19	11 31	41	7	2.84	7.48	.0702775	0 51.9	76	39	27.0	3 25	56.0	.4878519
5	1 48	46	82	0.20	12 22	29	0	2.89	7.63	.0621476	0 54.8	82	58	42.1	4 5	5.2	.4883857
6	1 55	30	25	0.20	13 11	30	2	2.95	7.78	.0535019	0 57.6	89	16	49.7	4 41	6.6	.4898146
7	2 2	3	85	0.21	13 58	34	1	3.01	7.94	.0443603	1 0.2	95	32	20.1	5 13	28.9	.4921067
8	2 8	26	30	0.21	N. 14 43	30	0	3.08	8.12	0.0347481	1 2.7	101	43	47.6	N. 5	41 48.0	9.4952128
9	2 14	36	33	0.22	15 26	8	7	3.16	8.31	.0246948	1 4.9	107	49	53.5	6 5	47.9	.4990684
10	2 20	32	71	0.22	16 6	22	2	3.24	8.52	.0142338	1 6.9	113	49	27.8	6 25	20.1	.5035980
11	2 26	14	28	0.23	16 44	3	9	3.32	8.73	0.0034014	1 8.6	119	41	31.3	6 40	24.0	.5087181
12	2 31	39	97	0.24	17 19	8	3	3.40	8.96	9.9922366	1 10.1	125	25	16.1	6 51	5.2	.5143417
13	2 36	48	76	0.24	17 51	31	2	3.49	9.20	.9807803	1 11.3	131	0	5.8	6 57	34.8	.5203811
14	2 41	39	72	0.25	N. 18 21	9	3	3.59	9.45	9.9690745	1 12.2	136	25	35.3	N. 7	0 8.1	9.5267506
15	2 46	11	98	0.26	18 48	0	2	3.69	9.72	.9571632	1 12.8	141	41	29.9	6 59	3.1	.5333686
16	2 50	24	77	0.27	19 12	2	1	3.79	9.99	.9450910	1 13.0	146	47	44.0	6 54	39.5	.5401599
17	2 54	17	37	0.28	19 33	13	8	3.90	10.27	.9329033	1 12.9	151	44	20.4	6 47	17.7	.5470554
18	2 57	49	15	0.29	19 51	34	7	4.01	10.56	.9206471	1 12.5	156	31	28.0	6 37	18.1	.5539937
19	3 0	59	56	0.29	20 7	4	2	4.13	10.87	.9083705	1 11.7	161	9	21.5	6 25	0.4	.5609204
20	3 3	48	16	0.30	N. 20 19	42	2	4.25	11.18	9.8961232	1 10.5	165	38	19.4	N. 6	10 43.1	9.5677884
21	3 6	14	57	0.31	20 29	28	8	4.37	11.50	.8839563	1 9.0	169	58	43.3	5 54	43.6	.5745551
22	3 8	18	54	0.32	20 36	24	4	4.49	11.82	.8719228	1 7.1	174	10	56.8	5 37	17.6	.5811922
23	3 9	59	93	0.33	20 40	29	3	4.61	12.14	.8600778	1 4.9	178	15	25.2	5 18	39.4	.5876647
24	3 11	18	76	0.34	20 41	44	7	4.73	12.47	.8484787	1 2.2	182	12	34.0	4 59	1.6	.5939507
25	3 12	15	19	0.35	20 40	11	8	4.86	12.80	.8371845	0 59.2	186	2	49.2	4 38	35.6	.6000310
26	3 12	49	56	0.36	N. 20 35	52	7	4.99	13.13	9.8262566	0 55.9	189	46	36.5	N. 4	17 31.2	9.6058891
27	3 13	2	39	0.37	20 28	50	0	5.11	13.45	.8157576	0 52.1	193	24	21.2	3 55	57.1	.6115125
28	3 12	54	43	0.37	20 19	7	5	5.22	13.76	.8057513	0 48.0	196	56	28.0	3 34	0.9	.6168911
29	3 12	26	67	0.38	20 6	50	4	5.34	14.06	.7963019	0 43.6	200	23	20.6	3 11	49.2	.6220173
30	3 11	40	29	0.39	19 52	5	0	5.45	14.35	.7874726	0 38.9	203	45	22.1	2 49	27.6	.6268852
May 1	3 10	36	76	0.40	19 34	59	5	5.55	14.62	.7793252	0 33.9	207	2	54.3	2 27	1.0	.6314908
2	3 9	17	73	0.40	N. 19 15	43	7	5.65	14.88	9.7719185	0 28.7	210	16	18.3	N. 2	4 33.7	9.6358308
3	3 7	45	11	0.41	18 54	29	7	5.73	15.11	.7653064	0 23.2	213	25	54.3	1 42	9.2	.6399037
4	3 6	0	98	0.41	18 31	31	2	5.81	15.31	.7595372	0 17.6	216	32	1.5	1 19	50.8	.6437082
5	3 4	7	59	0.41	18 7	4	1	5.87	15.48	.7546512	0 11.8	219	34	58.2	0 57	41.1	.6472440
6	3 2	7	32	0.42	17 41	25	8	5.93	15.62	.7506809	{ 0 5.8 } { 23 59.8 }	222	35	2.0	0 35	42.5	.6505110
7	3 0	2	60	0.42	17 14	55	3	5.97	15.73	.7476488	23 53.8	225	32	29.6	N. 0	13 57.0	.6535096
8	2 57	55	90	0.42	N. 16 47	52	6	6.00	15.81	9.7455664	23 47.8	228	27	37.1	S. 0	7 33.6	9.6562406
9	2 55	49	66	0.42	16 20	38	4	6.02	15.85	.7444348	23 41.8	231	20	39.9	0 28	47.7	.6587050
10	2 53	46	24	0.42	15 53	33	6	6.02	15.86	.7442447	23 35.9	234	11	52.9	0 49	43.9	.6609036
11	2 51	47	85	0.42	15 26	58	7	6.01	15.83	.7449758	23 30.1	237	1	30.3	1 10	20.9	.6628375
12	2 49	56	59	0.41	15 1	12	8	5.99	15.77	.7465993	23 24.5	239	49	46.1	1 30	37.5	.6645077
13	2 48	14	30	0.41	14 36	34	9	5.95	15.68	.7490773	23 19.1	242	36	53.7	1 50	32.7	.6659149
14	2 46	42	65	0.41	N. 14 13	21	2	5.91	15.56	9.7523650	23 13.8	245	23	6.2	S. 2	10 5.3	9.6670603
15	2 45	23	07	0.40	13 51	46	7	5.85	15.42	.7564130	23 8.8	248	8	36.5	2 29	14.4	.6679443
16	2 44	16	77	0.40	13 32	3	9	5.79	15.25	.7611676	23 4.0	250	53	37.0	2 47	58.9	.6685676
17	2 43	24	71	0.39	13 14	23	1	5.72	15.06	.7665724	22 59.4	253	38	20.3	3 6	17.7	.6689306
18	2 42	47	68	0.39	N. 12 58	52	8	5.64	14.86	9.7725697	22 55.1	256	22	58.7	S. 3	24 9.8	9.6690335

MERCURY, 1924.

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MEAN TIME.

Date	Apparent Right Ascension.				Sid. Time of Semid. pass ^r Merid.	Apparent Declination.				Semidiameter.	Hor. Par.	Log of True Dist. from the Earth.	Meridian Passage.	Heliocentric Longitude.	Heliocentric Latitude.	Log. of Rad. Vect.			
	Noon.					Noon.						Noon.		Noon.	Noon.	Noon.			
	h	m	s	s	N.	°	'	"	"	"	"	h	m	°	'	"	°	'	"
May 18	2 42	47	68	0.39	N.12	58	52	8	5.64	14.86	9.7725697	22 55.1	256 22	58.7	S. 3 24	9.8	9.6690335		
19	2 42	26	24	0.38	12 45	38	7	5.56	14.63	.7791029	22 51.1	259 7	44.4	3 41	33.9	.6888766			
20	2 42	20	79	0.37	12 34	45	4	5.47	14.40	.7861158	22 47.3	261 52	49.5	3 58	28.9	.6684595			
21	2 42	31	57	0.36	12 26	14	9	5.38	14.16	.7935544	22 43.8	264 38	26.2	4 14	53.4	.6677820			
22	2 42	58	67	0.36	12 20	7	9	5.28	13.90	.8013671	22 40.6	267 24	47.0	4 30	46.0	.6668438			
23	2 43	42	11	0.35	12 16	23	9	5.18	13.64	.8095061	22 37.7	270 12	4.2	4 46	5.2	.6656440			
24	2 44	41	79	0.35	N.12	15	0	8	5.08	13.38	9.8179261	22 35.0	273 0	30.5	S. 5 04	9.1	9.6641821		
25	2 45	57	55	0.34	12 15	55	7	4.98	13.11	.8265860	22 32.5	275 50	18.7	5 14	55.9	.6624571			
26	2 47	29	15	0.33	12 19	4	8	4.88	12.85	.8354474	22 30.4	278 41	41.9	5 28	23.5	.6604683			
27	2 49	16	37	0.33	12 24	23	8	4.78	12.59	.8444760	22 28.5	281 34	53.7	5 41	9.7	.6582146			
28	2 51	18	93	0.32	12 31	47	7	4.68	12.33	.8536408	22 26.8	284 30	7.9	5 53	11.7	.6556947			
29	2 53	36	57	0.32	12 41	11	3	4.58	12.07	.8629135	22 25.4	287 27	38.9	6 4	27.0	.6529079			
30	2 56	9	01	0.31	N.12	52	29	0	4.48	11.81	9.8722685	22 24.2	290 27	41.3	S. 6 14	52.3	9.6498536		
31	2 58	55	99	0.30	13 5	34	9	4.38	11.56	.8816832	22 23.2	293 30	30.4	6 24	24.2	.6465306			
June 1	3 1	57	27	0.29	13 20	23	1	4.29	11.31	.8911367	22 22.5	296 36	22.2	6 32	59.1	.6429391			
2	3 5	12	63	0.29	13 36	47	7	4.20	11.06	.9006102	22 22.1	299 45	33.2	6 40	32.7	.6390785			
3	3 8	41	89	0.28	13 54	42	3	4.11	10.82	.9100869	22 21.8	302 58	20.5	6 47	0.6	.6349497			
4	3 12	24	88	0.28	14 14	1	0	4.02	10.59	.9195510	22 21.8	306 15	1.8	6 52	17.8	.6305541			
5	3 16	21	48	0.27	N.14	34	37	5	3.93	10.36	9.9289881	22 22.0	309 35	55.8	S. 6 56	18.9	9.6258936		
6	3 20	31	60	0.27	14 56	25	5	3.85	10.14	.9383845	22 22.5	313 1	21.7	6 58	58.0	.6209714			
7	3 24	55	17	0.26	15 19	18	6	3.77	9.93	.9477272	22 23.1	316 31	39.5	7 0	8.9	.6157920			
8	3 29	32	19	0.26	15 43	10	5	3.69	9.72	.9570038	22 24.0	320 7	9.7	6 59	44.6	.6103617			
9	3 34	22	66	0.25	16 7	54	8	3.61	9.51	.9662019	22 25.1	323 48	13.6	6 57	38.0	.6046883			
10	3 39	26	63	0.25	16 33	24	6	3.53	9.31	.9753094	22 26.5	327 35	13.1	6 53	41.2	.5987827			
11	3 44	44	16	0.24	N.16	59	33	2	3.46	9.12	9.9843131	22 28.0	331 28	30.4	S. 6 47	46.1	9.5926581		
12	3 50	15	36	0.24	17 26	13	6	3.39	8.94	.99932005	22 29.8	335 28	28.0	6 39	44.2	.5863312			
13	3 56	0	35	0.23	17 53	18	3	3.33	8.76	0.0019578	22 31.8	339 35	28.5	6 29	27.0	.5798224			
14	4 1	59	26	0.23	18 20	39	3	3.26	8.59	.0105705	22 34.1	343 49	54.0	6 16	45.7	.5731566			
15	4 8	12	23	0.23	18 48	10	0	3.20	8.42	.0190233	22 36.6	348 12	6.1	6 1	32.0	.5663637			
16	4 14	39	41	0.22	19 15	40	6	3.14	8.26	.0272995	22 39.3	352 42	25.4	5 43	38.0	.5594795			
17	4 21	20	90	0.22	N.19	43	2	6	3.08	8.11	0.0353814	22 42.3	357 21	10.6	S. 5 22	56.6	9.5525458		
18	4 28	16	80	0.21	20 10	6	8	3.02	7.97	.0432498	22 45.5	2 8	37.9	4 59	22.4	.5456114			
19	4 35	27	17	0.21	20 36	43	1	2.97	7.83	.0508844	22 49.0	7 5	0.4	4 32	51.8	.5387319			
20	4 42	51	99	0.21	21 2	41	1	2.92	7.70	.0582635	22 52.7	12 10	27.1	4 3	23.7	.5319703			
21	4 50	31	18	0.20	21 27	50	0	2.88	7.57	.0653642	22 56.7	17 25	1.6	3 31	0.5	.5253971			
22	4 58	24	51	0.20	21 51	58	3	2.83	7.45	.0721625	23 0.9	22 48	41.5	2 55	48.5	.5190892			
23	5 6	31	70	0.20	N.22	14	54	3	2.79	7.34	0.0786340	23 5.3	28 21	16.8	S. 2 17	58.9	9.5131288		
24	5 14	52	26	0.20	22 36	25	8	2.75	7.24	.0847539	23 9.9	34 2	29.0	1 37	48.3	.5076024			
25	5 23	25	59	0.20	22 56	20	7	2.71	7.14	.0904975	23 14.7	39 51	50.0	0 55	38.7	.5025976			
26	5 32	10	88	0.19	23 14	27	1	2.68	7.06	.0958413	23 19.7	45 48	41.6	S. 0 11	58.4	.4982016			
27	5 41	7	16	0.19	23 30	33	3	2.65	6.98	.1007631	23 24.9	51 52	15.1	N. 0 32	39.2	.4944958			
28	5 50	13	29	0.19	23 44	28	2	2.62	6.91	.1052430	23 30.2	58 1	31.1	1 17	35.5	.4915542			
29	5 59	27	93	0.19	N.23	56	1	9	2.60	6.84	0.1092640	23 35.6	64 15	20.1	N. 2 2	8.7	9.4894380		
30	6 8	49	60	0.19	24 5	5	5	2.58	6.79	.1128131	23 41.2	70 32	24.2	2 45	35.0	.4881936			
July 1	6 18	16	71	0.19	24 11	31	8	2.56	6.74	.1158812	23 46.8	76 51	18.4	3 27	10.8	.4878484			
2	6 27	47	58	0.19	24 15	15	2	2.54	6.70	.1184636	23 52.4	83 10	33.3	4 6	14.8	.4884100			
3	6 37	20	45	0.19	N.24	16	12	1	2.53	6.67	0.1205610	23 58.0	89 28	38.1	N. 4 42	10 0	9.4898660		

MERCURY, 1924.

MEAN TIME.

Date.	Apparent Right Ascension.		Sid. Time of Semid. pass. Merid	Apparent Declination.		Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.		Meridian Passage.	Heliocentric Longitude.		Heliocentric Latitude.		Log. of Rad. Vect.	
	Noon.			Noon.				Noon			Noon.		Noon.			
	h	m	s	°	'	"	"	°	'	"	°	'	"	°	'	"
July 3	6	37	20.45	0	19	N.24 16 12.1	2.53	6.67	0.1205610	23 58 0	89 28 38.1	N. 4 42 10.0		9.4898660		
4	6	46	53.62	0	18	24 14 20.6	2.52	6.64	.1221782	* * *	95 44 2.9	5 14 25.1		.4921842		
5	6	56	25.40	0	18	24 9 40.8	2.51	6.62	.1233248	0 3.6	101 55 22.2	5 42 36.5		.4953146		
6	7	5	54.18	0	18	24 2 15.0	2.51	6.61	.1240138	0 9.2	108 1 17.5	6 6 28.2		.4991923		
7	7	15	18.49	0	18	23 52 6.5	2.51	6.61	.1242619	0 14.7	114 0 39.3	6 25 52.2		.5037416		
8	7	24	36.98	0	18	23 39 20.6	2.51	6.61	.1240885	0 20.1	119 52 28.6	6 40 47.8		.5088790		
9	7	33	48.48	0	18	N.23 24 3.3	2.51	6.62	0.1235146	0 25.3	125 35 57.9	N. 6 51 21.0		9.5145172		
10	7	42	51.97	0	18	23 6 22.1	2.52	6.64	.1225626	0 30.4	131 10 31.0	6 57 43.1		.5205683		
11	7	51	46.63	0	18	22 46 24.7	2.53	6.66	.1212554	0 35.4	136 35 43.3	7 0 9.3		.5269470		
12	8	0	31.75	0	18	22 24 19.4	2.54	6.68	.1196158	0 40.2	141 51 20.3	6 58 57.8		.5335720		
13	8	9	6.81	0	18	22 0 14.9	2.55	6.71	.1176663	0 44.9	146 57 16.8	6 54 28.3		.5403679		
14	8	17	31.42	0	18	21 34 19.8	2 56	6.74	.1154285	0 49.4	151 53 35.6	6 47 1.3		.5472660		
15	8	25	45.32	0	18	N.21 6 42.8	2.58	6.78	0.1129226	0 53.7	156 40 26.1	N. 6 36 57.1		9.5542051		
16	8	33	48.32	0	18	20 37 32.2	2.59	6.83	.1101675	0 57.8	161 18 2.9	6 24 35.4		.5611310		
17	8	41	40.36	0	19	20 6 56.3	2.61	6.88	.1071813	1 1.7	165 46 44.7	6 10 14.7		.5679969		
18	8	49	21.44	0	19	19 35 2.9	2.63	6.93	.1039800	1 5.4	170 6 53.2	5 54 12.2		.5747623		
19	8	56	51.61	0	19	19 1 59.6	2.65	6.98	.1005780	1 9.0	174 18 52.1	5 36 43.8		.5813931		
20	9	4	10.98	0	19	18 27 53.7	2.67	7.04	.0969886	1 12.4	178 23 6.5	5 18 3.5		.5878607		
21	9	11	19.70	0	19	N.17 52 51.8	2.70	7.10	0.0932234	1 15.6	182 20 2.1	N 4 58 24.0		9.5941408		
22	9	18	17.91	0	19	17 17 0.4	2.72	7.16	.0892927	1 18.6	186 10 4.9	4 37 56.6		.6002145		
23	9	25	5.82	0	19	16 40 25.8	2.75	7.23	.0852057	1 21.5	189 53 40.7	4 16 51.1		.6060657		
24	9	31	43.61	0	19	16 3 13.7	2 77	7.30	.0809701	1 24.2	193 31 14.5	3 55 16.2		.6116819		
25	9	38	11.48	0	19	15 25 29.5	2.80	7.38	.0765927	1 26.7	197 3 11.2	3 33 19.5		.6170530		
26	9	44	29.63	0	20	14 47 18.4	2.83	7.45	.0720789	1 29.0	200 29 54.5	3 11 7.4		.6221714		
27	9	50	38.25	0	20	N.14 8 45.4	2.86	7.53	0.0674341	1 31.2	203 51 47.2	N. 2 48 45.5		9.6270315		
28	9	56	37.53	0	20	13 29 55.2	2.89	7.61	.0626615	1 33.2	207 9 11.4	2 26 18.8		.6316290		
29	10	2	27.62	0	20	12 50 52.2	2.92	7.70	.0577646	1 35.1	210 22 28.0	2 3 51.5		.6359611		
30	10	8	8.69	0	20	12 11 40.8	2.95	7.79	.0527458	1 36.9	213 31 57.2	1 41 27.2		.6400253		
31	10	13	40.87	0	20	11 32 25.0	2.99	7.88	.0476066	1 38.5	216 37 58.2	1 19 9.0		.6438221		
Aug. 1	10	19	4.28	0	21	10 53 9.0	3.03	7.98	.0423482	1 39.9	219 40 49.2	0 56 59.6		.6473495		
2	10	24	19.01	0	21	N.10 13 56.6	3.07	8.08	0.0369714	1 41.2	222 40 47.9	N. 0 35 1.4		9.6506083		
3	10	29	25.12	0	21	9 34 51.6	3.11	8.18	.0314764	1 42.3	225 38 10.8	N. 0 13 16.4		.6535986		
4	10	34	22.68	0	21	8 55 58.0	3.15	8.29	.0258628	1 43.3	228 33 14.1	S. 0 8 13.7		.6563215		
5	10	39	11.68	0	22	8 17 19.3	3.19	8.40	.0201304	1 44.2	231 26 13.3	0 29 27.3		.6587777		
6	10	43	52.13	0	22	7 38 59.4	3.24	8.52	.0142783	1 44.9	234 17 23.0	0 50 22.9		.6609681		
7	10	48	23.97	0	22	7 1 2.0	3.28	8.63	.0083059	1 45.5	237 6 57.7	1 10 59.3		.6628937		
8	10	52	47.14	0	22	N. 6 23 30.9	3.32	8.75	0.0022121	1 45.9	239 55 11.1	S. 1 31 15.3		9.6645558		
9	10	57	1.53	0	23	5 46 30.2	3.37	8.88	.9959959	1 46.2	242 42 16.8	1 51 9.7		.6659549		
10	11	1	6.99	0	23	5 10 3.7	3.42	9.01	.9896564	1 46.4	245 28 27.8	2 10 41.7		.6670923		
11	11	5	3.35	0	23	4 34 15.7	3.47	9.15	.9831931	1 46.4	248 13 56.8	2 29 50.0		.6679681		
12	11	8	50.39	0	23	3 59 10.4	3.53	9.29	.9766054	1 46.2	250 58 56.6	2 48 33.7		.6685833		
13	11	12	27.85	0	24	3 24 52.4	3.58	9.43	.9698931	1 45.8	253 43 39.6	3 6 51.6		.6689385		
14	11	15	55.42	0	24	N. 2 51 26.5	3.64	9.58	9.9630570	1 45.3	256 28 17.9	S. 3 24 42.8		9.6690335		
15	11	19	12.77	0	25	2 18 57.8	3.70	9.74	.9560979	1 44.7	259 13 3.9	3 42 6.1		.6688683		
16	11	22	19.48	0	25	1 47 31.5	3.76	9.90	.9490180	1 43.8	261 58 9.8	3 59 0.1		.6684430		
17	11	25	15.13	0	25	1 17 13.3	3.82	10.06	.9418206	1 42.8	264 43 47.7	4 15 23.7		.6677573		
18	11	27	59.21	0	26	N. 0 48 9.4	3.88	10.23	9.9345101	1 41.6	267 30 10.0	S. 4 31 15.3		9.6668108		

MERCURY, 1924.

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MEAN TIME.

Date.	Apparent Right Ascension.				Sid. Time of Semid. pass. Merid	Apparent Declination.				Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.		Meridian Passage.	Heliocentric Longitude.		Heliocentric Latitude.		Log. of Rad. Vect.		
	Noon.					Noon.						Noon.			Noon.		Noon.				
	h	m	s	s		°	'	"	"			h	m		°	'	"				
Aug. 18	11	27	59.21	0.26	N.	0	48	9.4	3.88	10.23	9.9345101	1	41.6	267	30	10.0	S.	4	31	15.3	9.6668108
19	11	30	31.17	0.26	N.	0	20	26.4	3.95	10.41	.9270925	1	40.2	270	17	29.1		4	46	33.3	.6656029
20	11	32	50.41	0.27	S.	0	5	48.7	4.02	10.59	.9195763	1	38.6	273	5	57.7		5	1	16.1	.6641328
21	11	34	56.28	0.27		0	30	28.3	4.09	10.78	.9119722	1	36.7	275	55	48.6		5	15	21.7	.6623996
22	11	36	48.07	0.28		0	53	24.3	4.17	10.97	.9042936	1	34.6	278	47	15.0		5	28	48.1	.6604025
23	11	38	25.04	0.28		1	14	27.8	4.24	11.17	.8965579	1	32.3	281	40	30.4		5	41	32.9	.6581405
24	11	39	46.39	0.29	S.	1	33	29.5	4.32	11.37	9.8887864	1	29.7	284	35	48.6	S.	5	53	33.6	9.6556123
25	11	40	51.31	0.29		1	50	19.4	4.39	11.57	.8810047	1	26.8	287	33	24.0		6	4	47.3	.6528173
26	11	41	38.97	0.30		2	4	47.0	4.47	11.78	.8732449	1	23.6	290	33	31.3		6	15	11.0	.6497544
27	11	42	8.55	0.30		2	16	41.2	4.55	11.99	.8655446	1	20.2	293	36	25.9		6	24	41.2	.6464231
28	11	42	19.26	0.31		2	25	50.5	4.63	12.20	.8579490	1	16.4	296	42	23.6		6	33	14.2	.6428230
29	11	42	10.37	0.31		2	32	3.3	4.71	12.41	.8505108	1	12.3	299	51	41.0		6	40	45.8	.6389542
30	11	41	41.25	0.32	S.	2	35	8.0	4.79	12.62	9.8432918	1	7.9	303	4	35.3	S.	6	47	11.6	9.6348171
31	11	40	51.46	0.32		2	34	53.5	4.87	12.82	.8363627	1	3.1	306	21	24.2		6	52	26.5	.6304131
Sept. 1	11	39	40.70	0.33		2	31	9.4	4.94	13.02	.8298040	0	58.0	309	42	26.4		6	56	25.1	.6257443
2	11	38	9.02	0.33		2	23	46.9	5.01	13.21	.8237056	0	52.5	313	8	1.0		6	59	1.6	.6208139
3	11	36	16.77	0.34		2	12	39.4	5.08	13.38	.8181665	0	46.7	316	38	28.2		7	0	9.6	.6156265
4	11	34	4.72	0.34		1	57	43.3	5.14	13.53	.8132935	0	40.6	320	14	8.5		6	59	42.3	.6101884
5	11	31	34.17	0.35	S.	1	38	58.9	5.18	13.65	9.8091992	0	34.2	323	55	23.2	S.	6	57	32.3	9.6045076
6	11	28	46.91	0.35		1	16	31.3	5.22	13.76	.8059980	0	27.5	327	42	34.1		6	53	31.9	.5985949
7	11	25	45.36	0.35		0	50	31.1	5.25	13.83	.8038041	0	20.5	331	36	3.6		6	47	33.0	.5924637
8	11	22	32.51	0.35	S.	0	21	15.2	5.26	13.86	.8027248	0	13.4	335	36	14.0		6	39	27.0	.5861307
9	11	19	11.98	0.35	N.	0	10	53.0	5.26	13.86	.8028562	{ ₂₁ 0.6188}		339	43	28.0		6	29	5.4	.5796166
10	11	15	47.87	0.35		0	45	23.5	5.24	13.81	.8042771	23	51.5	343	58	7.8		6	16	19.5	.5729463
11	11	12	24.72	0.35	N.	1	21	40.3	5.21	13.72	9.8070431	23	44.3	348	20	34.8	S.	6	1	0.9	9.5661501
12	11	9	7.39	0.34		1	59	2.7	5.16	13.59	.8111834	23	37.3	352	51	9.6		5	43	1.8	.5592637
13	11	6	0.79	0.34		2	36	46.5	5.10	13.42	.8166963	23	30.5	357	30	10.8		5	22	15.2	.5523292
14	11	3	9.81	0.33		3	14	5.6	5.02	13.21	.8235488	23	24.1	2	17	54.6		4	58	35.5	.5453956
15	11	0	39.07	0.33		3	5	0.4	4.92	12.97	.8316765	23	18.1	7	14	34.0		4	31	59.3	.5385186
16	10	58	32.76	0.32		4	24	28.3	4.82	12.69	.8409874	23	12.5	12	20	17.8		4	2	25.7	.5317620
17	10	56	54.51	0.31	N.	4	56	7.6	4.70	12.39	9.8513641	23	7.5	17	35	9.4	S.	3	29	57.1	9.5251959
18	10	55	47.27	0.30		5	24	36.4	4.58	12.07	.8626714	23	3.0	22	59	6.3		2	54	40.0	.5188975
19	10	55	13.26	0.30		5	49	24.5	4.46	11.74	.8747601	22	59.0	28	31	58.0		2	16	45.8	.5129492
20	10	55	13.91	0.29		6	10	7.9	4.33	11.40	.8874737	22	55.7	34	13	25.9		1	36	31.0	.5074377
21	10	55	49.95	0.28		6	26	28.3	4.20	11.06	.9006540	22	52.9	40	3	1.6		0	54	18.2	.5024509
22	10	57	1.35	0.27		6	38	13.7	4.07	10.72	.9141454	22	50.7	46	0	6.6	S.	0	10	35.5	.4980752
23	10	58	47.46	0.26	N.	6	45	17.3	3.95	10.39	9.9277996	22	49.0	52	3	51.7	N.	0	34	3.2	9.4943921
24	11	1	7.04	0.25		6	47	37.7	3.82	10.07	.9414781	22	47.9	58	13	17.3		1	18	59.4	.4914754
25	11	3	58.40	0.25		6	45	17.8	3.70	9.76	.9550549	22	47.3	64	27	13.6		2	3	31.2	.4893859
26	11	7	19.46	0.24		6	38	24.7	3.59	9.46	.9684181	22	47.1	70	44	22.4		2	46	54.8	.4881692
27	11	11	7.86	0.23		6	27	8.8	3.49	9.18	.9814716	22	47.4	77	3	18.6		3	28	26.5	.4878522
28	11	15	21.07	0.22		6	11	43.3	3.39	8.92	9.9941347	22	48.0	83	22	32.8		4	7	25.1	.4884421
29	11	19	56.44	0.22	N.	5	52	23.8	3.29	8.67	0.0063419	22	49.0	89	40	33.9	N.	4	43	13.8	9.4899256
30	11	24	51.35	0.21		5	29	27.3	3.21	8.44	.0180428	22	50.2	95	55	52.2		5	15	21.7	.4922701
Oct. 1	11	30	3.17	0.21		5	3	12.7	3.13	8.23	.0292015	22	51.7	102	7	2.6		5	43	25.2	.4954248
2	11	35	29.50	0.21		4	33	58.3	3.05	8.03	.0397942	22	53.4	108	12	46.7		6	7	8.6	.4993248
3	11	41	8.02	0.20	N.	4	2	3.1	2.98	7.84	0.0498084	22	55.3	114	11	55.2	N.	6	26	24.1	9.5038938

MEAN TIME.

Date.	Apparent Right Ascension.				Sid. Time of Semid. pass ^r Merid.	Apparent Declination.				Semi-diameter.	Hor. Par.	Log. of True Dist. from the Earth.		Meridian Passage.	Heliocentric Longitude.		Heliocentric Latitude.		Log. of Rad. Vect.			
	Noon.					Noon.						Noon.			Noon.		Noon.		Noon.			
	h	m	s	s	N.	°	'	"	"	"		h	m	°	'	"	°	'	"	°	'	"
Oct. 3	11	41	8.02	0.20	N.	4	2	3.1	2.98	7.84	0.0498084	22	55.3	114	11	55.2	N.	6	26	24.1	9.5038938	
4	11	46	56.63	0.20		3	27	45.9	2.92	7.68	.0592415	22	57.3	120	3	29.5		6	41	11.5	.5090479	
5	11	52	53.44	0.19		2	51	24.7	2.86	7.52	.0680981	22	59.4	125	46	42.4		6	51	36.7	.5147003	
6	11	58	56.79	0.19		2	13	16.8	2.80	7.38	.0763900	23	1.5	131	20	58.3		6	57	51.1	.5207630	
7	12	5	5.23	0.18		1	33	38.1	2.75	7.25	.0841331	23	3.9	136	45	52.8		7	0	10.3	.5271505	
8	12	11	17.52	0.18		0	52	43.6	2.71	7.13	.0913470	23	6.2	142	1	11.7		6	58	52.3	.5337819	
9	12	17	32.60	0.18	N.	0	10	46.9	2.67	7.02	0.0980542	23	8.5	147	6	50.1	N.	6	54	17.0	9.5405820	
10	12	23	49.62	0.18	N.	0	31	59.4	2.63	6.92	.1042775	23	10.9	152	2	51.0		6	46	44.7	.5474821	
11	12	30	7.85	0.17		1	15	24.1	2.59	6.83	.1100411	23	13.2	156	49	24.0		6	36	35.9	.5544217	
12	12	36	26.74	0.17		1	59	17.1	2.56	6.75	.1153692	23	15.6	161	26	43.8		6	24	10.2	.5613466	
13	12	42	45.82	0.17		2	43	20.5	2.53	6.67	.1202851	23	18.0	165	55	9.2		6	9	46.1	.5682099	
14	12	49	4.74	0.17		3	27	53.0	2.50	6.60	.1248116	23	20.4	170	15	2.0		5	53	40.8	.5749715	
15	12	55	23.28	0.17	S.	4	12	20.9	2.48	6.54	0.1289708	23	22.7	174	26	46.1	N.	5	36	9.9	9.5815976	
16	13	1	41.21	0.16		4	56	46.6	2.46	6.48	.1327828	23	25.1	178	30	46.4		5	17	27.5	.5880595	
17	13	7	58.44	0.16		5	41	4.4	2.44	6.43	.1362668	23	27.4	182	27	28.7		4	57	46.4	.5943335	
18	13	14	14.88	0.16		6	25	9.5	2.42	6.38	.1394412	23	29.7	186	17	19.1		4	37	17.7	.6004004	
19	13	20	30.52	0.16		7	8	57.3	2.41	6.34	.1423223	23	32.0	190	0	43.2		4	16	11.2	.6062444	
20	13	26	45.37	0.16		7	52	24.2	2.39	6.30	.1449251	23	34.3	193	38	6.2		3	54	35.5	.6118531	
21	13	32	59.45	0.16	S.	8	35	26.4	2.38	6.27	0.1472637	23	36.6	197	9	52.8	N.	3	32	38.2	9.6172163	
22	13	39	12.82	0.16		9	18	0.9	2.37	6.24	.1493515	23	38.9	200	36	26.6		3	10	25.6	.6223267	
23	13	45	25.57	0.16		10	0	4.9	2.36	6.21	.1511992	23	41.2	203	58	10.7		2	48	3.6	.6271787	
24	13	51	37.78	0.16		10	41	35.9	2.35	6.19	.1528178	23	43.4	207	15	26.8		2	25	36.8	.6317680	
25	13	57	49.54	0.16		11	22	31.5	2.34	6.17	.1542166	23	45.7	210	28	36.1		2	3	9.6	.6360918	
26	14	4	0.96	0.16		12	2	49.6	2.34	6.15	.1554040	23	47.9	213	37	58.5		1	40	45.4	.6401481	
27	14	10	12.17	0.16	S.	12	42	28.5	2.33	6.14	0.1563875	23	50.2	216	43	53.3	N.	1	18	27.4	9.6439359	
28	14	16	23.23	0.16		13	21	26.1	2.33	6.13	.1571739	23	52.4	219	46	38.7		0	56	18.4	.6474549	
29	14	22	34.28	0.16		13	59	40.9	2.32	6.12	.1577690	23	54.6	222	46	32.3		0	34	20.5	.6507053	
30	14	28	45.44	0.16		14	37	11.2	2.32	6.11	.1581778	23	56.9	225	43	50.7	N.	0	12	35.9	.6536873	
31	14	34	56.80	0.16		15	13	55.5	2.32	6.11	.1584050	23	59.1	228	38	49.9	S.	0	8	53.7	.6564018	
Nov. 1	14	41	8.47	0.16		15	49	52.5	2.32	6.11	.1584544	*	*	231	31	45.5		0	30	6.7	.6588497	
2	14	47	20.56	0.16	S.	16	25	0.7	2.32	6.11	0.1583288	0	1.4	234	22	52.1	S.	0	51	1.7	9.6610318	
3	14	53	33.15	0.16		16	59	18.5	2.32	6.11	.1580310	0	3.7	237	12	24.0		1	11	37.5	.6629493	
4	14	59	46.35	0.16		17	32	45.2	2.32	6.12	.1575630	0	6.0	240	0	35.2		1	31	52.9	.6646032	
5	15	6	0.22	0.16		18	5	19.2	2.33	6.13	.1569258	0	8.3	242	47	38.9		1	51	46.7	.6659942	
6	15	12	14.85	0.16		18	36	59.0	2.33	6.14	.1561205	0	10.6	245	33	48.4		2	11	17.9	.6671233	
7	15	18	30.32	0.16		19	7	43.5	2.34	6.15	.1551470	0	12.9	248	19	16.4		2	30	25.4	.6679910	
8	15	24	46.66	0.17	S.	19	37	31.3	2.34	6.17	0.1540054	0	15.2	251	4	15.6	S.	2	49	8.3	9.6685981	
9	15	31	3.95	0.17		20	6	21.2	2.35	6.19	.1526944	0	17.6	253	48	58.2		3	7	5.5	.6689449	
10	15	37	22.21	0.17		20	34	11.9	2.36	6.21	.1512130	0	19.9	256	33	36.7		3	25	15.9	.6690318	
11	15	43	41.47	0.17		21	1	2.0	2.37	6.23	.1495592	0	22.3	259	18	23.1		3	42	38.2	.6688585	
12	15	50	1.73	0.17		21	26	50.3	2.38	6.26	.1477301	0	24.7	262	3	29.8		3	59	31.3	.6684252	
13	15	56	22.99	0.17		21	51	35.4	2.39	6.29	.1457231	0	27.1	264	49	8.9		4	15	53.9	.6677316	
14	16	2	45.23	0.17	S.	22	15	15.9	2.40	6.32	0.1435348	0	29.6	267	35	32.8	S.	4	31	44.5	9.6667771	
15	16	9	8.41	0.17		22	37	50.3	2.41	6.36	.1411607	0	32.0	270	22	53.9		4	47	1.5	.6655611	
16	16	15	32.48	0.18		22	59	17.4	2.43	6.40	.1385960	0	34.5	273	11	24.9		5	1	43.1	.6640829	
17	16	21	57.33	0.18		23	19	35.6	2.44	6.44	.1358356	0	37.0	276	1	18.6		5	15	47.5	.6623416	
18	16	28	22.87	0.18	S.	23	38	43.6	2.46	6.48	0.1328736	0	39.4	278	52	48.2	S.	5	29	12.6	9.6603363	

MEAN TIME.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass* Merid.	Apparent Declination.			Semidiameter.	Hor. Par.	Log. of True Dist. from the Earth.		Meridian Passage.	Heliocentric Longitude.		Heliocentric Latitude.		Log. of Rad. Vect.	
	h	m	s		o	'	"			h	m		o	'	"	o		'	"	o	'	"
Nov. 18	16	28	22.87	0.18	S. 23	38	43.6	2.46	6.48	0.1328736	0.39.4	278	52	48.2	S. 5	29	12.6	9.6603363
19	16	34	48.97	0.18	23	56	39.7	2.48	6.53	.1297034	0.41.9	281	46	7.2	5	41	56.1	.6580660
20	16	41	15.46	0.18	24	13	23.0	2.50	6.58	.1263176	0.44.4	284	41	29.5	5	53	55.3	.6555297
21	16	47	42.15	0.18	24	28	51.7	2.52	6.63	.1227082	0.47.0	287	39	9.4	6	5	7.5	.6527263
22	16	54	8.80	0.19	24	43	4.2	2.54	6.69	.1188665	0.49.5	290	39	21.7	6	15	29.6	.6496552
23	17	0	35.15	0.19	24	55	59.4	2.56	6.75	.1147836	0.52.0	293	42	21.8	6	24	58.1	.6463156
24	17	7	0.86	0.19	S. 25	7	35.8	2.59	6.82	0.1104489	0.54.5	296	48	25.5	S. 6	33	29.2	9.6427072
25	17	13	25.58	0.19	25	17	52.1	2.62	6.89	.1058505	0.56.9	299	57	49.4	6	40	58.9	.6388300
26	17	19	48.89	0.20	25	26	47.0	2.65	6.97	.1009778	0.59.4	303	10	50.6	6	47	22.5	.6346847
27	17	26	10.28	0.20	25	34	19.5	2.68	7.06	.0958181	1.1.8	306	27	47.1	6	52	35.1	.6302727
28	17	32	29.21	0.20	25	40	28.4	2.72	7.15	.0903579	1.4.2	309	48	57.5	6	56	31.3	.6255958
29	17	38	45.03	0.20	25	45	12.6	2.75	7.24	.0845826	1.6.5	313	14	40.9	6	59	5.1	.6206575
30	17	44	57.03	0.21	S. 25	48	31.7	2.79	7.34	0.0784782	1.8.7	316	45	17.4	S. 7	0	10.2	9.6154623
Dec. 1	17	51	4.36	0.21	25	50	25.0	2.83	7.45	.0720286	1.10.9	320	21	7.7	6	59	39.8	.6100167
2	17	57	6.09	0.21	25	50	52.1	2.88	7.57	.0652181	1.13.0	324	2	33.1	6	57	26.5	.6043286
3	18	3	1.19	0.22	25	49	53.1	2.92	7.70	.0580307	1.15.0	327	49	55.3	6	53	22.6	.5984092
4	18	8	48.40	0.22	25	47	28.4	2.97	7.83	.0504502	1.16.8	331	43	36.8	6	47	19.8	.5922717
5	18	14	26.39	0.22	25	43	38.6	3.03	7.98	.0424610	1.18.5	335	44	0.0	6	39	9.8	.5859328
6	18	19	53.59	0.23	S. 25	38	25.0	3.09	8.14	0.0340479	1.20.0	339	51	27.4	S. 6	28	43.8	9.5794136
7	18	25	8.28	0.23	25	31	49.5	3.15	8.30	.0251981	1.21.3	344	6	21.2	6	15	53.3	.5727391
8	18	30	8.47	0.24	25	23	54.3	3.22	8.48	.0159009	1.22.3	348	29	3.0	6	0	29.9	.5659399
9	18	34	51.97	0.24	25	14	42.5	3.30	8.68	0.0061491	1.23.1	352	59	53.1	5	42	25.6	.5590513
10	18	39	16.30	0.25	25	4	18.1	3.37	8.88	.99959417	1.23.5	357	39	10.1	5	21	33.7	.5521161
11	18	43	18.74	0.25	24	52	45.7	3.46	9.10	.9852845	1.23.6	2	27	10.1	4	57	48.6	.5451835
12	18	46	56.29	0.26	S. 24	40	10.8	3.55	9.34	9.9741928	1.23.3	7	24	6.1	S. 4	31	6.9	9.5383096
13	18	50	5.68	0.26	24	26	39.9	3.64	9.59	.9626949	1.22.4	12	30	6.6	4	1	27.8	.5315579
14	18	52	43.42	0.27	24	12	20.0	3.74	9.85	.9508350	1.21.1	17	45	15.1	3	28	53.9	.5249990
15	18	54	45.85	0.28	23	57	19.5	3.85	10.13	.9386770	1.19.2	23	9	28.4	2	53	31.7	.5187103
16	18	56	9.27	0.29	23	41	46.6	3.96	10.43	.9263093	1.16.6	28	42	36.2	2	15	32.9	.5127743
17	18	56	50.11	0.29	23	25	50.4	4.07	10.73	.9138473	1.13.3	34	24	19.5	1	35	14.1	.5072777
18	18	56	45.08	0.30	S. 23	9	39.9	4.19	11.04	9.9014390	1.9.2	40	14	9.5	S. 0	52	58.0	9.5023084
19	18	55	51.54	0.31	22	53	23.7	4.31	11.36	.8802653	1.4.4	46	11	27.4	S. 0	9	13.2	.4979529
20	18	54	7.81	0.32	22	37	10.5	4.43	11.67	.8775403	0.58.7	52	15	23.8	N. 0	35	26.7	.4942927
21	18	51	33.59	0.32	22	21	7.7	4.55	11.97	.8665072	0.52.2	58	24	58.6	1	20	22.8	.4914006
22	18	48	10.32	0.33	22	5	22.4	4.65	12.25	.8564301	0.44.9	64	39	1.9	2	4	53.1	.4893374
23	18	44	1.56	0.34	21	50	1.4	4.75	12.50	.8475802	0.36.8	70	56	15.1	2	48	13.8	.4881480
24	18	39	13.08	0.35	S. 21	35	11.7	4.83	12.71	9.8402174	0.28.1	77	15	13.0	N. 3	29	41.3	9.4878588
25	18	33	52.91	0.35	21	21	1.3	4.89	12.88	.8345684	0.18.9	83	34	26.1	4	8	34.6	.4884765
26	18	28	10.91	0.35	21	7	39.8	4.93	12.99	.8308060	{ 0.03 } 23.59.5	89	52	23.4	4	44	16.9	.4899870
27	18	22	18.25	0.35	20	55	18.3	4.95	13.04	.8290308	23.49.8	96	7	35.2	5	16	17.5	.4923571
28	18	16	26.55	0.35	20	44	9.8	4.95	13.04	.8292607	23.40.3	102	18	36.6	5	44	13.1	.4955356
29	18	10	47.02	0.35	20	34	27.1	4.92	12.97	.8314319	23.31.1	108	24	9.3	6	7	48.3	.4994571
30	18	5	29.70	0.35	S. 20	26	22.9	4.88	12.86	9.8354065	23.22.4	114	23	4.6	N. 6	26	55.6	9.5040452
31	18	0	42.88	0.34	20	20	7.1	4.82	12.69	.8409903	23.14.3	120	14	24.0	6	41	34.7	.5092159
32	17	56	32.75	0.34	S. 20	15	46.4	4.74	12.49	9.8479527	23.6.9	125	57	20.9	N. 6	51	51.9	9.5148821

VENUS, 1924.

Mean Noon.	Apparent Right Ascension.			Apparent Declination.			Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.			Apparent Declination.			Log. of True Dist. from the Earth.	Merid. Passage.						
	h	m	s	°	'	"				°	'	"	h	m	s			°	'	"			
Jan.	1	20	42	8	53	S.	20	133	7	0	15	34	8	3	0	0734002	2 34	8					
	2	20	47	14	16		19	42	17	7	0	19	54	19	1	0711200	2 35	1					
	3	20	52	18	44		19	22	28	3	2	0	24	13	27	2	0688152	2 35	5				
	4	20	57	21	34		19	2	6	2	0	32	32	12	2	0664855	2 35	9					
	5	21	2	22	87		18	41	12	1	0	50	30	12	3	0641306	2 36	3					
	6	21	7	23	00		18	19	46	8	2	0	37	9	26	3	0617505	2 36	6				
	7	21	12	21	73		17	57	51	1	0	41	27	5	8	4	0593449	2 37	0				
	8	21	17	19	07		17	35	25	8	2	0	45	45	82	4	0569133	2 37	4				
	9	21	22	15	00		17	12	31	6	2	0	50	4	01	5	0544555	2 37	7				
	10	21	27	9	54		16	49	9	3	2	0	54	22	18	5	0519713	2 38	1				
	11	21	32	2	69		16	25	19	7	2	0	58	40	35	6	049601	2 38	4				
	12	21	36	54	45		16	1	3	6	2	1	2	58	57	6	0469216	2 38	8				
	13	21	41	44	83		15	36	21	9	2	1	5	16	8	7	0433554	2 39	2				
	14	21	46	33	85		15	11	15	3	2	1	11	35	28	7	0417609	2 39	5				
	15	21	51	21	51		14	45	44	5	2	1	15	53	8	8	0391377	2 39	9				
	16	21	56	7	84		14	19	50	5	2	1	20	12	55	8	0364852	2 40	3				
	17	22	0	52	84		13	53	34	0	2	1	24	31	46	9	0338030	2 40	6				
	18	22	5	36	55		13	26	55	7	2	1	28	50	59	9	0310905	2 41	0				
	19	22	10	18	98		12	59	56	6	2	1	33	9	96	10	0283473	2 41	4				
	20	22	15	0	16		12	32	37	3	2	1	37	29	58	10	0255729	2 41	8				
	21	22	19	40	11		12	4	58	7	2	1	41	49	48	11	0227667	2 42	2				
	22	22	24	18	86		11	37	1	5	2	1	46	9	67	11	0199282	2 42	6				
23	22	28	56	44		11	8	46	7	2	1	50	30	17	12	0170571	2 43	0					
24	22	33	32	88		10	40	14	9	2	1	54	50	99	12	0141529	2 43	4					
25	22	38	8	21		10	11	26	8	2	1	59	12	15	13	0112151	2 43	8					
26	22	42	42	46		9	42	23	4	2	1	2	33	66	13	0082433	2 44	2					
27	22	47	15	67		9	13	5	3	2	1	7	55	52	14	0052372	2 44	6					
28	22	51	47	88		8	43	33	3	2	1	12	17	74	14	0021962	2 45	0					
29	22	56	19	11		8	13	48	1	2	1	16	40	33	14	99991200	2 45	5					
30	23	0	49	41		7	43	50	6	2	1	21	3	29	15	24	24	8	9960082	2 45	9		
31	23	5	18	81		7	13	41	4	2	1	25	26	62	15	50	23	4	9928604	2 46	3		
Feb.	1	23	9	47	35		6	43	21	4	2	2	29	50	33	16	16	0	4	9896764	2 46	8	
	2	23	14	15	05		6	12	51	2	2	2	34	14	42	16	41	15	2	9864556	2 47	3	
	3	23	18	41	96		5	42	11	8	2	2	38	38	88	17	6	7	1	9831977	2 47	7	
	4	23	23	8	10		5	11	23	8	2	2	43	3	71	17	30	35	5	9799024	2 48	2	
	5	23	27	33	52		4	40	28	0	2	2	47	28	91	17	54	39	8	9765693	2 48	7	
	6	23	31	58	24		4	9	25	1	2	2	51	54	47	18	18	19	5	9731978	2 49	2	
	7	23	36	22	30		3	38	16	0	2	2	56	20	38	18	41	34	0	9697877	2 49	7	
	8	23	40	45	74		3	7	1	3	2	2	3	46	64	19	4	22	7	9663383	2 50	2	
	9	23	45	8	58		2	35	41	8	2	2	5	13	23	19	26	45	0	9628491	2 50	7	
	10	23	49	30	87		2	4	18	3	2	2	9	40	14	19	48	40	4	9593195	2 51	2	
	11	23	53	52	63		1	32	51	4	2	2	3	14	7	35	20	10	8	9557489	2 51	7	
	12	23	58	13	91		1	1	22	1	2	2	3	18	34	84	20	31	8	9521366	2 52	2	
	13	0	2	34	73	S.	0	29	50	9	2	2	3	23	2	58	20	51	40	2	9484819	2 52	7
	14	0	6	55	13	N.	0	1	41	4	2	2	3	27	30	54	21	11	42	9	9447841	2 53	2
	15	0	11	15	16		0	33	14	1	2	2	3	31	58	69	21	31	16	3	9410424	2 53	8
	16	0	15	34	83	N.	1	4	46	3	2	2	3	36	26	99	N.	21	50	19	8	93972560	2 54	3

		H. P.		S. D.				H. P.		S. D.				H. P.		S. D.							
Jan.	1	6	14	5	87	Jan.	25	6	71	6	41	Feb.	18	7	51	7	18	Mar.	13	8	69	8	31
	5	6	22	5	94		29	6	82	6	52		22	7	68	7	34		17	8	95	8	55
	9	6	31	6	03		6	6	94	6	63		26	7	85	7	50		21	9	22	8	81
	13	6	40	6	12		7	7	07	6	76		Mar. 1	8	04	7	68		25	9	51	9	09
	17	6	50	6	21		10	7	21	6	89		5	8	24	7	87		29	9	83	9	39
21	6	60	6	31	14	7	35	7	03	9	8	46	8	08	Apr. 2	10	17	9	72				

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Mean Noon.	Apparent Right Ascension.			Apparent Declination.			Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.			Apparent Declination.			Log. of True Dist. from the Earth.	Merid. Passage.
	h	m	s	N.	°	'				°	'	°	'	°	'		
Apr. 2	3 36	26	99	N. 21	50	19.8	9.9372560	2 54.3	May 18	6 41	51	72	N. 26	38	24.5	9.7038476	2 58.2
3	3 40	55	39	22	8	53.0	.9334242	2 54.8	19	6 44	42	21	26	33	2.2	.6973108	2 57.0
4	3 45	23	86	22	26	55.5	.9295464	2 55.4	20	6 47	27	05	26	27	18.7	.6907159	2 55.8
5	3 49	52	34	22	44	26.8	.9256218	2 55.9	21	6 50	6	05	26	21	14.9	.6840650	2 54.5
6	3 54	20	77	23	1	26.6	.9216496	2 56.4	22	6 52	38	99	26	14	51.7	.6773603	2 53.1
7	3 58	49	10	23	17	54.3	.9176292	2 57.0	23	6 55	5	68	26	8	9.9	.6706044	2 51.6
8	4 3	17	27	23	33	49.8	.9135599	2 57.5	24	6 57	25	89	26	1	10.3	.6638001	2 50.0
9	4 7	45	21	23	49	12.6	.9094410	2 58.0	25	6 59	39	42	25	53	53.6	.6569506	2 48.3
10	4 12	12	86	24	4	2.4	.9052718	2 58.5	26	7 1	46	04	25	46	20.7	.6500591	2 46.4
11	4 16	40	14	24	18	19.0	.9010517	2 59.0	27	7 3	45	52	25	38	32.7	.6431298	2 44.5
12	4 21	6	98	24	32	2.0	.8967801	2 59.5	28	7 5	37	63	25	30	30.2	.6361669	2 42.4
13	4 25	33	30	24	45	11.3	.8924562	3 0.0	29	7 7	22	11	25	22	14.0	.6291754	2 40.2
14	4 29	59	01	24	57	46.6	.8880795	3 0.5	30	7 8	58	73	25	13	44.8	.6221608	2 37.8
15	4 34	24	04	25	9	47.8	.8836495	3 1.0	31	7 10	27	25	25	5	3.6	.6151293	2 35.3
16	4 38	48	29	25	21	14.6	.8791657	3 1.5	June 1	7 11	47	41	24	56	11.0	.6080877	2 32.7
17	4 43	11	67	25	32	7.0	.8746274	3 1.9	2	7 12	58	97	24	47	7.9	.6010438	2 30.0
18	4 47	34	10	25	42	24.8	.8700342	3 2.3	3	7 14	1	67	24	37	54.9	.5940060	2 27.1
19	4 51	55	47	25	52	8.0	.8653857	3 2.7	4	7 14	55	28	24	28	32.8	.5869836	2 24.0
20	4 56	15	70	26	1	16.5	.8606813	3 3.1	5	7 15	39	57	24	19	2.1	.5799869	2 20.8
21	5 0	34	69	26	9	50.4	.8559207	3 3.5	6	7 16	14	31	24	9	23.4	.5730272	2 17.4
22	5 4	52	33	26	17	49.8	.8511032	3 3.9	7	7 16	39	27	23	59	37.1	.5661168	2 13.9
23	5 9	8	54	26	25	14.6	.8462281	3 4.2	8	7 16	54	27	23	49	43.9	.5592689	2 10.2
24	5 13	23	20	26	32	5.0	.8412948	3 4.5	9	7 16	59	11	23	39	44.2	.5524982	2 6.3
25	5 17	36	22	26	38	21.2	.8363027	3 4.8	10	7 16	53	65	23	29	38.4	.5458203	2 2.3
26	5 21	47	47	26	44	3.4	.8312510	3 5.0	11	7 16	37	75	23	19	26.8	.5392520	1 58.1
27	5 25	56	85	26	49	11.7	.8261389	3 5.2	12	7 16	11	33	23	9	10.0	.5328111	1 53.7
28	5 30	4	23	26	53	46.3	.8209656	3 5.4	13	7 15	34	35	22	58	48.0	.5265170	1 49.1
29	5 34	9	50	26	57	47.6	.8157304	3 5.5	14	7 14	46	80	22	48	21.0	.5203902	1 44.4
30	5 38	12	52	27	1	15.9	.8104326	3 5.6	15	7 13	48	74	22	37	49.2	.5144515	1 39.5
May 1	5 42	13	16	27	4	11.5	.8050714	3 5.7	16	7 12	40	29	22	27	13.0	.5087222	1 34.4
2	5 46	11	28	27	6	34.7	.7996461	3 5.7	17	7 11	21	65	22	16	32.5	.5032252	1 29.2
3	5 50	6	75	27	8	26.0	.7941562	3 5.7	18	7 9	53	07	22	5	48.0	.4979830	1 23.8
4	5 53	59	43	27	9	45.8	.7886009	3 5.6	19	7 8	14	87	21	54	59.8	.4930184	1 18.2
5	5 57	49	16	27	10	34.5	.7829797	3 5.5	20	7 6	27	47	21	44	8.2	.4883540	1 12.5
6	6 1	135	78	27	10	52.8	.7772922	3 5.3	21	7 4	31	34	21	33	13.6	.4840118	1 6.6
7	6 5	19	14	27	10	41.0	.7715380	3 5.1	22	7 2	27	05	21	22	16.7	.4800131	1 0.6
8	6 8	59	08	27	9	59.8	.7657167	3 4.8	23	7 0	15	20	21	11	18.1	.4763788	0 54.5
9	6 12	35	43	27	8	49.6	.7598282	3 4.5	24	6 57	56	48	21	0	18.7	.4731281	0 48.3
10	6 16	8	02	27	7	11.1	.7538724	3 4.0	25	6 55	31	66	20	49	19.5	.4702786	0 41.9
11	6 19	36	68	27	5	4.9	.7478494	3 3.6	26	6 53	1	57	20	38	21.6	.4678456	0 35.5
12	6 23	1	23	27	2	31.7	.7417595	3 3.0	27	6 50	27	09	20	27	26.5	.4658437	0 29.0
13	6 26	21	48	26	59	32.2	.7356028	3 2.4	28	6 47	49	13	20	16	35.6	.4642846	0 22.5
14	6 29	37	25	26	56	7.0	.7293801	3 1.7	29	6 45	8	67	20	5	50.5	.4631772	0 15.9
15	6 32	48	36	26	52	16.9	.7230921	3 1.0	30	6 42	26	68	19	55	13.1	.4625275	0 9.3
16	6 35	54	60	26	48	2.7	.7167398	3 0.1	July 1	6 39	44	18	19	44	45.3	.4623390	{ 0 2.7 }
17	6 38	55	79	26	43	24.9	.7103245	2 59.2	2	6 37	2	16	19	34	29.2	.4626122	23 49.5
18	6 41	51	72	N. 26	38	24.5	9.7038476	2 58.2	3	6 34	21	62	N. 19	24	27.0	9.4633448	23 42.9

		H. P.	S. D.			H. P.	S. D.			H. P.	S. D.								
Apr. 2	10	17	9	72	Apr. 26	12	98	12	40	May 20	17	94	17	15	June 13	26	18	25	02
6	10	54	10	07	30	13	62	13	02	24	19	08	18	23	17	27	62	26	40
10	10	94	10	45	May 4	14	32	13	69	28	20	34	19	44	21	28	87	27	59
14	11	39	10	88	8	15	09	14	42	June 1	21	70	20	74	25	29	80	28	48
18	11	87	11	34	12	15	95	15	24	5	23	15	22	12	29	30	29	28	95
22	12	40	11	85	16	16	89	16	14	9	24	66	23	57	July 3	30	28	28	94

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
July 3	h m s 6 34 21.62	° ' " N. 19 24 27.0	9.4633448	h m 23 42.9	Aug. 18	h m s 6 49 35.51	N. 18 21 9.9	9.7250074	h m 21 2.5
4	6 31 43.54	19 14 40.7	.4645312	23 36.4	19	6 52 38.39	18 22 32.6	.7310814	21 1.7
5	6 29 8.85	19 5 12.4	.4661638	23 30.0	20	6 55 45.37	18 23 41.0	.7370926	21 0.9
6	6 26 38.46	18 56 4.5	.4682316	23 23.7	21	6 58 56.29	18 24 33.9	.7430406	21 0.2
7	6 24 13.21	18 47 18.8	.4707217	23 17.4	22	7 2 11.00	18 25 10.4	.7489250	20 59.6
8	6 21 53.89	18 38 57.2	.4736188	23 11.3	23	7 5 29.34	18 25 29.3	.7547458	20 59.0
9	6 19 41.23	18 31 1.5	.4769063	23 5.3	24	7 8 51.18	18 25 29.9	.7605030	20 58.5
10	6 17 35.90	18 23 33.2	.4805657	22 59.4	25	7 12 16.36	18 25 11.4	.7661964	20 58.0
11	6 15 38.47	18 16 33.6	.4845771	22 53.7	26	7 15 44.74	18 24 32.9	.7718264	20 57.6
12	6 13 49.45	18 10 4.0	.4889197	22 48.1	27	7 19 16.20	18 23 33.7	.7773932	20 57.2
13	6 12 9.30	18 4 5.3	.4935717	22 42.6	28	7 22 50.59	18 22 13.1	.7828972	20 56.9
14	6 10 38.40	17 58 37.9	.4985109	22 37.3	29	7 26 27.80	18 20 30.3	.7883390	20 56.6
15	6 9 17.05	17 53 42.3	.5037151	22 32.2	30	7 30 7.69	18 18 24.7	.7937189	20 56.3
16	6 8 5.46	17 49 18.8	.5091618	22 27.3	31	7 33 50.15	18 15 55.7	.7990377	20 56.1
17	6 7 3.83	17 45 27.1	.5148289	22 22.5	Sept. 1	7 37 35.05	18 13 2.8	.8042960	20 56.0
18	6 6 12.26	17 42 6.9	.5206947	22 17.8	2	7 41 22.30	18 9 45.4	.8094945	20 55.9
19	6 5 30.82	17 39 17.8	.5267378	22 13.4	3	7 45 11.77	18 6 3.0	.8146341	20 55.8
20	6 4 59.49	17 36 58.9	.5329377	22 9.1	4	7 49 3.37	18 1 55.2	.8197156	20 55.7
21	6 4 38.22	17 35 9.4	.5392749	22 4.9	5	7 52 57.01	17 57 21.5	.8247398	20 55.7
22	6 4 26.90	17 33 48.1	.5457310	22 1.0	6	7 56 52.58	17 52 21.6	.8297075	20 55.7
23	6 4 25.42	17 32 53.8	.5522889	21 57.2	7	8 0 50.00	17 46 55.1	.8346194	20 55.7
24	6 4 33.62	17 32 25.2	.5589323	21 53.5	8	8 4 49.18	17 41 1.6	.8394766	20 55.8
25	6 4 51.32	17 32 20.9	.5656463	21 50.0	9	8 8 50.03	17 34 40.9	.8442795	20 55.9
26	6 5 18.31	17 32 39.2	.5724166	21 46.7	10	8 12 52.48	17 27 52.7	.8490288	20 56.0
27	6 5 54.38	17 33 18.5	.5792307	21 43.5	11	8 16 56.45	17 20 36.7	.8537252	20 56.2
28	6 6 39.31	17 34 17.3	.5860771	21 40.4	12	8 21 1.87	17 12 52.8	.8583693	20 56.3
29	6 7 32.87	17 35 33.9	.5929447	21 37.5	13	8 25 8.66	17 4 40.8	.8629615	20 56.5
30	6 8 34.80	17 37 6.6	.5998237	21 34.7	14	8 29 16.74	16 56 0.6	.8675024	20 56.7
31	6 9 44.86	17 38 53.6	.6067053	21 32.0	15	8 33 26.04	16 46 52.0	.8719924	20 56.9
Aug. 1	6 11 2.80	17 40 53.3	.6135817	21 29.5	16	8 37 36.49	16 37 14.9	.8764320	20 57.2
2	6 12 28.38	17 43 3.9	.6204457	21 27.1	17	8 41 48.02	16 27 9.4	.8808217	20 57.5
3	6 14 1.35	17 45 23.8	.6272908	21 24.9	18	8 46 0.56	16 16 35.5	.8851622	20 57.8
4	6 15 41.48	17 47 51.3	.6341115	21 22.7	19	8 50 14.04	16 5 33.1	.8894558	20 58.1
5	6 17 28.54	17 50 24.9	.6409027	21 20.6	20	8 54 28.40	15 54 2.3	.8936972	20 58.4
6	6 19 22.30	17 53 2.4	.6476600	21 18.7	21	8 58 43.58	15 42 3.3	.8978928	20 58.7
7	6 21 22.52	17 55 42.8	.6543793	21 16.8	22	9 2 59.51	15 29 36.0	.9020412	20 59.0
8	6 23 29.00	17 58 24.4	.6610571	21 15.1	23	9 7 16.14	15 16 40.7	.9061431	20 59.3
9	6 25 41.54	18 1 5.7	.6676901	21 13.4	24	9 11 33.41	15 3 17.5	.9101990	20 59.7
10	6 27 59.94	18 3 45.2	.6742758	21 11.9	25	9 15 51.27	14 49 26.6	.9142094	21 0.1
11	6 30 23.98	18 6 21.3	.6808118	21 10.4	26	9 20 9.65	14 35 8.3	.9181750	21 0.4
12	6 32 53.50	18 8 52.8	.6872958	21 9.1	27	9 24 28.52	14 20 22.7	.9220964	21 0.8
13	6 35 28.31	18 11 18.2	.6937258	21 7.8	28	9 28 47.82	14 5 10.3	.9259742	21 1.2
14	6 38 8.23	18 13 36.3	.7000998	21 6.6	29	9 33 7.51	13 49 31.2	.9298090	21 1.6
15	6 40 53.07	18 15 45.8	.7064163	21 5.5	30	9 37 27.56	13 33 25.7	.9336017	21 2.0
16	6 43 42.67	18 17 45.4	.7126739	21 4.4	Oct. 1	9 41 47.91	13 16 54.3	.9373528	21 2.4
17	6 46 36.88	18 19 33.8	.7188713	21 3.4	2	9 46 8.54	12 59 57.2	.9410631	21 2.8
18	6 49 35.51	N. 18 21 9.9	9.7250074	21 2.5	3	9 50 29.42	N. 12 42 34.8	9.9447334	21 3.2

	H. P.	S. D.		H. P.	S. D.		H. P.	S. D.		H. P.	S. D.
July 3	30.28	28.94	July 27	23.19	22.16	Aug. 20	16.12	15.41	Sept. 13	12.06	11.53
7	29.77	28.45	31	21.77	20.81	24	15.27	14.59	17	11.58	11.07
11	28.83	27.55	Aug. 4	20.43	19.52	28	14.51	13.87	21	11.13	10.64
15	27.59	26.37	8	19.21	18.36	Sept. 1	13.81	13.20	25	10.72	10.25
19	26.17	25.01	12	18.08	17.28	5	13.17	12.59	29	10.34	9.88
23	24.64	23.55	16	17.05	16.29	9	12.60	12.04	Oct. 3	9.99	9.55

Mean Noon.	Apparent Right Ascension.			Apparent Declination.			Log. of True Dist. from the Earth.	Merid. Passage	Mean Noon.	Apparent Right Ascension.			Apparent Declination.			Log. of True Dist. from the Earth.	Merid. Passage.
	h	m	s	°	'	"				°	'	"	h	m	s		
Oct. 3	9	50	29.42	N. 12	42	34.8	9.9447334	21 3.2	Nov. 18	13	13	11.02	S. 5	43	16.5	0.0778611	21 24.7
4	9	54	50.51	12	24	47.6	.9483642	21 3.6	19	13	17	42.98	6	10	1.2	.0801100	21 25.3
5	9	59	11.79	12	6	35.8	.9519563	21 4.0	20	13	22	15.63	6	36	41.5	.0823357	21 25.9
6	10	3	33.25	11	48	0.0	.9555103	21 4.5	21	13	26	49.00	7	3	16.7	.0845383	21 26.6
7	10	7	54.87	11	29	0.4	.9590268	21 4.9	22	13	31	23.12	7	29	45.8	.0867179	21 27.2
8	10	12	16.62	11	9	37.5	.9625063	21 5.3	23	13	35	58.01	7	56	8.2	.0888747	21 27.8
9	10	16	38.50	10	49	51.8	.9659494	21 5.7	24	13	40	33.69	8	22	23.1	.0910089	21 28.5
10	10	21	0.50	10	29	43.7	.9693565	21 6.1	25	13	45	10.20	8	48	29.7	.0931208	21 29.2
11	10	25	22.60	10	9	13.6	.9727280	21 6.6	26	13	49	47.54	9	14	27.1	.0952106	21 29.9
12	10	29	44.80	9	48	22.1	.9760642	21 7.0	27	13	54	25.75	9	40	14.6	.0972785	21 30.6
13	10	34	7.09	9	27	9.7	.9793656	21 7.4	28	13	59	4.84	10	5	51.4	.0993248	21 31.3
14	10	38	29.47	9	5	36.9	.9826325	21 7.9	29	14	3	44.84	10	31	16.6	.1013499	21 32.0
15	10	42	51.92	8	43	44.2	.9858651	21 8.3	30	14	8	25.78	10	56	29.5	.1033539	21 32.8
16	10	47	14.45	8	21	32.1	.9890639	21 8.7	Dec. 1	14	13	7.68	11	21	29.2	.1053374	21 33.6
17	10	51	37.05	7	59	1.3	.9922292	21 9.2	2	14	17	50.56	11	46	15.0	.1073005	21 34.4
18	10	55	59.72	7	36	12.2	.9953612	21 9.6	3	14	22	34.44	12	10	46.1	.1092436	21 35.2
19	11	0	22.46	7	13	5.5	.99984602	21 10.0	4	14	27	19.35	12	35	1.6	.1111669	21 36.0
20	11	4	45.28	6	49	41.8	0.0015266	21 10.5	5	14	32	5.31	12	59	0.9	.1130709	21 36.8
21	11	9	8.17	6	26	1.5	.0045607	21 10.9	6	14	36	52.33	13	22	43.0	.1149555	21 37.7
22	11	13	31.14	6	2	5.4	.0075628	21 11.3	7	14	41	40.45	13	46	7.3	.1168212	21 38.5
23	11	17	54.20	5	37	54.2	.0105332	21 11.8	8	14	46	29.68	14	9	12.9	.1186679	21 39.4
24	11	22	17.35	5	13	28.3	.0134723	21 12.3	9	14	51	20.04	14	31	59.0	.1204959	21 40.4
25	11	26	40.60	4	48	48.6	.0163802	21 12.7	10	14	56	11.54	14	54	24.9	.1223054	21 41.3
26	11	31	3.95	4	23	55.6	.0192574	21 13.1	11	15	1	4.20	15	16	29.8	.1240964	21 42.3
27	11	35	27.41	3	58	49.9	.0221044	21 13.6	12	15	5	58.03	15	38	12.8	.1258691	21 43.2
28	11	39	51.00	3	33	32.3	.0249213	21 14.1	13	15	10	53.04	15	59	33.2	.1276238	21 44.2
29	11	44	14.72	3	8	3.5	.0277088	21 14.5	14	15	15	49.24	16	20	30.3	.1293604	21 45.2
30	11	48	38.59	2	42	24.1	.0304672	21 14.9	15	15	20	46.64	16	41	3.1	.1310790	21 46.3
31	11	53	2.63	2	16	34.8	.0331970	21 15.4	16	15	25	45.23	17	1	11.0	.1327798	21 47.3
Nov. 1	11	57	26.86	1	50	36.3	.0358987	21 15.9	17	15	30	45.03	17	20	53.2	.1344629	21 48.4
2	12	1	51.29	1	24	29.4	.0385726	21 16.3	18	15	35	46.02	17	40	9.0	.1361283	21 49.5
3	12	6	15.95	0	58	14.6	.0412193	21 16.8	19	15	40	48.22	17	58	57.4	.1377761	21 50.6
4	12	10	40.86	0	31	52.6	.0438392	21 17.3	20	15	45	51.60	18	17	17.9	.1394064	21 51.7
5	12	15	6.04	N. 0	5	24.1	.0464326	21 17.8	21	15	50	56.17	18	35	9.6	.1410193	21 52.9
6	12	19	31.52	S. 0	21	10.2	.0489998	21 18.3	22	15	56	1.92	18	52	31.9	.1426148	21 54.0
7	12	23	57.33	0	47	49.6	.0515412	21 18.8	23	16	1	8.82	19	9	23.9	.1441931	21 55.2
8	12	28	23.50	1	14	33.4	.0540571	21 19.3	24	16	6	16.87	19	25	44.9	.1457543	21 56.5
9	12	32	50.06	1	41	20.8	.0565477	21 19.8	25	16	11	26.04	19	41	34.4	.1472985	21 57.7
10	12	37	17.02	2	8	11.3	.0590134	21 20.3	26	16	16	36.31	19	56	51.5	.1488259	21 58.9
11	12	41	44.43	2	35	4.1	.0614542	21 20.8	27	16	21	47.66	20	11	35.6	.1503367	22 0.2
12	12	46	12.31	3	1	58.5	.0638705	21 21.3	28	16	27	0.05	20	25	46.0	.1518311	22 1.5
13	12	50	40.68	3	28	53.7	.0662623	21 21.9	29	16	32	13.47	20	39	22.1	.1533093	22 2.8
14	12	55	9.58	3	55	49.0	.0686299	21 22.4	30	16	37	27.87	20	52	23.2	.1547716	22 4.1
15	12	59	39.04	4	22	43.7	.0709734	21 23.0	31	16	42	43.24	21	4	48.8	.1562182	22 5.4
16	13	4	9.08	4	49	37.0	.0732930	21 23.5	32	16	47	59.54	S. 21	16	38.3	0.1576493	22 6.7
17	13	8	39.73	5	16	28.2	.0755888	21 24.1									
18	13	13	11.02	S. 5	43	16.5	0.0778611	21 24.7									

	H. P.			S. D.			H. P.			S. D.	
	°	'		°	'		°	'		°	'
Oct. 3	9	99	Oct. 27	8	36	Nov. 20	7	28	Dec. 14	6	53
7	9	67	31	8	15	24	7	13	18	6	43
11	9	37	Nov. 4	7	95	28	7	00	22	6	34
15	9	09	8	7	77	Dec. 2	6	87	26	6	25
19	8	83	12	7	60	6	6	75	30	6	16
23	8	59	16	7	43	10	6	64	34	6	08

Mean Noon.	Apparent Right Ascension.			Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.			Log. of True Dist. from the Earth.	Merid. Passage.								
	h	m	s				°	'	"			h	m	s					
Jan. 1	15	3	57.85	S. 16	34	39.9	0.3081002	20	23.3	Feb. 16	17	6	48.25	S.22	39	29.5	0.2108773	19	25.0
2	15	6	32.14	16	45	43.4	.3063210	20	21.9	17	17	9	33.15	22	43	45.3	.2084096	19	23.8
3	15	9	6.74	16	56	39.7	.3045269	20	20.6	18	17	12	18.16	22	47	50.9	.2059266	19	22.6
4	15	11	41.63	17	7	28.9	.3027178	20	19.2	19	17	15	3.27	22	51	46.5	.2034286	19	21.4
5	15	14	16.81	17	18	10.7	.3008938	20	17.9	20	17	17	48.48	22	55	31.8	.2009154	19	20.2
6	15	16	52.28	17	28	45.1	.2990550	20	16.5	21	17	20	33.76	22	59	7.1	.1983868	19	19.0
7	15	19	28.04	17	39	12.0	.2972012	20	15.2	22	17	23	19.13	23	2	32.1	.1958430	19	17.9
8	15	22	4.09	17	49	31.3	.2953327	20	13.8	23	17	26	4.58	23	5	47.0	.1932836	19	16.7
9	15	24	40.41	17	59	42.8	.2934495	20	12.5	24	17	28	50.08	23	8	51.6	.1907085	19	15.5
10	15	27	17.02	18	9	46.6	.2915516	20	11.2	25	17	31	35.65	23	11	46.1	.1881178	19	14.3
11	15	29	53.90	18	19	42.4	.2896390	20	9.8	26	17	34	21.25	23	14	30.4	.1855112	19	13.1
12	15	32	31.07	18	29	30.3	.2877119	20	8.5	27	17	37	6.88	23	17	4.5	.1828885	19	11.9
13	15	35	8.52	18	39	10.1	.2857702	20	7.2	28	17	39	52.52	23	19	28.5	.1802500	19	10.8
14	15	37	46.24	18	48	41.9	.2838140	20	5.9	29	17	42	38.17	23	21	42.1	.1775953	19	9.6
15	15	40	24.24	18	58	5.4	.2818432	20	4.6	Mar. 1	17	45	23.81	23	23	45.7	.1749245	19	8.4
16	15	43	2.51	19	7	20.6	.2798580	20	3.3	2	17	48	9.44	23	25	39.0	.1722377	19	7.2
17	15	45	41.06	19	16	27.5	.2778584	20	2.0	3	17	50	55.02	23	27	22.2	.1695348	19	6.0
18	15	48	19.90	19	25	25.9	.2758441	20	0.7	4	17	53	40.56	23	28	55.2	.1668158	19	4.9
19	15	50	59.00	19	34	15.8	.2738152	19	59.4	5	17	56	26.04	23	30	18.1	.1640810	19	3.7
20	15	53	38.39	19	42	57.2	.2717717	19	58.2	6	17	59	11.45	23	31	30.8	.1613303	19	2.5
21	15	56	18.05	19	51	29.9	.2697136	19	56.9	7	18	1	56.78	23	32	33.5	.1585637	19	1.3
22	15	58	57.97	19	59	53.9	.2676406	19	55.6	8	18	4	42.02	23	33	26.1	.1557814	19	0.1
23	16	1	38.16	20	8	9.1	.2655529	19	54.3	9	18	7	27.16	23	34	8.7	.1529834	18	58.9
24	16	4	18.62	20	16	15.5	.2634506	19	53.1	10	18	10	12.18	23	34	41.2	.1501697	18	57.7
25	16	6	59.34	20	24	12.9	.2613332	19	51.8	11	18	12	57.09	23	35	3.7	.1473406	18	56.5
26	16	9	40.32	20	32	1.3	.2592008	19	50.5	12	18	15	41.87	23	35	16.4	.1444960	18	55.3
27	16	12	21.55	20	39	40.6	.2570530	19	49.3	13	18	18	26.52	23	35	19.1	.1416358	18	54.1
28	16	15	3.04	20	47	10.9	.2548901	19	48.1	14	18	21	11.02	23	35	12.0	.1387602	18	52.9
29	16	17	44.76	20	54	31.9	.2527118	19	46.8	15	18	23	55.37	23	34	55.1	.1358691	18	51.7
30	16	20	26.72	21	1	43.7	.2505180	19	45.6	16	18	26	39.56	23	34	28.5	.1329625	18	50.5
31	16	23	8.91	21	8	46.1	.2483088	19	44.4	17	18	29	23.59	23	33	52.2	.1300403	18	49.3
Feb. 1	16	25	51.31	21	15	39.2	.2460840	19	43.1	18	18	32	7.44	23	33	6.2	.1271026	18	48.1
2	16	28	33.92	21	22	22.8	.2438438	19	41.9	19	18	34	51.12	23	32	10.8	.1241492	18	46.9
3	16	31	16.73	21	28	56.9	.2415881	19	40.7	20	18	37	34.61	23	31	5.7	.1211801	18	45.7
4	16	33	59.74	21	35	21.4	.2393169	19	39.5	21	18	40	17.91	23	29	51.2	.1181951	18	44.4
5	16	36	42.92	21	41	36.2	.2370303	19	38.2	22	18	43	1.00	23	28	27.4	.1151942	18	43.2
6	16	39	26.29	21	47	41.3	.2347284	19	37.0	23	18	45	43.88	23	26	54.3	.1121769	18	42.0
7	16	42	9.82	21	53	36.7	.2324113	19	35.8	24	18	48	26.53	23	25	12.0	.1091434	18	40.7
8	16	44	53.51	21	59	22.3	.2300789	19	34.6	25	18	51	8.94	23	23	20.5	.1060935	18	39.5
9	16	47	37.37	22	4	58.0	.2277314	19	33.4	26	18	53	51.10	23	21	20.0	.1030269	18	38.3
10	16	50	21.37	22	10	23.9	.2253687	19	32.2	27	18	56	32.99	23	19	10.6	.0999437	18	37.0
11	16	53	5.52	22	15	39.8	.2229910	19	30.9	28	18	59	14.60	23	16	52.3	.0968437	18	35.8
12	16	55	49.81	22	20	45.8	.2205982	19	29.7	29	19	1	55.91	23	14	25.2	.0937269	18	34.5
13	16	58	34.23	22	25	41.8	.2181905	19	28.6	30	19	4	36.92	23	11	49.4	.0905933	18	33.2
14	17	1	18.79	22	30	27.8	.2157678	19	27.4	31	19	7	17.60	23	9	5.0	.0874428	18	32.0
15	17	4	3.46	22	35	3.7	.2133300	19	26.2	Apr. 1	19	9	57.94	23	6	12.2	.0842755	18	30.7
16	17	6	48.25	S. 22	39	29.5	0.2108773	19	25.0	2	19	12	37.93	S.23	3	11.0	0.0810915	18	29.4

		Hor. Par.	Semidiameter.		Hor. Par.	Semidiameter.	
January	1	4.33	2.31	February	20	5.54	2.94
	11	4.52	2.40	March	1	5.88	3.13
	21	4.73	2.52		11	6.27	3.34
	31	4.97	2.65		21	6.70	3.56
February	10	5.24	2.79		31	7.19	3.83

MARS, 1924.

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Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	
	h m s	° ' "		h m		h m s	° ' "		h m	
Apr.	2	19 12 37.93	S. 23 3 11.0	0.0810915	18 29.4	May 18	21 6 1.07	S. 18 53 7.0	9.9166199	17 21.2
	3	19 15 17.56	23 0 1.5	.0778909	18 28.1	19	21 8 12.56	18 46 21.3	.9126500	17 19.4
	4	19 17 56.81	22 56 43.8	.0746737	18 26.8	20	21 10 23.16	18 39 35.6	.9086631	17 17.6
	5	19 20 35.67	22 53 18.2	.0714402	18 25.5	21	21 12 32.84	18 32 50.1	.9046591	17 15.8
	6	19 23 14.13	22 49 44.6	.0681902	18 24.2	22	21 14 41.58	18 26 5.0	.9006379	17 14.0
	7	19 25 52.19	22 46 3.1	.0649240	18 22.9	23	21 16 49.37	18 19 20.6	.8965994	17 12.2
	8	19 28 29.83	22 42 13.9	.0616414	18 21.6	24	21 18 56.18	18 12 37.3	.8925437	17 10.4
	9	19 31 7.04	22 38 17.2	.0583427	18 20.3	25	21 21 1.97	18 5 55.1	.8884707	17 8.5
	10	19 33 43.82	22 34 13.0	.0550277	18 19.0	26	21 23 6.74	17 59 14.6	.8843808	17 6.6
	11	19 36 20.16	22 30 1.5	.0516966	18 17.6	27	21 25 10.44	17 52 35.9	.8802742	17 4.7
	12	19 38 56.05	22 25 42.8	.0483494	18 16.3	28	21 27 13.05	17 45 59.4	.8761509	17 2.8
	13	19 41 31.48	22 21 17.0	.0449860	18 14.9	29	21 29 14.56	17 39 25.4	.8720114	17 0.9
	14	19 44 4.45	22 16 44.2	.0416065	18 13.6	30	21 31 14.92	17 32 54.0	.8678559	16 59.0
	15	19 46 40.95	22 12 4.7	.0382108	18 12.2	31	21 33 14.12	17 26 25.6	.8636846	16 57.0
	16	19 49 14.98	22 7 18.5	.0347989	18 10.8	June 1	21 35 12.15	17 20 0.5	.8594982	16 55.0
	17	19 51 48.52	22 2 25.7	.0313708	18 9.4	2	21 37 8.96	17 13 39.0	.8552967	16 53.0
	18	19 54 21.58	21 57 26.6	.0279263	18 8.0	3	21 39 4.54	17 7 21.4	.8510806	16 51.0
	19	19 56 54.13	21 52 21.3	.0244652	18 6.6	4	21 40 58.87	17 1 7.7	.8468503	16 48.9
	20	19 59 26.18	21 47 9.9	.0209873	18 5.2	5	21 42 51.92	16 54 58.5	.8426063	16 46.9
	21	20 1 57.71	21 41 52.5	.0174923	18 3.8	6	21 44 43.68	16 48 54.0	.8383488	16 44.8
	22	20 4 28.71	21 36 29.5	.0139800	18 2.3	7	21 46 34.10	16 42 54.5	.8340785	16 42.7
	23	20 6 59.17	21 31 0.8	.0104505	18 0.9	8	21 48 23.18	16 37 0.3	.8297958	16 40.5
	24	20 9 29.06	21 25 26.7	.0069035	17 59.4	9	21 50 10.89	16 31 11.6	.8255012	16 38.4
	25	20 11 58.39	21 19 47.4	0.0033389	17 58.0	10	21 51 57.20	16 25 28.8	.8211950	16 36.2
	26	20 14 27.12	21 14 3.1	9.9997567	17 56.5	11	21 53 42.11	16 19 52.1	.8169775	16 34.0
	27	20 16 55.24	21 8 13.9	.9961568	17 55.0	12	21 55 25.59	16 14 21.8	.8125493	16 31.8
	28	20 19 22.74	21 2 20.1	.9925393	17 53.5	13	21 57 7.60	16 8 58.0	.8082105	16 29.5
	29	20 21 49.60	20 56 21.8	.9889042	17 52.0	14	21 58 48.12	16 3 41.3	.8038613	16 27.2
	30	20 24 15.79	20 50 19.2	.9852514	17 50.5	15	22 0 27.12	15 58 31.8	.7995023	16 24.9
	May	1	20 26 41.32	20 44 12.6	.9815813	17 49.0	16	22 2 4.59	15 53 29.9	.7951338	16 22.6
2		20 29 6.16	20 38 2.0	.9778938	17 47.5	17	22 3 40.47	15 48 35.9	.7907560	16 20.2
3		20 31 30.31	20 31 47.7	.9741892	17 45.9	18	22 5 14.71	15 43 50.1	.7863692	16 17.8
4		20 33 53.75	20 25 29.9	.9704674	17 44.4	19	22 6 47.29	15 39 13.0	.7819739	16 15.4
5		20 36 16.46	20 19 8.9	.9667287	17 42.8	20	22 8 18.19	15 34 44.7	.7775705	16 13.0
6		20 38 38.43	20 12 44.7	.9629730	17 41.2	21	22 9 47.33	15 30 25.8	.7731596	16 10.5
7		20 40 59.67	20 6 17.6	.9592005	17 39.6	22	22 11 14.67	15 26 16.5	.7687422	16 8.0
8		20 43 20.14	19 59 47.8	.9554114	17 38.0	23	22 12 40.16	15 22 17.2	.7643191	16 5.5
9		20 45 39.85	19 53 15.6	.9516059	17 36.4	24	22 14 3.74	15 18 28.3	.7598915	16 2.9
10		20 47 58.78	19 46 41.0	.9477838	17 34.7	25	22 15 25.39	15 14 50.1	.7554603	16 0.3
11		20 50 16.91	19 40 4.4	.9439455	17 33.1	26	22 16 45.04	15 11 23.0	.7510268	15 57.7
12		20 52 34.26	19 33 25.9	.9400909	17 31.4	27	22 18 2.65	15 8 7.2	.7465923	15 55.0
13		20 54 50.79	19 26 45.7	.9362200	17 29.8	28	22 19 18.18	15 5 3.0	.7421582	15 52.3
14	20 57 6.52	19 20 4.0	.9323329	17 28.1	29	22 20 51.57	15 2 10.9	.7377259	15 49.6	
15	20 59 21.42	19 13 21.1	.9284294	17 26.4	30	22 21 42.79	14 59 30.9	.7332971	15 46.8	
16	21 1 35.49	19 6 37.1	.9245095	17 24.7	July 1	22 22 51.78	14 57 3.6	.7288734	15 44.0	
17	21 3 48.71	18 59 52.3	.9205731	17 22.9	2	22 23 58.51	14 54 49.1	.7244564	15 41.1	
18	21 6 1.07	S. 18 53 7.0	9.9166199	17 21.2	3	22 25 2.92	S. 14 52 47.6	9.7200478	15 38.2	

		Hor. Par.	Semidiameter.		Hor. Par.	Semidiameter.		
April	10	7.75	4.12	May	30	11.93	6.35	
	20	8.38	4.46		June	9	13.15	7.00
	30	9.10	4.84			19	14.54	7.73
May	10	9.92	5.27	July	29	16.10	8.56	
	20	10.86	5.78		9	17.81	9.48	

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
July 3	22 25 2.92	S. 14 52 47.6	9.7200478	15 38.2	Aug. 18	22 24 37.89	S. 17 13 47.6	9.5731671	12 35.8
4	22 26 4.98	14 50 59.5	.7156497	15 35.3	19	22 23 38.11	17 19 18.4	.5725193	12 30.8
5	22 27 4.65	14 49 24.8	.7112639	15 32.3	20	22 22 37.21	17 24 41.8	.5720315	12 25.9
6	22 28 1.88	14 48 3.9	.7068922	15 29.3	21	22 21 35.37	17 29 56.6	.5717055	12 20.9
7	22 28 56.65	14 46 56.9	.7025368	15 26.3	22	22 20 32.75	17 35 1.8	.5715425	12 15.9
8	22 29 48.92	14 46 4.0	.6981994	15 23.2	23	22 19 29.53	17 39 56.4	.5715437	12 10.9
9	22 30 38.64	14 45 25.4	.6938825	15 20.0	24	22 18 25.91	17 44 39.3	.5717096	12 6.0
10	22 31 25.79	14 45 1.2	.6895881	15 16.8	25	22 17 22.08	17 49 9.5	.5720403	12 1.0
11	22 32 10.31	14 44 51.5	.6853182	15 13.6	26	22 16 18.22	17 53 26.1	.5725357	11 56.0
12	22 32 52.19	14 44 56.4	.6810750	15 10.4	27	22 15 14.54	17 57 28.2	.5731954	11 51.0
13	22 33 31.37	14 45 16.1	.6768607	15 7.1	28	22 14 11.24	18 1 14.9	.5740185	11 46.0
14	22 34 7.82	14 45 50.6	.6726778	15 3.7	29	22 13 8.50	18 4 45.5	.5750039	11 41.1
15	22 34 41.49	14 46 40.1	.6685285	15 0.3	30	22 12 6.56	18 7 59.1	.5761498	11 36.1
16	22 35 12.35	14 47 44.6	.6644152	14 56.9	31	22 11 5.56	18 10 55.1	.5774548	11 31.2
17	22 35 40.34	14 49 4.2	.6603407	14 53.4	Sept. 1	22 10 5.73	18 13 32.8	.5789158	11 26.3
18	22 36 5.43	14 50 39.0	.6563073	14 49.8	2	22 9 7.23	18 15 51.8	.5805298	11 21.4
19	22 36 27.57	14 52 29.0	.6523184	14 46.2	3	22 8 10.25	18 17 51.5	.5822938	11 16.5
20	22 36 46.70	14 54 34.1	.6483774	14 42.6	4	22 7 14.96	18 19 31.6	.5842041	11 11.7
21	22 37 2.80	14 56 54.3	.6444877	14 38.9	5	22 6 21.52	18 20 51.7	.5862569	11 6.9
22	22 37 15.83	14 59 29.5	.6406528	14 35.1	6	22 5 30.06	18 21 51.8	.5884485	11 2.1
23	22 37 25.75	15 2 19.5	.6368766	14 31.3	7	22 4 40.73	18 22 31.5	.5907747	10 57.4
24	22 37 32.53	15 5 24.1	.6331632	14 27.5	8	22 3 53.65	18 22 50.7	.5932314	10 52.7
25	22 37 36.17	15 8 43.2	.6295165	14 23.6	9	22 3 8.93	18 22 49.5	.5958142	10 48.0
26	22 37 36.64	15 12 16.3	.6259410	14 19.6	10	22 2 26.66	18 22 27.9	.5985189	10 43.4
27	22 37 33.93	15 16 3.2	.6224410	14 15.6	11	22 1 146.94	18 21 45.9	.6013411	10 38.9
28	22 37 28.04	15 20 3.3	.6190208	14 11.5	12	22 1 9.84	18 20 43.7	.6042760	10 34.3
29	22 37 18.99	15 24 16.4	.6156850	14 7.4	13	22 0 35.44	18 19 21.3	.6073198	10 29.8
30	22 37 6.80	15 28 41.7	.6124380	14 3.3	14	22 0 3.81	18 17 39.1	.6104684	10 25.4
31	22 36 51.48	15 33 18.7	.6092844	13 59.1	15	21 59 35.00	18 15 37.1	.6137177	10 21.0
Aug. 1	22 36 33.06	15 38 6.7	.6062289	13 54.8	16	21 59 9.05	18 13 15.6	.6170635	10 16.7
2	22 36 11.60	15 43 5.0	.6032759	13 50.5	17	21 58 46.02	18 10 34.7	.6205020	10 12.4
3	22 35 47.13	15 48 12.9	.6004299	13 46.1	18	21 58 25.96	18 7 34.7	.6240292	10 8.1
4	22 35 19.73	15 53 29.5	.5976953	13 41.7	19	21 58 8.89	18 4 15.9	.6276413	10 3.9
5	22 34 49.45	15 58 54.0	.5950762	13 37.2	20	21 57 54.87	18 0 38.5	.6313344	9 59.8
6	22 34 16.39	16 4 25.4	.5925767	13 32.7	21	21 57 43.90	17 56 42.7	.6351046	9 55.7
7	22 33 40.62	16 10 3.0	.5902008	13 28.2	22	21 57 36.02	17 52 28.9	.6389480	9 51.7
8	22 33 2.23	16 15 45.6	.5879522	13 23.6	23	21 57 31.23	17 47 57.3	.6428607	9 47.7
9	22 32 21.32	16 21 32.2	.5858342	13 18.9	24	21 57 29.55	17 43 8.3	.6468390	9 43.7
10	22 31 37.99	16 27 22.0	.5838504	13 14.3	25	21 57 30.98	17 38 2.1	.6508788	9 39.8
11	22 30 52.35	16 33 13.8	.5820040	13 9.6	26	21 57 35.51	17 32 39.0	.6549767	9 36.0
12	22 30 4.50	16 39 6.7	.5802979	13 4.8	27	21 57 43.17	17 26 59.3	.6591290	9 32.2
13	22 29 14.57	16 44 59.5	.5787354	13 0.0	28	21 57 53.92	17 21 3.4	.6633320	9 28.5
14	22 28 22.66	16 50 51.4	.5773190	12 55.2	29	21 58 7.76	17 14 51.5	.6675819	9 24.8
15	22 27 28.90	16 56 41.2	.5760514	12 50.4	30	21 58 24.67	17 8 24.0	.6718754	9 21.2
16	22 26 33.42	17 2 27.9	.5749353	12 45.5	Oct. 1	21 58 44.62	17 1 41.2	.6762089	9 17.6
17	22 25 36.37	17 8 10.4	.5739731	12 40.7	2	21 59 7.59	16 54 43.3	.6805791	9 14.1
18	22 24 37.89	S. 17 13 47.6	9.5731671	12 35.8	3	21 59 33.54	S. 16 47 30.8	9.6849825	9 10.6

		Hor. Par.	Semidiameter.		Hor. Par.	Semidiameter.	
July	19	19.60	10.42	September	7	22.58	12.01
	29	21.32	11.34		17	21.08	11.21
August	8	22.73	12.09		27	19.29	10.26
	18	23.51	12.51	October	7	17.44	9.27
	28	23.47	12.48		17	15.70	8.35

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Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
h m s		° ' "		h m	h m s		° ' "		h m
Oct. 3	21 59 33.54	S. 16 47 30.8	0.6849825	9 10.6	Nov. 18	22 58 14.82	S. 8 6 55.1	0.8918766	7 8.6
4	22 0 2.42	16 40 4.0	.6894159	9 7.2	19	23 0 4.99	7 52 40.8	.8961016	7 6.5
5	22 0 34.19	16 32 23.3	.6938764	9 3.8	20	23 1 56.04	7 38 21.4	.9003083	7 4.4
6	22 1 8.79	16 24 28.9	.6983606	9 0.4	21	23 3 47.94	7 23 57.1	.9044967	7 2.4
7	22 1 46.16	16 16 21.3	.7028663	8 57.1	22	23 5 40.67	7 9 28.0	.9086668	7 0.3
8	22 2 26.25	16 8 0.7	.7073908	8 53.9	23	23 7 34.21	6 54 54.3	.9128183	6 58.3
9	22 3 8.99	15 59 27.5	.7119319	8 50.7	24	23 9 28.55	6 40 16.0	.9169510	6 56.2
10	22 3 54.33	15 50 41.9	.7164874	8 47.5	25	23 11 23.66	6 25 33.2	.9210646	6 54.2
11	22 4 42.20	15 41 44.4	.7210555	8 44.4	26	23 13 19.54	6 10 46.0	.9251590	6 52.2
12	22 5 32.56	15 32 35.1	.7256341	8 41.3	27	23 15 16.16	5 55 54.7	.9292337	6 50.2
13	22 6 25.32	15 23 14.3	.7302217	8 38.3	28	23 17 13.51	5 40 59.2	.9332887	6 48.2
14	22 7 20.44	15 13 42.4	.7348168	8 35.3	29	23 19 11.57	5 25 59.8	.9373234	6 46.3
15	22 8 17.87	15 3 59.5	.7394178	8 32.3	30	23 21 10.32	5 10 56.5	.9413378	6 44.3
16	22 9 17.55	14 54 5.8	.7440234	8 29.4	Dec. 1	23 23 9.74	4 55 49.6	.9453315	6 42.4
17	22 10 19.43	14 44 1.7	.7486322	8 26.5	2	23 25 9.80	4 40 39.0	.9493047	6 40.4
18	22 11 23.47	14 33 47.3	.7532431	8 23.6	3	23 27 10.48	4 25 25.1	.9532570	6 38.5
19	22 12 29.62	14 23 22.7	.7578547	8 20.8	4	23 29 11.77	4 10 8.0	.9571885	6 36.6
20	22 13 37.81	14 12 48.3	.7624661	8 18.0	5	23 31 13.65	3 54 47.8	.9610991	6 34.7
21	22 14 48.01	14 2 4.1	.7670759	8 15.2	6	23 33 16.09	3 39 24.7	.9649890	6 32.8
22	22 16 0.17	13 51 10.4	.7716831	8 12.5	7	23 35 19.08	3 23 58.9	.9688581	6 30.9
23	22 17 14.25	13 40 7.4	.7762867	8 9.8	8	23 37 22.60	3 8 30.5	.9727066	6 29.0
24	22 18 30.20	13 28 55.2	.7808856	8 7.2	9	23 39 26.64	2 52 59.7	.9765345	6 27.1
25	22 19 47.99	13 17 33.9	.7854788	8 4.5	10	23 41 31.19	2 37 26.5	.9803420	6 25.3
26	22 21 7.58	13 6 3.7	.7900655	8 1.9	11	23 43 36.23	2 21 51.1	.9841293	6 23.4
27	22 22 28.92	12 54 24.8	.7946446	7 59.4	12	23 45 41.76	2 6 13.6	.9878963	6 21.6
28	22 23 51.98	12 42 37.2	.7992148	7 56.8	13	23 47 47.76	1 50 34.2	.9916435	6 19.7
29	22 25 16.70	12 30 41.3	.8037751	7 54.3	14	23 49 54.23	1 34 53.0	.9953707	6 17.9
30	22 26 43.06	12 18 37.1	.8083247	7 51.8	15	23 52 1.16	1 19 10.1	.9990782	6 16.1
31	22 28 11.00	12 6 24.7	.8128624	7 49.3	16	23 54 8.54	1 3 25.7	0.0027660	6 14.3
Nov. 1	22 29 40.47	11 54 4.5	.8173875	7 46.9	17	23 56 16.36	0 47 39.9	.0064344	6 12.5
2	22 31 11.44	11 41 36.5	.8218991	7 44.5	18	23 58 24.63	0 31 52.7	.0100831	6 10.7
3	22 32 43.86	11 29 0.9	.8263964	7 42.1	19	0 0 33.33	0 16 4.4	.0137126	6 8.9
4	22 34 17.67	11 16 17.9	.8308788	7 39.7	20	0 2 42.47	N. 0 0 14.9	.0173225	6 7.1
5	22 35 52.84	11 3 27.7	.8353458	7 37.4	21	0 4 52.03	N. 0 15 35.5	.0209133	6 5.3
6	22 37 29.31	10 50 30.5	.8397968	7 35.0	22	0 7 2.03	0 31 26.9	.0244847	6 3.5
7	22 39 7.03	10 37 26.4	.8442314	7 32.7	23	0 9 12.45	0 47 19.0	.0280366	6 1.8
8	22 40 45.98	10 24 15.7	.8486494	7 30.5	24	0 11 23.30	1 3 11.9	.0315692	6 0.0
9	22 42 26.10	10 10 58.5	.8530505	7 28.2	25	0 13 34.57	1 19 5.2	.0350822	5 58.3
10	22 44 7.37	9 57 34.9	.8574346	7 26.0	26	0 15 46.26	1 34 59.0	.0385756	5 56.5
11	22 45 49.75	9 44 5.2	.8618014	7 23.7	27	0 17 58.35	1 50 53.0	.0420491	5 54.8
12	22 47 33.20	9 30 29.3	.8661509	7 21.5	28	0 20 10.85	2 6 47.4	.0455027	5 53.1
13	22 49 17.70	9 16 47.6	.8704829	7 19.3	29	0 22 23.75	2 22 41.7	.0489364	5 51.3
14	22 51 3.20	9 3 0.0	.8747973	7 17.2	30	0 24 37.04	2 38 36.0	.0523500	5 49.6
15	22 52 49.69	8 49 6.9	.8790940	7 15.0	31	0 26 50.71	2 54 30.0	.0557436	5 47.9
16	22 54 37.14	8 35 8.3	.8833728	7 12.8	32	0 29 4.75	N. 3 10 23.7	0.0591171	5 46.2
17	22 56 25.52	8 21 4.3	.8876337	7 10.7					
18	22 58 14.82	S. 8 6 55.1	0.8918766	7 8.6					

	Hor. Par.	Semidiameter.		Hor. Par.	Semidiameter.
October 27	14.12	7.51	December 6	9.54	5.07
November 6	12.73	6.77	16	8.74	4.65
16	11.51	6.13	26	8.05	4.28
26	10.45	5.56	36	7.45	3.96

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
Jan. 1	16 26 15.21	S. 21 0 22.2	0.7906591	21 44.0	Feb. 16	17 0 48.05	S. 22 3 28.5	0.7483626	19 17.2
2	16 27 7.41	21 2 19.9	.7900373	21 40.9	17	17 1 22.94	22 4 16.3	.7471703	19 13.9
3	16 27 59.40	21 4 16.0	.7894011	21 37.8	18	17 1 57.28	22 5 2.8	.7459687	19 10.5
4	16 28 51.17	21 6 10.5	.7887506	21 34.7	19	17 2 31.06	22 5 48.0	.7447580	19 7.1
5	16 29 42.72	21 8 3.4	.7880858	21 31.6	20	17 3 4.27	22 6 32.0	.7435385	19 3.7
6	16 30 34.03	21 9 54.7	.7874067	21 28.6	21	17 3 36.91	22 7 14.7	.7423103	19 0.3
7	16 31 25.10	21 11 44.3	.7867135	21 25.5	22	17 4 8.96	22 7 56.1	.7410735	18 56.9
8	16 32 15.93	21 13 32.3	.7860061	21 22.4	23	17 4 40.43	22 8 36.3	.7398285	18 53.5
9	16 33 6.50	21 15 18.7	.7852848	21 19.3	24	17 5 11.30	22 9 15.4	.7385753	18 50.1
10	16 33 56.81	21 17 3.5	.7845496	21 16.2	25	17 5 41.57	22 9 53.2	.7373143	18 46.6
11	16 34 46.86	21 18 46.6	.7838005	21 13.1	26	17 6 11.22	22 10 29.9	.7360455	18 43.2
12	16 35 36.63	21 20 28.2	.7830376	21 10.0	27	17 6 40.25	22 11 5.4	.7347691	18 39.8
13	16 36 26.11	21 22 8.1	.7822611	21 6.9	28	17 7 8.65	22 11 39.7	.7334855	18 36.3
14	16 37 15.30	21 23 46.4	.7814710	21 3.7	29	17 7 36.41	22 12 12.9	.7321948	18 32.8
15	16 38 4.19	21 25 23.1	.7806673	21 0.6	Mar. 1	17 8 3.53	22 12 45.0	.7308973	18 29.3
16	16 38 52.78	21 26 58.2	.7798502	20 57.5	2	17 8 29.99	22 13 15.9	.7295933	18 25.8
17	16 39 41.05	21 28 31.7	.7790198	20 54.4	3	17 8 55.79	22 13 45.8	.7282830	18 22.3
18	16 40 29.01	21 30 3.6	.7781762	20 51.2	4	17 9 20.92	22 14 14.5	.7269668	18 18.8
19	16 41 16.64	21 31 33.9	.7773194	20 48.1	5	17 9 45.37	22 14 42.2	.7256449	18 15.2
20	16 42 3.94	21 33 2.7	.7764495	20 44.9	6	17 10 9.14	22 15 8.8	.7243177	18 11.7
21	16 42 50.90	21 34 29.8	.7755667	20 41.8	7	17 10 32.22	22 15 34.3	.7229855	18 8.1
22	16 43 37.52	21 35 55.4	.7746710	20 38.6	8	17 10 54.60	22 15 58.8	.7216486	18 4.6
23	16 44 23.79	21 37 19.4	.7737624	20 35.4	9	17 11 16.27	22 16 22.2	.7203073	18 1.0
24	16 45 9.69	21 38 41.8	.7728411	20 32.3	10	17 11 37.24	22 16 44.6	.7189620	17 57.4
25	16 45 55.23	21 40 2.7	.7719071	20 29.1	11	17 11 57.49	22 17 5.9	.7176129	17 53.8
26	16 46 40.40	21 41 22.1	.7709604	20 25.9	12	17 12 17.02	22 17 26.3	.7162604	17 50.2
27	16 47 25.19	21 42 40.0	.7700011	20 22.7	13	17 12 35.82	22 17 45.7	.7149049	17 46.6
28	16 48 9.58	21 43 56.3	.7690293	20 19.5	14	17 12 53.89	22 18 4.1	.7135467	17 42.9
29	16 48 53.57	21 45 11.1	.7680451	20 16.3	15	17 13 11.23	22 18 21.6	.7121861	17 39.3
30	16 49 37.18	21 46 24.4	.7670487	20 13.1	16	17 13 27.82	22 18 38.2	.7108234	17 35.6
Feb. 1	16 50 20.35	21 47 36.2	.7660401	20 9.8	17	17 13 43.67	22 18 53.8	.7094591	17 31.9
2	16 51 3.10	21 48 46.5	.7650194	20 6.6	18	17 13 58.77	22 19 8.5	.7080934	17 28.2
3	16 51 45.43	21 49 55.3	.7639867	20 3.4	19	17 14 13.12	22 19 22.2	.7067266	17 24.5
4	16 52 27.31	21 51 2.7	.7629422	20 0.1	20	17 14 26.71	22 19 35.1	.7053592	17 20.8
5	16 53 8.75	21 52 8.6	.7618861	19 56.9	21	17 14 39.53	22 19 47.1	.7039914	17 17.1
6	16 53 49.73	21 53 13.0	.7608184	19 53.6	22	17 14 51.59	22 19 58.2	.7026236	17 13.3
7	16 54 30.24	21 54 16.0	.7597393	19 50.4	23	17 15 2.87	22 20 8.5	.7012562	17 9.6
8	16 55 10.28	21 55 17.5	.7586491	19 47.1	24	17 15 13.38	22 20 17.8	.6998895	17 5.8
9	16 55 49.84	21 56 17.6	.7575479	19 43.8	25	17 15 23.10	22 20 26.3	.6985239	17 2.0
10	16 56 28.90	21 57 16.3	.7564358	19 40.5	26	17 15 32.04	22 20 34.0	.6971597	16 58.2
11	16 57 7.47	21 58 13.6	.7553130	19 37.2	27	17 15 40.19	22 20 40.8	.6957974	16 54.4
12	16 57 45.54	21 59 9.5	.7541797	19 33.9	28	17 15 47.53	22 20 46.8	.6944375	16 50.6
13	16 58 23.10	22 0 4.0	.7530362	19 30.6	29	17 15 54.08	22 20 51.9	.6930803	16 46.7
14	16 59 0.13	22 0 57.1	.7518825	19 27.3	30	17 15 59.83	22 20 56.2	.6917263	16 42.9
15	16 59 36.64	22 1 48.8	.7507189	19 23.9	31	17 16 4.77	22 20 59.7	.6903760	16 39.1
16	17 0 12.61	22 2 39.3	.7495456	19 20.6	Apr. 1	17 16 8.90	22 21 2.4	.6890299	16 35.2
17	17 0 48.05	S. 22 3 28.5	0.7483626	19 17.2	2	17 16 12.21	S. 22 21 4.3	0.6876884	16 31.3

	Hor. Par.	Polar Semidiameter.		Hor. Par.	Polar Semidiameter.
January	1	1.43	February	20	1.59
	11	1.45		11	1.69
	21	1.48	March	1	1.64
	31	1.51		21	1.74
February	10	1.55		31	1.80
					18.74

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Mean Noon	Apparent Light Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon	Apparent Light Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
Apr. 2	17 16 12.21	S. 22 21 4.3	0.6876884	16 31.3	May 18	17 5 4.12	S. 22 8 21.5	0.6395433	13 19.0
	3 17 16 14.71	22 21 5.4	.6863520	16 27.4		19 17 4 35.03	22 7 47.0	.6389748	13 14.6
	4 17 16 16.40	22 21 5.7	.6850211	16 23.5		20 17 4 5.55	22 7 11.8	.6384333	13 10.2
	5 17 16 17.28	22 21 5.1	.6836964	16 19.6		21 17 3 35.70	22 6 35.9	.6379191	13 5.8
	6 17 16 17.34	22 21 3.8	.6823783	16 15.6		22 17 3 5.49	22 5 59.4	.6374325	13 1.3
	7 17 16 16.59	22 21 1.7	.6810672	16 11.7		23 17 2 34.96	22 5 22.3	.6369738	12 56.9
	8 17 16 15.02	22 20 58.8	.6797637	16 7.7		24 17 2 4.12	22 4 44.5	.6365433	12 52.5
	9 17 16 12.65	22 20 55.1	.6784683	16 3.7		25 17 1 32.98	22 4 6.1	.6361413	12 48.0
	10 17 16 9.46	22 20 50.6	.6771815	15 59.7		26 17 1 1.58	22 3 27.2	.6357680	12 43.5
	11 17 16 5.47	22 20 45.3	.6759038	15 55.7		27 17 0 29.93	22 2 47.7	.6354238	12 39.1
	12 17 16 0.67	22 20 39.2	.6746358	15 51.7		28 16 59 58.05	22 2 7.6	.6351087	12 34.6
	13 17 15 55.06	22 20 32.4	.6733778	15 47.7		29 16 59 25.97	22 1 27.0	.6348231	12 30.2
	14 17 15 48.66	22 20 24.7	.6721304	15 43.6		30 16 58 53.71	22 0 45.9	.6345672	12 25.7
	15 17 15 41.47	22 20 16.3	.6708940	15 39.6		31 16 58 21.30	22 0 4.4	.6343411	12 21.2
	16 17 15 33.49	22 20 7.1	.6696691	15 35.5		June 1 16 57 48.75	21 59 22.4	.6341448	12 16.8
	17 17 15 24.72	22 19 57.2	.6684561	15 31.4		2 16 57 16.09	21 58 40.0	.6339786	12 12.3
	18 17 15 15.17	22 19 46.5	.6672557	15 27.3		3 16 56 43 35	21 57 57.2	.6338425	12 7.8
	19 17 15 4.85	22 19 35.0	.6660682	15 23.2		4 16 56 10.55	21 57 14.1	.6337365	12 3.3
	20 17 14 53.75	22 19 22.8	.6648941	15 19.1		5 16 55 37.71	21 56 30.7	.6336607	11 58.9
	21 17 14 41.88	22 19 9.7	.6637339	15 14.9		6 16 55 4.86	21 55 47.0	.6336152	11 54.4
	22 17 14 29.25	22 18 55.9	.6625881	15 10.8		7 16 54 32.02	21 55 3.1	.6336000	11 49.8
	23 17 14 15.86	22 18 41.3	.6614572	15 6.6		8 16 53 59.21	21 54 19.0	.6336149	11 45.4
	24 17 14 1.72	22 18 26.0	.6603418	15 2.5		9 16 53 26.47	21 53 34.7	.6336598	11 41.0
	25 17 13 46.84	22 18 9.8	.6592423	14 58.3		10 16 52 53.81	21 52 50.3	.6337348	11 36.5
	26 17 13 31.22	22 17 52.9	.6581593	14 54.1		11 16 52 21.25	21 52 5.8	.6338396	11 32.0
	27 17 13 14.87	22 17 35.2	.6570934	14 49.9		12 16 51 48.83	21 51 21.2	.6339742	11 27.5
	28 17 12 57.80	22 17 16.6	.6560450	14 45.6		13 16 51 16.55	21 50 36.7	.6341384	11 23.1
	29 17 12 40.02	22 16 57.3	.6550148	14 41.4		14 16 50 44.44	21 49 52.2	.6343320	11 18.6
	30 17 12 21.53	22 16 37.2	.6540032	14 37.1		15 16 50 12.53	21 49 7.7	.6345549	11 14.1
	May 1	17 12 2.35	22 16 16.3	.6530108		14 32.9	16 16 49 40.83	21 48 23.4	.6348069	11 9.6
2 17 11 42.49		22 15 54.5	.6520382	14 28.6	17 16 49 9.36	21 47 39.3	.6350878	11 5.2	
3 17 11 21.96		22 15 32.0	.6510858	14 24.4	18 16 48 38.14	21 46 55.4	.6353974	11 0.8	
4 17 11 0.78		22 15 8.7	.6501541	14 20.1	19 16 48 7.20	21 46 11.7	.6357355	10 56.3	
5 17 10 38.96		22 14 44.6	.6492438	14 15.8	20 16 47 36.55	21 45 28.2	.6361018	10 51.9	
6 17 10 16.51		22 14 19.7	.6483551	14 11.5	21 16 47 6.21	21 44 45.1	.6364962	10 47.5	
7 17 9 53.45		22 13 54.1	.6474887	14 7.1	22 16 46 36.20	21 44 2.3	.6369184	10 43.1	
8 17 9 29.79		22 13 27.6	.6466449	14 2.8	23 16 46 6.54	21 43 19.9	.6373682	10 38.7	
9 17 9 5.55		22 13 0.3	.6458242	13 58.5	24 16 45 37.25	21 42 38.0	.6378454	10 34.2	
10 17 8 40.75		22 12 32.3	.6450269	13 54.1	25 16 45 8.36	21 41 56.5	.6383496	10 29.8	
11 17 8 15.41		22 12 3.5	.6442537	13 49.8	26 16 44 39.88	21 41 15.6	.6388807	10 25.4	
12 17 7 49.53		22 11 34.0	.6435048	13 45.4	27 16 44 11.82	21 40 35.2	.6394383	10 21.0	
13 17 7 23.14		22 11 3.7	.6427807	13 41.0	28 16 43 44.22	21 39 55.5	.6400220	10 16.6	
14 17 6 56.25		22 10 32.7	.6420817	13 36.7	29 16 43 17.08	21 39 16.5	.6406314	10 12.3	
15 17 6 28.89		22 10 0.9	.6414081	13 32.3	30 16 42 50.43	21 38 38.2	.6412662	10 7.9	
16 17 6 1.07		22 9 28.5	.6407603	13 27.9	July 1 16 42 24.27	21 38 0.6	.6419260	10 3.5	
17 17 5 32.81		22 8 55.3	.6401386	13 23.4	2 16 41 58.64	21 37 23.8	.6426104	9 59.2	
18 17 5 4.12		S. 22 8 21.5	0.6395433	13 19.0	3 16 41 33.55	S. 21 36 47.8	0.6433190	9 54.8	

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.	
April	10	1.85	19.32	May	30	2.04	21.32	
	20	1.90	19.88		June	9	2.05	21.36
	30	1.95	20.39			19	2.04	21.26
May	10	1.99	20.81	July	29	2.01	21.02	
	20	2.02	21.13		9	1.98	20.67	

Mean Noon.	Apparent Light Ascension.			Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Light Ascension.			Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.		
	h	m	s					°	'	''				h	m
July 3	16 41	33	55	S. 21 36	47.8	0.6433190	9 54.8	Aug. 18	16 34	48	38	S. 21 32	47.2	0.6936690	6 47.5
4	16 41	9	01	21 36	12.7	.6440514	9 50.5	19	16 34	57	53	21 33	17.6	.6949681	6 43.7
5	16 40	45	04	21 35	38.6	.6448070	9 46.2	20	16 35	7	43	21 33	49.5	.6962688	6 39.9
6	16 40	21	65	21 35	5.4	.6455854	9 41.9	21	16 35	18	10	21 34	22.8	.6975708	6 36.1
7	16 39	58	86	21 34	33.3	.6463861	9 37.6	22	16 35	29	52	21 34	57.6	.6988738	6 32.4
8	16 39	36	68	21 34	2.2	.6472086	9 33.3	23	16 35	41	50	21 35	33.7	.7001773	6 28.7
9	16 39	15	13	21 33	32.2	.6480525	9 29.0	24	16 35	54	62	21 36	11.3	.7014809	6 25.0
10	16 38	54	21	21 33	3.3	.6489171	9 24.7	25	16 36	8	29	21 36	50.2	.7027844	6 21.3
11	16 38	33	93	21 32	35.6	.6498020	9 20.4	26	16 36	22	71	21 37	30.5	.7040872	6 17.6
12	16 38	14	31	21 32	9.1	.6507067	9 16.2	27	16 36	37	88	21 38	12.1	.7053892	6 13.9
13	16 37	55	36	21 31	43.8	.6516308	9 11.9	28	16 36	53	78	21 38	55.1	.7066899	6 10.3
14	16 37	37	08	21 31	19.7	.6525737	9 7.7	29	16 37	10	41	21 39	39.4	.7079889	6 6.6
15	16 37	19	49	21 30	56.9	.6535349	9 3.5	30	16 37	27	78	21 40	24.9	.7092860	6 2.9
16	16 37	2	59	21 30	35.5	.6545139	8 59.3	31	16 37	45	87	21 41	11.7	.7105807	5 59.3
17	16 36	46	38	21 30	15.3	.6555103	8 55.1	Sept. 1	16 38	4	68	21 41	59.6	.7118727	5 55.7
18	16 36	30	88	21 29	56.5	.6565236	8 50.9	2	16 38	24	21	21 42	48.8	.7131616	5 52.1
19	16 36	16	10	21 29	39.1	.6575534	8 46.7	3	16 38	44	44	21 43	39.1	.7144472	5 48.5
20	16 36	2	04	21 29	23.1	.6585992	8 42.6	4	16 39	5	38	21 44	30.6	.7157292	5 44.9
21	16 35	48	70	21 29	8.5	.6596604	8 38.4	5	16 39	27	01	21 45	23.2	.7170071	5 41.3
22	16 35	36	11	21 28	55.3	.6607366	8 34.3	6	16 39	49	33	21 46	16.9	.7182807	5 37.8
23	16 35	24	25	21 28	43.6	.6618274	8 30.2	7	16 40	12	34	21 47	11.6	.7195497	5 34.3
24	16 35	13	14	21 28	33.4	.6629322	8 26.1	8	16 40	36	02	21 48	7.3	.7208138	5 30.7
25	16 35	2	78	21 28	24.6	.6640506	8 22.0	9	16 41	0	37	21 49	4.0	.7220728	5 27.2
26	16 34	53	19	21 28	17.4	.6651821	8 17.9	10	16 41	25	39	21 50	1.7	.7233264	5 23.7
27	16 34	44	36	21 28	11.7	.6663262	8 13.8	11	16 41	51	06	21 51	0.2	.7245744	5 20.2
28	16 34	36	30	21 28	7.5	.6674824	8 9.7	12	16 42	17	38	21 51	59.7	.7258166	5 16.7
29	16 34	29	02	21 28	4.9	.6686502	8 5.7	13	16 42	44	35	21 53	0.0	.7270528	5 13.2
30	16 34	22	52	21 28	3.9	.6698290	8 1.7	14	16 43	11	96	21 54	1.1	.7282828	5 9.7
31	16 34	16	80	21 28	4.5	.6710184	7 57.6	15	16 43	40	20	21 55	3.0	.7295063	5 6.3
Aug. 1	16 34	11	86	21 28	6.7	.6722178	7 53.6	16	16 44	9	07	21 56	5.7	.7307232	5 2.8
2	16 34	7	71	21 28	10.4	.6734267	7 49.6	17	16 44	38	55	21 57	9.1	.7319332	4 59.4
3	16 34	4	35	21 28	15.8	.6746447	7 45.7	18	16 45	8	65	21 58	13.2	.7331361	4 55.9
4	16 34	1	78	21 28	22.7	.6758712	7 41.7	19	16 45	39	37	21 59	17.9	.7343316	4 52.5
5	16 34	0	01	21 28	31.3	.6771057	7 37.7	20	16 46	10	69	22 0	23.3	.7355197	4 49.1
6	16 33	59	02	21 28	41.5	.6783477	7 33.8	21	16 46	42	61	22 1	29.2	.7367000	4 45.7
7	16 33	58	83	21 28	53.3	.6795967	7 29.8	22	16 47	15	13	22 2	35.7	.7378725	4 42.3
8	16 33	59	42	21 29	6.7	.6808523	7 25.9	23	16 47	48	24	22 3	42.8	.7390369	4 38.9
9	16 34	0	80	21 29	21.7	.6821139	7 22.0	24	16 48	21	94	22 4	50.3	.7401929	4 35.6
10	16 34	2	97	21 29	38.4	.6833810	7 18.1	25	16 48	56	21	22 5	58.3	.7413404	4 32.2
11	16 34	5	93	21 29	56.6	.6846533	7 14.2	26	16 49	31	06	22 7	6.7	.7424791	4 28.8
12	16 34	9	67	21 30	16.3	.6859304	7 10.4	27	16 50	6	47	22 8	15.5	.7436088	4 25.5
13	16 34	14	19	21 30	37.6	.6872117	7 6.5	28	16 50	42	44	22 9	24.7	.7447293	4 22.2
14	16 34	19	48	21 31	0.5	.6884969	7 2.7	29	16 51	18	96	22 10	34.2	.7458404	4 18.8
15	16 34	25	55	21 31	25.0	.6897856	6 58.9	30	16 51	56	03	22 11	44.1	.7469420	4 15.5
16	16 34	32	39	21 31	50.9	.6910774	6 55.0	Oct. 1	16 52	33	63	22 12	54.2	.7480339	4 12.2
17	16 34	40	00	21 32	18.3	.6923720	6 51.2	2	16 53	11	77	22 14	4.5	.7491158	4 8.9
18	16 34	48	38	S. 21 32	47.2	0.6936690	6 47.5	3	16 53	50	44	S. 22 15	15.0	0.7501875	4 5.6

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.
July	19	1.94	20.22	September	7	1.68	17.53
	29	1.89	19.71		17	1.63	17.03
August	8	1.83	19.16	27	1.59	16.58	
	18	1.78	18.60	October	7	1.55	16.18
	28	1.73	18.06		17	1.51	15.83

Mean Noon.	Apparent Right Ascension.			Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage	Mean Noon.	Apparent Right Ascension.			Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h	m	s					h	m	s			
Oct. 3	16 53	50.44		S. 22 15 15.0	0.7501875	4 5.6	Nov. 18	17 31	3.22		S. 23 3 28.5	0.7866152	1 41.8
4	16 54	29.63		22 16 25.7	.7512489	4 2.4	19	17 31	59.25	23 4 13.2	.7870946	1 38.8	
5	16 55	9.32		22 17 36.5	.7523000	3 59.1	20	17 32	55.50	23 4 56.8	.7875597	1 35.8	
6	16 55	49.52		22 18 47.3	.7533404	3 55.8	21	17 33	51.97	23 5 39.2	.7880105	1 32.8	
7	16 56	30.21		22 19 58.2	.7543702	3 52.6	22	17 34	48.64	23 6 20.4	.7884469	1 29.9	
8	16 57	11.39		22 21 9.1	.7553892	3 49.3	23	17 35	45.52	23 7 0.4	.7888689	1 26.9	
9	16 57	53.05		22 22 20.0	.7563973	3 46.1	24	17 36	42.59	23 7 39.2	.7892763	1 23.9	
10	16 58	35.19		22 23 30.9	.7573944	3 42.8	25	17 37	39.86	23 8 16.8	.7896691	1 20.9	
11	16 59	17.79		22 24 41.7	.7583804	3 39.6	26	17 38	37.31	23 8 53.1	.7900472	1 17.9	
12	17 0	0.86		22 25 52.3	.7593552	3 36.4	27	17 39	34.94	23 9 28.2	.7904106	1 14.9	
13	17 0	44.38		22 27 2.8	.7603187	3 33.2	28	17 40	32.73	23 10 2.0	.7907592	1 12.0	
14	17 1	128.35		22 28 13.1	.7612707	3 30.0	29	17 41	30.68	23 10 34.5	.7910930	1 9.0	
15	17 2	12.76		22 29 23.1	.7622112	3 26.8	30	17 42	28.79	23 11 5.7	.7914120	1 6.0	
16	17 2	57.61		22 30 32.9	.7631401	3 23.6	Dec. 1	17 43	27.05	23 11 35.6	.7917162	1 3.1	
17	17 3	42.90		22 31 42.5	.7640572	3 20.4	2	17 44	25.45	23 12 4.2	.7920056	1 0.1	
18	17 4	28.62		22 32 51.7	.7649625	3 17.3	3	17 45	23.98	23 12 31.4	.7922801	0 57.1	
19	17 5	14.75		22 34 0.6	.7658559	3 14.1	4	17 46	22.64	23 12 57.3	.7925398	0 54.2	
20	17 6	1.30		22 35 9.1	.7667372	3 10.9	5	17 47	21.42	23 13 21.8	.7927846	0 51.2	
21	17 6	48.27		22 36 17.2	.7676064	3 7.8	6	17 48	20.31	23 13 44.9	.7930146	0 48.3	
22	17 7	35.63		22 37 24.9	.7684633	3 4.6	7	17 49	19.31	23 14 6.6	.7932297	0 45.3	
23	17 8	23.39		22 38 32.1	.7693077	3 1.5	8	17 50	18.42	23 14 26.9	.7934300	0 42.4	
24	17 9	11.55		22 39 38.9	.7701396	2 58.4	9	17 51	17.62	23 14 45.8	.7936154	0 39.4	
25	17 10	0.09		22 40 45.1	.7709589	2 55.2	10	17 52	16.91	23 15 3.4	.7937860	0 36.5	
26	17 10	49.01		22 41 50.8	.7717654	2 52.1	11	17 53	16.29	23 15 19.5	.7939417	0 33.5	
27	17 11	38.30		22 42 55.9	.7725590	2 49.0	12	17 54	15.75	23 15 34.2	.7940826	0 30.6	
28	17 12	27.96		22 44 0.4	.7733397	2 45.9	13	17 55	15.29	23 15 47.4	.7942085	0 27.6	
29	17 13	17.99		22 45 4.3	.7741073	2 42.8	14	17 56	14.89	23 15 59.3	.7943195	0 24.7	
30	17 14	8.36		22 46 7.6	.7748618	2 39.7	15	17 57	14.56	23 16 9.7	.7944155	0 21.8	
31	17 14	59.08		22 47 10.1	.7756030	2 36.6	16	17 58	14.29	23 16 18.6	.7944966	0 18.8	
Nov. 1	17 15	50.14		22 48 11.9	.7763309	2 33.5	17	17 59	14.07	23 16 26.1	.7945627	0 15.9	
2	17 16	41.52		22 49 13.0	.7770454	2 30.5	18	18 0	13.90	23 16 32.2	.7946138	0 12.9	
3	17 17	33.23		22 50 13.3	.7777465	2 27.4	19	18 1	13.77	23 16 36.8	.7946499	0 10.0	
4	17 18	25.25		22 51 12.8	.7784340	2 24.3	20	18 2	13.67	23 16 40.0	.7946709	0 7.1	
5	17 19	17.58		22 52 11.5	.7791079	2 21.2	21	18 3	13.60	23 16 41.7	.7946767	0 4.1	
6	17 20	10.21		22 53 9.4	.7797681	2 18.2	22	18 4	13.55	23 16 42.0	.7946675	{ _{23 58.2}	
7	17 21	3.14		22 54 6.3	.7804147	2 15.1	23	18 5	13.52	23 16 40.8	.7946430	23 55.3	
8	17 21	56.36		22 55 2.4	.7810476	2 12.1	24	18 6	13.50	23 16 38.2	.7946034	23 52.4	
9	17 22	49.86		22 55 57.5	.7816668	2 9.0	25	18 7	13.48	23 16 34.1	.7945485	23 49.4	
10	17 23	43.65		22 56 51.7	.7822723	2 6.0	26	18 8	13.45	23 16 28.6	.7944783	23 46.5	
11	17 24	37.70		22 57 44.9	.7828640	2 3.0	27	18 9	13.41	23 16 21.6	.7943929	23 43.5	
12	17 25	32.02		22 58 37.1	.7834418	1 59.9	28	18 10	13.35	23 16 13.2	.7942922	23 40.6	
13	17 26	26.60		22 59 28.3	.7840058	1 56.9	29	18 11	13.27	23 16 3.4	.7941763	23 37.7	
14	17 27	21.44		23 0 18.5	.7845558	1 53.9	30	18 12	13.14	23 15 52.1	.7940453	23 34.7	
15	17 28	16.53		23 1 7.6	.7850918	1 50.9	31	18 13	12.97	23 15 39.4	.7938991	23 31.8	
16	17 29	11.85		23 1 55.7	.7856137	1 47.9	32	18 14	12.76	S. 23 15 25.3	0.7937379	23 28.8	
17	17 30	7.42		23 2 42.7	.7861215	1 44.8							
18	17 31	3.22	S. 23 3 28.5	0.7866152	1 41.8								

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.
October	27	1.49	15.52	December	6	1.42	14.81
November	6	1.46	15.26		16	1.41	14.76
	16	1.44	15.06		26	1.41	14.76
	26	1.43	14.91		36	1.42	14.81

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
	h m s	° ' "		h m		h m s	° ' "		h m
Jan. 1	13 58 35.7	S. 9 32 30.8	1.0016131	19 16.2	Feb. 16	14 4 7.70	S. 9 50 8.3	0.9680997	16 20.6
2	13 58 51.25	9 33 40.7	.0009387	19 12.5	17	14 4 5.68	9 49 41.4	.9673933	16 16.6
3	13 59 6.38	9 34 48.7	1.0002591	19 8.8	18	14 4 3.27	9 49 12.4	.9666917	16 12.6
4	13 59 21.19	9 35 54.7	0.9995743	19 5.1	19	14 4 0.46	9 48 41.4	.9659952	16 8.6
5	13 59 35.66	9 36 58.7	.9988846	19 1.4	20	14 3 57.27	9 48 8.4	.9653039	16 4.6
6	13 59 49.80	9 38 0.7	.9981902	18 57.7	21	14 3 53.68	9 47 33.3	.9646181	16 0.6
7	14 0 3.59	9 39 0.7	.9974912	18 54.0	22	14 3 49.70	9 46 56.3	.9639380	15 56.7
8	14 0 17.04	9 39 58.6	.9967878	18 50.3	23	14 3 45.34	9 46 17.3	.9632639	15 52.7
9	14 0 30.14	9 40 54.4	.9960803	18 46.6	24	14 3 40.59	9 45 36.4	.9625961	15 48.6
10	14 0 42.89	9 41 48.3	.9953688	18 42.9	25	14 3 35.45	9 44 53.6	.9619348	15 44.6
11	14 0 55.29	9 42 40.1	.9946536	18 39.1	26	14 3 29.94	9 44 8.8	.9612802	15 40.6
12	14 1 7.34	9 43 29.8	.9939348	18 35.4	27	14 3 24.05	9 43 22.2	.9606326	15 36.6
13	14 1 19.02	9 44 17.4	.9932126	18 31.6	28	14 3 17.78	9 42 33.7	.9599923	15 32.5
14	14 1 30.35	9 45 3.0	.9924871	18 27.9	29	14 3 11.15	9 41 43.3	.9593596	15 28.5
15	14 1 41.31	9 45 46.4	.9917585	18 24.1	Mar. 1	14 3 4.14	9 40 51.1	.9587347	15 24.4
16	14 1 51.91	9 46 27.8	.9910272	18 20.4	2	14 2 56.76	9 39 57.0	.9581179	15 20.4
17	14 2 2.14	9 47 7.0	.9902932	18 16.6	3	14 2 49.03	9 39 1.2	.9575094	15 16.3
18	14 2 12.00	9 47 44.1	.9895568	18 12.8	4	14 2 40.93	9 38 3.6	.9569094	15 12.2
19	14 2 21.48	9 48 19.1	.9888182	18 9.0	5	14 2 32.49	9 37 4.3	.9563183	15 8.2
20	14 2 30.59	9 48 52.0	.9880776	18 5.2	6	14 2 23.70	9 36 3.3	.9557362	15 4.1
21	14 2 39.31	9 49 22.8	.9873351	18 1.4	7	14 2 14.56	9 35 0.6	.9551635	15 0.0
22	14 2 47.66	9 49 51.4	.9865909	17 57.6	8	14 2 5.08	9 33 56.2	.9546003	14 55.9
23	14 2 55.62	9 50 17.9	.9858453	17 53.8	9	14 1 55.27	9 32 50.3	.9540470	14 51.8
24	14 3 3.20	9 50 42.3	.9850985	17 50.0	10	14 1 45.13	9 31 42.8	.9535039	14 47.7
25	14 3 10.40	9 51 4.6	.9843506	17 46.2	11	14 1 34.67	9 30 33.7	.9529711	14 43.6
26	14 3 17.21	9 51 24.7	.9836018	17 42.4	12	14 1 23.89	9 29 23.1	.9524488	14 39.5
27	14 3 23.62	9 51 42.6	.9828524	17 38.6	13	14 1 12.80	9 28 11.0	.9519373	14 35.3
28	14 3 29.64	9 51 58.4	.9821025	17 34.8	14	14 1 1.41	9 26 57.5	.9514366	14 31.2
29	14 3 35.27	9 52 12.0	.9813525	17 30.9	15	14 0 49.72	9 25 42.6	.9509470	14 27.1
30	14 3 40.50	9 52 23.4	.9806025	17 27.1	16	14 0 37.74	9 24 26.3	.9504687	14 23.0
31	14 3 45.33	9 52 32.7	.9798528	17 23.2	17	14 0 25.47	9 23 8.7	.9500020	14 18.8
Feb. 1	14 3 49.76	9 52 39.8	.9791036	17 19.3	18	14 0 12.93	9 21 49.8	.9495471	14 14.7
2	14 3 53.78	9 52 44.8	.9783551	17 15.5	19	14 0 0.11	9 20 29.7	.9491041	14 10.5
3	14 3 57.41	9 52 47.6	.9776077	17 11.6	20	13 59 47.03	9 19 8.4	.9486731	14 6.4
4	14 4 0.63	9 52 48.2	.9768615	17 7.7	21	13 59 33.70	9 17 45.9	.9482544	14 2.2
5	14 4 3.44	9 52 46.6	.9761168	17 3.8	22	13 59 20.11	9 16 22.2	.9478480	13 58.1
6	14 4 5.85	9 52 42.9	.9753739	16 59.9	23	13 59 6.27	9 14 57.5	.9474542	13 53.9
7	14 4 7.85	9 52 37.0	.9746330	16 56.0	24	13 58 52.19	9 13 31.7	.9470732	13 49.7
8	14 4 9.45	9 52 29.0	.9738944	16 52.1	25	13 58 37.89	9 12 5.0	.9467050	13 45.6
9	14 4 10.64	9 52 18.8	.9731584	16 48.1	26	13 58 23.36	9 10 37.2	.9463500	13 41.4
10	14 4 11.43	9 52 6.4	.9724252	16 44.2	27	13 58 8.62	9 9 8.6	.9460083	13 37.2
11	14 4 11.81	9 51 51.9	.9716951	16 40.3	28	13 57 53.67	9 7 39.0	.9456801	13 33.0
12	14 4 11.79	9 51 35.4	.9709684	16 36.4	29	13 57 38.52	9 6 8.7	.9453654	13 28.8
13	14 4 11.36	9 51 16.7	.9702452	16 32.5	30	13 57 23.16	9 4 37.5	.9450645	13 24.7
14	14 4 10.54	9 50 56.0	.9695259	16 28.5	31	13 57 7.62	9 3 5.5	.9447774	13 20.5
15	14 4 9.32	9 50 33.2	.9688107	16 24.5	Apr. 1	13 56 51.90	9 1 32.8	.9445044	13 16.3
16	14 4 7.70	S. 9 50 8.3	0.9680997	16 20.6	2	13 56 36.02	S. 8 59 59.5	0.9442456	13 12.1

	Hor. Par.	Polar Semidiameter.		Hor. Par.	Polar Semidiameter.
January 1	0.88	7.43	February 20	0.95	8.07
11	0.89	7.55	March 1	0.97	8.20
21	0.90	7.68	11	0.98	8.31
31	0.92	7.81	21	0.99	8.40
February 10	0.94	7.95	31	1.00	8.47

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Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.		
	h m s	° ' "		h m		h m s	° ' "		h m		
Apr. 2	13 56 36.02	S. 8 59 59.5	0.9442456	13 12.1	May 18	13 43 59.82	S. 7 51 18.0	0.9482711	9 58.7		
	3	13 56 19.97	8 58 25.6	.9440011		13 7.9	19	13 43 46.09	7 50 10.2	.9486862	9 54.5
	4	13 56 3.78	8 56 51.1	.9437710		13 3.7	20	13 43 32.60	7 49 4.0	.9491131	9 50.4
	5	13 55 47.44	8 55 16.1	.9435554		12 59.5	21	13 43 19.36	7 47 59.4	.9495518	9 46.2
	6	13 55 30.97	8 53 40.7	.9433545		12 55.3	22	13 43 6.36	7 46 56.5	.9500021	9 42.1
	7	13 55 14.38	8 52 4.9	.9431684		12 51.1	23	13 42 53.62	7 45 55.3	.9504638	9 38.0
	8	13 54 57.68	8 50 28.7	.9429972		12 46.9	24	13 42 41.15	7 44 55.8	.9509366	9 33.8
	9	13 54 40.87	8 48 52.3	.9428407		12 42.6	25	13 42 28.94	7 43 58.0	.9514204	9 29.7
	10	13 54 23.97	8 47 15.6	.9426992		12 38.4	26	13 42 17.00	7 43 2.0	.9519151	9 25.6
	11	13 54 6.98	8 45 38.7	.9425726		12 34.2	27	13 42 5.35	7 42 7.8	.9524203	9 21.4
	12	13 53 49.92	8 44 1.7	.9424609		12 30.0	28	13 41 53.98	7 41 15.5	.9529360	9 17.3
	13	13 53 32.79	8 42 24.6	.9423643		12 25.8	29	13 41 42.90	7 40 25.0	.9534619	9 13.2
	14	13 53 15.60	8 40 47.5	.9422828		12 21.6	30	13 41 32.12	7 39 36.4	.9539978	9 9.1
	15	13 52 58.36	8 39 10.4	.9422165		12 17.4	31	13 41 21.63	7 38 49.7	.9545435	9 5.0
	16	13 52 41.08	8 37 33.4	.9421653		12 13.1	June 1	13 41 11.45	7 38 5.0	.9550987	9 0.9
	17	13 52 23.78	8 35 56.4	.9421292		12 8.9	2	13 41 1.58	7 37 22.2	.9556631	8 56.8
	18	13 52 6.45	8 34 19.7	.9421082		12 4.7	3	13 40 52.03	7 36 41.5	.9562366	8 52.7
	19	13 51 49.11	8 32 43.2	.9421021		12 0.5	4	13 40 42.79	7 36 2.7	.9568189	8 48.6
	20	13 51 31.76	8 31 7.0	.9421109		11 56.2	5	13 40 33.88	7 35 25.9	.9574098	8 44.5
	21	13 51 14.41	8 29 31.1	.9421348		11 52.0	6	13 40 25.30	7 34 51.2	.9580091	8 40.5
	22	13 50 57.08	8 27 55.6	.9421737		11 47.8	7	13 40 17.05	7 34 18.6	.9586166	8 36.4
	23	13 50 39.77	8 26 20.5	.9422276		11 43.6	8	13 40 9.14	7 33 48.0	.9592320	8 32.3
	24	13 50 22.49	8 24 45.8	.9422966		11 39.4	9	13 40 1.57	7 33 19.5	.9598550	8 28.3
	25	13 50 5.26	8 23 11.6	.9423806		11 35.1	10	13 39 54.34	7 32 53.1	.9604853	8 24.2
	26	13 49 48.07	8 21 38.0	.9424795		11 30.9	11	13 39 47.45	7 32 28.9	.9611227	8 20.2
	27	13 49 30.94	8 20 5.0	.9425934		11 26.7	12	13 39 40.90	7 32 6.8	.9617670	8 16.2
	28	13 49 13.87	8 18 32.7	.9427222		11 22.5	13	13 39 34.71	7 31 46.8	.9624178	8 12.1
	29	13 48 56.87	8 17 1.0	.9428658		11 18.3	14	13 39 28.87	7 31 29.0	.9630750	8 8.1
	30	13 48 39.96	8 15 30.1	.9430241		11 14.1	15	13 39 23.38	7 31 13.3	.9637384	8 4.1
	May 1	13 48 23.14	8 14 0.0	.9431971		11 9.9	16	13 39 18.24	7 30 59.7	.9644077	8 0.0
2		13 48 6.43	8 12 30.8	.9433847	11 5.7	17	13 39 13.45	7 30 48.3	.9650827	7 56.0	
3		13 47 49.83	8 11 2.5	.9435867	11 1.5	18	13 39 9.02	7 30 39.1	.9657633	7 52.0	
4		13 47 33.35	8 9 35.2	.9438032	10 57.3	19	13 39 4.95	7 30 32.0	.9664491	7 48.0	
5		13 47 16.99	8 8 8.9	.9440341	10 53.1	20	13 39 1.23	7 30 27.1	.9671400	7 44.0	
6		13 47 0.77	8 6 43.6	.9442792	10 48.9	21	13 38 57.88	7 30 24.4	.9678357	7 40.1	
7		13 46 44.70	8 5 19.3	.9445384	10 44.7	22	13 38 54.90	7 30 23.9	.9685360	7 36.1	
8		13 46 28.78	8 3 56.3	.9448114	10 40.5	23	13 38 52.28	7 30 25.5	.9692408	7 32.1	
9		13 46 13.02	8 2 34.4	.9450982	10 36.3	24	13 38 50.03	7 30 29.4	.9699497	7 28.2	
10		13 45 57.44	8 1 13.8	.9453986	10 32.1	25	13 38 48.15	7 30 35.4	.9706625	7 24.2	
11		13 45 42.04	7 59 54.5	.9457124	10 27.9	26	13 38 46.64	7 30 43.6	.9713791	7 20.2	
12		13 45 26.82	7 58 36.5	.9460395	10 23.7	27	13 38 45.50	7 30 54.0	.9720992	7 16.3	
13		13 45 11.80	7 57 19.9	.9463797	10 19.5	28	13 38 44.72	7 31 6.6	.9728227	7 12.3	
14		13 44 56.98	7 56 4.6	.9467329	10 15.4	29	13 38 44.32	7 31 21.3	.9735492	7 8.4	
15		13 44 42.36	7 54 50.7	.9470988	10 11.2	30	13 38 44.29	7 31 38.3	.9742785	7 4.5	
16		13 44 27.96	7 53 38.3	.9474773	10 7.0	July 1	13 38 44.64	7 31 57.4	.9750104	7 0.6	
17		13 44 13.78	7 52 27.4	.9478681	10 2.9	2	13 38 45.36	7 32 18.8	.9757447	6 56.6	
18		13 43 59.82	S. 7 51 18.0	0.9482711	9 58.7	3	13 38 46.45	S. 7 32 42.3	0.9764811	6 52.7	

		Hor. Par.	Polar Semidiameter.		Hor. Par.	Polar Semidiameter.		
April	10	1.00	8.51	May	30	0.98	8.29	
	20	1.00	8.52		June	9	0.96	8.18
	30	1.00	8.50			19	0.95	8.06
May	10	1.00	8.45	July	29	0.93	7.93	
	20	0.99	8.39		9	0.92	7.79	

Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth	Merid. Passage	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
July 3	h m s 13 38 46.45	S. ° ' " 7 32 42.3	0.9764811	h m 6 52.7	Aug. 18	h m s 13 45 59.41	S. ° ' " 8 26 15.8	1.0091964	h m 3 59.1
4	13 38 47.92	7 33 8.0	.9772193	6 48.8	19	13 46 16.37	8 28 5.4	.0098186	3 55.4
5	13 38 49.76	7 33 35.8	.9779591	6 44.9	20	13 46 33.60	8 29 56.3	.0104348	3 51.8
6	13 38 51.97	7 34 5.8	.9787002	6 41.0	21	13 46 51.12	8 31 48.5	.0110449	3 48.2
7	13 38 54.56	7 34 38.0	.9794426	6 37.1	22	13 47 8.91	8 33 42.1	.0116487	3 44.5
8	13 38 57.52	7 35 12.3	.9801860	6 33.3	23	13 47 26.97	8 35 37.0	.0122461	3 40.9
9	13 39 0.85	7 35 48.7	.9809301	6 29.4	24	13 47 45.30	8 37 33.2	.0128371	3 37.3
10	13 39 4.55	7 36 27.2	.9816748	6 25.5	25	13 48 3.89	8 39 30.6	.0134215	3 33.6
11	13 39 8.62	7 37 7.9	.9824198	6 21.6	26	13 48 22.75	8 41 29.3	.0139991	3 30.0
12	13 39 13.06	7 37 50.6	.9831649	6 17.8	27	13 48 41.86	8 43 29.1	.0145699	3 26.4
13	13 39 17.86	7 38 35.4	.9839099	6 13.9	28	13 49 1.22	8 45 30.0	.0151338	3 22.8
14	13 39 23.02	7 39 22.3	.9846546	6 10.1	29	13 49 20.84	8 47 32.2	.0156905	3 19.2
15	13 39 28.54	7 40 11.2	.9853988	6 6.3	30	13 49 40.71	8 49 35.5	.0162401	3 15.6
16	13 39 34.43	7 41 2.1	.9861424	6 2.4	31	13 50 0.82	8 51 39.8	.0167824	3 12.0
17	13 39 40.67	7 41 55.1	.9868852	5 58.6	Sept. 1	13 50 21.17	8 53 45.2	.0173172	3 8.4
18	13 39 47.27	7 42 50.0	.9876270	5 54.8	2	13 50 41.76	8 55 51.7	.0178445	3 4.8
19	13 39 54.23	7 43 46.9	.9883676	5 51.0	3	13 51 2.59	8 57 59.2	.0183642	3 1.2
20	13 40 1.54	7 44 45.8	.9891070	5 47.2	4	13 51 23.64	9 0 7.7	.0188762	2 57.6
21	13 40 9.21	7 45 46.7	.9898449	5 43.4	5	13 51 44.92	9 2 17.1	.0193804	2 54.1
22	13 40 17.23	7 46 49.5	.9905812	5 39.6	6	13 52 6.42	9 4 27.5	.0198766	2 50.5
23	13 40 25.59	7 47 54.2	.9913156	5 35.8	7	13 52 28.13	9 6 38.8	.0203649	2 46.9
24	13 40 34.31	7 49 0.9	.9920480	5 32.0	8	13 52 50.06	9 8 51.0	.0208451	2 43.4
25	13 40 43.37	7 50 9.4	.9927781	5 28.2	9	13 53 12.19	9 11 4.0	.0213172	2 39.8
26	13 40 52.79	7 51 19.8	.9935058	5 24.4	10	13 53 34.53	9 13 17.9	.0217812	2 36.2
27	13 41 2.55	7 52 32.1	.9942309	5 20.7	11	13 53 57.07	9 15 32.6	.0222370	2 32.7
28	13 41 12.65	7 53 46.3	.9949533	5 16.9	12	13 54 19.81	9 17 48.0	.0226845	2 29.1
29	13 41 23.09	7 55 2.3	.9956727	5 13.1	13	13 54 42.75	9 20 4.2	.0231237	2 25.6
30	13 41 33.87	7 56 20.1	.9963891	5 9.4	14	13 55 5.88	9 22 21.2	.0235545	2 22.0
31	13 41 44.99	7 57 39.7	.9971022	5 5.6	15	13 55 29.20	9 24 38.9	.0239768	2 18.5
Aug. 1	13 41 56.44	7 59 1.1	.9978118	5 1.9	16	13 55 52.71	9 26 57.2	.0243906	2 14.9
2	13 42 8.23	8 0 24.3	.9985178	4 58.2	17	13 56 16.40	9 29 16.2	.0247957	2 11.4
3	13 42 20.34	8 1 49.2	.9992199	4 54.4	18	13 56 40.27	9 31 35.9	.0251922	2 7.9
4	13 42 32.77	8 3 15.9	.9999181	4 50.7	19	13 57 4.31	9 33 56.2	.0255799	2 4.3
5	13 42 45.53	8 4 44.2	1.0006122	4 47.0	20	13 57 28.53	9 36 17.1	.0259588	2 0.8
6	13 42 58.61	8 6 14.1	.0013020	4 43.3	21	13 57 52.91	9 38 38.5	.0263288	1 57.3
7	13 43 12.01	8 7 45.7	.0019873	4 39.6	22	13 58 17.46	9 41 0.5	.0266899	1 53.7
8	13 43 25.72	8 9 19.0	.0026681	4 35.9	23	13 58 42.18	9 43 23.1	.0270420	1 50.2
9	13 43 39.74	8 10 53.8	.0033442	4 32.1	24	13 59 7.05	9 45 46.1	.0273849	1 46.7
10	13 43 54.07	8 12 30.3	.0040154	4 28.4	25	13 59 32.08	9 48 9.6	.0277186	1 43.2
11	13 44 8.71	8 14 8.3	.0046816	4 24.8	26	13 59 57.26	9 50 33.6	.0280429	1 39.7
12	13 44 23.64	8 15 47.8	.0053427	4 21.1	27	14 0 22.58	9 52 58.0	.0283579	1 36.2
13	13 44 38.87	8 17 28.8	.0059987	4 17.4	28	14 0 48.04	9 55 22.8	.0286635	1 32.6
14	13 44 54.40	8 19 11.3	.0066494	4 13.7	29	14 1 13.64	9 57 47.9	.0289595	1 29.1
15	13 45 10.22	8 20 55.3	.0072946	4 10.1	30	14 1 39.38	10 0 13.4	.0292462	1 25.6
16	13 45 26.33	8 22 40.8	.0079343	4 6.4	Oct. 1	14 2 5.25	10 2 39.3	.0295233	1 22.1
17	13 45 42.73	8 24 27.6	.0085683	4 2.8	2	14 2 31.24	10 5 5.4	.0297909	1 18.6
18	13 45 59.41	S. 8 26 15.8	1.0091964	3 59.1	3	14 2 57.35	S. 10 7 31.7	1.0300489	1 15.1

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.
July	19	0.90	7.66	September	7	0.84	7.12
	29	0.89	7.53		17	0.83	7.04
August	8	0.87	7.41		27	0.82	6.98
	18	0.86	7.30	October	7	0.82	6.94
	28	0.85	7.20		17	0.82	6.92

SATURN, 1924.

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Mean Noon.	Apparent Right Ascension.			Apparent Declination.			Log. of True Dist. from the Earth.		Merid. Passage.		Mean Noon.	Apparent Right Ascension.			Apparent Declination.			Log. of True Dist. from the Earth.		Merid. Passage.	
	h	m	s	S.	°	'	°	'	°	'		h	m	h	m	s	S.	°	'	°	'
Oct. 3	14	2	57.35	S.	10	7	31.7	1.0300489	1	15.1	Nov. 18	14	23	58.75	S.	11	57	34.8	1.0310851	22	31.7
4	14	3	23.58		10	9	58.3	.0302972	1	11.6	19	14	24	25.89		11	59	46.9	.0308687	22	28.2
5	14	3	49.92		10	12	25.1	.0305359	1	8.1	20	14	24	52.94		12	1	58.1	.0306422	22	24.7
6	14	4	16.37		10	14	52.1	.0307647	1	4.7	21	14	25	19.91		12	4	8.5	.0304058	22	21.2
7	14	4	42.92		10	17	19.2	.0309838	1	1.2	22	14	25	46.79		12	6	18.0	.0301594	22	17.8
8	14	5	9.57		10	19	46.5	.0311932	0	57.7	23	14	26	13.57		12	8	26.6	.0299030	22	14.3
9	14	5	36.31		10	22	14.0	.0313927	0	54.2	24	14	26	40.27		12	10	34.3	.0296367	22	10.8
10	14	6	3.15		10	24	41.5	.0315824	0	50.7	25	14	27	6.85		12	12	41.0	.0293604	22	7.3
11	14	6	30.08		10	27	9.0	.0317622	0	47.2	26	14	27	33.31		12	14	46.8	.0290742	22	3.8
12	14	6	57.09		10	29	36.6	.0319321	0	43.7	27	14	27	59.66		12	16	51.6	.0287781	22	0.3
13	14	7	24.19		10	32	4.3	.0320921	0	40.2	28	14	28	25.89		12	18	55.4	.0284722	21	56.8
14	14	7	51.36		10	34	31.9	.0322421	0	36.8	29	14	28	51.99		12	20	58.1	.0281566	21	53.3
15	14	8	18.61		10	36	59.4	.0323822	0	33.3	30	14	29	17.96		12	22	59.8	.0278314	21	49.8
16	14	8	45.92		10	39	26.9	.0325124	0	29.8	Dec. 1	14	29	43.80		12	25	0.4	.0274966	21	46.3
17	14	9	13.30		10	41	54.3	.0326326	0	26.3	2	14	30	9.49		12	26	59.9	.0271523	21	42.8
18	14	9	40.74		10	44	21.7	.0327427	0	22.9	3	14	30	35.04		12	28	58.3	.0267985	21	39.3
19	14	10	8.24		10	46	49.0	.0328428	0	19.4	4	14	31	0.44		12	30	55.6	.0264332	21	35.8
20	14	10	35.80		10	49	16.1	.0329328	0	15.9	5	14	31	25.68		12	32	51.7	.0260626	21	32.2
21	14	11	3.41		10	51	43.0	.0330126	0	12.4	6	14	31	50.76		12	34	46.7	.0256807	21	28.7
22	14	11	31.06		10	54	9.8	.0330822	0	8.9	7	14	32	15.68		12	36	40.5	.0252897	21	25.2
23	14	11	58.75		10	56	36.4	.0331417	0	5.5	8	14	32	40.44		12	38	33.2	.0248896	21	21.7
24	14	12	26.48		10	59	2.7	.0331909	{ ^{0 20} _{23 58 5} }		9	14	33	5.02		12	40	24.6	.0244804	21	18.1
25	14	12	54.25		11	1	28.8	.0332298	23	55.1	10	14	33	29.43		12	42	14.8	.0240623	21	14.6
26	14	13	22.04		11	3	54.6	.0332584	23	51.6	11	14	33	53.66		12	44	3.7	.0236352	21	11.1
27	14	13	49.86		11	6	20.1	.0332766	23	48.1	12	14	34	17.70		12	45	51.4	.0231991	21	7.5
28	14	14	17.70		11	8	45.3	.0332846	23	44.6	13	14	34	41.55		12	47	37.8	.0227542	21	4.0
29	14	14	45.55		11	11	10.1	.0332822	23	41.2	14	14	35	5.21		12	49	22.9	.0223006	21	0.5
30	14	15	13.41		11	13	34.5	.0332695	23	37.7	15	14	35	28.68		12	51	6.7	.0218383	20	56.9
31	14	15	41.28		11	15	58.5	.0332465	23	34.2	16	14	35	51.94		12	52	49.2	.0213674	20	53.4
Nov. 1	14	16	9.15		11	18	22.0	.0332133	23	30.8	17	14	36	15.00		12	54	30.4	.0208880	20	49.8
2	14	16	37.01		11	20	45.1	.0331698	23	27.3	18	14	36	37.84		12	56	10.2	.0204001	20	46.3
3	14	17	4.87		11	23	7.7	.0331161	23	23.8	19	14	37	0.46		12	57	48.6	.0199040	20	42.7
4	14	17	32.71		11	25	29.8	.0330521	23	20.4	20	14	37	22.86		12	59	25.7	.0193997	20	39.1
5	14	18	0.54		11	27	51.4	.0329778	23	16.9	21	14	37	45.03		13	1	1.3	.0188872	20	35.6
6	14	18	28.34		11	30	12.5	.0328933	23	13.4	22	14	38	6.97		13	2	35.5	.0183666	20	32.0
7	14	18	56.12		11	32	33.0	.0327985	23	9.9	23	14	38	28.67		13	4	8.3	.0178378	20	28.4
8	14	19	23.86		11	34	52.9	.0326934	23	6.5	24	14	38	50.14		13	5	39.6	.0173011	20	24.9
9	14	19	51.57		11	37	12.2	.0325782	23	3.0	25	14	39	11.36		13	7	9.5	.0167565	20	21.3
10	14	20	19.24		11	39	30.8	.0324528	22	59.5	26	14	39	32.32		13	8	37.9	.0162041	20	17.7
11	14	20	46.87		11	41	48.8	.0323172	22	56.1	27	14	39	53.03		13	10	4.8	.0156442	20	14.1
12	14	21	14.45		11	44	6.1	.0321715	22	52.6	28	14	40	13.47		13	11	30.1	.0150769	20	10.5
13	14	21	41.99		11	46	22.7	.0320157	22	49.1	29	14	40	33.65		13	12	53.9	.0145022	20	6.9
14	14	22	9.47		11	48	38.6	.0318498	22	45.6	30	14	40	53.56		13	14	16.1	.0139203	20	3.3
15	14	22	36.89		11	50	53.8	.0316738	22	42.1	31	14	41	13.19		13	15	36.8	.0133315	19	59.7
16	14	23	4.24		11	53	8.3	.0314877	22	38.7	32	14	41	32.55		S. 13	16	55.9	1.0127357	19	56.1
17	14	23	31.53		11	55	22.0	.0312914	22	35.2											
18	14	23	58.75	S.	11	57	34.8	1.0310851	22	31.7											

		Hor. Par.	Polar Semidiameter.			Hor. Par.	Polar Semidiameter.
October	27	0.81	6.91	December	6	0.83	7.02
November	6	0.82	6.91		16	0.84	7.10
	16	0.82	6.94		26	0.85	7.18
	26	0.82	6.97		36	0.86	7.28

Mean Noon.	Apparent Light Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.	Mean Noon.	Apparent Light Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
1923-24	h m s	° ' "		h m	July	h m s	° ' "		h m
Dec. 30	23 2 56.72	S. 6 55 12.2	1.3110510	4 30.6	1	23 30 1.10	S. 4 5 21.8	1.2958155	16 50.2
Jan. 3	23 3 24.62	6 52 9.3	.3123755	4 15.4	5	23 29 56.38	4 6 1.8	.2944300	16 34.4
7	23 3 55.07	6 48 50.9	.3136504	4 0.2	9	23 29 48.86	4 6 59.5	.2930778	16 18.5
11	23 4 27.94	6 45 17.5	.3148701	3 45.0	13	23 29 38.62	4 8 14.4	.2917659	16 2.6
15	23 5 3.10	6 41 30.2	.3160290	3 29.8	17	23 29 25.73	4 9 46.0	.2905003	15 46.7
19	23 5 40.39	6 37 29.9	.3171233	3 14.7	21	23 29 10.26	4 11 33.8	.2892868	15 30.7
23	23 6 19.68	S. 6 33 17.2	1.3181486	2 59.6	25	23 28 52.32	S. 4 13 37.1	1.2881317	15 14.7
27	23 7 0.82	6 28 53.1	.3191015	2 44.6	29	23 28 31.98	4 15 55.3	.2870418	14 58.6
31	23 7 43.67	6 24 18.7	.3199785	2 29.6	Aug. 2	23 28 9.37	4 18 27.4	.2860233	14 42.5
Feb. 4	23 8 28.09	6 19 34.7	.3207759	2 14.6	6	23 27 44.66	4 21 12.5	.2850822	14 26.3
8	23 9 13.90	6 14 42.2	.3214905	1 59.6	10	23 27 18.00	4 24 9.5	.2842237	14 10.1
12	23 10 0.94	6 9 42.4	.3221197	1 44.7	14	23 26 49.55	4 27 17.1	.2834527	13 53.9
16	23 10 49.01	S. 6 4 36.2	1.3226616	1 29.7	18	23 26 19.51	S. 4 30 34.3	1.2827731	13 37.7
20	23 11 37.96	5 59 24.8	.3231146	1 14.8	22	23 25 48.05	4 33 59.9	.2821892	13 21.5
24	23 12 27.62	5 54 9.1	.3234789	0 59.9	26	23 25 15.35	4 37 32.4	.2817046	13 5.2
28	23 13 17.84	5 48 50.2	.3237516	0 45.0	30	23 24 41.62	4 41 10.7	.2813231	12 48.9
Mar. 3	23 14 8.44	5 43 29.2	.3239328	0 30.1	Sept. 3	23 24 7.11	4 44 53.0	.2810475	12 32.6
7	23 14 59.26	5 38 7.1	.3240212	0 15.3	7	23 23 32.05	4 48 38.1	.2808799	12 16.3
11	23 15 50.11	S. 5 32 45.1	1.3240170	{ 0 0 4 }	11	23 22 56.68	S. 4 52 24.2	1.2808207	12 0.0
15	23 16 40.82	5 27 24.2	.3239207	23 41.8	15	23 22 21.22	4 56 9.9	.2808704	11 43.7
19	23 17 31.21	5 22 5.6	.3237334	23 26.9	19	23 21 45.90	4 59 53.8	.2810290	11 27.4
23	23 18 21.14	5 16 50.5	.3234565	23 11.9	23	23 21 10.95	5 3 34.4	.2812966	11 11.1
27	23 19 10.44	5 11 39.1	.3230905	22 57.0	27	23 20 36.60	5 7 10.1	.2816720	10 54.8
31	23 19 58.99	5 6 33.2	.3226371	22 42.1	Oct. 1	23 20 3.10	5 10 39.7	.2821535	10 38.5
Apr. 4	23 20 46.60	S. 5 1 33.5	1.3220979	22 27.2	5	23 19 30.71	S. 5 14 1.2	1.2827384	10 22.2
8	23 21 33.10	4 56 41.2	.3214746	22 12.2	9	23 18 59.65	5 17 13.6	.2834235	10 6.0
12	23 22 18.35	4 51 57.1	.3207703	21 57.2	13	23 18 30.11	5 20 15.5	.2842039	9 49.8
16	23 23 2.21	4 47 22.3	.3199880	21 42.2	17	23 18 2.29	5 23 5.6	.2850760	9 33.6
20	23 23 44.52	4 42 57.6	.3191311	21 27.2	21	23 17 36.37	5 25 43.0	.2860352	9 17.4
24	23 24 25.19	4 38 43.7	.3182027	21 12.1	25	23 17 12.53	5 28 6.5	.2870762	9 1.3
28	23 25 4.08	S. 4 34 41.6	1.3172056	20 57.0	29	23 16 50.98	S. 5 30 15.0	1.2881941	8 45.2
May 2	23 25 41.05	4 30 52.0	.3161439	20 41.9	Nov. 2	23 16 31.86	5 32 7.5	.2893818	8 29.2
6	23 26 15.98	4 27 15.8	.3150209	20 26.8	6	23 16 15.30	5 33 43.2	.2906324	8 13.2
10	23 26 48.73	4 23 53.8	.3138419	20 11.6	10	23 16 1.44	5 35 1.5	.2919392	7 57.2
14	23 27 19.21	4 20 46.6	.3126119	19 56.3	14	23 15 50.34	5 36 2.0	.2932949	7 41.3
18	23 27 47.33	4 17 54.8	.3113359	19 41.1	18	23 15 42.10	5 36 44.0	.2946928	7 25.5
22	23 28 13.02	S. 4 15 18.8	1.3100185	19 25.8	22	23 15 36.79	S. 5 37 7.2	1.2961259	7 9.7
26	23 28 36.18	4 12 59.4	.3086645	19 10.4	26	23 15 34.49	5 37 11.3	.2975869	6 53.9
30	23 28 56.73	4 10 56.8	.3072794	18 55.0	30	23 15 35.23	5 36 56.1	.2990676	6 38.2
June 3	23 29 14.60	4 9 11.7	.3058689	18 39.6	Dec. 4	23 15 39.03	5 36 21.4	.3005066	6 22.5
7	23 29 29.71	4 7 44.3	.3044393	18 24.1	8	23 15 45.88	5 35 27.3	.3020578	6 6.9
11	23 29 42.02	4 6 35.0	.3029971	18 8.6	12	23 15 55.75	5 34 14.2	.3035522	5 51.3
15	23 29 51.53	S. 4 5 43.9	1.3015491	17 53.0	16	23 16 8.62	S. 5 32 42.1	1.3050372	5 35.8
19	23 29 58.20	4 5 10.9	.3001002	17 37.4	20	23 16 24.44	5 30 51.5	.3065061	5 20.4
23	23 30 2.03	4 4 56.3	.2986575	17 21.7	24	23 16 43.18	5 28 42.6	.3079518	5 5.0
27	23 30 2.99	4 4 59.9	.2972266	17 6.0	28	23 17 4.77	5 26 15.7	.3093677	4 49.6
July 1	23 30 1.10	S. 4 5 21.8	1.2958155	16 50.2	32	23 17 29.12	S. 5 23 31.6	1.3107467	4 34.3

NEPTUNE, 1924.

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Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage	Mean Noon.	Apparent Right Ascension.	Apparent Declination.	Log. of True Dist. from the Earth.	Merid. Passage.
h m s	° ' "	° ' "		h m	h m s	° ' "	° ' "		h m
1923-24									
Dec. 30	9 30 3·35	N. 15 2 47·8	1·4676553	14 56·0	July 1	9 24 36·63	N. 15 30 3·9	1·4895650	2 47·1
Jan. 3	9 29 44·68	15 4 22·0	·4669923	14 39·9	5	9 25 5·74	15 27 48·0	·4901409	2 31·9
7	9 29 24·54	15 6 3·1	·4663864	14 23·8	9	9 25 35·93	15 25 26·8	·4906655	2 16·7
11	9 29 3·06	15 7 50·5	·4658414	14 7·7	13	9 26 7·11	15 23 0·8	·4911373	2 1·5
15	9 28 40·40	15 9 43·1	·4653601	13 51·6	17	9 26 39·15	15 20 30·4	·4915541	1 46·3
19	9 28 16·70	15 11 40·5	·4649454	13 35·5	21	9 27 11·96	15 17 56·2	·4919150	1 31·1
23	9 27 52·12	N. 15 13 41·7	1·4645993	13 19·4	25	9 27 45·43	N. 15 15 18·6	1·4922189	1 15·9
27	9 27 26·82	15 15 46·0	·4643235	13 3·2	29	9 28 19·45	15 12 38·1	·4924635	1 0·7
31	9 27 0 94	15 17 52·7	·4641196	12 47·1	Aug. 2	9 28 53·90	15 9 55·4	·4926482	0 45·6
Feb. 4	9 26 34·66	15 20 0·9	·4639803	12 30·9	6	9 29 28·66	15 7 11·0	·4927719	0 30·4
8	9 26 8·16	15 22 9·7	·4639333	12 14·7	10	9 30 3·60	15 4 25·3	·4928346	0 15·3
12	9 25 41·62	15 24 18·4	·4639519	11 58·6	14	9 30 38·61	15 1 39·1	·4928358	{ ^{0 0·1} _{23 56·3} }
16	9 25 15·22	N. 15 26 25·9	1·1640441	11 42·4	18	9 31 13·56	N. 14 58 52·9	1·4927757	23 41·2
20	9 24 49·13	15 28 31·7	·4642094	11 26·3	22	9 31 48·37	14 56 7·2	·4926545	23 26·0
24	9 24 23·50	15 30 34·8	·4644463	11 10·1	26	9 32 22·89	14 53 22·6	·4924722	23 10·9
28	9 23 58·50	15 32 34·6	·4647535	10 54·0	30	9 32 57·02	14 50 39·7	·4922286	22 55·7
Mar. 3	9 23 34·28	15 34 30·4	·4651293	10 37·8	Sept. 3	9 33 30·62	14 47 59·1	·4919248	22 40·6
7	9 23 11·01	15 36 21·3	·4655719	10 21·7	7	9 34 3·58	14 45 21·5	·4915623	22 25·4
11	9 22 48·84	N. 15 38 6·8	1·4660780	10 5·6	11	9 34 35·76	N. 14 42 47·4	1·4911418	22 10·2
15	9 22 27·92	15 39 46·1	·4666445	9 49·6	15	9 35 7·08	14 40 17·4	·4906654	21 54·9
19	9 22 8·36	15 41 18·8	·4672680	9 33·5	19	9 35 37·42	14 37 52·1	·4901346	21 39·7
23	9 21 50·28	15 42 44·4	·4679440	9 17·5	23	9 36 6·68	14 35 31·9	·4895508	21 24·5
27	9 21 33·79	15 44 2·3	·4686699	9 1·5	27	9 36 34·74	14 33 17·5	·4889160	21 9·2
31	9 21 18·98	15 45 12·1	·4694413	8 45·5	Oct. 1	9 37 1·49	* 14 31 9·6	·4882327	20 43·9
Apr. 4	9 21 5·96	N. 15 46 13·5	1·4702542	8 29·6	5	9 37 26·83	N. 14 29 8·4	1·4875034	20 38·6
8	9 20 54·79	15 47 6·2	·4711043	8 13·7	9	9 37 50·64	14 27 14·8	·4867317	20 23·3
12	9 20 45·57	15 47 49·7	·4719867	7 57·8	13	9 38 12·87	14 25 29·0	·4859203	20 7·9
16	9 20 38·34	15 48 23·9	·4728964	7 42·0	17	9 38 33·42	14 23 51·5	·4850724	19 52·5
20	9 20 33·12	15 48 48·6	·4738290	7 26·2	21	9 38 52·21	14 22 22·7	·4841916	19 37·1
24	9 20 29·96	15 49 3·9	·4747800	7 10·4	25	9 39 9·17	14 21 3·1	·4832808	19 21·7
28	9 20 28·86	N. 15 49 9·4	1·4757451	6 54·6	29	9 39 24·21	N. 14 19 53·1	1·4823447	19 6·2
May 2	9 20 29 86	15 49 5·3	·4767198	6 38·9	Nov. 2	9 39 37·27	14 18 52·9	·4813871	18 50·7
6	9 20 32·97	15 48 51·4	·4776989	6 23·2	6	9 39 48·30	14 18 3·0	·4804130	18 35·1
10	9 20 38·17	15 48 27·8	·4786781	6 7·6	10	9 39 57·26	14 17 23·3	·4794265	18 19·5
14	9 20 45·44	15 47 54·6	·4796525	5 52·0	14	9 40 4·13	14 16 54·3	·4784323	18 3·9
18	9 20 54·75	15 47 11·9	·4806178	5 36·4	18	9 40 8·89	14 16 35·8	·4774347	17 48·2
22	9 21 6·05	N. 15 46 20·0	1·4815702	5 20·9	22	9 40 11·50	N. 14 16 28·2	1·4764386	17 32·5
26	9 21 19·31	15 45 19·0	·4825062	5 5·4	26	9 40 11·95	14 16 31·3	·4754488	17 16·8
30	9 21 34·49	15 44 9·0	·4834211	4 49·9	30	9 40 10·24	14 16 45·2	·4744708	17 1·1
June 3	9 21 51·53	15 42 50·4	·4843115	4 34·5	Dec. 4	9 40 6·41	14 17 9·8	·4735098	16 45·3
7	9 22 10·37	15 41 23·3	·4851732	4 19·1	8	9 40 0·49	14 17 44·8	·4725709	16 29·4
11	9 22 30·93	15 39 48·2	·4860029	4 3·7	12	9 39 52·52	14 18 30·1	·4716585	16 13·6
15	9 22 53·13	N. 15 38 5·3	1·4867971	3 48·3	16	9 39 42·56	N. 14 19 25·2	1·4707775	15 57·7
19	9 23 16·88	15 36 15·1	·4875532	3 33·0	20	9 39 30·67	14 20 29·9	·4699326	15 41·7
23	9 23 42·10	15 34 17·9	·4882683	3 17·7	24	9 39 16·91	14 21 43·7	·4691284	15 25·8
27	9 24 8·72	15 32 14·1	·4889397	3 2·4	28	9 39 1·36	14 23 6·3	·4683700	15 9·8
July 1	9 24 36·63	N. 15 30 3·9	1·4895650	2 47·1	32	9 38 44·14	N. 14 24 37·1	1·4676617	14 53·7

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Semid. pass. Merid	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semid. pass. Merid	Apparent Declination.	Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Jan. 1	20 42 34.63	0.42	S. 19 59 56.5	5.88	6.15	Feb. 16	0 16 2.72	0.47	N. 1 8 9.6	7.10	7.43
2	20 47 40.40	0.42	19 40 36.7	5.90	6.17	17	0 20 22.12	0.47	1 39 41.2	7.14	7.47
3	20 52 44.79	0.42	19 20 43.5	5.92	6.19	18	0 24 41.24	0.48	2 11 10.9	7.18	7.51
4	20 57 47.81	0.42	19 0 17.6	5.94	6.21	19	0 29 0.13	0.48	2 42 37.9	7.22	7.55
5	21 2 49.43	0.42	18 39 19.8	5.95	6.23	20	0 33 18.82	0.49	3 14 1.6	7.25	7.59
6	21 7 49.66	0.42	18 17 50.8	5.97	6.25	21	0 37 37.34	0.49	3 45 21.3	7.29	7.64
7	21 12 48.49	0.42	S. 17 55 51.5	5.99	6.27	22	0 41 55.73	0.49	N. 4 16 36.3	7.34	7.68
8	21 17 45.90	0.42	17 33 22.6	6.01	6.29	23	0 46 14.04	0.49	4 47 45.9	7.38	7.73
9	21 22 41.92	0.42	17 10 24.9	6.03	6.31	24	0 50 32.29	0.50	5 18 49.4	7.43	7.77
10	21 27 36.53	0.42	16 46 59.1	6.05	6.33	25	0 54 50.52	0.50	5 49 46.1	7.47	7.82
11	21 32 29.74	0.42	16 23 6.1	6.07	6.35	26	0 59 8.76	0.50	6 20 35.3	7.51	7.86
12	21 37 21.56	0.42	15 58 46.7	6.09	6.37	27	1 3 27.05	0.50	6 51 16.5	7.56	7.91
13	21 42 11.99	0.42	S. 15 34 1.7	6.12	6.40	28	1 7 45.43	0.51	N. 7 21 48.8	7.60	7.95
14	21 47 1.05	0.42	15 8 51.8	6.14	6.42	29	1 12 3.92	0.51	7 52 11.7	7.65	8.00
15	21 51 48.76	0.43	14 43 17.9	6.16	6.45	Mar. 1	1 16 22.55	0.52	8 22 24.3	7.69	8.05
16	21 56 35.12	0.43	14 17 20.8	6.19	6.47	2	1 20 41.35	0.52	8 52 26.1	7.74	8.10
17	22 1 20.16	0.43	13 51 1.3	6.21	6.50	3	1 25 0.35	0.53	9 22 16.3	7.79	8.15
18	22 6 3.90	0.43	13 24 20.2	6.24	6.52	4	1 29 19.58	0.53	9 51 54.3	7.83	8.20
19	22 10 46.36	0.43	S. 12 57 18.2	6.27	6.55	5	1 33 39.04	0.53	N. 10 21 19.3	7.88	8.25
20	22 15 27.56	0.43	12 29 56.1	6.29	6.57	6	1 37 58.77	0.54	10 50 30.8	7.93	8.30
21	22 20 7.53	0.43	12 2 14.8	6.31	6.60	7	1 42 18.77	0.54	11 19 27.9	7.99	8.36
22	22 24 46.30	0.43	11 34 15.1	6.33	6.62	8	1 46 39.06	0.55	11 48 10.1	8.04	8.41
23	22 29 23.90	0.43	*11 5 57.7	6.35	6.65	9	1 50 59.67	0.55	12 16 36.6	8.09	8.47
24	22 34 0.35	0.43	10 37 23.5	6.38	6.68	10	1 55 20.60	0.55	12 44 46.7	8.15	8.52
25	22 38 35.69	0.43	S. 10 8 33.1	6.41	6.71	11	1 59 41.87	0.56	N. 13 12 39.7	8.20	8.58
26	22 43 9.96	0.44	9 39 27.4	6.43	6.73	12	2 4 3.50	0.56	13 40 15.0	8.26	8.64
27	22 47 43.19	0.44	9 10 7.1	6.46	6.76	13	2 8 25.48	0.57	14 7 31.9	8.31	8.70
28	22 52 15.41	0.44	8 40 33.0	6.49	6.79	14	2 12 47.82	0.57	14 34 29.7	8.37	8.76
29	22 56 46.65	0.44	8 10 45.8	6.52	6.82	15	2 17 10.53	0.58	15 1 7.8	8.43	8.82
30	23 1 16.97	0.44	7 40 46.3	6.55	6.85	16	2 21 33.61	0.58	15 27 25.4	8.49	8.88
31	23 5 46.38	0.44	S. 7 10 35.3	6.58	6.88	17	2 25 57.07	0.59	N. 15 53 22.1	8.55	8.95
Feb. 1	23 10 14.92	0.44	6 40 13.6	6.61	6.91	18	2 30 20.91	0.59	16 18 57.1	8.62	9.02
2	23 14 42.64	0.45	6 9 41.8	6.64	6.95	19	2 34 45.12	0.60	16 44 9.7	8.69	9.09
3	23 19 9.56	0.45	5 39 0.8	6.67	6.98	20	2 39 9.71	0.61	17 8 59.4	8.75	9.16
4	23 23 35.72	0.45	5 8 11.3	6.71	7.02	21	2 43 34.67	0.62	17 33 25.5	8.82	9.23
5	23 28 1.15	0.45	4 37 14.1	6.74	7.05	22	2 48 0.00	0.62	17 57 27.4	8.89	9.30
6	23 32 25.88	0.45	S. 4 6 10.0	6.77	7.08	23	2 52 25.69	0.63	N. 18 21 4.7	8.96	9.37
7	23 36 49.96	0.45	3 34 59.6	6.80	7.11	24	2 56 51.74	0.64	18 44 16.6	9.02	9.44
8	23 41 13.42	0.46	3 3 43.8	6.83	7.14	25	3 1 18.13	0.64	19 7 2.7	9.09	9.52
9	23 45 36.28	0.46	2 32 23.3	6.86	7.17	26	3 5 44.85	0.65	19 29 22.3	9.16	9.59
10	23 49 58.59	0.46	2 0 58.8	6.89	7.21	27	3 10 11.89	0.66	19 51 15.0	9.24	9.67
11	23 54 20.38	0.46	1 29 31.1	6.92	7.24	28	3 14 39.23	0.66	20 12 40.2	9.31	9.75
12	23 58 41.68	0.47	S. 0 58 1.0	6.96	7.28	29	3 19 6.84	0.67	N. 20 33 37.3	9.39	9.83
13	0 3 2.52	0.47	S. 0 26 29.1	6.99	7.32	30	3 23 34.71	0.68	20 54 6.0	9.47	9.91
14	0 7 22.96	0.47	N. 0 5 3.8	7.03	7.36	31	3 28 2.79	0.68	21 14 5.6	9.56	10.00
15	0 11 43.01	0.47	N. 0 36 37.0	7.07	7.40	Apr. 1	3 32 31.06	0.69	N. 21 33 35.9	9.64	10.09

VENUS, 1924.

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AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass. Merid.	Apparent Declination.			Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.			Sid. Time of Semid. pass. Merid.	Apparent Declination.			Semidiameter.	Hor. Par.													
	h	m	s		°	'	"				°	'	"		h	m	s			°	'	"	°	'	"							
Apr.	2	3	36	59	47	0	70	N.21	52	36	2	9	73	10	18	May	18	6	42	13	11	1	24	N.26	37	45	8	16	67	17	44	
	3	3	41	27	98	0	71	22	11	6	1	9	81	10	27		19	6	45	2	79	1	26	26	32	21	1	16	92	17	70	
	4	3	45	56	56	0	72	22	29	5	2	9	90	10	36		20	6	47	46	79	1	28	26	26	35	3	17	17	17	97	
	5	3	50	25	13	0	73	22	46	33	1	9	99	10	45		21	6	50	24	92	1	30	26	20	29	5	17	44	18	25	
	6	3	54	53	65	0	73	23	3	29	3	10	08	10	55		22	6	52	56	97	1	32	26	14	4	3	17	71	18	53	
	7	3	59	22	06	0	74	23	19	53	5	10	17	10	65		23	6	55	22	74	1	34	26	7	20	8	17	99	18	82	
	8	4	3	50	31	0	75	N.23	35	45	3	10	27	10	75		24	6	57	42	01	1	36	N.26	0	19	6	18	27	19	12	
	9	4	8	18	32	0	76	23	51	4	4	10	37	10	85		25	6	59	54	58	1	38	25	53	1	5	18	56	19	42	
	10	4	12	46	02	0	77	24	5	50	4	10	47	10	96		26	7	2	0	22	1	40	25	45	27	4	18	86	19	73	
	11	4	17	13	34	0	77	24	20	3	2	10	57	11	06		27	7	3	58	70	1	42	25	37	38	3	19	16	20	05	
	12	4	21	40	22	0	78	24	33	42	3	10	68	11	17		28	7	5	49	79	1	44	25	29	34	9	19	47	20	37	
	13	4	26	6	56	0	79	24	46	47	6	10	79	11	28		29	7	7	33	25	1	46	25	21	18	0	19	78	20	70	
	14	4	30	32	28	0	80	N.24	59	18	9	10	90	11	40		30	7	9	8	84	1	48	N.25	12	48	3	20	11	21	04	
	15	4	34	57	30	0	81	25	11	16	0	11	01	11	52		31	7	10	36	31	1	50	25	4	6	7	20	43	21	38	
	16	4	39	21	53	0	82	25	22	38	7	11	12	11	64		June	1	7	11	55	42	1	53	24	55	13	9	20	77	21	73
	17	4	43	44	88	0	83	25	33	26	9	11	24	11	76			2	7	13	5	92	1	55	24	46	10	8	21	10	22	08
	18	4	48	7	25	0	84	25	43	40	6	11	36	11	89			3	7	14	7	57	1	57	24	36	57	9	21	45	22	44
	19	4	52	28	56	0	85	25	53	19	5	11	48	12	02			4	7	15	0	14	1	60	24	27	36	1	21	79	22	80
	20	4	56	48	71	0	86	N.26	2	23	8	11	61	12	15		5	7	15	43	40	1	62	N.24	18	5	9	22	15	23	18	
21	5	1	7	59	0	87	26	10	53	4	11	74	12	28	6	7	16	17	12	1	64	24	8	27	8	22	52	23	56			
22	5	5	25	12	0	88	26	18	48	5	11	87	12	42	7	7	16	41	09	1	67	23	58	42	2	22	87	23	93			
23	5	9	41	20	0	89	26	26	9	0	12	00	12	56	8	7	16	55	13	1	69	23	48	49	9	23	23	24	31			
24	5	13	55	71	0	91	26	32	55	1	12	14	12	70	9	7	16	59	05	1	72	23	38	51	3	23	60	24	69			
25	5	18	8	55	0	92	26	39	7	0	12	28	12	85	10	7	16	52	71	1	74	23	28	46	7	23	96	25	07			
26	5	22	19	61	0	93	N.26	44	44	9	12	42	13	00	11	7	16	35	98	1	77	N.23	18	36	5	24	32	25	45			
27	5	26	28	78	0	94	26	49	48	9	12	57	13	15	12	7	16	8	79	1	79	23	8	21	1	24	69	25	83			
28	5	30	35	93	0	95	26	54	19	2	12	72	13	31	13	7	15	31	11	1	81	22	58	0	6	25	05	26	21			
29	5	34	40	93	0	96	26	58	16	3	12	87	13	47	14	7	14	42	94	1	84	22	47	35	3	25	40	26	58			
30	5	38	43	67	0	98	27	1	40	3	13	03	13	64	15	7	13	44	34	1	86	22	37	5	4	25	75	26	94			
May	1	5	42	44	01	0	99	27	4	31	7	13	19	13	81	16	7	12	35	44	1	88	22	26	31	1	26	08	27	29		
2	5	46	41	80	1	00	N.27	6	50	8	13	36	13	98	17	7	11	16	45	1	90	N.22	15	52	7	26	41	27	64			
3	5	50	36	92	1	02	27	8	38	0	13	53	14	16	18	7	9	47	62	1	92	22	5	10	4	26	73	27	97			
4	5	54	29	21	1	03	27	9	53	8	13	70	14	34	19	7	8	9	27	1	94	21	54	24	5	27	04	28	29			
5	5	58	18	52	1	05	27	10	38	6	13	88	14	52	20	7	6	21	83	1	96	21	43	35	3	27	32	28	59			
6	6	2	4	71	1	06	27	10	52	9	14	06	14	71	21	7	4	25	76	1	98	21	32	43	2	27	60	28	88			
7	6	5	47	61	1	07	27	10	37	4	14	25	14	91	22	7	2	21	64	2	00	21	21	49	0	27	86	29	15			
8	6	9	27	05	1	08	N.27	9	52	4	14	45	15	12	23	7	0	10	07	2	01	N.21	10	53	1	28	09	29	39			
9	6	13	2	88	1	09	27	8	38	6	14	65	15	33	24	6	57	51	72	2	02	20	59	56	6	28	30	29	61			
10	6	16	34	91	1	11	27	6	56	5	14	85	15	54	25	6	55	27	36	2	03	20	49	0	3	28	48	29	80			
11	6	20	2	99	1	12	27	4	46	9	15	06	15	76	26	6	52	57	80	2	04	20	38	5	4	28	64	29	97			
12	6	23	26	93	1	14	27	2	10	3	15	27	15	98	27	6	50	23	93	2	05	20	27	13	3	28	77	30	11			
13	6	26	46	53	1	15	26	59	7	6	15	49	16	21	28	6	47	46	64	2	05	20	16	25	5	28	87	30	21			
14	6	30	1	63	1	17	N.26	55	39	3	15	71	16	44	29	6	45	6	89	2	05	N.20	5	43	4	28	95	30	29			
15	6	33	12	03	1	19	26	51	46	3	15	94	16	68	30	{	6	42	25	63	2	06	19	55	9	0	28	99	30	33		
16	6	36	17	54	1	21	26	47	29	2	16	18	16	93	July	1	6	39	43	88	2	06	19	44	44	1	29	01	30	35		
17	6	39	17	96	1	23	N.26	42	48	8	16	42	17	18	2	6	37	2	60	2	05	19	34	30	9	28	99	30	33			
																						N.19	24	31	3	28	94	30	28			

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass Merid.	Apparent Declination.			Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.			Sid. Time of Semid. pass Merid.	Apparent Declination.			Semidiameter.	Hor. Par.											
	h	m	s		°	'	"				h	m	s		°	'	"													
July	3	6	31	45	39	2	04	N.19	14	47	5	28	85	30	19	Aug.18	6	52	15	62	1	10	N.18	22	23	1	15	64	16	37
	4	6	29	11	35	2	03	19	5	21	5	28	75	30	08	19	6	55	22	00	1	09	18	23	33	3	15	43	16	15
	5	6	26	41	54	2	02	18	56	15	7	28	61	29	94	20	6	58	32	34	1	07	18	24	28	2	15	21	15	92
	6	6	24	16	81	2	01	18	47	31	8	28	45	29	77	21	7	1	46	49	1	05	18	25	6	7	15	01	15	71
	7	6	21	57	92	1	99	18	39	11	7	28	27	29	58	22	7	5	4	29	1	04	18	25	27	9	14	81	15	50
	8	6	19	45	60	1	98	18	31	17	1	28	06	29	36	23	7	8	25	62	1	03	18	25	30	9	14	62	15	30
	9	6	17	40	52	1	96	N.18	23	49	7	27	83	29	12	24	7	11	50	31	1	01	N.18	25	14	9	14	43	15	10
	10	6	15	43	25	1	94	18	16	50	7	27	57	28	85	25	7	15	18	23	1	00	18	24	38	9	14	25	14	91
	11	6	13	54	28	1	92	18	10	21	3	27	30	28	57	26	7	18	49	24	0	99	18	23	42	4	14	07	14	72
	12	6	12	14	09	1	90	18	4	22	5	27	01	28	26	27	7	22	23	22	0	98	18	22	24	5	13	89	14	53
	13	6	10	43	05	1	87	17	58	54	7	26	70	27	94	28	7	26	0	02	0	96	18	20	44	6	13	71	14	35
	14	6	9	21	46	1	85	17	53	58	4	26	39	27	61	29	7	29	39	53	0	95	18	18	42	0	13	55	14	18
	15	6	8	9	54	1	83	N.17	49	34	0	26	06	27	27	30	7	33	21	63	0	94	N.18	16	16	1	13	38	14	00
	16	6	7	7	50	1	80	17	45	41	1	25	73	26	92	31	7	37	6	20	0	93	18	13	26	3	13	22	13	83
17	6	6	15	44	1	77	17	42	19	5	25	38	26	56	Sept. 1	7	40	53	13	0	92	18	10	12	0	13	06	13	67	
18	6	5	33	43	1	75	17	39	28	8	25	03	26	19	2	7	44	42	30	0	91	18	6	32	8	12	91	13	51	
19	6	5	1	46	1	73	17	37	8	2	24	68	25	82	3	7	48	33	62	0	89	18	2	28	3	12	76	13	35	
20	6	4	39	50	1	70	17	35	16	8	24	32	25	45	4	7	52	27	00	0	88	17	57	58	0	12	61	13	19	
21	6	4	27	44	1	68	N.17	33	53	6	23	96	25	07	5	7	56	22	32	0	87	N.17	53	1	5	12	46	13	04	
22	6	4	25	17	1	65	17	32	57	3	23	61	24	70	6	8	0	19	51	0	86	17	47	38	4	12	32	12	89	
23	6	4	32	54	1	63	17	32	26	7	23	25	24	33	7	8	4	18	48	0	85	17	41	48	4	12	18	12	75	
24	6	4	49	39	1	60	17	32	20	3	22	90	23	96	8	8	8	19	13	0	84	17	35	31	1	12	05	12	61	
25	6	5	15	49	1	57	17	32	36	6	22	54	23	59	9	8	12	21	40	0	83	17	28	46	4	11	92	12	47	
26	6	5	50	66	1	55	17	33	14	0	22	19	23	22	10	8	16	25	20	0	82	17	21	34	0	11	79	12	34	
27	6	6	34	67	1	53	N.17	34	10	9	21	85	22	86	11	8	20	30	46	0	81	N.17	13	53	6	11	67	12	21	
28	6	7	27	30	1	50	17	35	25	7	21	50	22	50	12	8	24	37	11	0	80	17	5	45	1	11	54	12	08	
29	6	8	28	30	1	48	17	36	56	7	21	17	22	15	13	8	28	45	06	0	80	16	57	8	5	11	42	11	95	
30	6	9	37	43	1	46	17	38	42	2	20	83	21	80	14	8	32	54	24	0	79	16	48	3	4	11	31	11	83	
31	6	10	54	43	1	43	17	40	40	5	20	51	21	46	15	8	7	44	4	59	0	78	16	38	29	9	11	19	11	71
Aug. 1	6	12	19	08	1	41	17	42	49	8	20	18	21	12	16	8	41	16	03	0	77	16	28	27	9	11	08	11	59	
2	6	13	51	13	1	39	N.17	45	8	5	19	87	20	79	17	8	45	28	49	0	76	N.16	17	57	4	10	97	11	48	
3	6	15	30	35	1	37	17	47	35	1	19	56	20	47	18	8	49	41	91	0	75	16	6	58	5	10	87	11	37	
4	6	17	16	51	1	35	17	50	7	7	19	26	20	15	19	8	53	56	21	0	74	15	55	31	2	10	76	11	26	
5	6	19	9	38	1	33	17	52	44	8	18	96	19	84	20	8	58	11	34	0	74	15	43	35	5	10	66	11	15	
6	6	21	8	73	1	31	17	55	24	7	18	67	19	54	21	9	2	27	24	0	73	15	31	11	6	10	56	11	04	
7	6	23	14	36	1	29	17	58	6	1	18	39	19	24	22	9	6	43	85	0	72	15	18	19	7	10	46	10	94	
8	6	25	26	06	1	27	N.18	0	47	3	18	11	18	95	23	9	11	1	10	0	72	N.15	4	59	8	10	35	10	83	
9	6	27	43	63	1	25	18	3	26	9	17	83	18	66	24	9	15	18	95	0	71	14	51	12	1	10	25	10	73	
10	6	30	6	87	1	23	18	6	3	3	17	57	18	38	25	9	19	37	34	0	70	14	36	57	0	10	16	10	63	
11	6	32	35	61	1	21	18	8	35	2	17	31	18	11	26	9	23	56	22	0	69	14	22	14	6	10	07	10	54	
12	6	35	9	66	1	20	18	11	1	3	17	05	17	84	27	9	28	15	54	0	68	14	7	5	3	9	98	10	44	
13	6	37	48	84	1	18	18	13	20	2	16	80	17	58	28	9	32	35	25	0	68	13	51	29	2	9	89	10	35	
14	6	40	32	96	1	16	N.18	15	30	7	16	56	17	33	29	9	36	55	32	0	67	N.13	35	26	8	9	80	10	26	
15	6	43	21	86	1	15	18	17	31	5	16	32	17	08	30	9	41	15	71	0	67	13	18	58	3	9	72	10	17	
16	6	46	15	39	1	13	18	19	21	2	16	09	16	84	Oct. 1	9	45	36	38	0	66	13	2	4	0	9	63	10	08	
17	6	49	13	37	1	12	N.18	20	58	8	15	86	16	60	2	9	49	57	30	0	65	N.12	44	44	5	9	56	10	00	

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass ^g Merid.	Apparent Declination.			Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.			Sid. Time of Semid. pass ^g Merid.	Apparent Declination.			Semidiameter.	Hor. Par.
	h	m	s		°	'	"				h	m	s		°	'	"		
Jan. 19	15	53	11.75	0.18	S. 19	41	30.7	2.50	4.70	Mar. 5	17	58	37.42	0.23	S. 23	31	16.7	3.22	6.06
20	15	55	51.22	0.18	19	50	4.4	2.51	4.72	6	18	1	22.63	0.24	23	32	21.4	3.24	6.10
21	15	58	30.96	0.18	19	58	29.5	2.52	4.74	7	18	4	7.75	0.24	23	33	16.0	3.26	6.14
22	16	1	10.96	0.18	20	6	45.7	2.53	4.76	8	18	6	52.78	0.24	23	34	0.6	3.29	6.18
23	16	3	51.23	0.18	20	14	53.1	2.55	4.79	9	18	9	37.69	0.24	23	34	35.2	3.31	6.22
24	16	6	31.76	0.18	20	22	51.6	2.56	4.81	10	18	12	22.48	0.24	23	34	59.8	3.33	6.26
25	16	9	12.56	0.18	S. 20	30	41.2	2.57	4.84	11	18	15	7.15	0.24	S. 23	35	14.5	3.35	6.30
26	16	11	53.61	0.18	20	38	21.7	2.58	4.86	12	18	17	51.69	0.25	23	35	19.3	3.37	6.34
27	16	14	34.91	0.19	20	45	53.1	2.60	4.89	13	18	20	36.09	0.25	23	35	14.3	3.39	6.38
28	16	17	16.45	0.19	20	53	15.4	2.61	4.91	14	18	23	20.34	0.25	23	34	59.5	3.41	6.42
29	16	19	58.23	0.19	21	0	28.4	2.62	4.94	15	18	26	4.42	0.25	23	34	35.0	3.44	6.47
30	16	22	40.24	0.19	21	7	32.2	2.63	4.96	16	18	28	48.35	0.25	23	34	0.8	3.47	6.51
31	16	25	22.46	0.19	S. 21	14	26.6	2.65	4.99	17	18	31	32.11	0.25	S. 23	33	17.0	3.49	6.56
Feb. 1	16	28	4.90	0.19	21	21	11.5	2.66	5.01	18	18	34	15.69	0.26	23	32	23.5	3.51	6.60
2	16	30	47.54	0.19	21	27	47.0	2.68	5.04	19	18	36	59.08	0.26	23	31	20.6	3.54	6.65
3	16	33	30.37	0.19	21	34	12.9	2.69	5.06	20	18	39	42.29	0.26	23	30	8.3	3.56	6.69
4	16	36	13.38	0.20	21	40	29.1	2.71	5.09	21	18	42	25.29	0.26	23	28	46.6	3.58	6.74
5	16	38	56.57	0.20	21	46	35.7	2.72	5.12	22	18	45	8.07	0.26	23	27	15.6	3.61	6.78
6	16	41	39.94	0.20	S. 21	52	32.6	2.74	5.14	23	18	47	50.63	0.26	S. 23	25	35.3	3.64	6.83
7	16	44	23.47	0.20	21	58	19.6	2.75	5.17	24	18	50	32.95	0.27	23	23	46.0	3.66	6.88
8	16	47	7.15	0.20	22	3	56.9	2.77	5.20	25	18	53	15.02	0.27	23	21	47.6	3.69	6.93
9	16	49	51.00	0.20	22	9	24.3	2.78	5.23	26	18	55	56.84	0.27	23	19	40.3	3.71	6.98
10	16	52	34.98	0.20	22	14	41.8	2.80	5.26	27	18	58	38.38	0.27	23	17	24.0	3.74	7.03
11	16	55	19.11	0.20	22	19	49.4	2.81	5.29	28	19	1	19.62	0.27	23	14	59.1	3.77	7.08
12	16	58	3.37	0.20	S. 22	24	47.0	2.83	5.32	29	19	4	0.55	0.28	S. 23	12	25.4	3.80	7.13
13	17	0	47.76	0.21	22	29	34.6	2.84	5.35	30	19	6	41.16	0.28	23	9	43.1	3.82	7.18
14	17	3	32.27	0.21	22	34	12.2	2.86	5.38	31	19	9	21.44	0.28	23	6	52.3	3.85	7.23
15	17	6	16.91	0.21	22	38	39.7	2.87	5.41	Apr. 1	19	12	1.37	0.28	23	3	53.2	3.87	7.28
16	17	9	1.66	0.21	22	42	57.1	2.89	5.44	2	19	14	40.94	0.28	23	0	45.7	3.90	7.34
17	17	11	46.51	0.21	22	47	4.5	2.91	5.47	3	19	17	20.14	0.29	22	57	30.1	3.93	7.39
18	17	14	31.45	0.21	S. 22	51	1.8	2.92	5.50	4	19	19	58.95	0.29	S. 22	54	6.4	3.97	7.45
19	17	17	16.50	0.21	22	54	49.0	2.94	5.53	5	19	22	37.37	0.29	22	50	34.8	4.00	7.51
20	17	20	1.63	0.21	22	58	26.0	2.96	5.57	6	19	25	15.37	0.29	22	46	55.4	4.02	7.56
21	17	22	46.86	0.22	23	1	52.9	2.97	5.60	7	19	27	52.97	0.29	22	43	8.3	4.05	7.62
22	17	25	32.15	0.22	23	5	9.6	2.99	5.63	8	19	30	30.14	0.30	22	39	13.5	4.08	7.68
23	17	28	17.52	0.22	23	8	16.2	3.01	5.67	9	19	33	6.87	0.30	22	35	11.3	4.11	7.74
24	17	31	2.93	0.22	S. 23	11	12.5	3.03	5.70	10	19	35	43.17	0.30	S. 22	31	1.8	4.15	7.80
25	17	33	48.39	0.22	23	13	58.6	3.05	5.74	11	19	38	19.02	0.30	22	26	44.9	4.18	7.86
26	17	36	33.88	0.22	23	16	34.6	3.06	5.77	12	19	40	54.42	0.30	22	22	21.0	4.21	7.92
27	17	39	19.39	0.22	23	19	0.5	3.08	5.81	13	19	43	29.36	0.31	22	17	50.2	4.24	7.98
28	17	42	4.90	0.23	23	21	16.1	3.10	5.84	14	19	46	3.83	0.31	22	13	12.6	4.27	8.04
29	17	44	50.41	0.23	23	23	21.6	3.12	5.88	15	19	48	37.82	0.31	22	8	28.2	4.31	8.10
Mar. 1	17	47	35.90	0.23	S. 23	25	16.9	3.14	5.91	16	19	51	11.34	0.31	S. 22	3	37.3	4.35	8.17
2	17	50	21.36	0.23	23	27	2.0	3.16	5.95	17	19	53	44.36	0.32	21	58	40.1	4.38	8.23
3	17	53	6.77	0.23	23	28	37.0	3.18	5.98	18	19	56	16.89	0.32	21	53	36.5	4.41	8.30
4	17	55	52.13	0.23	S. 23	30	1.9	3.20	6.02	19	19	58	48.92	0.32	S. 21	48	26.8	4.45	8.36

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Semid. pass. Merid	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semid. pass. Merid	Apparent Declination.	Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Apr. 20	20 120.42	0.32	S. 21 43 11.3	4.49	8.43	June 5	21 44 10.20	0.47	S. 16 50 43.2	6.77	12.73
21	20 3 51.41	0.32	21 37 49.9	4.52	8.50	6	21 46 0.87	0.48	16 44 42.6	6.83	12.85
22	20 6 21.85	0.33	21 32 22.9	4.56	8.57	7	21 47 50.20	0.48	16 38 47.3	6.90	12.98
23	20 8 51.74	0.33	21 26 50.5	4.59	8.64	8	21 49 38.16	0.49	16 32 57.4	6.97	13.11
24	20 11 21.06	0.33	21 21 12.8	4.63	8.71	9	21 51 24.75	0.49	16 27 13.3	7.04	13.24
25	20 13 49.79	0.33	21 15 30.1	4.67	8.78	10	21 53 9.93	0.50	16 21 35.2	7.11	13.37
26	20 16 17.91	0.34	S. 21 9 42.5	4.71	8.86	11	21 54 53.69	0.50	S. 16 16 3.3	7.19	13.51
27	20 18 45.42	0.34	21 3 50.2	4.75	8.93	12	21 56 36.01	0.51	16 10 38.0	7.26	13.64
28	20 21 12.29	0.34	20 57 53.4	4.80	9.01	13	21 58 16.84	0.51	16 5 19.6	7.33	13.78
29	20 23 38.50	0.35	20 51 52.3	4.84	9.09	14	21 59 56.16	0.52	16 0 8.3	7.40	13.92
30	20 26 4.05	0.35	20 45 47.0	4.87	9.16	15	22 1 33.94	0.52	15 55 4.4	7.48	14.06
May 1	20 28 28.91	0.35	20 39 37.8	4.91	9.24	16	22 3 10.17	0.53	15 50 8.4	7.55	14.20
2	20 30 53.09	0.35	S. 20 33 24.9	4.96	9.32	17	22 4 44.80	0.53	S. 15 45 20.4	7.63	14.35
3	20 33 16.56	0.36	20 27 8.4	5.00	9.40	18	22 6 17.77	0.54	15 40 40.9	7.70	14.50
4	20 35 39.30	0.36	20 20 48.6	5.04	9.48	19	22 7 49.05	0.54	15 36 10.3	7.78	14.64
5	20 38 1.32	0.36	20 14 25.6	5.09	9.56	20	22 9 18.61	0.55	15 31 48.8	7.86	14.79
6	20 40 22.59	0.36	20 7 59.7	5.13	9.64	21	22 10 46.39	0.55	15 27 36.7	7.94	14.94
7	20 42 43.11	0.37	20 1 31.0	5.17	9.72	22	22 12 12.34	0.56	15 23 34.5	8.02	15.09
8	20 45 2.87	0.37	S. 19 54 59.8	5.22	9.81	23	22 13 36.41	0.56	S. 15 19 42.6	8.11	15.25
9	20 47 21.84	0.37	19 48 26.3	5.26	9.90	24	22 14 58.55	0.57	15 16 1.2	8.19	15.40
10	20 49 40.04	0.38	19 41 50.7	5.31	9.99	25	22 16 18.72	0.57	15 12 30.8	8.28	15.56
11	20 51 57.44	0.38	19 35 13.1	5.36	10.08	26	22 17 36.88	0.58	15 9 11.5	8.36	15.72
12	20 54 14.03	0.38	19 28 33.8	5.41	10.17	27	22 18 52.97	0.58	15 6 3.8	8.45	15.88
13	20 56 29.82	0.39	19 21 53.0	5.46	10.26	28	22 20 6.96	0.59	15 3 7.8	8.54	16.04
14	20 58 44.79	0.39	S. 19 15 10.9	5.51	10.35	29	22 21 18.78	0.59	S. 15 0 24.0	8.63	16.21
15	21 0 58.92	0.39	19 8 27.6	5.55	10.44	30	22 22 28.40	0.60	14 57 52.6	8.71	16.37
16	21 3 12.22	0.40	19 1 43.5	5.60	10.54	July 1	22 23 35.78	0.61	14 55 34.0	8.79	16.54
17	21 5 24.66	0.40	18 54 58.8	5.66	10.63	2	22 24 40.86	0.61	14 53 28.2	8.88	16.71
18	21 7 36.23	0.40	18 48 13.7	5.71	10.73	3	22 25 43.62	0.62	14 51 35.7	8.98	16.88
19	21 9 46.91	0.40	18 41 28.5	5.77	10.83	4	22 26 44.01	0.63	14 49 56.5	9.07	17.05
20	21 11 56.70	0.41	S. 18 34 43.4	5.82	10.93	5	22 27 41.98	0.63	S. 14 48 30.9	9.16	17.22
21	21 14 5.55	0.41	18 27 58.6	5.87	11.03	6	22 28 37.51	0.64	14 47 19.1	9.25	17.39
22	21 16 13.45	0.42	18 21 14.5	5.92	11.14	7	22 29 30.56	0.65	14 46 21.3	9.35	17.57
23	21 18 20.37	0.42	18 14 31.4	5.98	11.24	8	22 30 21.09	0.65	14 45 37.6	9.44	17.74
24	21 20 26.30	0.42	18 7 49.4	6.04	11.35	9	22 31 9.06	0.66	14 45 8.3	9.53	17.92
25	21 22 31.19	0.43	18 1 8.9	6.09	11.45	10	22 31 54.44	0.66	14 44 53.3	9.62	18.09
26	21 24 35.04	0.43	S. 17 54 30.2	6.15	11.56	11	22 32 37.19	0.67	S. 14 44 52.9	9.72	18.27
27	21 26 37.80	0.44	17 47 53.6	6.21	11.67	12	22 33 17.27	0.68	14 45 7.1	9.81	18.45
28	21 28 39.47	0.44	17 41 19.3	6.27	11.78	13	22 33 54.65	0.68	14 45 36.1	9.91	18.63
29	21 30 40.01	0.45	17 34 47.6	6.33	11.89	14	22 34 29.28	0.69	14 46 19.9	10.00	18.81
30	21 32 39.39	0.45	17 28 18.8	6.39	12.01	15	22 35 1.12	0.70	14 47 18.7	10.10	18.99
31	21 34 37.60	0.45	17 21 53.3	6.45	12.12	16	22 35 30.12	0.70	14 48 32.4	10.19	19.17
June 1	21 36 34.61	0.46	S. 17 15 31.2	6.51	12.24	17	22 35 56.25	0.71	S. 14 50 1.2	10.29	19.35
2	21 38 30.40	0.46	17 9 12.9	6.57	12.36	18	22 36 19.46	0.72	14 51 45.2	10.39	19.53
3	21 40 24.94	0.46	17 2 58.6	6.64	12.48	19	22 36 39.70	0.72	14 53 44.2	10.49	19.71
4	21 42 18.22	0.47	S. 16 56 48.6	6.70	12.60	20	22 36 56.93	0.73	S. 14 55 58.3	10.58	19.88

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass Merid	Apparent Declination.			Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.			Sid. Time of Semid. pass Merid.	Apparent Declination.			Semidiameter.	Hor. Par.
	h	m	s		°	'	"				h	m	s		°	'	"		
July 21	22	37	11.12	0.74	S. 14	58	27.3	10.67	20.06	Sept. 5	22	5	57.43	0.85	S. 18	21	22.1	12.11	22.76
22	22	37	22.23	0.74	15	1	11.1	10.77	20.23	6	22	5	7.11	0.85	18	22	12.5	12.05	22.64
23	22	37	30.23	0.75	15	4	9.5	10.86	20.41	7	22	4	18.95	0.84	18	22	42.8	11.98	22.52
24	22	37	35.10	0.76	15	7	22.4	10.95	20.58	8	22	3	33.08	0.84	18	22	52.7	11.91	22.39
25	22	37	36.83	0.76	15	10	49.3	11.04	20.75	9	22	2	49.59	0.83	18	22	42.3	11.84	22.26
26	22	37	35.40	0.77	15	14	30.1	11.13	20.92	10	22	2	8.59	0.83	18	22	11.7	11.77	22.12
27	22	37	30.81	0.77	S. 15	18	24.3	11.22	21.09	11	22	1	30.15	0.82	S. 18	21	20.8	11.69	21.97
28	22	37	23.07	0.78	15	22	31.5	11.31	21.25	12	22	0	54.35	0.82	18	20	9.9	11.61	21.82
29	22	37	12.19	0.79	15	26	51.1	11.39	21.41	13	22	0	21.26	0.81	18	18	39.1	11.52	21.66
30	22	36	58.20	0.79	15	31	22.5	11.47	21.57	14	21	59	50.94	0.81	18	16	48.5	11.44	21.50
31	22	36	41.11	0.80	15	36	5.2	11.55	21.72	15	21	59	23.45	0.80	18	14	38.4	11.35	21.34
Aug. 1	22	36	20.98	0.80	15	40	58.4	11.63	21.87	16	21	58	58.83	0.79	18	12	9.0	11.27	21.18
2	22	35	57.84	0.81	S. 15	46	1.4	11.71	22.02	17	21	58	37.13	0.78	S. 18	9	20.5	11.18	21.01
3	22	35	31.76	0.81	15	51	13.5	11.79	22.16	18	21	58	18.38	0.78	18	6	13.1	11.09	20.84
4	22	35	2.79	0.82	15	56	33.7	11.86	22.30	19	21	58	2.64	0.77	18	2	47.0	11.00	20.67
5	22	34	31.02	0.82	16	2	1.3	11.93	22.43	20	21	57	49.92	0.76	17	59	2.5	10.91	20.50
6	22	33	56.52	0.83	16	7	35.3	12.00	22.56	21	21	57	40.26	0.76	17	54	59.8	10.81	20.32
7	22	33	19.39	0.83	16	13	14.7	12.06	22.68	22	21	57	33.67	0.75	17	50	39.4	10.72	20.14
8	22	32	39.71	0.84	S. 16	18	58.6	12.12	22.79	23	21	57	30.17	0.74	S. 17	46	1.4	10.62	19.95
9	22	31	57.58	0.84	16	24	46.0	12.18	22.90	24	21	57	29.75	0.74	17	41	6.2	10.52	19.77
10	22	31	13.10	0.85	16	30	35.9	12.23	23.00	25	21	57	32.43	0.73	17	35	54.0	10.42	19.59
11	22	30	26.38	0.85	16	36	27.2	12.28	23.09	26	21	57	38.21	0.72	17	30	25.1	10.32	19.41
12	22	29	37.53	0.86	16	42	19.1	12.33	23.18	27	21	57	47.07	0.71	17	24	39.8	10.22	19.22
13	22	28	46.68	0.86	16	48	10.3	12.37	23.26	28	21	57	59.02	0.70	17	18	38.5	10.12	19.03
14	22	27	53.93	0.87	S. 16	54	0.0	12.41	23.33	29	21	58	14.03	0.70	S. 17	12	21.4	10.02	18.84
15	22	26	59.42	0.87	16	59	47.2	12.44	23.39	30	21	58	32.08	0.69	17	5	48.9	9.92	18.66
16	22	26	3.28	0.87	17	5	30.6	12.46	23.44	Oct. 1	21	58	53.16	0.69	16	59	1.2	9.83	18.47
17	22	25	5.64	0.87	17	11	9.2	12.49	23.49	2	21	59	17.22	0.68	16	51	58.6	9.73	18.29
18	22	24	6.67	0.87	17	16	42.1	12.52	23.53	3	21	59	44.24	0.67	16	44	41.6	9.63	18.10
19	22	23	6.49	0.87	17	22	8.0	12.53	23.56	4	22	0	14.16	0.66	16	37	10.6	9.53	17.92
20	22	22	5.28	0.88	S. 17	27	26.0	12.54	23.58	5	22	0	46.93	0.66	S. 16	29	25.7	9.43	17.74
21	22	21	3.23	0.88	17	32	34.9	12.55	23.59	6	22	1	22.49	0.65	16	21	27.4	9.34	17.56
22	22	20	0.50	0.88	17	37	33.8	12.55	23.60	7	22	2	0.80	0.64	16	13	16.0	9.24	17.38
23	22	18	57.27	0.88	17	42	21.5	12.55	23.60	8	22	2	41.79	0.63	16	4	51.8	9.14	17.20
24	22	17	53.74	0.88	17	46	57.2	12.54	23.58	9	22	3	25.40	0.63	15	56	15.2	9.05	17.02
25	22	16	50.09	0.88	17	51	19.8	12.53	23.56	10	22	4	11.58	0.62	15	47	26.4	8.96	16.84
26	22	15	46.52	0.88	S. 17	55	28.4	12.52	23.53	11	22	5	0.26	0.61	S. 15	38	25.7	8.87	16.67
27	22	14	43.22	0.87	17	59	22.2	12.49	23.49	12	22	5	51.38	0.60	15	29	13.4	8.77	16.49
28	22	13	40.40	0.87	18	3	0.2	12.46	23.44	13	22	6	44.89	0.60	15	19	49.7	8.68	16.32
29	22	12	38.24	0.87	18	6	21.9	12.43	23.38	14	22	7	40.73	0.59	15	10	15.0	8.59	16.15
30	22	11	36.94	0.87	18	9	26.4	12.40	23.32	15	22	8	38.85	0.59	15	0	29.5	8.50	15.98
31	22	10	36.69	0.87	18	12	13.1	12.36	23.25	16	22	9	39.19	0.58	14	50	33.3	8.41	15.81
Sept. 1	22	9	37.68	0.87	S. 18	14	41.4	12.32	23.17	17	22	10	41.71	0.57	S. 14	40	26.7	8.32	15.64
2	22	8	40.07	0.86	18	16	50.8	12.27	23.08	18	22	11	46.37	0.57	14	30	10.0	8.23	15.47
3	22	7	44.06	0.86	18	18	41.0	12.22	22.98	19	22	12	53.10	0.56	14	19	43.2	8.15	15.31
4	22	6	49.80	0.86	S. 18	20	11.5	12.17	22.87	20	22	14	1.86	0.55	S. 14	9	6.6	8.06	15.15

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.			Sid. Time of Equat. Semid. pass ^g Merid.	Apparent Declination.			Polar Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.			Sid. Time of Equat. Semid. pass ^g Merid.	Apparent Declination.			Polar Semidiameter.	Hor. Par.					
	h	m	s		°	'	"				°	'	"		h	m	s			°	'	"	°	'
Feb.	3	16	53	1.88	1.22	S.	21	51	57.7	15.90	1.52	Mar.	20	17	14	36.05	1.40	S.	22	19	43.9	18.15	1.74	
	4	16	53	42.84	1.23		21	53	2.2	15.94	1.53		21	17	14	48.29	1.40		22	19	55.2	18.21	1.74	
	5	16	54	23.34	1.23		21	54	5.3	15.98	1.53		22	17	14	59.76	1.41		22	20	5.7	18.27	1.75	
	6	16	55	3.37	1.23		21	55	6.9	16.01	1.53		23	17	15	10.46	1.41		22	20	15.3	18.33	1.76	
	7	16	55	42.92	1.24		21	56	7.2	16.05	1.54		24	17	15	20.39	1.42		22	20	24.0	18.38	1.76	
	8	16	56	21.99	1.24		21	57	6.0	16.09	1.54		25	17	15	29.53	1.43		22	20	31.8	18.44	1.77	
	9	16	57	0.56	1.24	S.	21	58	3.4	16.14	1.55		26	17	15	37.88	1.43	S.	22	20	38.9	18.49	1.77	
	10	16	57	38.63	1.25		21	58	59.4	16.18	1.55		27	17	15	45.45	1.44		22	20	45.1	18.55	1.78	
	11	16	58	16.19	1.25		21	59	54.0	16.22	1.55		28	17	15	52.22	1.44		22	20	50.4	18.61	1.78	
	12	16	58	53.24	1.26		22	0	47.2	16.26	1.56		29	17	15	58.18	1.44		22	20	55.0	18.66	1.79	
	13	16	59	29.77	1.26		22	1	39.1	16.30	1.56		30	17	16	3.35	1.45		22	20	58.8	18.72	1.79	
	14	17	0	5.76	1.26		22	2	29.7	16.35	1.57		31	17	16	7.72	1.45		22	21	1.7	18.78	1.80	
	15	17	0	41.22	1.27	S.	22	3	19.0	16.40	1.57		Apr.	1	17	16	11.27	1.46	S.	22	21	3.8	18.84	1.81
	16	17	1	16.14	1.27		22	4	7.0	16.44	1.57			2	17	16	14.02	1.46		22	21	5.2	18.90	1.81
17	17	1	50.50	1.27		22	4	53.7	16.49	1.58	3	17		16	15.96	1.47		22	21	5.7	18.96	1.82		
18	17	2	24.31	1.28		22	5	39.0	16.53	1.58	4	17		16	17.09	1.47		22	21	5.4	19.02	1.82		
19	17	2	57.56	1.28		22	6	23.1	16.58	1.59	5	17		16	17.41	1.47		22	21	4.3	19.08	1.83		
20	17	3	30.24	1.28		22	7	6.0	16.62	1.59	6	17		16	16.92	1.48		22	21	2.5	19.14	1.83		
21	17	4	2.34	1.29	S.	22	7	47.6	16.67	1.60	7	17		16	15.62	1.48	S.	22	20	59.8	19.19	1.84		
22	17	4	33.85	1.29		22	8	28.0	16.72	1.60	8	17		16	13.51	1.49		22	20	56.4	19.25	1.84		
23	17	5	4.78	1.29		22	9	7.2	16.77	1.61	9	17		16	10.60	1.49		22	20	52.2	19.31	1.85		
24	17	5	35.11	1.30		22	9	45.2	16.82	1.61	10	17		16	6.88	1.49		22	20	47.2	19.36	1.85		
25	17	6	4.82	1.30		22	10	22.0	16.86	1.61	11	17		16	2.37	1.50		22	20	41.4	19.42	1.86		
26	17	6	33.92	1.31		22	10	57.7	16.91	1.62	12	17		15	57.05	1.50		22	20	34.8	19.48	1.87		
27	17	7	2.39	1.31	S.	22	11	32.2	16.96	1.62	13	17	15	50.94	1.51	S.	22	20	27.4	19.53	1.87			
28	17	7	30.23	1.31		22	12	5.5	17.01	1.63	14	17	15	44.04	1.51		22	20	19.3	19.59	1.88			
29	17	7	57.42	1.32		22	12	37.8	17.07	1.63	15	17	15	36.35	1.52		22	20	10.4	19.65	1.88			
Mar.	1	17	8	23.97	1.32		22	13	8.9	17.12	1.64	16	17	15	27.88	1.52		22	20	0.8	19.70	1.89		
	2	17	8	49.86	1.32		22	13	38.9	17.17	1.64	17	17	15	18.63	1.52		22	19	50.4	19.76	1.89		
	3	17	9	15.09	1.33		22	14	7.9	17.21	1.65	18	17	15	8.61	1.53		22	19	39.2	19.81	1.90		
	4	17	9	39.64	1.33	S.	22	14	35.8	17.26	1.65	19	17	14	57.82	1.53	S.	22	19	27.2	19.86	1.90		
	5	17	10	3.51	1.34		22	15	2.6	17.31	1.66	20	17	14	46.26	1.54		22	19	14.5	19.92	1.91		
	6	17	10	26.70	1.34		22	15	28.3	17.36	1.66	21	17	14	33.95	1.54		22	19	1.0	19.97	1.91		
	7	17	10	49.19	1.35		22	15	52.9	17.42	1.67	22	17	14	20.87	1.55		22	18	46.8	20.02	1.92		
	8	17	11	10.99	1.35		22	16	16.5	17.47	1.67	23	17	14	7.05	1.55		22	18	31.8	20.07	1.92		
	9	17	11	32.08	1.36		22	16	39.1	17.53	1.68	24	17	13	52.48	1.55		22	18	16.0	20.12	1.93		
	10	17	11	52.46	1.36	S.	22	17	0.7	17.59	1.68	25	17	13	37.18	1.56	S.	22	17	59.4	20.17	1.93		
	11	17	12	12.12	1.36		22	17	21.2	17.64	1.69	26	17	13	21.16	1.56		22	17	42.0	20.22	1.94		
	12	17	12	31.06	1.37		22	17	40.8	17.70	1.69	27	17	13	4.41	1.56		22	17	23.8	20.27	1.94		
	13	17	12	49.27	1.37		22	17	59.4	17.76	1.70	28	17	12	46.95	1.57		22	17	4.9	20.32	1.94		
	14	17	13	6.76	1.37		22	18	17.1	17.81	1.70	29	17	12	28.79	1.57		22	16	45.1	20.37	1.95		
	15	17	13	23.51	1.38		22	18	33.9	17.87	1.71	30	17	12	9.93	1.58		22	16	24.6	20.41	1.95		
16	17	13	39.51	1.38	S.	22	18	49.7	17.92	1.72	May	1	17	11	50.40	1.58	S.	22	16	3.2	20.46	1.96		
17	17	13	54.78	1.38		22	19	4.6	17.97	1.72		2	17	11	30.19	1.58		22	15	41.0	20.51	1.96		
18	17	14	9.29	1.39		22	19	18.6	18.03	1.73		3	17	11	9.33	1.59		22	15	18.1	20.55	1.97		
19	17	14	23.05	1.39	S.	22	19	31.7	18.09	1.73		4	17	10	47.82	1.59	S.	22	14	54.4	20.59	1.97		

JUPITER, 1924.

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AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi-d. pass# Merid	Apparent Declination.	Polar Semi-diameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Equat. Semi-d. pass# Merid.	Apparent Declination.	Polar Semi-diameter.	Hor. Par.
May 5	17 10 25.69	1.59	S. 22 14 29.9	20.63	1.98	June 20	16 47 22.77	1.63	S. 21 45 8.7	21.23	2.03
6	17 10 2.94	1.60	22 14 4.6	20.67	1.98	21	16 46 52.67	1.63	21 44 25.8	21.21	2.03
7	17 9 39.60	1.60	22 13 38.6	20.71	1.98	22	16 46 22.91	1.63	21 43 43.3	21.19	2.03
8	17 9 15.68	1.60	22 13 11.7	20.75	1.99	23	16 45 53.50	1.63	21 43 1.2	21.16	2.03
9	17 8 51.18	1.61	22 12 44.1	20.79	1.99	24	16 45 24.47	1.63	21 42 19.6	21.14	2.02
10	17 8 26.14	1.61	22 12 15.7	20.83	1.99	25	16 44 55.85	1.62	21 41 38.5	21.12	2.02
11	17 8 0.56	1.61	S. 22 11 46.6	20.87	2.00	26	16 44 27.64	1.62	S. 21 40 58.0	21.09	2.02
12	17 7 34.47	1.61	22 11 16.7	20.90	2.00	27	16 43 59.86	1.62	21 40 18.0	21.07	2.02
13	17 7 7.87	1.62	22 10 46.1	20.94	2.00	28	16 43 32.54	1.62	21 39 38.7	21.04	2.01
14	17 6 40.80	1.62	22 10 14.8	20.97	2.01	29	16 43 5.69	1.62	21 39 0.1	21.01	2.01
15	17 6 13.26	1.62	22 9 42.7	21.00	2.01	30	16 42 39.33	1.61	21 38 22.2	20.98	2.01
16	17 5 45.27	1.62	22 9 10.0	21.03	2.01	July 1	16 42 13.47	1.61	21 37 45.0	20.95	2.00
17	17 5 16.85	1.63	S. 22 8 36.5	21.06	2.02	2	16 41 48.13	1.61	S. 21 37 8.7	20.92	2.00
18	17 4 48.03	1.63	22 8 2.4	21.09	2.02	3	16 41 23.34	1.61	21 36 33.2	20.89	2.00
19	17 4 18.81	1.63	22 7 27.6	21.12	2.02	4	16 40 59.11	1.60	21 35 58.6	20.85	1.99
20	17 3 49.22	1.63	22 6 52.2	21.15	2.03	5	16 40 35.45	1.60	21 35 25.0	20.81	1.99
21	17 3 19.26	1.63	22 6 16.1	21.17	2.03	6	16 40 12.37	1.60	21 34 52.3	20.78	1.99
22	17 2 48.97	1.63	22 5 39.3	21.20	2.03	7	16 39 49.89	1.59	21 34 20.7	20.74	1.98
23	17 2 18.36	1.63	S. 22 5 2.0	21.22	2.03	8	16 39 28.02	1.59	S. 21 33 50.2	20.70	1.98
24	17 1 47.45	1.64	22 4 24.0	21.24	2.03	9	16 39 6.78	1.59	21 33 20.7	20.66	1.98
25	17 1 16.27	1.64	22 3 45.4	21.26	2.03	10	16 38 46.18	1.58	21 32 52.4	20.62	1.97
26	17 0 44.83	1.64	22 3 6.3	21.28	2.04	11	16 38 26.22	1.58	21 32 25.2	20.57	1.97
27	17 0 13.15	1.64	22 2 26.6	21.29	2.04	12	16 38 6.91	1.58	21 31 59.2	20.53	1.97
28	16 59 41.26	1.64	22 1 46.4	21.31	2.04	13	16 37 48.27	1.57	21 31 34.4	20.49	1.96
29	16 59 9.19	1.64	S. 22 1 5.7	21.32	2.04	14	16 37 30.31	1.57	S. 21 31 10.8	20.44	1.96
30	16 58 36.94	1.64	22 0 24.5	21.33	2.04	15	16 37 13.03	1.57	21 30 48.6	20.40	1.95
31	16 58 4.56	1.64	21 59 42.8	21.34	2.04	16	16 36 56.43	1.56	21 30 27.8	20.35	1.95
June 1	16 57 32.05	1.64	21 59 0.8	21.35	2.04	17	16 36 40.54	1.56	21 30 8.2	20.30	1.94
2	16 56 59.45	1.64	21 58 18.3	21.35	2.04	18	16 36 25.35	1.55	21 29 50.0	20.25	1.94
3	16 56 26.78	1.64	21 57 35.5	21.36	2.04	19	16 36 10.87	1.55	21 29 33.1	20.20	1.93
4	16 55 54.06	1.64	S. 21 56 52.4	21.36	2.05	20	16 35 57.11	1.55	S. 21 29 17.6	20.15	1.93
5	16 55 21.31	1.64	21 56 8.9	21.36	2.05	21	16 35 44.08	1.54	21 29 3.6	20.10	1.93
6	16 54 48.56	1.64	21 55 25.3	21.36	2.05	22	16 35 31.79	1.54	21 28 51.0	20.05	1.92
7	16 54 15.84	1.64	21 54 41.4	21.36	2.05	23	16 35 20.23	1.54	21 28 39.8	20.00	1.92
8	16 53 43.17	1.64	21 53 57.3	21.36	2.05	24	16 35 9.41	1.53	21 28 30.1	19.95	1.91
9	16 53 10.56	1.64	21 53 13.1	21.35	2.05	25	16 34 59.35	1.53	21 28 21.9	19.90	1.91
10	16 52 38.05	1.64	S. 21 52 28.8	21.35	2.04	26	16 34 50.05	1.52	S. 21 28 15.3	19.85	1.90
11	16 52 5.65	1.64	21 51 44.4	21.35	2.04	27	16 34 41.51	1.52	21 28 10.1	19.80	1.90
12	16 51 33.39	1.64	21 51 0.0	21.34	2.04	28	16 34 33.74	1.52	21 28 6.5	19.75	1.89
13	16 51 1.30	1.64	21 50 15.6	21.34	2.04	29	16 34 26.74	1.51	21 28 4.4	19.69	1.89
14	16 50 29.38	1.64	21 49 31.2	21.33	2.04	30	16 34 20.52	1.51	21 28 4.0	19.64	1.88
15	16 49 57.66	1.64	21 48 47.0	21.32	2.04	31	16 34 15.08	1.50	21 28 5.1	19.59	1.88
16	16 49 26.16	1.64	S. 21 48 2.9	21.31	2.04	Aug. 1	16 34 10.41	1.50	S. 21 28 7.7	19.53	1.87
17	16 48 54.91	1.64	21 47 19.0	21.29	2.04	2	16 34 6.53	1.49	21 28 12.0	19.48	1.87
18	16 48 23.91	1.63	21 46 35.3	21.27	2.03	3	16 34 3.43	1.49	21 28 17.9	19.42	1.86
19	16 47 53.19	1.63	S. 21 45 51.9	21.25	2.03	4	16 34 1.12	1.49	S. 21 28 25.3	19.36	1.85

SATURN, 1924.

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AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Equat Semid. pass. Merid.	Apparent Declination.	Polar Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Equat. Semid. pass. Merid.	Apparent Declination.	Polar Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Jan. 1	13 58 48.22	0.56	S. 9 33 27.1	7.44	0.88	Feb. 16	14 4 6.36	0.61	S. 9 49 50.2	8.03	0.95
2	13 59 3.39	0.56	9 34 35.3	7.45	0.88	17	14 4 4.08	0.61	9 49 21.9	8.04	0.95
3	13 59 18.22	0.56	9 35 41.5	7.46	0.88	18	14 4 1.41	0.61	9 48 51.7	8.06	0.95
4	13 59 32.72	0.56	9 36 45.8	7.48	0.88	19	14 3 58.35	0.61	9 48 19.4	8.07	0.95
5	13 59 46.89	0.56	9 37 48.0	7.49	0.88	20	14 3 54.90	0.61	9 47 45.1	8.08	0.95
6	14 0 0.72	0.57	9 38 48.2	7.50	0.88	21	14 3 51.06	0.61	9 47 8.9	8.09	0.96
7	14 0 14.21	0.57	S. 9 39 46.4	7.51	0.88	22	14 3 46.84	0.61	S. 9 46 30.6	8.11	0.96
8	14 0 27.36	0.57	9 40 42.6	7.53	0.89	23	14 3 42.24	0.61	9 45 50.5	8.12	0.96
9	14 0 40.15	0.57	9 41 36.7	7.54	0.89	24	14 3 37.25	0.62	9 45 8.4	8.13	0.96
10	14 0 52.59	0.57	9 42 28.8	7.55	0.89	25	14 3 31.88	0.62	9 44 24.4	8.15	0.96
11	14 1 4.69	0.57	9 43 18.9	7.56	0.89	26	14 3 26.13	0.62	9 43 38.6	8.16	0.96
12	14 1 16.42	0.57	9 44 6.9	7.58	0.89	27	14 3 20.01	0.62	9 42 50.8	8.17	0.97
13	14 1 27.80	0.57	S. 9 44 52.8	7.59	0.89	28	14 3 13.52	0.62	S. 9 42 1.2	8.19	0.97
14	14 1 38.82	0.57	9 45 36.6	7.60	0.90	29	14 3 6.67	0.62	9 41 9.8	8.20	0.97
15	14 1 49.47	0.57	9 46 18.3	7.61	0.90	Mar. 1	14 2 59.45	0.62	9 40 16.6	8.21	0.97
16	14 1 59.76	0.58	9 46 57.9	7.63	0.90	2	14 2 51.86	0.62	9 39 21.6	8.22	0.97
17	14 2 9.68	0.58	9 47 35.5	7.64	0.90	3	14 2 43.92	0.62	9 38 24.8	8.23	0.97
18	14 2 19.23	0.58	9 48 10.9	7.65	0.90	4	14 2 35.63	0.62	9 37 26.2	8.24	0.97
19	14 2 28.41	0.58	S. 9 48 44.2	7.67	0.90	5	14 2 26.99	0.62	S. 9 36 26.0	8.25	0.98
20	14 2 37.20	0.58	9 49 15.4	7.68	0.91	6	14 2 18.00	0.62	9 35 24.1	8.27	0.98
21	14 2 45.62	0.58	9 49 44.5	7.69	0.91	7	14 2 8.67	0.63	9 34 20.6	8.28	0.98
22	14 2 53.66	0.58	9 50 11.5	7.70	0.91	8	14 1 59.01	0.63	9 33 15.4	8.29	0.98
23	14 3 1.32	0.58	9 50 36.3	7.72	0.91	9	14 1 49.03	0.63	9 32 8.7	8.30	0.98
24	14 3 8.59	0.58	9 50 59.1	7.73	0.91	10	14 1 38.72	0.63	9 31 0.4	8.31	0.98
25	14 3 15.48	0.59	S. 9 51 19.7	7.74	0.91	11	14 1 28.09	0.63	S. 9 29 50.6	8.32	0.98
26	14 3 21.98	0.59	9 51 38.1	7.75	0.91	12	14 1 17.15	0.63	9 28 39.3	8.34	0.98
27	14 3 28.09	0.59	9 51 54.4	7.77	0.92	13	14 1 5.91	0.63	9 27 26.5	8.35	0.98
28	14 3 33.81	0.59	9 52 8.6	7.78	0.92	14	14 0 54.37	0.63	9 26 12.3	8.36	0.98
29	14 3 39.13	0.59	9 52 20.6	7.79	0.92	15	14 0 42.53	0.63	9 24 56.8	8.37	0.98
30	14 3 44.05	0.59	9 52 30.4	7.80	0.92	16	14 0 30.41	0.63	9 23 40.0	8.38	0.99
31	14 3 48.58	0.59	S. 9 52 38.1	7.82	0.92	17	14 0 18.02	0.63	S. 9 22 21.8	8.39	0.99
Feb. 1	14 3 52.70	0.59	9 52 43.6	7.83	0.92	18	14 0 5.35	0.63	9 21 2.5	8.39	0.99
2	14 3 56.43	0.59	9 52 47.0	7.84	0.92	19	13 59 52.42	0.63	9 19 41.9	8.40	0.99
3	14 3 59.76	0.59	9 52 48.2	7.86	0.93	20	13 59 39.22	0.63	9 18 20.1	8.40	0.99
4	14 4 2.68	0.59	9 52 47.3	7.87	0.93	21	13 59 25.78	0.63	9 16 57.1	8.41	0.99
5	14 4 5.20	0.60	9 52 44.2	7.89	0.93	22	13 59 12.08	0.64	9 15 33.1	8.41	0.99
6	14 4 7.31	0.60	S. 9 52 39.0	7.90	0.93	23	13 58 58.14	0.64	S. 9 14 8.0	8.42	0.99
7	14 4 9.02	0.60	9 52 31.6	7.92	0.93	24	13 58 43.97	0.64	9 12 41.8	8.42	0.99
8	14 4 10.33	0.60	9 52 22.0	7.93	0.93	25	13 58 29.59	0.64	9 11 14.8	8.43	1.00
9	14 4 11.24	0.60	9 52 10.3	7.95	0.94	26	13 58 14.98	0.64	9 9 46.8	8.43	1.00
10	14 4 11.74	0.60	9 51 56.5	7.96	0.94	27	13 58 0.16	0.64	9 8 17.9	8.44	1.00
11	14 4 11.84	0.60	9 51 40.6	7.97	0.94	28	13 57 45.14	0.64	9 6 48.1	8.45	1.00
12	14 4 11.54	0.60	S. 9 51 22.6	7.98	0.94	29	13 57 29.92	0.64	S. 9 5 17.6	8.45	1.00
13	14 4 10.84	0.60	9 51 2.6	8.00	0.94	30	13 57 14.50	0.64	9 3 46.2	8.46	1.00
14	14 4 9.75	0.60	9 50 40.5	8.01	0.95	31	13 56 58.90	0.64	9 2 14.1	8.47	1.00
15	14 4 8.25	0.61	S. 9 50 16.4	8.02	0.95	Apr. 1	13 56 43.14	0.64	S. 9 0 41.3	8.47	1.00

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.			Sid. Time of Equat. Semid. pass ^g Merid.	Apparent Declination.			Polar Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.			Sid. Time of Equat. Semid. pass ^g Merid.	Apparent Declination.			Polar Semidiameter.	Hor. Par.
	h	m	s		°	'	"				h	m	s		°	'	"		
Apr.	2	13 56 27	21	0.64	S.	8 59 7	9	8.48	1.00	May 18	13 43 54	08	0.63	S.	7 50 49	7	8.40	0.99	
	3	13 56 11	13	0.64		8 57 33	9	8.48	1.00		19	13 43 40	49	0.63		7 49 42	7	8.39	0.99
	4	13 55 54	09	0.64		8 55 59	5	8.49	1.00		20	13 43 27	14	0.63		7 48 37	3	8.38	0.99
	5	13 55 38	53	0.64		8 54 24	5	8.49	1.00		21	13 43 14	03	0.63		7 47 33	6	8.38	0.99
	6	13 55 22	05	0.64		8 52 49	2	8.49	1.00		22	13 43 1	18	0.63		7 46 31	5	8.37	0.99
	7	13 55 5	45	0.64		8 51 13	5	8.50	1.00		23	13 42 48	58	0.63		7 45 31	2	8.36	0.99
	8	13 54 48	74	0.64	S.	8 49 37	4	8.50	1.00		24	13 42 36	25	0.63	S.	7 44 32	6	8.35	0.99
	9	13 54 31	93	0.64		8 48 11	1	8.50	1.00		25	13 42 24	18	0.63		7 43 35	7	8.34	0.98
	10	13 54 15	03	0.64		8 46 24	6	8.51	1.00		26	13 42 12	39	0.63		7 42 40	5	8.33	0.98
	11	13 53 58	06	0.64		8 44 47	9	8.51	1.00		27	13 42 0	88	0.62		7 41 47	2	8.32	0.98
	12	13 53 41	01	0.64		8 43 11	2	8.51	1.00		28	13 41 49	66	0.62		7 40 55	7	8.31	0.98
	13	13 53 23	89	0.64		8 41 34	3	8.51	1.00		29	13 41 38	72	0.62		7 40 6	1	8.30	0.98
	14	13 53 6	73	0.64	S.	8 39 57	5	8.51	1.00		30	13 41 28	08	0.62	S.	7 39 18	4	8.29	0.98
15	13 52 49	52	0.64		8 38 20	7	8.52	1.00	31	13 41 17	74	0.62		7 38 32	6	8.28	0.98		
16	13 52 32	27	0.64		8 36 44	0	8.52	1.00	June 1	13 41 7	70	0.62		7 37 48	7	8.27	0.98		
17	13 52 15	00	0.64		8 35 7	5	8.52	1.00		2	13 40 57	98	0.62		7 37 6	8	8.26	0.97	
18	13 51 57	72	0.64		8 33 31	1	8.52	1.00		3	13 40 48	57	0.62		7 36 26	9	8.25	0.97	
19	13 51 40	43	0.64		8 31 55	0	8.52	1.00		4	13 40 39	48	0.62		7 35 49	0	8.24	0.97	
20	13 51 23	13	0.64	S.	8 30 19	3	8.52	1.00		5	13 40 30	72	0.62	S.	7 35 13	0	8.23	0.97	
21	13 51 5	84	0.64		8 28 43	8	8.52	1.00		6	13 40 22	28	0.62		7 34 39	1	8.22	0.97	
22	13 50 48	57	0.64		8 27 8	8	8.52	1.00		7	13 40 14	18	0.62		7 34 7	3	8.21	0.97	
23	13 50 31	32	0.64		8 25 34	2	8.52	1.00		8	13 40 6	41	0.62		7 33 37	6	8.20	0.97	
24	13 50 14	11	0.64		8 24 0	0	8.51	1.00		9	13 39 58	98	0.62		7 33 10	0	8.18	0.97	
25	13 49 56	95	0.64		8 22 26	3	8.51	1.00		10	13 39 51	89	0.61		7 32 44	4	8.17	0.96	
26	13 49 39	84	0.64	S.	8 20 53	3	8.51	1.00		11	13 39 45	14	0.61	S.	7 32 21	0	8.16	0.96	
27	13 49 22	79	0.64		8 19 20	9	8.51	1.00		12	13 39 38	73	0.61		7 31 59	7	8.14	0.96	
28	13 49 5	80	0.64		8 17 49	1	8.51	1.00		13	13 39 32	67	0.61		7 31 40	5	8.13	0.96	
29	13 48 48	89	0.64		8 16 18	1	8.50	1.00	14	13 39 26	96	0.61		7 31 23	4	8.12	0.96		
30	13 48 32	07	0.64		8 14 47	8	8.50	1.00	15	13 39 21	61	0.61		7 31 8	5	8.10	0.96		
May	1	13 48 15	35	0.64		8 13 18	4	8.50	1.00	16	13 39 16	60	0.61		7 30 55	7	8.09	0.96	
	2	13 47 58	74	0.64	S.	8 11 49	9	8.49	1.00	17	13 39 11	95	0.61	S.	7 30 45	0	8.08	0.95	
	3	13 47 42	24	0.64		8 10 22	3	8.49	1.00	18	13 39 7	65	0.61		7 30 36	5	8.07	0.95	
	4	13 47 25	87	0.64		8 8 55	7	8.49	1.00	19	13 39 3	70	0.61		7 30 30	2	8.05	0.95	
	5	13 47 9	62	0.64		8 7 30	0	8.48	1.00	20	13 39 0	12	0.60		7 30 26	0	8.04	0.95	
	6	13 46 53	51	0.64		8 6 5	5	8.48	1.00	21	13 38 56	89	0.60		7 30 24	0	8.02	0.95	
	7	13 46 37	55	0.64		8 4 42	0	8.47	1.00	22	13 38 54	03	0.60		7 30 24	2	8.01	0.95	
	8	13 46 21	75	0.64	S.	8 3 19	8	8.47	1.00	23	13 38 51	54	0.60	S.	7 30 26	5	8.00	0.95	
	9	13 46 6	12	0.64		8 1 58	7	8.46	1.00	24	13 38 49	41	0.60		7 30 31	0	7.98	0.94	
	10	13 45 50	66	0.64		8 0 38	8	8.46	1.00	25	13 38 47	65	0.60		7 30 37	7	7.97	0.94	
	11	13 45 35	38	0.64		7 59 20	3	8.45	1.00	26	13 38 46	25	0.60		7 30 46	6	7.95	0.94	
	12	13 45 20	29	0.64		7 58 3	1	8.45	1.00	27	13 38 45	23	0.60		7 30 57	6	7.94	0.94	
	13	13 45 5	39	0.64		7 56 47	3	8.44	1.00	28	13 38 44	57	0.60		7 31 10	8	7.93	0.94	
14	13 44 50	70	0.63	S.	7 55 32	8	8.44	1.00	29	13 38 44	27	0.60	S.	7 31 26	1	7.92	0.94		
15	13 44 36	22	0.63		7 54 19	8	8.43	1.00	30	13 38 44	35	0.60		7 31 43	7	7.90	0.93		
16	13 44 21	95	0.63		7 53 8	2	8.42	0.99	July 1	13 38 44	81	0.60		7 32 3	4	7.89	0.93		
17	13 44 7	90	0.63	S.	7 51 58	2	8.41	0.99		2	13 38 45	63	0.60	S.	7 32 25	4	7.88	0.93	

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.			Sid. Time of Equat. Semid. pass ^W Merid.	Apparent Declination.			Polar Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.			Sid. Time of Equat. Semid. pass ^W Merid.	Apparent Declination.			Polar Semidiameter.	Hor. Par.		
	h	m	s		°	'	"				h	m	s		°	'	"				
July 3	13	38	46.83	0.59	S.	7	32	49.4	7.86	0.93	July 26	13	40	54.96	0.57	S.	7	51	35.9	7.56	0.89
4	13	38	48.40	0.59		7	33	15.6	7.85	0.93	27	13	41	4.77	0.57		7	52	48.4	7.55	0.89
5	13	38	50.35	0.59		7	33	44.0	7.83	0.93	28	13	41	14.92	0.57		7	54	2.8	7.54	0.89
6	13	38	52.66	0.59		7	34	14.5	7.82	0.92	29	13	41	25.41	0.57		7	55	19.0	7.52	0.89
7	13	38	55.34	0.59		7	34	47.2	7.81	0.92	30	13	41	36.23	0.57		7	56	37.0	7.51	0.89
8	13	38	58.39	0.59		7	35	22.0	7.80	0.92	31	13	41	47.39	0.57		7	57	56.8	7.50	0.88
9	13	39	1.81	0.59	S.	7	35	58.9	7.79	0.92	Aug. 1	13	41	58.88	0.56	S.	7	59	18.4	7.48	0.88
10	13	39	5.60	0.59		7	36	37.9	7.77	0.92	2	13	42	10.70	0.56		8	0	41.7	7.47	0.88
11	13	39	9.76	0.59		7	37	19.0	7.76	0.92	3	13	42	22.85	0.56		8	2	6.8	7.46	0.88
12	13	39	14.28	0.58		7	38	2.2	7.74	0.91	4	13	42	35.32	0.56		8	3	33.6	7.45	0.88
13	13	39	19.16	0.58		7	38	47.4	7.73	0.91	5	13	42	48.11	0.56		8	5	2.0	7.44	0.88
14	13	39	24.40	0.58		7	39	34.7	7.71	0.91	6	13	43	1.22	0.56		8	6	32.0	7.43	0.88
15	13	39	30.00	0.58	S.	7	40	24.0	7.70	0.91	7	13	43	14.65	0.56	S.	8	8	3.7	7.42	0.87
16	13	39	35.96	0.58		7	41	15.3	7.68	0.91	8	13	43	28.38	0.56		8	9	37.0	7.41	0.87
17	13	39	42.28	0.58		7	42	8.6	7.67	0.90	9	13	43	42.43	0.56		8	11	11.9	7.40	0.87
18	13	39	48.95	0.58		7	43	3.9	7.66	0.90	10	13	43	56.78	0.56		8	12	48.4	7.39	0.87
19	13	39	55.98	0.58		7	44	1.1	7.65	0.90	11	13	44	11.43	0.56		8	14	26.4	7.38	0.87
20	13	40	3.36	0.58		7	45	0.3	7.63	0.90	12	13	44	26.38	0.56		8	16	6.0	7.37	0.87
21	13	40	11.09	0.57	S.	7	46	1.5	7.62	0.90	13	13	44	41.63	0.55	S.	8	17	47.0	7.36	0.87
22	13	40	19.17	0.57		7	47	4.6	7.61	0.90	14	13	44	57.17	0.55		8	19	29.5	7.35	0.86
23	13	40	27.59	0.57		7	48	9.6	7.60	0.89	15	13	45	13.00	0.55		8	21	13.5	7.33	0.86
24	13	40	36.37	0.57		7	49	16.5	7.59	0.89	16	13	45	29.12	0.55		8	22	59.0	7.32	0.86
25	13	40	45.49	0.57	S.	7	50	25.3	7.57	0.89	17	13	45	45.52	0.55	S.	8	24	45.8	7.31	0.86

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Sid. Time of Semid. pass. Merid.	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.	Sid. Time of Semid. pass. Merid.	Apparent Declination.	Semidiameter.	Hor. Par.
	h m s	s	° ' "	"	"		h m s	s	° ' "	"	"
Jan. 1	23 311.62	0.11	S. 6 53 34.4	1.7	0.4	Jan. 5	23 340.84	0.11	S. 6 50 23.4	1.7	0.4
2	23 318.69	0.11	6 52 48.1	1.7	0.4	6	23 348.54	0.11	6 49 33.3	1.7	0.4
3	23 325.92	0.11	6 52 0.8	1.7	0.4	7	23 356.39	0.11	S. 6 48 42.3	1.7	0.4
4	23 333.30	0.11	S. 6 51 12.6	1.7	0.4						
July 28	23 28 33.97	0.12	S. 4 15 41.8	1.8	0.5	Sept. 5	23 23 45.10	0.12	S. 4 47 14.5	1.8	0.5
29	23 28 28.60	0.12	4 16 18.2	1.8	0.5	6	23 23 36.33	0.12	4 48 10.7	1.8	0.5
30	23 28 23.08	0.12	4 16 55.4	1.8	0.5	7	23 23 27.54	0.12	4 49 7.0	1.8	0.5
31	23 28 17.42	0.12	4 17 33.4	1.8	0.5	8	23 23 18.73	0.12	4 50 3.3	1.8	0.5
Aug. 1	23 28 11.64	0.12	4 18 12.2	1.8	0.5	9	23 23 9.91	0.12	4 50 59.7	1.8	0.5
2	23 28 5.72	0.12	4 18 51.9	1.8	0.5	10	23 23 1.08	0.12	4 51 56.1	1.8	0.5
3	23 27 59.66	0.12	S. 4 19 32.4	1.8	0.5	11	23 22 52.25	0.12	S. 4 52 52.5	1.8	0.5
4	23 27 53.49	0.12	4 20 13.6	1.8	0.5	12	23 22 43.40	0.12	4 53 48.8	1.8	0.5
5	23 27 47.19	0.12	4 20 55.6	1.8	0.5	13	23 22 34.56	0.12	4 54 45.1	1.8	0.5
6	23 27 40.77	0.12	4 21 38.4	1.8	0.5	14	23 22 25.73	0.12	4 55 41.3	1.8	0.5
7	23 27 34.23	0.12	4 22 21.9	1.8	0.5	15	23 22 16.89	0.12	4 56 37.4	1.8	0.5
8	23 27 27.56	0.12	4 23 6.1	1.8	0.5	16	23 22 8.07	0.12	4 57 33.4	1.8	0.5
9	23 27 20.79	0.12	S. 4 23 51.0	1.8	0.5	17	23 21 59.27	0.12	S. 4 58 29.2	1.8	0.5
10	23 27 13.91	0.12	4 24 36.5	1.8	0.5	18	23 21 50.48	0.12	4 59 24.9	1.8	0.5
11	23 27 6.91	0.12	4 25 22.7	1.8	0.5	19	23 21 41.71	0.12	5 0 20.3	1.8	0.5
12	23 26 59.80	0.12	4 26 9.6	1.8	0.5	20	23 21 32.96	0.12	5 1 15.6	1.8	0.5
13	23 26 52.60	0.12	4 26 57.0	1.8	0.5	21	23 21 24.25	0.12	5 2 10.6	1.8	0.5
14	23 26 45.29	0.12	4 27 45.1	1.8	0.5	22	23 21 15.56	0.12	5 3 5.4	1.8	0.5
15	23 26 37.89	0.12	S. 4 28 33.7	1.8	0.5	23	23 21 6.91	0.12	S. 5 3 59.8	1.8	0.5
16	23 26 30.39	0.12	4 29 22.9	1.8	0.5	24	23 20 58.30	0.12	5 4 53.9	1.8	0.5
17	23 26 22.80	0.12	4 30 12.7	1.8	0.5	25	23 20 49.73	0.12	5 5 47.7	1.8	0.5
18	23 26 15.13	0.12	4 31 3.0	1.8	0.5	26	23 20 41.21	0.12	5 6 41.2	1.8	0.5
19	23 26 7.36	0.12	4 31 53.9	1.8	0.5	27	23 20 32.75	0.12	5 7 34.3	1.8	0.5
20	23 25 59.51	0.12	4 32 45.2	1.8	0.5	28	23 20 24.33	0.12	5 8 27.0	1.8	0.5
21	23 25 51.58	0.12	S. 4 33 36.9	1.8	0.5	29	23 20 15.97	0.12	S. 5 9 19.3	1.8	0.5
22	23 25 43.57	0.12	4 34 29.1	1.8	0.5	30	23 20 7.67	0.12	5 10 11.1	1.8	0.5
23	23 25 35.49	0.12	4 35 21.7	1.8	0.5	Oct. 1	23 19 59.45	0.12	5 11 2.5	1.8	0.5
24	23 25 27.33	0.12	4 36 14.7	1.8	0.5	2	23 19 51.30	0.12	5 11 53.3	1.8	0.5
25	23 25 19.10	0.12	4 37 8.1	1.8	0.5	3	23 19 43.21	0.12	5 12 43.5	1.8	0.5
26	23 25 10.81	0.12	4 38 1.9	1.8	0.5	4	23 19 35.21	0.12	5 13 33.2	1.8	0.5
27	23 25 2.45	0.12	S. 4 38 56.0	1.8	0.5	5	23 19 27.29	0.12	S. 5 14 22.4	1.8	0.5
28	23 24 54.04	0.12	4 39 50.5	1.8	0.5	6	23 19 19.45	0.12	5 15 11.1	1.8	0.5
29	23 24 45.57	0.12	4 40 45.2	1.8	0.5	7	23 19 11.70	0.12	5 15 59.1	1.8	0.5
30	23 24 37.06	0.12	4 41 40.2	1.8	0.5	8	23 19 4.04	0.12	5 16 46.5	1.8	0.5
31	23 24 28.49	0.12	4 42 35.4	1.8	0.5	9	23 18 56.47	0.12	5 17 33.3	1.8	0.5
Sept. 1	23 24 19.89	0.12	4 43 30.9	1.8	0.5	10	23 18 48.99	0.12	5 18 19.3	1.8	0.5
2	23 24 11.24	0.12	S. 4 44 26.5	1.8	0.5	11	23 18 41.62	0.12	S. 5 19 4.7	1.8	0.5
3	23 24 2.56	0.12	4 45 22.3	1.8	0.5	12	23 18 34.35	0.12	5 19 49.5	1.8	0.5
4	23 23 53.84	0.12	S. 4 46 18.3	1.8	0.5	13	23 18 27.18	0.12	S. 5 20 33.5	1.8	0.5

URANUS, 1924.

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AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.			Sid. Time of Semid. pass ^r Merid.	Apparent Declination.	Semidiameter.	Hor. Par.	Date.	Apparent Right Ascension.			Sid. Time of Semid. pass ^r Merid.	Apparent Declination.	Semidiameter.	Hor. Par.
	h	m	s	s					°	'	"	h				m	s	s	°	'	"
Oct. 14	23	18	20	12	S. 5 21 16.7	1.8	0.5	Nov. 23	23	15	35	71	S. 5 37 10.6	1.7	0.4
15	23	18	13	17	5 21 59.2	1.8	0.5	24	23	15	35	10	5 37 11.9	1.7	0.4
16	23	18	6	34	5 22 40.9	1.8	0.5	25	23	15	34	68	5 37 12.0	1.7	0.4
17	23	17	59	62	5 23 21.9	1.8	0.5	26	23	15	34	44	5 37 10.8	1.7	0.4
18	23	17	53	02	5 24 2.0	1.8	0.5	27	23	15	34	40	5 37 8.5	1.7	0.4
19	23	17	46	54	5 24 41.4	1.8	0.5	28	23	15	34	54	5 37 5.0	1.7	0.4
20	23	17	40	19	S. 5 25 19.9	1.8	0.5	29	23	15	34	87	S. 5 37 0.3	1.7	0.4
21	23	17	33	97	5 25 57.5	1.8	0.5	30	23	15	35	39	5 36 54.3	1.7	0.4
22	23	17	27	88	5 26 34.3	1.8	0.5	Dec. 1	23	15	36	11	5 36 47.2	1.7	0.4
23	23	17	21	91	5 27 10.2	1.8	0.5	2	23	15	37	01	5 36 38.8	1.7	0.4
24	23	17	16	09	5 27 45.2	1.8	0.5	3	23	15	38	11	5 36 29.2	1.7	0.4
25	23	17	10	41	5 28 19.2	1.8	0.5	4	23	15	39	39	5 36 18.4	1.7	0.4
26	23	17	4	87	S. 5 28 52.3	1.8	0.5	5	23	15	40	87	S. 5 36 6.4	1.7	0.4
27	23	16	59	48	5 29 24.5	1.8	0.5	6	23	15	42	53	5 35 53.2	1.7	0.4
28	23	16	54	23	5 29 55.8	1.8	0.5	7	23	15	44	38	5 35 38.8	1.7	0.4
29	23	16	49	13	5 30 26.0	1.8	0.5	8	23	15	46	42	5 35 23.2	1.7	0.4
30	23	16	44	19	5 30 55.2	1.8	0.5	9	23	15	48	65	5 35 6.4	1.7	0.4
31	23	16	39	40	5 31 23.4	1.8	0.5	10	23	15	51	06	5 34 48.5	1.7	0.4
Nov. 1	23	16	34	77	S. 5 31 50.5	1.8	0.5	11	23	15	53	66	S. 5 34 29.4	1.7	0.4
2	23	16	30	29	5 32 16.7	1.8	0.5	12	23	15	56	45	5 34 9.1	1.7	0.4
3	23	16	25	98	5 32 41.7	1.8	0.5	13	23	15	59	43	5 33 17.6	1.7	0.4
4	23	16	21	82	5 33 5.8	1.8	0.5	14	23	16	2	59	5 33 24.9	1.7	0.4
5	23	16	17	83	5 33 28.7	1.8	0.5	15	23	16	5	93	5 33 1.1	1.7	0.4
6	23	16	14	01	5 33 50.6	1.8	0.5	16	23	16	9	46	5 32 36.2	1.7	0.4
7	23	16	10	35	S. 5 34 11.4	1.8	0.5	17	23	16	13	17	S. 5 32 10.0	1.7	0.4
8	23	16	6	87	5 34 31.1	1.8	0.5	18	23	16	17	07	5 31 42.8	1.7	0.4
9	23	16	3	56	5 34 49.7	1.8	0.5	19	23	16	21	15	5 31 14.4	1.7	0.4
10	23	16	0	41	5 35 7.2	1.8	0.5	20	23	16	25	41	5 30 44.8	1.7	0.4
11	23	15	57	44	5 35 23.6	1.8	0.4	21	23	16	29	85	5 30 14.1	1.7	0.4
12	23	15	54	64	5 35 38.9	1.8	0.4	22	23	16	34	47	5 29 42.3	1.7	0.4
13	23	15	52	02	S. 5 35 53.1	1.8	0.4	23	23	16	39	27	S. 5 29 9.4	1.7	0.4
14	23	15	49	57	5 36 6.1	1.8	0.4	24	23	16	44	25	5 28 35.3	1.7	0.4
15	23	15	47	31	5 36 17.9	1.7	0.4	25	23	16	49	41	5 28 0.1	1.7	0.4
16	23	15	45	22	5 36 28.6	1.7	0.4	26	23	16	54	74	5 27 23.8	1.7	0.4
17	23	15	43	31	5 36 38.1	1.7	0.4	27	23	17	0	25	5 26 46.4	1.7	0.4
18	23	15	41	59	5 36 46.5	1.7	0.4	28	23	17	5	93	5 26 8.0	1.7	0.4
19	23	15	40	04	S. 5 36 53.7	1.7	0.4	29	23	17	11	78	S. 5 25 28.4	1.7	0.4
20	23	15	38	08	5 36 59.7	1.7	0.4	30	23	17	17	80	5 24 47.8	1.7	0.4
21	23	15	37	50	5 37 4.5	1.7	0.4	31	23	17	23	99	5 24 6.2	1.7	0.4
22	23	15	36	51	S. 5 37 8.2	1.7	0.4	32	23	17	30	35	S. 5 23 23.5	1.7	0.4

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Apparent Declination.	Hor. Par.	Date.	Apparent Right Ascension.	Apparent Declination.	Hor. Par.
	<i>h m s</i>	<i>° ' "</i>	<i>"</i>		<i>h m s</i>	<i>° ' "</i>	<i>"</i>
Jan. 1	9 29 51.31	N.15 3 48.7	0.3	Feb. 16	9 25 12.02	N.15 26 41.3	0.3
2	9 29 46.55	15 4 12.7	0.3	17	9 25 5.49	15 27 12.8	0.3
3	9 29 41.70	15 4 37.1	0.3	18	9 24 58.98	15 27 44.2	0.3
4	9 29 36.75	15 5 1.9	0.3	19	9 24 52.50	15 28 15.4	0.3
5	9 29 31.72	15 5 27.2	0.3	20	9 24 46.05	15 28 46.5	0.3
6	9 29 26.60	15 5 52.8	0.3	21	9 24 39.62	15 29 17.4	0.3
7	9 29 21.40	N.15 6 18.8	0.3	22	9 24 33.23	N.15 29 48.1	0.3
8	9 29 16.11	15 6 45.3	0.3	23	9 24 26.87	15 30 18.6	0.3
9	9 29 10.75	15 7 12.1	0.3	24	9 24 20.55	15 30 48.9	0.3
10	9 29 5.31	15 7 39.2	0.3	25	9 24 14.28	15 31 19.0	0.3
11	9 28 59.80	15 8 6.7	0.3	26	9 24 8.04	15 31 48.9	0.3
12	9 28 54.21	15 8 34.5	0.3	27	9 24 1.85	15 32 18.6	0.3
13	9 28 48.56	N.15 9 2.6	0.3	28	9 23 55.71	N.15 32 48.0	0.3
14	9 28 42.83	15 9 31.1	0.3	29	9 23 49.61	15 33 17.1	0.3
15	9 28 37.04	15 9 59.8	0.3	Mar. 1	9 23 43.57	15 33 46.0	0.3
16	9 28 31.18	15 10 28.8	0.3	2	9 23 37.58	15 34 14.6	0.3
17	9 28 25.26	15 10 58.1	0.3	3	9 23 31.65	15 34 42.9	0.3
18	9 28 19.29	15 11 27.7	0.3	4	9 23 25.78	15 35 10.9	0.3
19	9 28 13.27	N.15 11 57.5	0.3	5	9 23 19.98	N.15 35 38.6	0.3
20	9 28 7.19	15 12 27.5	0.3	6	9 23 14.24	15 36 6.0	0.3
21	9 28 1.05	15 12 57.8	0.3	7	9 23 8.56	15 36 33.0	0.3
22	9 27 54.87	15 13 28.2	0.3	8	9 23 2.96	15 36 59.7	0.3
23	9 27 48.65	15 13 58.8	0.3	9	9 22 57.42	15 37 26.0	0.3
24	9 27 42.38	15 14 29.7	0.3	10	9 22 51.96	15 37 52.0	0.3
25	9 27 36.07	N.15 15 0.7	0.3	11	9 22 46.58	N.15 38 17.5	0.3
26	9 27 29.72	15 15 31.8	0.3	12	9 22 41.28	15 38 42.7	0.3
27	9 27 23.33	15 16 3.1	0.3	13	9 22 36.05	15 39 7.5	0.3
28	9 27 16.90	15 16 34.6	0.3	14	9 22 30.91	15 39 31.9	0.3
29	9 27 10.45	15 17 6.2	0.3	15	9 22 25.85	15 39 55.9	0.3
30	9 27 3.97	15 17 37.9	0.3	16	9 22 20.88	15 40 19.5	0.3
31	9 26 57.46	N.15 18 9.7	0.3	17	9 22 16.00	N.15 40 42.7	0.3
Feb. 1	9 26 50.92	15 18 41.6	0.3	18	9 22 11.20	15 41 5.4	0.3
2	9 26 44.37	15 19 13.6	0.3	19	9 22 6.49	15 41 27.7	0.3
3	9 26 37.80	15 19 45.6	0.3	20	9 22 1.88	15 41 49.5	0.3
4	9 26 31.21	15 20 17.7	0.3	21	9 21 57.36	15 42 10.9	0.3
5	9 26 24.61	15 20 49.8	0.3	22	9 21 52.94	15 42 31.9	0.3
6	9 26 18.01	N.15 21 21.9	0.3	23	9 21 48.61	N.15 42 52.3	0.3
7	9 26 11.39	15 21 54.0	0.3	24	9 21 44.39	15 43 12.2	0.3
8	9 26 4.77	15 22 26.1	0.3	25	9 21 40.27	15 43 31.7	0.3
9	9 25 58.15	15 22 58.2	0.3	26	9 21 36.24	15 43 50.7	0.3
10	9 25 51.53	15 23 30.3	0.3	27	9 21 32.32	15 44 9.2	0.3
11	9 25 44.92	15 24 2.4	0.3	28	9 21 28.51	15 44 27.2	0.3
12	9 25 38.32	N.15 24 34.4	0.3	29	9 21 24.80	N.15 44 44.7	0.3
13	9 25 31.72	15 25 6.3	0.3	30	9 21 21.20	15 45 1.6	0.3
14	9 25 25.13	15 25 38.1	0.3	31	9 21 17.72	15 45 18.1	0.3
15	9 25 18.57	N.15 26 9.8	0.3	Apr. 1	9 21 14.34	N.15 45 34.0	0.3

AT TRANSIT AT GREENWICH.

Date.	Apparent Right Ascension.	Apparent Declination.	Hor. Par.	Date.	Apparent Right Ascension.	Apparent Declination.	Hor. Par.
	h m s	° ' "	"		h m s	° ' "	"
Apr. 2	9 21 11.08	N.15 45 49.4	0.3	May 8	9 20 35.66	N.15 48 39.3	0.3
3	9 21 7.93	15 46 4.2	0.3	9	9 20 37.05	15 48 32.9	0.3
4	9 21 4.90	15 46 18.5	0.3	10	9 20 38.57	15 48 26.0	0.3
5	9 21 1.98	15 46 32.3	0.3	11	9 20 40.23	15 48 18.4	0.3
6	9 20 59.17	15 46 45.6	0.3	12	9 20 42.01	15 48 10.3	0.3
7	9 20 56.49	15 46 58.2	0.3	13	9 20 43.91	15 48 1.6	0.3
8	9 20 53.92	N.15 47 10.3	0.3	14	9 20 45.95	N.15 47 52.3	0.3
9	9 20 51.48	15 47 21.8	0.3	15	9 20 48.12	15 47 42.4	0.3
10	9 20 49.16	15 47 32.8	0.3	16	9 20 50.41	15 47 31.9	0.3
11	9 20 46.97	15 47 43.2	0.3	17	9 20 52.82	15 47 20.8	0.3
12	9 20 44.90	15 47 52.9	0.3	18	9 20 55.36	15 47 9.1	0.3
13	9 20 42.95	15 48 2.1	0.3	19	9 20 58.02	15 46 56.9	0.3
14	9 20 41.12	N.15 48 10.8	0.3	20	9 21 0.80	N.15 46 44.1	0.3
15	9 20 39.42	15 48 18.8	0.3	21	9 21 3.71	15 46 30.8	0.3
16	9 20 37.85	15 48 26.3	0.3	22	9 21 6.74	15 46 16.9	0.3
17	9 20 36.39	15 48 33.1	0.3	23	9 21 9.89	15 46 2.4	0.3
18	9 20 35.07	15 48 39.4	0.3	24	9 21 13.16	15 45 47.3	0.3
19	9 20 33.87	15 48 45.0	0.3	25	9 21 16.55	15 45 31.7	0.3
20	9 20 32.80	N.15 48 50.1	0.3	26	9 21 20.07	N.15 45 15.5	0.3
21	9 20 31.86	15 48 54.6	0.3	27	9 21 23.70	15 44 58.8	0.3
22	9 20 31.05	15 48 58.6	0.3	28	9 21 27.45	15 44 41.5	0.3
23	9 20 30.36	15 49 1.9	0.3	29	9 21 31.32	15 44 23.7	0.3
24	9 20 29.81	15 49 4.7	0.3	30	9 21 35.30	15 44 5.3	0.3
25	9 20 29.38	15 49 6.8	0.3	31	9 21 39.41	15 43 46.4	0.3
26	9 20 29.08	N.15 49 8.3	0.3	June 1	9 21 43.62	N.15 43 26.9	0.3
27	9 20 28.91	15 49 9.2	0.3	2	9 21 47.95	15 43 7.0	0.3
28	9 20 28.86	15 49 9.4	0.3	3	9 21 52.39	15 42 46.5	0.3
29	9 20 28.95	15 49 9.1	0.3	4	9 21 56.94	15 42 25.4	0.2
30	9 20 29.17	15 49 8.3	0.3	5	9 22 1.61	15 42 3.8	0.3
May 1	9 20 29.53	15 49 6.8	0.3	6	9 22 6.38	15 41 41.8	0.3
2	9 20 30.01	N.15 49 4.7	0.3	7	9 22 11.26	N.15 41 19.2	0.3
3	9 20 30.62	15 49 1.9	0.3	8	9 22 16.25	15 40 56.1	0.3
4	9 20 31.37	15 48 58.6	0.3	9	9 22 21.34	15 40 32.6	0.3
5	9 20 32.24	15 48 54.7	0.3	10	9 22 26.54	15 40 8.5	0.3
6	9 20 33.25	15 48 50.1	0.3	11	9 22 31.84	N.15 39 44.0	0.3
7	9 20 34.39	N.15 48 45.0	0.3				

Date.	X, True Eq ^s of Date.		Hel. to M. Eq ^s of 1924-0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924-0	Z, True Eq ^s of Date.		Hel. to M. Eq ^s of 1924-0
	Noon.	Midnight.		Noon.	Midnight		Noon.	Midnight.	
Jan. 1	0°1676595	0°1762730	+ 330	0°8888512	0°8874468	+ 219	0°3854975	0°3848883	- 362
2	·1848732	·1934593	321	·8859731	·8844301	223	·3842490	·3835797	359
3	·2020306	·2105865	312	·8828179	·8811366	226	·3828805	·3821513	355
4	·2191261	·2276488	303	·8793863	·8775672	228	·3813923	·3806034	352
5	·2361538	·2446404	294	·8756793	·8737228	230	·3797848	·3789365	348
6	0°2531079	0°2615556	+ 285	0°8716980	0°8696049	+ 232	0°3780585	0°3771509	- 345
7	·2699829	·2783889	276	·8674438	·8652147	234	·3762139	·3752475	341
8	·2867730	·2951345	267	·8629180	·8605538	235	·3742518	·3732268	338
9	·3034727	·3117869	258	·8581224	·8556240	236	·3721727	·3710895	334
10	·3200765	·3283408	250	·8530589	·8504273	237	·3699773	·3688363	331
11	0°3365792	0°3447910	+ 241	0°8477295	0°8449657	+ 237	0°3676666	0°3664683	- 327
12	·3529755	·3611322	232	·8421362	·8392412	237	·3652414	·3639862	323
13	·3692605	·3773597	223	·8362809	·8332558	237	·3627026	·3613908	319
14	·3854292	·3934684	215	·8301660	·8270118	237	·3600510	·3586832	316
15	·4014767	·4094535	206	·8237936	·8205116	236	·3572876	·3558643	312
16	0°4173983	0°4253103	+ 198	0°8171660	0°8137572	+ 235	0°3544134	0°3529351	- 308
17	·4331891	·4410341	190	·8102854	·8067510	233	·3514294	·3498965	304
18	·4488447	·4566203	182	·8031542	·7994954	232	·3483365	·3467496	301
19	·4643604	·4720644	174	·7957748	·7919927	230	·3451358	·3434954	297
20	·4797318	·4873620	166	·7881495	·7842455	228	·3418284	·3401350	293
21	0°4949544	0°5025086	+ 158	0°7802809	0°7762561	+ 226	0°3384153	0°3366695	- 289
22	·5100240	·5175000	150	·7721713	·7680270	223	·3348976	·3330999	285
23	·5249361	·5323318	143	·7638233	·7595606	220	·3312764	·3294273	281
24	·5396866	·5469999	135	·7552392	·7508593	217	·3275527	·3256528	278
25	·5542711	·5614997	128	·7464213	·7419256	214	·3237277	·3217776	274
26	0°5686853	0°5758272	+ 121	0°7373724	0°7327620	+ 210	0°3198025	0°3178027	- 270
27	·5829250	·5899780	114	·7280947	·7233709	207	·3157782	·3137292	266
28	·5969856	·6039474	108	·7185910	·7137552	203	·3116559	·3095584	262
29	·6108628	·6177312	101	·7088638	·7039173	199	·3073369	·3052915	258
30	·6245521	·6313249	95	·6989160	·6938602	195	·3031224	·3009298	254
31	0°6380490	0°6447240	+ 88	0°6887504	0°6835869	+ 190	0°2987137	0°2964743	- 250
Feb. 1	·6513492	·6579240	82	·6783702	·6731006	186	·2942119	·2919266	246
2	·6644480	·6709206	76	·6677785	·6624044	181	·2896186	·2872881	242
3	·6773412	·6837094	71	·6569787	·6515019	176	·2849352	·2825602	238
4	·6900245	·6962860	65	·6459744	·6403966	171	·2801632	·2777445	234
5	0°7024935	0°7086464	+ 60	0°6347692	0°6290926	+ 166	0°2753042	0°2728426	- 230
6	·7147443	·7207866	55	·6233672	·6175935	161	·2703598	·2678561	226
7	·7267730	·7327030	50	·6117721	·6059034	156	·2653316	·2627866	222
8	·7385762	·7443920	45	·5999880	·5940264	150	·2602214	·2576361	218
9	·7501501	·7558500	40	·5880191	·5819665	144	·2550310	·2524063	214
10	0°7614913	0°7670737	+ 36	0°5758693	0°5697279	+ 139	0°2497621	0°2470987	- 210
11	·7725967	·7780600	32	·5635429	·5573148	133	·2444164	·2417153	206
12	·7834632	·7888059	28	·5510440	·5447311	127	·2389957	·2362578	202
13	·7940877	·7993083	24	·5383766	·5319811	121	·2335019	·2307281	198
14	·8044674	·8095646	20	·5255450	·5190689	115	·2279367	·2251279	194
15	0°8145995	0°8195718	+ 17	0°5125533	0°5059987	+ 109	0°2223019	0°2194590	- 190
	+	+		-	-		-	-	

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Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924·0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924·0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924·0
	Noon.	Midnight.		Noon.	Midnight.		Noon.	Midnight.	
	+			-			-		
Feb. 16.	0·8244812	0·8293274	+ 14	0·4994056	0·4927746	+ 103	0·2165993	0·2137231	- 186
17	·8341101	·8388290	11	·4861062	·4794009	97	·2108307	·2079223	182
18	·8434837	·8480740	8	·4726591	·4658814	91	·2049981	·2020582	178
19	·8525997	·8570604	5	·4590684	·4522205	84	·1991030	·1961327	174
20	·8614558	·8657856	- 2	·4453382	·4384220	78	·1931474	·1901474	169
21	0·8700496	0·8742474	0	0·4314725	0·4244900	+ 72	0·1871330	0·1841043	- 165
22	·8783788	·8824435	- 2	·4174752	·4104285	65	·1810616	·1780050	161
23	·8864413	·8903719	4	·4033505	·3962415	59	·1749349	·1718514	157
24	·8942349	·8980300	6	·3891022	·3819330	53	·1687548	·1656452	153
25	·9017570	·9054156	8	·3747344	·3675070	46	·1625229	·1593882	149
26	0·9090055	0·9125263	- 9	0·3602513	0·3529678	+ 40	0·1562412	0·1530822	- 145
27	·9159779	·9193599	11	·3456570	·3383195	33	·1499115	·1467292	141
28	·9226720	·9259140	12	·3309559	·3235667	27	·1435356	·1403310	137
29	·9290856	·9321866	13	·3161524	·3087137	20	·1371155	·1338894	133
Mar. 1	·9352166	·9381754	13	·3012512	·2937653	14	·1306530	·1274066	129
2	0·9410627	0·9438784	- 14	0·2862568	0·2787262	+ 7	0·1241504	0·1208846	- 124
3	·9466222	·9492939	15	·2711742	·2636013	+ 1	·1176096	·1143255	120
4	·9518933	·9544202	15	·2560082	·2483955	- 6	1110326	·1077312	116
5	·9568744	·9592557	15	·2407638	·2331138	12	·1044216	·1011040	112
6	·9615640	·9637991	15	·2254461	·2177613	18	·0977788	·0944461	108
7	0·9659609	0·9680493	- 15	0·2100600	0·2023429	- 25	0·0911063	0·0877596	- 104
8	·9700641	·9720053	15	·1946107	·1868638	31	·0844062	·0810465	99
9	·9738727	·9756663	15	·1791030	·1713289	37	·0776807	·0743091	95
10	·9773859	·9790316	14	·1635421	·1557432	44	·0709320	·0675496	91
11	·9806032	·9821007	13	·1479329	·1401117	50	·0641622	·0607700	87
12	0·9835240	0·9848731	- 12	0·1322802	0·1244391	- 56	0·0573734	0·0539725	- 83
13	·9861479	·9873485	11	·1165889	·1087304	63	·0505677	·0471592	79
14	·9884747	·9895266	10	·1008640	·0929904	69	·0437473	·0403322	74
15	·9905041	·9914074	9	·0851102	·0772239	75	·0369142	·0334935	70
16	·9922363	·9929909	8	·0693322	·0614356	81	·0300705	·0266453	66
17	0·9936712	0·9942773	- 6	0·0535347	0·0456301	- 88	0·0232183	0·0197896	- 62
18	·9948091	·9952666	5	·0377224	·0298120	94	·0163596	·0129284	58
19	·9956500	·9959592	3	·0218996	·0139857	100	·0094963	·0060636	53
20	·9961943	·9963553	- 1	·0060709	·0018443	106	·0026305	·0008027	49
21	·9964422	·9964551	+ 1	·0097593	·0176736	112	·0042359	·0076688	45
22	0·9963939	0·9962587	+ 4	0·0255868	0·0334982	- 118	0·0111011	0·0145326	- 41
23	·9960495	·9957663	6	·0414074	·0493137	124	·0179631	·0213923	36
24	·9954092	·9949781	8	·0572166	·0651155	130	·0248200	·0282460	32
25	·9944732	·9938944	11	·0730099	·0808993	136	·0316700	·0350917	28
26	·9932417	·9925152	14	·0887831	·0966607	142	·0385110	·0419275	24
27	0·9917148	0·9908407	+ 16	0·1045316	0·1123951	- 147	0·0453411	0·0487514	- 19
28	·9898928	·9888713	19	·1202506	·1280976	153	·0521582	·0555613	15
29	·9877761	·9866074	23	·1359354	·1437635	159	·0589604	·0623552	11
30	·9853653	·9840498	26	·1515813	·1593881	165	·0657455	·0691311	7
31	·9826611	·9811992	29	·1671833	·1749663	170	·0725116	·0788869	- 2
Apr. 1	0·9796642	0·9780563	+ 33	0·1827366	0·1904935	- 176	0·0792567	0·0826206	+ 2
	+	+		+	+		+	+	

Date.	X, True Eq ^z of Date.		Red. to M. Eq ^z of 1924.0	Y, True Eq ^z of Date.		Red. to M. Eq ^z of 1924.0	Z, True Eq ^z of Date.		Red. to M. Eq ^z of 1924.0
	Noon.	Midnight.		Noon.	Midnight.		Noon.	Midnight.	
	+	+		+	+	-	+	+	+
Apr. 2	0.9763756	0.9746223	+ 36	0.1982364	0.2059646	- 182	0.0859785	0.0893300	+ 6
3	.9727965	.9708984	40	.2136776	.2213748	187	.0926749	.0960130	11
4	.9689283	.9668862	44	.2290555	.2367193	193	.0993440	.1026677	15
5	.9647723	.9625869	48	.2443654	.2519933	198	.1059837	.1092918	19
6	.9603303	.9580025	52	.2596024	.2671921	203	.1125918	.1158835	24
7	0.9556039	0.9531346	+ 57	0.2747618	0.2823110	- 209	0.1191665	0.1224407	+ 28
8	.9505950	.9479853	61	.2898392	.2973457	214	.1257058	.1289615	33
9	.9453058	.9425566	66	.3048301	.3122917	219	.1322076	.1354439	37
10	.9397380	.9368504	70	.3197300	.3271444	225	.1386701	.1418860	41
11	.9338940	.9308691	75	.3345345	.3418996	230	.1450914	.1482860	46
12	0.9277761	0.9246151	+ 80	0.3492393	0.3565530	- 235	0.1514695	0.1546418	+ 50
13	.9213865	.9180905	85	.3638403	.3711006	240	.1578027	.1609519	55
14	.9147276	.9112980	91	.3783334	.3855382	245	.1640892	.1672144	59
15	.9078020	.9042400	96	.3927146	.3998621	249	.1703272	.1734275	63
16	.9006122	.8969189	101	.4069802	.4140685	254	.1765150	.1795896	68
17	0.8931606	0.8893375	+ 107	0.4211264	0.4281536	- 259	0.1826510	0.1856991	+ 72
18	.8854499	.8814981	113	.4351495	.4421138	263	.1887336	.1917543	77
19	.8774824	.8734031	119	.4490460	.4559457	268	.1947611	.1977538	81
20	.8692606	.8650550	125	.4628124	.4696457	272	.2007321	.2036959	86
21	.8607867	.8564560	131	.4764452	.4832103	277	.2066449	.2095789	90
22	0.8520631	0.8476083	+ 138	0.4899407	0.4966358	- 281	0.2124979	0.2154016	+ 95
23	.8430920	.8385144	144	.5032953	.5099186	285	.2182897	.2211621	99
24	.8338758	.8291765	151	.5165052	.5230547	289	.2240186	.2268590	104
25	.8244169	.8195973	158	.5295667	.5360406	293	.2296830	.2324905	108
26	.8147180	.8097793	165	.5424760	.5488724	297	.2352813	.2380551	113
27	0.8047817	0.7997254	+ 172	0.5552292	0.5615460	- 300	0.2408118	0.2435511	+ 117
28	.7946108	.7894383	179	.5678223	.5740577	304	.2462728	.2489768	122
29	.7842083	.7789212	187	.5802516	.5864036	307	.2516628	.2543307	127
30	.7735773	.7681771	194	.5925133	.5985801	310	.2569802	.2596111	131
May 1	.7627211	.7572096	202	.6046036	.6105833	313	.2622233	.2648165	136
2	0.7516430	0.7460218	+ 210	0.6165188	0.6224096	- 316	0.2673905	0.2699453	+ 140
3	.7403465	.7346175	218	.6282554	.6340556	319	.2724805	.2749959	145
4	.7288353	.7230003	226	.6398099	.6455177	322	.2774915	.2799670	149
5	.7171130	.7111739	234	.6511788	.6567927	324	.2824223	.2848571	154
6	.7051834	.6991420	242	.6623589	.6678771	327	.2872712	.2896646	159
7	0.6930503	0.6869087	+ 251	0.6733470	0.6787681	- 329	0.2920370	0.2943883	+ 163
8	.6807177	.6744778	259	.6841400	.6894624	331	.2967183	.2990269	168
9	.6681895	.6618533	268	.6947349	.6999572	333	.3013139	.3035791	172
10	.6554698	.6490395	277	.7051289	.7102497	334	.3058224	.3080436	177
11	.6425628	.6360403	286	.7153192	.7203371	335	.3102426	.3124193	182
12	0.6294725	0.6228599	+ 295	0.7253031	0.7302169	- 337	0.3145734	0.3167049	+ 186
13	.6162030	.6095024	304	.7350783	.7398869	338	.3188136	.3208994	191
14	.6027585	.5959719	313	.7446424	.7493445	338	.3229622	.3250018	196
15	.5891431	.5822726	322	.7539929	.7585875	339	.3270181	.3290111	200
16	.5753609	.5684085	332	.7631280	.7676141	339	.3309805	.3329263	205
17	0.5614159	0.5543835	+ 341	0.7720455	0.7764220	- 339	0.3348483	0.3367465	+ 210
	+	+		+	+		+	+	

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Date.	X, True Eq ^r of Date.		Red. to M. Eq ^r of 1924°0	Y, True Eq ^r of Date.		Red. to M. Eq ^r of 1924°0	Z, True Eq ^r of Date.		Red. to M. Eq ^r of 1924°0
	Noon.	Midnight.		Noon.	Midnight.		Noon.	Midnight.	
	+	+		+	+		-	+	
May 18	0.5473118	0.5402013	+ 351	0.7807434	0.7850094	- 339	0.3386208	0.3404710	+ 214
19	.5330525	.5258659	361	.7892197	.7933741	339	.3422970	.3440987	219
20	.5186418	.5113808	371	.7974724	.8015142	338	.3458760	.3476288	224
21	.5040833	.4967499	380	.8054992	.8094273	337	.3493569	.3510602	228
22	.4899809	.4819769	390	.8132981	.8171113	336	.3527387	.3543922	233
23	0.4745383	0.4670657	+ 400	0.8208666	0.8245638	- 335	0.3560206	0.3576238	+ 238
24	.4595595	.4520203	410	.8282027	.8317829	333	.3592016	.3607539	242
25	.4444486	.4368449	420	.8353041	.8387661	331	.3622807	.3637818	247
26	.4292098	.4215437	430	.8421685	.8455111	329	.3652571	.3667065	252
27	.4138473	.4061211	441	.8487937	.8520160	326	.3681299	.3695271	256
28	0.3983656	0.3905815	+ 451	0.8551777	0.8582786	- 323	0.3708981	0.3722427	+ 261
29	.3827693	.3749296	461	.8613185	.8642970	320	.3735608	.3748524	266
30	.3670629	.3591698	471	.8672140	.8700693	317	.3761174	.3773556	270
31	.3512510	.3433070	481	.8728626	.8755938	313	.3785670	.3797515	275
June 1	.3353385	.3273460	491	.8782626	.8808688	309	.3809090	.3820393	280
2	0.3193302	0.3112916	+ 502	0.8834123	0.8858928	- 305	0.3831424	0.3842183	+ 284
3	.3032309	.2951486	512	.8888103	.8906645	300	.3852669	.3862881	289
4	.2870454	.2789219	522	.8929553	.8951825	295	.3872818	.3882480	293
5	.2707788	.2626165	532	.8973460	.8994456	290	.3891866	.3900975	298
6	.2544358	.2462373	542	.9014813	.9034529	284	.3909806	.3918360	303
7	0.2380216	0.2297893	+ 552	0.9053602	0.9072032	- 278	0.3926635	0.3934632	+ 307
8	.2215411	.2132775	562	.9089819	.9106961	272	.3942349	.3949786	312
9	.2049992	.1967068	572	.9123457	.9139307	266	.3956944	.3963821	316
10	.1884008	.1800819	581	.9154510	.9169065	259	.3970418	.3976734	321
11	.1717508	.1634080	591	.9182973	.9196232	252	.3982768	.3988521	325
12	0.1550540	0.1466895	+ 601	0.9208842	0.9220803	- 244	0.3993992	0.3999181	+ 330
13	.1383151	.1299313	610	.9232115	.9242778	236	.4004089	.4008715	335
14	.1215387	.1131379	619	.9252791	.9261254	228	.4013058	.4017119	339
15	.1047293	.0963136	628	.9270867	.9278930	220	.4020897	.4024393	343
16	.0878913	.0794629	638	.9286342	.9293104	211	.4027607	.4030537	348
17	0.0710290	0.0625900	+ 646	0.9299214	0.9304673	- 202	0.4033185	0.4035551	+ 352
18	.0541466	.0456992	655	.9309481	.9313636	193	.4037634	.4039433	357
19	.0372484	.0287948	664	.9317138	.9319988	183	.4040949	.4042181	361
20	.0203389	.0118813	672	.9322184	.9323726	173	.4043130	.4043796	365
21	.0034225	.0050369	681	.9324613	.9324846	163	.4044177	.4044274	370
22	0.0134964	0.0219553	+ 689	0.9324423	0.9323345	- 152	0.4044087	0.4043616	+ 374
23	.0304131	.0388692	697	.9321610	.9319219	141	.4042860	.4041820	378
24	.0473229	.0557736	704	.9316171	.9312466	130	.4040495	.4038886	383
25	.0642208	.0726638	712	.9308105	.9303087	119	.4036993	.4034815	387
26	.0811020	.0895349	719	.9297412	.9291081	107	.4032352	.4029605	391
27	0.0979618	0.1063820	+ 726	0.9284094	0.9276450	- 95	0.4026573	0.4023257	+ 395
28	.1147950	.1232000	733	.9268151	.9259196	83	.4019658	.4015774	399
29	.1315966	.1399841	739	.9249586	.9239322	70	.4011607	.4007156	404
30	.1483618	.1567291	745	.9228405	.9216835	57	.4002422	.3997406	408
July 1	.1650855	.1734302	751	.9204612	.9191738	44	.3992107	.3986525	412
2	0.1817627	0.1900822	+ 757	0.9178213	0.9164039	- 30	0.3980662	0.3974518	+ 416
	-	-		+	+		+	+	

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	Noon.	Midnight.		Noon.	Midnight.		Noon.	Midnight.	
	—	—		+	—		+	—	
July 3	0.1983883	0.2066803	+ 762	0.9149217	0.9133747	— 17	0.3968093	0.3961387	+ 420
4	.2149575	.2232193	767	.9117632	.9100872	— 3	.3954401	.3947136	424
5	.2314652	.2396945	772	.9083469	.9065425	+ 11	.3939592	.3931769	428
6	.2479066	.2561009	777	.9046741	.9027418	.26	.3923669	.3915292	431
7	.2642768	.2724336	781	.9007459	.8986865	40	.3906639	.3897710	435
8	0.2805709	0.2886880	+ 785	0.8965637	0.8943778	+ 55	0.3888507	0.3879030	+ 439
9	.2967844	.3048594	788	.8921290	.8898175	70	.3869279	.3859256	443
10	.3129126	.3209433	792	.8874435	.8850072	86	.3848962	.3838398	446
11	.3289511	.3369354	794	.8825089	.8799487	101	.3827563	.3816459	450
12	.3448956	.3528313	797	.8773269	.8746436	116	.3805088	.3793450	454
13	0.3607420	0.3686271	+ 799	0.8718991	0.8690936	+ 132	0.3781547	0.3769378	+ 457
14	.3764861	.3843185	801	.8662273	.8633004	148	.3756945	.3744249	461
15	.3921238	.3999016	802	.8603131	.8572657	164	.3731291	.3718071	464
16	.4076513	.4153725	803	.8541583	.8509911	181	.3704591	.3690851	467
17	.4230646	.4307272	804	.8477643	.8444781	197	.3676853	.3662597	471
18	0.4383597	0.4459617	+ 804	0.8411326	0.8377281	+ 214	0.3648084	0.3633315	+ 474
19	.4535327	.4610720	804	.8342647	.8307426	230	.3618290	.3603011	477
20	.4685792	.4760538	804	.8271621	.8235233	247	.3587479	.3571694	480
21	.4834953	.4909030	803	.8198265	.8160718	264	.3555658	.3539371	483
22	.4982765	.5056153	802	.8122595	.8083897	281	.3522834	.3506049	487
23	0.5129187	0.5201863	+ 800	0.8044627	0.8004787	+ 298	0.3489016	0.3471736	+ 490
24	.5274174	.5346116	798	.7964381	.7923410	315	.3454211	.3436441	492
25	.5417683	.5488869	796	.7881877	.7839784	332	.3418428	.3400172	495
26	.5559670	.5630080	793	.7797135	.7753931	350	.3381675	.3362938	498
27	.5700093	.5769705	790	.7710177	.7665875	367	.3343963	.3324751	501
28	0.5838909	0.5907701	+ 786	0.7621028	0.7575639	+ 384	0.3305302	0.3285618	+ 503
29	.5976075	.6044026	782	.7529710	.7483246	401	.3265701	.3245552	506
30	.6111548	.6178637	778	.7436249	.7388723	419	.3225172	.3204563	508
31	.6245287	.6311493	773	.7340671	.7292096	436	.3183726	.3162662	511
Aug. 1	.6377250	.6442553	768	.7243003	.7193395	454	.3141374	.3119862	513
2	0.6507396	0.6571775	+ 762	0.7143275	0.7092648	+ 471	0.3098129	0.3076175	+ 515
3	.6635685	.6699121	756	.7041517	.6989886	488	.3054003	.3031614	517
4	.6762078	.6824552	750	.6937759	.6885141	505	.3009009	.2986191	519
5	.6886538	.6948031	743	.6832035	.6778445	523	.2963161	.2939921	521
6	.7009028	.7069524	736	.6724376	.6669831	540	.2916472	.2892817	523
7	0.7129514	0.7188995	+ 728	0.6614815	0.6559333	+ 557	0.2868958	0.2844896	+ 525
8	.7247962	.7306412	720	.6503388	.6446985	574	.2820632	.2796169	527
9	.7364341	.7421745	711	.6390127	.6332819	591	.2771509	.2746653	529
10	.7478620	.7534963	703	.6275065	.6216869	607	.2721603	.2696361	530
11	.7590769	.7646036	693	.6158235	.6099168	624	.2670929	.2645309	532
12	0.7700759	0.7754936	+ 684	0.6039671	0.5979749	+ 641	0.2619502	0.2593510	+ 533
13	.7808564	.7861638	674	.5919406	.5858645	657	.2567334	.2540977	534
14	.7914155	.7966111	663	.5797469	.5735883	673	.2514441	.2487727	536
15	.8017503	.8068328	653	.5673891	.5611497	689	.2460837	.2433773	537
16	.8118581	.8168260	642	.5548704	.5485517	705	.2406536	.2379128	538
17	0.8217360	0.8265879	+ 630	0.5421939	0.5357974	+ 721	0.2351550	0.2323805	+ 539

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Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0
	Noon.	Midnight.		Noon.	Midnight.		Noon.	Midnight.	
	—	—		+	+		+	-	
Aug. 18	0 8313812	0 8361155	+ 618	0 5293627	0 5228901	+ 737	0 2295894	0 2267819	+ 539
19	8407905	8454058	606	5163800	5098329	752	2239582	2211185	540
20	8499610	8544558	593	5032491	4966291	768	2182629	2153916	541
21	8588898	8632627	580	4899734	4832824	783	2125049	2096029	541
22	8675740	8718234	567	4765565	4697962	798	2066859	2037539	542
23	0 8760105	0 8801350	+ 554	0 4630020	0 4561743	+ 812	0 2008072	0 1978461	+ 542
24	8841965	8881947	540	4493135	4424202	827	1948707	1918812	542
25	8921293	8959999	525	4354949	4285380	841	1888778	1858607	542
26	8998062	9035479	511	4215500	4145314	855	1828302	1797865	542
27	9072245	9108358	496	4074828	4004046	869	1767297	1736601	542
28	0 9143814	0 9178611	+ 481	0 3932974	0 3861617	+ 882	0 1705780	0 1674835	+ 542
29	9212746	9246215	465	3789980	3718069	895	1643768	1612583	541
30	9279016	9311145	449	3645888	3573444	908	1581281	1549864	541
31	9342600	9373379	433	3500741	3427786	921	1518335	1486696	540
Sept. 1	9403478	9432895	417	3354584	3281141	934	1454950	1422099	539
2	0 9461629	0 9489677	+ 400	0 3207463	0 3133555	+ 946	0 1391146	0 1359093	+ 539
3	9517036	9543705	383	3059423	2985072	958	1326942	1294696	538
4	9569682	9594965	366	2910509	2835739	969	1262357	1229928	537
5	9619553	9643444	348	2760767	2685600	980	1197412	1164810	535
6	9666636	9688128	330	2610243	2534701	991	1132125	1099360	534
7	0 9710919	0 9732007	+ 312	0 2458980	0 2383085	+ 1002	0 1066516	0 1033597	+ 533
8	9752390	9772069	294	2307022	2230795	1013	1000604	0967540	531
9	9791041	9809305	276	2154411	2077874	1023	0934408	0901210	529
10	9826861	9843707	257	2001190	1924364	1032	0867947	0834623	527
11	9859841	9875264	238	1847402	1770308	1042	0801239	0767798	525
12	0 9889973	0 9903967	+ 219	0 1693087	0 1615744	+ 1051	0 0734302	0 0700754	+ 523
13	9917246	9929808	200	1538284	1460713	1060	0667155	0633508	521
14	9941652	9952776	180	1383035	1305256	1069	0599815	0566079	519
15	9963180	9972863	160	1227382	1149417	1077	0532301	0498484	516
16	9981822	0 9990057	140	1071367	0993236	1085	0464630	0430742	513
17	0 9997566	1 0004349	+ 120	0 0915030	0 0836754	+ 1092	0 0396822	0 0362872	+ 511
18	1 0010404	0015730	100	0758415	0680017	1100	0328895	0294893	508
19	0020327	0024193	80	0601567	0523070	1107	0260869	0226825	505
20	0027327	0029729	59	0444531	0365956	1113	0192762	0158684	502
21	0031397	0032331	38	0287351	0208721	1119	0124593	0090492	498
22	1 0032530	1 0031993	+ 17	0 0130073	0 0051412	+ 1125	0 0056383	0 0022269	+ 495
23	0030720	0028710	- 4	0027257	0105927	1131	0011847	0045965	491
24	0025963	0022478	25	0184592	0263246	1136	0080080	0114190	488
25	0018254	0013291	46	0341884	0420499	1141	0148293	0182386	484
26	1 0007590	1 0001149	67	0499085	0577636	1146	0216467	0250533	480
27	0 9993969	0 9986050	- 89	0 0656145	0 0734607	+ 1150	0 0284581	0 0318609	+ 476
28	9977392	9967995	111	0813016	0891364	1154	0352613	0386591	472
29	9957860	9946987	132	0969646	1047856	1157	0420541	0454460	467
30	9935377	9923030	154	1125987	1204033	1161	0488345	0522194	463
Oct. 1	9909947	9896130	176	1281987	1359843	1163	0556004	0589771	458
2	0 9881579	0 9866296	- 198	0 1437596	0 1515239	+ 1166	0 0623494	0 0657169	+ 453

Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0
	Noon.	Midnight.	—	—	—	—	—	—	—
	—	—	Noon.	Noon.	Midnight.	Noon.	Noon.	Midnight.	Noon.
Oct. 3	0.9850282	0.9833538	— 220	0.1592766	0.1670171	+ 1168	0.0690795	0.0724368	+ 448
4	.9816066	.9797867	242	.1747449	.1824593	1170	.0757887	.0791348	443
5	.9778943	.9759296	265	.1901598	.1978458	1172	.0824749	.0858088	438
6	.9738927	.9717838	287	.2055168	.2131722	1173	.0891361	.0924567	433
7	.9696030	.9673505	309	.2208114	.2284339	1174	.0957703	.0990767	427
8	0.9650265	0.9626312	— 332	0.2360392	0.2436267	+ 1174	0.1023756	0.1056668	+ 421
9	.9601648	.9576274	354	.2511958	.2587461	1174	.1089500	.1122251	416
10	.9550191	.9523402	377	.2662771	.2737882	1174	.1154917	.1187497	410
11	.9495909	.9467712	399	.2812789	.2887487	1173	.1219989	.1252389	404
12	.9438814	.9409217	422	.2961971	.3036235	1172	.1284696	.1316907	397
13	0.9378922	0.9347931	— 445	0.3110275	0.3184084	+ 1171	0.1349021	0.1381035	+ 391
14	.9316245	.9283867	467	.3257658	.3330991	1169	.1412946	.1444752	385
15	.9250798	.9217040	490	.3404077	.3476912	1167	.1476451	.1508041	378
16	.9182595	.9147465	513	.3549491	.3621807	1165	.1539519	.1570883	371
17	.9111652	.9075158	535	.3693856	.3765632	1163	.1602130	.1633259	365
18	0.9037985	0.9000135	— 558	0.3837129	0.3908343	+ 1160	0.1664267	0.1695151	+ 358
19	.8961610	.8922413	581	.3979267	.4049896	1156	.1725909	.1756540	350
20	.8882546	.8842011	604	.4120225	.4190248	1152	.1787040	.1817407	343
21	.8800811	.8758948	626	.4259959	.4329353	1148	.1847639	.1877733	336
22	.8716424	.8673242	649	.4398425	.4467169	1144	.1907687	.1937499	328
23	0.8629405	0.8584916	— 672	0.4535579	0.4603650	+ 1139	0.1967167	0.1996687	+ 320
24	.8539777	.8493991	694	.4671377	.4738753	1134	.2026058	.2055277	313
25	.8447562	.8400492	717	.4805773	.4872431	1128	.2084341	.2113249	305
26	.8352784	.8304443	740	.4938722	.5004640	1122	.2141998	.2170586	297
27	.8255471	.8205872	762	.5070179	.5135333	1116	.2199010	.2227267	288
28	0.8155649	0.8104807	— 785	0.5200097	0.5264466	+ 1110	0.2255355	0.2283272	+ 280
29	.8053350	.8001281	807	.5328435	.5391997	1103	.2311016	.2338584	272
30	.7948605	.7895325	830	.5455148	.5517882	1095	.2365974	.2393184	263
31	.7841447	.7786975	852	.5580195	.5642081	1087	.2420211	.2447054	254
Nov. 1	.7731913	.7676266	875	.5703535	.5764553	1079	.2473710	.2500177	245
2	0.7620038	0.7563234	— 897	0.5825130	0.5885262	+ 1071	0.2526453	0.2552536	+ 236
3	.7505858	.7447915	919	.5944943	.6004170	1062	.2578423	.2604114	227
4	.7389410	.7330347	941	.6062938	.6121243	1053	.2629606	.2654897	218
5	.7270730	.7210565	963	.6179081	.6236448	1043	.2679986	.2704870	209
6	.7149855	.7088605	985	.6293339	.6349751	1033	.2729547	.2754016	199
7	0.7026820	0.6964505	— 1007	0.6405679	0.6461120	+ 1022	0.2778276	0.2802324	+ 190
8	.6901663	.6838299	1029	.6516069	.6570523	1012	.2826158	.2849777	180
9	.6774418	.6710025	1051	.6624477	.6677928	1001	.2873179	.2896363	170
10	.6645123	.6579717	1072	.6730872	.6783305	990	.2919326	.2942067	161
11	.6513812	.6447412	1094	.6835222	.6886621	978	.2964585	.2986877	151
12	0.6380522	0.6313146	— 1115	0.6937497	0.6987846	+ 964	0.3008942	0.3030778	+ 141
13	.6245290	.6176957	1136	.7037664	.7086948	951	.3052383	.3073756	130
14	.6108153	.6038882	1157	.7135693	.7183896	938	.3094896	.3115800	120
15	.5969149	.5898958	1178	.7231553	.7278659	925	.3136467	.3156895	110
16	.5828315	.5757225	1199	.7325212	.7371207	911	.3177083	.3197029	99
17	0.5685692	0.5613721	— 1219	0.7416641	0.7461510	+ 896	0.3216731	0.3236187	+ 89

SUN'S CO-ORDINATES, 1924.

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Date.	X, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Y, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0	Z, True Eq ^s of Date.		Red. to M. Eq ^s of 1924.0
	—	—		—	—		—	—	
	Noon.	Midnight.	Noon.	Noon.	Midnight.	Noon.	Noon.	Midnight.	Noon.
Nov. 18	0.5541318	0.5468488	-1239	0.7505809	0.7549535	+ 881	0.3255397	0.3274358	+ 78
19	.5395235	.5321565	1260	.7592684	.7635253	866	.3293069	.3311528	67
20	.5247483	.5172995	1280	.7677238	.7718635	850	.3329734	.3347685	57
21	.5098105	.5022819	1299	.7759440	.7799650	834	.3365380	.3382816	46
22	.4947143	.4871083	1319	.7839261	.7878268	817	.3399993	.3416909	35
23	0.4794644	0.4717832	-1338	0.7916669	0.7954460	+ 800	0.3433562	0.3449951	+ 24
24	.4640654	.4563114	1357	.7991638	.8028198	783	.3466074	.3481930	12
25	.4485219	.4406975	1376	.8064137	.8099452	765	.3497517	.3512834	1
26	.4328390	.4249469	1395	.8134140	.8168198	747	.3527879	.3542651	- 10
27	.4170219	.4090646	1413	.8201622	.8234410	728	.3557149	.3571371	22
28	0.4010758	0.3930560	-1431	0.8266558	0.8298065	+ 709	0.3585316	0.3598984	- 33
29	.3850060	.3769264	1449	.8328927	.8359143	689	.3612372	.3625480	45
30	.3688178	.3606810	1467	.8388709	.8417624	669	.3638306	.3650850	56
Dec. 1	.3525167	.3443254	1484	.8445886	.8473493	649	.3663111	.3675087	68
2	.3361078	.3278647	1501	.8500443	.8526734	628	.3686779	.3698185	80
3	0.3195967	0.3113043	-1517	0.8552364	0.8577332	+ 607	0.3709304	0.3720136	- 91
4	.3029882	.2946491	1534	.8601637	.8625276	585	.3730680	.3740935	103
5	.2862876	.2779044	1550	.8648247	.8670550	563	.3750900	.3760575	115
6	.2695001	.2610752	1565	.8692183	.8713145	540	.3769959	.3779052	127
7	.2526305	.2441665	1580	.8733434	.8753049	517	.3787852	.3796360	139
8	0.2356839	0.2271833	-1595	0.8771989	0.8790251	+ 494	0.3804574	0.3812494	- 151
9	.2186654	.2101307	1609	.8807835	.8824739	470	.3820120	.3827451	163
10	.2015798	.1930135	1623	.8840963	.8856505	446	.3834486	.3841225	175
11	.1844323	.1758369	1637	.8871363	.8885536	421	.3847667	.3853812	187
12	.1672278	.1586057	1650	.8899024	.8911825	396	.3859660	.3865209	199
13	0.1499713	0.1413251	-1663	0.8923938	0.8935362	+ 371	0.3870460	0.3875411	- 211
14	.1326679	.1240002	1675	.8946095	.8956137	345	.3880063	.3884415	223
15	.1153227	.1066359	1687	.8965486	.8974142	319	.3888467	.3892218	235
16	.0979406	.0892374	1698	.8982104	.8989370	292	.3895667	.3898815	247
17	.0805270	.0718100	1709	.8995939	.9001812	266	.3901662	.3904206	259
18	0.0630870	0.0543587	-1720	0.9006986	0.9011461	+ 238	0.3906447	0.3908385	- 272
19	.0456258	.0368889	1729	.9015237	.9018312	211	.3910020	.3911352	284
20	.0281488	.0194060	1739	.9020685	.9022356	183	.3912380	.3913103	296
21	.0106613	.0019155	1748	.9023325	.9023590	154	.3913522	.3913636	308
22	.0068309	.0155771	1756	.9023151	.9022008	126	.3913445	.3912950	320
23	0.0243225	0.0330662	-1764	0.9020160	0.9017607	+ 97	0.3912149	0.3911043	- 332
24	.0418076	.0505459	1771	.9014348	.9010384	67	.3909631	.3907913	345
25	.0592803	.0680101	1777	.9005715	.9000341	38	.3905890	.3903562	357
26	.0767346	.0854531	1783	.8994263	.8987481	+ 8	.3900929	.3897991	369
27	.0941648	.1028690	1789	.8979995	.8971806	- 22	.3894748	.3891200	381
28	0.1115650	0.1202520	-1794	0.8962915	0.8953323	- 53	0.3887348	0.3883192	- 393
29	.1289293	.1375963	1798	.8943032	.8932042	84	.3878732	.3873969	405
30	.1462521	.1548961	1801	.8920356	.8907974	115	.3868904	.3863537	417
31	.1635277	.1721461	1804	.8894898	.8881129	146	.3857868	.3851899	429
32	0.1807507	0.1893408	-1807	0.8866668	0.8856158	- 177	0.3845630	0.3839062	- 440
	+	+		-	-		-	-	

PRECESSION, NUTATION, &C., 1924. 199

	Mean Noon.	LONGITUDE.			Appar-ent Obliq-uity.	OBLIQUITY.			Mean Noon.	LONGITUDE.			Appar-ent Obliq-uity.	OBLIQUITY.					
		Pre-cession from 1924 ^o	Nutation.			Nutation.	Pre-cession from 1924 ^o	Nutation.		Nutation.									
			ΔL	$d L$				$\Delta \omega$			$d \omega$	ΔL		$d L$	$\Delta \omega$	$d \omega$			
					23° 26'														
Apr.	2	12.64	9.18	+ .11	49.38	7.52	| .07		May	18	18.97	10.47	- .20	48.79	8.05	- .01			
	3	12.78	9.23	+ .03	49.37	7.53	| .07			19	19.11	10.46	- .15	48.78	8.06	- .05			
	4	12.92	9.28	- .05	49.36	7.53	| .06			20	19.25	10.46	- .05	48.76	8.07	- .07			
	5	13.06	9.34	- .10	49.36	7.54	+ .04			21	19.39	10.45	+ .06	48.75	8.08	- .08			
	6	13.19	9.39	- .14	49.35	7.54	+ .02			22	19.52	10.44	| .16	48.74	8.10	- .07			
	7	13.33	9.44	- .16	49.34	7.55	- .01			23	19.66	10.43	+ .23	48.73	8.11	- .04			
	8	13.47	9.49	- .15	49.34	7.56	- .04			24	19.80	10.42	+ .26	48.72	8.12	.00			
	9	13.61	9.54	- .11	49.33	7.56	- .06			25	19.94	10.41	| .24	48.71	8.13	+ .03			
	10	13.74	9.58	- .07	49.32	7.57	- .07			26	20.07	10.40	| .19	48.69	8.14	+ .06			
	11	13.88	9.63	- .01	49.31	7.58	- .07			27	20.21	10.39	| .11	48.68	8.14	+ .07			
	12	14.02	9.68	+ .05	49.30	7.59	- .06			28	20.35	10.38	| .02	48.67	8.15	+ .07			
	13	14.16	9.72	+ .09	49.29	7.60	- .03			29	20.49	10.36	- .05	48.67	8.16	+ .06			
	14	14.29	9.77	+ .11	49.28	7.61	.00			30	20.62	10.35	- .10	48.66	8.17	+ .03			
	15	14.43	9.81	+ .09	49.26	7.62	+ .03			31	20.76	10.33	- .13	48.65	8.18	.00			
	16	14.57	9.85	+ .04	49.25	7.63	+ .06		June	1	20.90	10.31	- .14	48.64	8.18	- .02			
	17	14.71	9.89	- .04	49.24	7.64	+ .08			2	21.04	10.29	- .12	48.63	8.19	- .05			
	18	14.84	9.93	- .12	49.23	7.65	+ .07			3	21.17	10.28	- .08	48.63	8.19	- .06			
	19	14.98	9.97	- .18	49.22	7.66	+ .05			4	21.31	10.26	- .03	48.62	8.20	- .07			
	20	15.12	10.00	- .20	49.20	7.67	| .02			5	21.45	10.24	+ .03	48.61	8.21	- .07			
	21	15.26	10.04	- .17	49.19	7.69	- .02			6	21.59	10.21	| .08	48.61	8.21	- .05			
	22	15.40	10.07	- .10	49.18	7.70	- .06			7	21.73	10.19	+ .10	48.60	8.21	- .02			
	23	15.53	10.10	.00	49.16	7.71	- .08			8	21.86	10.17	| .10	48.60	8.22	| .01			
	24	15.67	10.14	+ .11	49.15	7.72	- .08			9	22.00	10.15	| .06	48.59	8.22	+ .05			
	25	15.81	10.17	+ .20	49.13	7.74	- .06			10	22.14	10.12	.00	48.59	8.22	+ .07			
	26	15.95	10.20	+ .25	49.12	7.75	- .03			11	22.28	10.10	- .09	48.59	8.22	+ .08			
	27	16.08	10.22	+ .26	49.10	7.76	| .01			12	22.41	10.07	- .17	48.59	8.22	+ .07			
	28	16.22	10.25	+ .22	49.09	7.78	| .04			13	22.55	10.05	- .22	48.58	8.22	+ .04			
	29	16.36	10.27	+ .15	49.07	7.79	+ .06			14	22.69	10.02	- .23	48.58	8.22	+ .01			
	30	16.50	10.29	+ .07	49.06	7.81	+ .07			15	22.83	10.00	- .19	48.58	8.22	- .03			
May	1	16.63	10.32	- .01	49.04	7.82	+ .06			16	22.96	9.97	- .11	48.58	8.22	- .06			
	2	16.77	10.34	- .08	49.03	7.83	+ .05			17	23.10	9.95	.00	48.59	8.22	- .08			
	3	16.91	10.35	- .13	49.01	7.85	+ .02			18	23.24	9.92	+ .11	48.59	8.21	- .07			
	4	17.05	10.37	- .15	48.99	7.86	.00			19	23.38	9.89	+ .20	48.59	8.21	- .05			
	5	17.18	10.39	- .14	48.98	7.88	- .03			20	23.51	9.87	+ .25	48.59	8.21	- .01			
	6	17.32	10.40	- .12	48.97	7.89	- .05			21	23.65	9.84	+ .25	48.60	8.20	+ .02			
	7	17.46	10.42	- .08	48.95	7.90	- .07			22	23.79	9.82	+ .21	48.60	8.20	+ .05			
	8	17.60	10.43	- .02	48.93	7.92	- .07			23	23.93	9.79	+ .14	48.60	8.19	+ .07			
	9	17.73	10.44	+ .03	48.92	7.93	- .06			24	24.06	9.76	+ .05	48.61	8.18	+ .07			
	10	17.87	10.44	+ .08	48.91	7.95	- .04			25	24.20	9.74	- .02	48.61	8.18	+ .06			
	11	18.01	10.45	+ .10	48.89	7.96	- .01			26	24.34	9.71	- .08	48.62	8.17	+ .04			
	12	18.15	10.46	+ .09	48.88	7.97	+ .02			27	24.48	9.68	- .12	48.63	8.16	+ .01			
	13	18.29	10.46	+ .04	48.86	7.99	+ .06			28	24.62	9.66	- .13	48.64	8.15	- .01			
	14	18.42	10.47	- .03	48.85	8.00	+ .08			29	24.75	9.63	- .11	48.64	8.14	- .04			
	15	18.56	10.47	- .10	48.83	8.01	+ .08			30	24.89	9.61	- .08	48.65	8.13	- .06			
	16	18.70	10.47	- .18	48.82	8.02	+ .06		July	1	25.03	9.58	- .03	48.66	8.12	- .07			
	17	18.84	10.47	- .21	48.80	8.04	+ .03			2	25.17	9.56	+ .02	48.67	8.11	- .07			
	18	18.97	10.47	- .20	48.79	8.05	- .01			3	25.30	9.54	+ .07	48.68	8.10	- .06			

PRECESSION, NUTATION, &C., 1924. 201

	LONGITUDE.				Appar-ent Obliq-uity.	OBLIQUITY.		Mean Noon.	LONGITUDE.				Appar-ent Obliq-uity.	OBLIQUITY.	
	Pre-cession from 1924·0	Nutation.		Nutation.		Δ ω	d ω		Pre-cession from 1924·0	Nutation.		Nutation.		Δ ω	d ω
		Δ L	d L							Δ L	d L				
				23° 26'											
Oct. 3	37·96	11·79	-·14	50·07	6·59	-·06	Nov. 18	44·29	13·05	+·11	49·54	7·07	-·02		
4	38·10	11·84	-·04	50·07	6·59	-·08	19	44·43	13·04	+·10	49·52	7·08	+·02		
5	38·24	11·89	+·07	50·07	6·59	-·08	20	44·57	13·03	+·06	49·51	7·09	+·05		
6	38·38	11·94	+·16	50·06	6·60	-·06	21	44·71	13·02	·00	49·50	7·10	+·07		
7	38·51	12·00	+·22	50·06	6·60	-·03	22	44·84	13·01	-·09	49·48	7·11	+·08		
8	38·65	12·05	+·23	50·05	6·60	+·01	23	44·98	12·99	-·17	49·47	7·12	+·07		
9	38·79	12·10	+·20	50·05	6·61	+·04	24	45·12	12·98	-·22	49·46	7·14	+·05		
10	38·93	12·15	+·14	50·04	6·61	+·07	25	45·26	12·96	-·24	49·45	7·15	+·01		
11	39·06	12·20	+·06	50·03	6·62	+·07	26	45·39	12·94	-·20	49·44	7·16	-·03		
12	39·20	12·24	-·02	50·03	6·62	+·07	27	45·53	12·92	-·12	49·43	7·17	-·06		
13	39·34	12·29	-·09	50·02	6·63	+·05	28	45·67	12·90	-·01	49·42	7·17	-·08		
14	39·48	12·33	-·13	50·01	6·64	+·02	29	45·81	12·88	+·10	49·41	7·18	-·08		
15	39·61	12·38	-·14	50·00	6·65	-·01	30	45·95	12·86	+·20	49·40	7·19	-·05		
16	39·75	12·42	-·13	49·99	6·65	-·03	Dec. 1	46·08	12·83	+·25	49·39	7·20	-·02		
17	39·89	12·46	-·09	49·98	6·66	-·06	2	46·22	12·81	+·25	49·38	7·20	+·02		
18	40·03	12·50	-·04	49·97	6·67	-·07	3	46·36	12·78	+·21	49·37	7·21	+·05		
19	40·17	12·54	+·01	49·96	6·68	-·07	4	46·50	12·76	+·14	49·37	7·22	+·07		
20	40·30	12·58	+·06	49·95	6·69	-·06	5	46·63	12·73	+·05	49·36	7·22	+·07		
21	40·44	12·62	+·10	49·94	6·70	-·04	6	46·77	12·70	-·03	49·35	7·23	+·06		
22	40·58	12·65	+·11	49·93	6·71	-·01	7	46·91	12·67	-·09	49·35	7·23	+·04		
23	40·72	12·69	+·10	49·91	6·72	+·02	8	47·05	12·64	-·12	49·34	7·24	+·01		
24	40·85	12·72	+·05	49·90	6·73	+·06	9	47·18	12·61	-·12	49·34	7·24	-·02		
25	40·99	12·75	-·02	49·89	6·75	+·08	10	47·32	12·57	-·10	49·33	7·24	-·04		
26	41·13	12·78	-·10	49·87	6·76	+·08	11	47·46	12·54	-·06	49·33	7·24	-·06		
27	41·27	12·81	-·17	49·86	6·77	+·07	12	47·60	12·51	-·01	49·33	7·24	-·07		
28	41·40	12·84	-·21	49·85	6·78	+·04	13	47·73	12·47	+·04	49·33	7·24	-·07		
29	41·54	12·87	-·21	49·83	6·80	·00	14	47·87	12·44	+·09	49·33	7·24	-·05		
30	41·68	12·89	-·16	49·82	6·81	-·04	15	48·01	12·40	+·11	49·33	7·24	-·03		
31	41·82	12·91	-·07	49·80	6·82	-·07	16	48·15	12·37	+·11	49·33	7·24	·00		
Nov. 1	41·95	12·93	+·04	49·79	6·84	-·08	17	48·28	12·33	+·08	49·33	7·24	+·04		
2	42·09	12·95	+·14	49·77	6·85	-·07	18	48·42	12·30	+·02	49·33	7·23	+·06		
3	42·23	12·97	+·22	49·76	6·86	-·04	19	48·56	12·26	-·06	49·34	7·23	+·08		
4	42·37	12·99	+·25	49·75	6·88	-·01	20	48·70	12·22	-·15	49·34	7·22	+·08		
5	42·50	13·00	+·23	49·73	6·89	+·03	21	48·84	12·18	-·23	49·34	7·22	+·06		
6	42·64	13·02	+·18	49·71	6·90	+·06	22	48·97	12·15	-·26	49·35	7·21	+·02		
7	42·78	13·03	+·10	49·70	6·92	+·07	23	49·11	12·11	-·24	49·35	7·21	-·02		
8	42·92	13·04	+·01	49·68	6·93	+·07	24	49·25	12·07	-·17	49·36	7·20	-·06		
9	43·06	13·05	-·06	49·67	6·95	+·06	25	49·39	12·04	-·07	49·37	7·19	-·08		
10	43·19	13·05	-·11	49·65	6·96	+·03	26	49·52	12·00	+·05	49·37	7·18	-·08		
11	43·33	13·06	-·13	49·64	6·97	·00	27	49·66	11·97	+·15	49·38	7·17	-·06		
12	43·47	13·06	-·13	49·62	6·99	-·02	28	49·80	11·93	+·22	49·39	7·16	-·03		
13	43·61	13·06	-·10	49·61	7·00	-·05	29	49·94	11·89	+·25	49·40	7·15	+·01		
14	43·74	13·06	-·06	49·59	7·01	-·07	30	50·07	11·86	+·23	49·41	7·14	+·04		
15	43·88	13·06	-·01	49·57	7·03	-·07	31	50·21	11·82	+·17	49·42	7·12	+·07		
16	44·02	13·06	+·05	49·57	7·04	-·06	32	50·35	11·79	+·09	49·44	7·11	+·08		
17	44·16	13·05	+·09	49·55	7·05	-·04									
18	44·29	13·05	+·11	49·54	7·07	-·02									

202 MEAN PLACES OF STARS, 1924.

FOR JANUARY 1^d.126

Star's Name.	Mag	Spect.	Right Ascension.			Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h	m	s	s	s			
α Andromedæ	2.2	A o p	0 4 27.321			+ 3.0870	+ .0107	N. 28 40 15.14	+ 20.041	- .163
β Cassiopeiæ	2.4	F 5	0 5 6.744			3.1219	+ .0681	N. 58 43 50.30	20.039	- .180
γ Pegasi	2.9	B 2	0 9 19.203			+ 3.0871	+ .0003	N. 14 45 39.99	20.028	- .010
δ Octantis	7.2	A o	0 12 16.875			- 0.3033	+ .0057	S. 88 47 7.76	20.016	+ .006
ϵ Ceti	3.8	K o	0 15 33.356			+ 3.0581	- .0013	S. 9 14 42.38	19.999	- .030
ζ Tucanæ	4.3	F 8	0 16 7.491			+ 2.8684	+ .2734	S. 65 19 15.77	+ 19.995	+ 1.172
d Piscium	5.6	K o	0 16 41.164			3.0861	+ .0003	N. 7 46 5.93	19.992	+ .016
44 Piscium	6.0	G 5	0 21 30.358			3.0761	- .0014	N. 1 31 7.73	19.956	- .023
β Hydri	2.9	G o	0 21 46.968			2.4920	+ .6950	S. 77 40 56.17	19.954	+ .319
α Phœnicis	2.4	K o	0 22 31.915			2.9517	+ .0187	S. 42 43 7.38	19.948	- .403
12 Ceti	6.0	K 5	0 26 9.631			+ 3.0612	+ .0011	S. 4 22 37.24	+ 19.914	.000
ϵ Andromedæ	4.5	G 5	0 34 32.093			3.1835	- .0173	N. 28 53 57.46	19.818	- .251
δ Andromedæ	3.5	K o	0 35 15.572			3.1932	+ .0110	N. 30 26 42.56	19.808	- .097
α Cassiopeiæ	var.	K o	0 36 11.003			3.3857	+ .0063	N. 56 7 14.77	19.796	- .032
β Ceti	2.2	K o	0 39 46.529			2.9960	+ .0160	S. 18 24 12.33	19.744	+ .041
δ Piscium	4.6	K 5	0 44 44.227			+ 3.1054	+ .0052	N. 7 10 18.09	+ 19.664	- .046
20 Ceti	4.9	K o	0 49 7.326			3.0651	- .0005	N. 1 33 23.36	19.586	- .003
γ Cassiopeiæ	2.3	B o p	0 52 6.445			3.6010	+ .0036	N. 60 18 19.93	19.529	- .005
μ Andromedæ	3.9	A 2	0 52 31.720			3.3107	+ .0132	N. 38 5 14.68	19.521	+ .030
α Sculptoris	4.4	B 5	0 54 56.599			2.8913	- .0018	S. 29 46 5.46	19.472	- .013
ϵ Piscium	4.5	K o	0 58 59.812			+ 3.1174	- .0054	N. 7 28 52.64	+ 19.384	+ .026
72 Piscium	5.7	F 2	1 1 4.442			3.1642	- .0001	N. 14 32 15.66	19.336	+ .054
β Phœnicis	3.4	K o	1 2 41.558			2.6839	- .0057	S. 47 7 33.10	19.299	- .024
β Andromedæ	2.4	M a	1 5 28.229			3.3386	+ .0148	N. 35 13 4.70	19.232	- .117
ξ^1 Piscium	5.6	A 5	1 9 45.524			3.1232	+ .0096	N. 7 10 25.90	19.123	- .052
θ Ceti	3.8	K o	1 20 13.429			+ 3.0037	- .0057	S. 8 34 30.34	+ 18.829	- .215
δ Cassiopeiæ	2.8	A 5	1 20 49.779			3.8672	+ .0407	N. 59 50 27.74	18.811	- .037
γ Phœnicis	3.4	K 5	1 25 3.916			2.6095	- .0038	S. 43 42 26.49	18.680	- .218
η Piscium	3.7	G 5	1 27 24.782			3.2057	+ .0015	N. 14 57 16.32	18.605	- .003
α Ursæ Minoris	2.1	F 8	1 33 42.610			30.6929	+ .1519	N. 88 53 52.74	18.392	+ .001
α Eridani	0.6	B 5	1 34 53.101			+ 2.2249	+ .0103	S. 57 37 21.46	+ 18.351	- .041
ν Piscium	4.7	K o	1 37 28.445			3.1220	- .0017	N. 5 6 12.52	18.259	+ .002
δ Piscium	4.5	K o	1 41 22.676			3.1611	- .0049	N. 8 46 32.63	18.115	+ .045
ζ Ceti	3.9	K o	1 47 42.505			2.9583	+ .0020	S. 10 42 35.46	17.872	- .027
ϵ Cassiopeiæ	3.4	B 3	1 48 54.517			4.2882	+ .0053	N. 63 17 47.94	17.824	- .015
β Arietis	2.7	A 5	1 50 26.222			+ 3.3036	+ .0064	N. 20 26 13.66	+ 17.762	- .111
α Hydri	3.0	F o	1 56 22.016			1.8540	+ .0276	S. 61 56 21.55	17.516	+ .026
ν Ceti	4.2	K 5	1 56 25.398			2.8174	+ .0082	S. 21 26 43.54	17.514	- .009
γ Andromedæ	2.3	K o	1 59 13.577			3.6702	+ .0046	N. 41 57 56.92	17.393	- .051
α Arietis	2.2	K 2	2 2 53.069			3.3640	+ .0139	N. 23 6 13.67	17.232	- .144
β Trianguli	3.1	A 5	2 5 0.908			+ 3.5515	+ .0127	N. 34 37 42.69	+ 17.135	- .044
ξ^1 Ceti	4.5	G 5	2 8 58.153			3.1793	- .0013	N. 8 29 26.72	16.953	- .016
67 Ceti	5.7	G 5	2 13 11.470			2.9857	+ .0054	S. 6 46 18.47	16.754	- .110
ϕ Eridani	3.8	B 8	2 13 47.614			+ 2.1346	+ .0081	S. 51 51 49.14	+ 16.725	- .036

PROPER NAMES.— γ Pegasi - *Algenib*. α Ursæ Minoris - *Polaris*. α Eridani - *Achernar*.

VARIABLE STARS.— α Cassiopeiæ. The limits of magnitude are 2.2 and 2.8. Period irregular.

MEAN PLACES OF STARS, 1924. 203

FOR JANUARY 1^d.126

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s			
θ Arietis - -	5.7	A o	2 13 53.642	+ 3.3345	- .0010	N. 19 33 1.04	+ 16.720	- .002
\circ Ceti - - -	var.	M d	2 15 30.357	3.0295	+ .0002	S. 3 19 18.87	16.642	- .229
κ Fornacis - -	5.4	F 5	2 19 3.892	2.7310	+ .0142	S. 24 9 40.07	16.467	- .063
δ Hydri - - -	4.3	A 2	2 20 23.437	1.0708	- .0097	S. 69 0 17.52	16.399	+ .020
ξ^2 Ceti - - -	4.3	A o	2 24 6.927	+ 3.1850	+ .0025	N. 8 7 12.69	16.211	- .007
η B Octantis -	7.8	F o	2 31 50.086	- 8.8516	- .0203	S. 86 3 24.40	+ 15.804	+ .006
ν Ceti - - -	5.0	G 5	2 31 52.986	+ 3.1486	- .0025	N. 5 15 44.91	15.800	- .018
δ Ceti - - -	4.0	B 2	2 35 35.122	3.0728	+ .0011	N. 0 0 5.55	15.601	+ .004
γ Ceti - - -	3.6	A o	2 39 21.613	3.1164	- .0098	N. 2 54 58.65	15.391	- .148
π Ceti - - -	4.4	B 5	2 40 30.246	2.8552	- .0012	S. 14 10 47.24	15.326	- .011
β Fornacis -	4.5	K o	2 45 54.601	+ 2.5041	+ .0080	S. 32 43 28.28	+ 15.017	+ .156
σ Arietis - -	5.5	B 5	2 47 17.590	+ 3.3078	+ .0016	N. 14 46 10.71	14.936	- .034
ι B Octantis	8.4	G 5	2 50 35.267	- 30.9766	- .0618	S. 88 28 36.99	14.744	- .025
ϵ Arietis (mean)	4.6	A 2	2 54 51.720	+ 3.4280	- .0009	N. 21 2 14.10	14.486	- .010
θ Eridani - -	3.1	A 2	2 55 22.901	2.2792	- .0025	S. 40 36 30.92	14.457	+ .024
α Ceti - - -	2.8	M a	2 58 18.259	+ 3.1350	- .0009	N. 3 47 32.78	+ 14.278	- .078
γ Persei - - -	3.1	F 5 p	2 59 16.855	4.3324	+ .0010	N. 53 12 36.35	14.218	- .004
μ Horologii -	5.2	F o	3 1 49.036	1.4210	- .0123	S. 60 1 54.79	14.061	- .054
β Persei - - -	var.	B 8	3 3 12.992	3.8958	+ .0008	N. 40 39 50.32	13.974	- .002
δ Arietis - - -	4.5	K o	3 7 16.778	3.4167	+ .0110	N. 19 26 25.30	13.716	+ .001
τ^1 Arietis - -	5.2	B 3	3 16 50.151	+ 3.4587	+ .0023	N. 20 52 26.52	+ 13.093	- .033
α Persei - - -	1.9	F 5	3 18 53.237	4.2703	+ .0030	N. 49 35 31.08	12.959	- .028
\circ Tauri - - -	3.8	G 5	3 20 43.246	3.2310	- .0046	N. 8 45 44.76	12.837	- .074
f Tauri - - -	4.3	K o	3 26 40.472	3.3086	+ .0016	N. 12 40 38.24	12.432	+ .002
ϵ Eridani - - -	3.8	K o p	3 29 20.920	2.8917	- .0660	S. 9 42 52.21	12.248	+ .027
45 G Horologii	5.6	K o	3 30 18.520	+ 1.7791	+ .0048	S. 50 38 9.47	+ 12.181	+ .080
τ^5 Eridani - -	4.3	B 8	3 30 25.741	2.6463	+ .0023	S. 21 53 13.43	12.171	- .039
11 Tauri - - -	6.2	A o	3 36 13.730	3.5793	+ .0014	N. 25 5 5.67	11.763	- .008
δ Persei - - -	3.1	B 5	3 37 30.340	4.2602	+ .0035	N. 47 32 45.27	11.675	- .036
δ Eridani - - -	3.7	K o	3 39 36.373	2.8796	- .0064	S. 10 1 11.02	11.525	+ .747
17 Tauri - - -	3.8	B 5	3 40 21.515	+ 3.5578	+ .0017	N. 23 52 31.96	+ 11.472	- .044
η Tauri - - -	3.0	B 5	3 42 57.780	+ 3.5616	+ .0016	N. 23 52 16.46	11.284	- .050
γ Hydri - - -	3.2	M a	3 48 23.798	- 0.9654	+ .0097	S. 74 28 19.93	10.888	+ .117
ζ Persei - - -	2.9	B 1	3 49 21.003	+ 3.7665	+ .0010	N. 31 39 32.97	10.818	- .014
ϵ Persei - - -	3.0	B 1	3 52 44.931	4.0186	+ .0031	N. 39 47 30.12	10.566	- .027
γ Eridani - -	3.2	K 5	3 54 28.980	+ 2.7941	+ .0047	S. 13 43 25.55	+ 10.438	- .111
A Tauri - - -	4.5	K o	4 0 11.947	3.5378	+ .0069	N. 21 52 31.71	10.005	- .058
43 Tauri - - -	5.7	G 5	4 44.148	3.4854	+ .0079	N. 19 24 33.45	9.659	- .044
\circ^1 Eridani - -	4.1	F 5	4 8 9.282	2.9271	+ .0007	S. 7 2 4.77	9.398	+ .086
α Horologii -	3.8	K o	4 11 28.985	1.9837	+ .0040	S. 42 28 53.27	9.141	- .231
α Reticuli - -	3.4	G 5	4 13 26.434	+ 0.7621	+ .0048	S. 62 39 49.75	+ 8.988	+ .044
ν^4 Eridani - -	3.6	B 9	4 15 0.937	2.2649	+ .0025	S. 33 58 58.46	8.864	- .000
γ Tauri - - -	3.9	K o	4 15 27.946	3.4043	+ .0082	N. 15 26 42.78	8.829	- .029
ϵ Tauri - - -	3.6	K o	4 24 10.595	3.4936	+ .0082	N. 19 0 47.27	8.138	- .034
α Tauri - - -	1.1	K 5	4 31 33.442	+ 3.4362	+ .0047	N. 16 21 27.91	+ 7.545	- .189

PROPER NAMES.— \circ Ceti - *Mira*. β Persei - *Algol*. α Tauri - *Aldebaran*.

VARIABLE STARS.— \circ Ceti. The limits of magnitude are 1.7-9.6. Period 331^d.6.

β Persei. The limits of magnitude are 2.1 and 3.2. Period 2^d 21^h.

NOTE.— ϵ Eridani. The apparent places are affected with a parallax of 0".32.

204 MEAN PLACES OF STARS, 1924.

FOR JANUARY 1st 1926

Star's Name.	Mag.	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s	° ' "	"	"
α Doradus -	3.5	A o p	4 32 21.175	+ 1.2888	+ .0067	S. 55 12 6.54	+ 7.480	- .011
53 Eridani -	4.0	K o	4 34 41.867	2.7520	- .0061	S. 14 27 5.37	7.290	- .154
τ Tauri -	4.3	B 5	4 37 40.887	3.5990	+ .0007	N.22 48 44.65	7.046	- .020
μ Eridani -	4.2	B 5	4 41 42.082	2.9981	+ .0013	S. 3 23 34.43	6.716	- .012
π^3 Orionis -	3.3	F 8	4 45 42.770	3.2246	+ .0312	N. 6 49 47.71	6.382	+ .023
ι Aurigæ -	2.9	K 2	4 52 2.488	+ 3.9042	+ .0009	N.33 2 49.88	+ 5.857	- .021
ϵ Aurigæ -	var.	F 5 p	4 56 30.736	4.3017	+ .0012	N.43 42 44.54	5.482	- .013
η Aurigæ -	3.3	B 3	5 1 10.961	4.2017	+ .0039	N.41 7 59.58	5.088	- .072
ϵ Leporis -	3.3	K 5	5 2 14.582	2.5375	+ .0012	S. 22 28 19.60	4.999	- .064
β Eridani -	2.9	A 2	5 4 6.793	2.9552	- .0056	S. 5 11 0.56	4.840	- .074
μ Leporis -	3.3	A o p	5 9 31.020	+ 2.6916	+ .0027	S. 16 17 39.91	+ 4.378	- .028
β Orionis -	0.3	B 8 p	5 10 53.069	2.8826	.0000	S. 8 17 17.90	4.263	.000
α Aurigæ -	0.2	G o	5 11 4.313	4.4215	+ .0086	N.45 55 20.55	4.247	- .429
σ Orionis -	4.6	B 3	5 17 52.887	3.0624	- .0001	S. 0 27 22.51	3.661	+ .005
η Orionis (mean)	3.4	B 1	5 20 39.323	3.0161	+ .0005	S. 2 27 57.29	3.424	+ .001
γ Orionis -	1.7	B 2	5 21 3.231	+ 3.2177	- .0004	N. 6 16 55.29	+ 3.390	- .017
β Tauri -	1.8	B 8	5 21 29.177	3.7894	+ .0025	N.28 32 40.88	3.353	- .177
β Leporis -	3.0	G o	5 24 59.338	2.5706	+ .0004	S. 20 49 8.94	3.050	- .093
20 G Pictoris -	5.5	G 5	5 28 4.006	1.6469	- .0005	S. 47 7 57.10	2.783	- .188
δ Orionis -	2.5	B o	5 28 7.388	3.0646	.0000	S. 0 21 15.14	2.779	- .002
α Leporis -	2.7	F o	5 29 22.677	+ 2.6456	+ .0003	S. 17 52 32.47	+ 2.670	.000
ι Orionis -	2.9	O e 5	5 31 42.900	2.9344	+ .0001	S. 5 57 31.31	2.467	- .002
ϵ Orionis -	1.7	B o	5 32 21.382	3.0438	.0000	S. 1 14 57.21	2.412	+ .001
β Doradus -	3.8	F 5	5 32 57.941	0.5192	+ .0002	S. 62 32 23.15	2.359	- .026
ζ Tauri -	3.0	B 3	5 33 6.117	3.5848	+ .0006	N.21 5 50.73	2.347	- .032
α Columbae -	2.7	B 5 p	5 36 53.818	+ 2.1721	+ .0006	S. 34 6 50.06	+ 2.017	- .038
ζ Orionis -	2.0	B o	5 36 55.417	3.0268	+ .0005	S. 1 58 54.36	2.013	- .014
130 Tauri -	5.5	F o	5 43 0.300	3.4981	+ .0004	N.17 42 7.11	1.485	- .006
κ Orionis -	2.2	B o	5 44 9.101	+ 2.8450	+ .0001	S. 9 41 43.88	1.385	- .003
31 G Mensae -	6.2	A o	5 44 53.032	- 11.6560	- .0118	S. 84 49 37.44	1.321	+ .087
β Columbae -	3.2	K o	5 48 16.755	+ 2.1104	+ .0034	S. 35 47 45.76	+ 1.025	+ .404
α Orionis -	var.	M a	5 51 3.419	3.2461	+ .0020	N. 7 23 38.98	0.782	+ .009
β Aurigæ -	2.1	A o p	5 53 57.278	4.4059	- .0038	N.44 56 29.03	0.529	- .006
θ Aurigæ -	2.7	A o p	5 54 32.327	4.0872	+ .0047	N.37 12 31.41	0.478	- .091
1 Geminorum -	4.3	G 5	5 59 30.038	+ 3.6474	+ .0002	N.23 16 7.51	0.041	- .109
12 B Octantis	6.8	K o	5 59 51.621	- 15.7220	- .0265	S. 85 55 59.07	+ 0.012	+ .005
ν Orionis -	4.4	B 2	6 3 13.996	+ 3.4253	+ .0012	N.14 46 43.76	- 0.283	- .025
η Geminorum -	var.	M a	6 10 17.457	3.6266	- .0039	N.22 31 48.63	0.900	- .016
ζ Canis Maj. -	3.1	B 3	6 17 23.643	2.3026	- .0006	S. 30 1 44.75	1.520	- .023
μ Geminorum -	3.2	M a	6 18 21.801	3.6260	+ .0046	N.22 33 14.40	1.605	- .114
β Canis Maj. -	2.0	B 1	6 19 21.146	+ 2.6423	- .0006	S. 17 55 1.39	- 1.691	+ .004
α Argus -	0.9	F o	6 22 15.889	1.3298	+ .0022	S. 52 39 13.55	1.944	+ .009
ν Geminorum -	4.1	B 5	6 24 27.045	3.5633	- .0005	N.20 15 41.83	2.137	- .016
γ Geminorum -	1.9	A o	6 33 19.332	+ 3.4636	+ .0033	N.16 27 55.52	- 2.904	- .048

PROPER NAMES.— β Orionis - *Rigel*. α Aurigæ - *Cupella*. γ Orionis - *Bellatrix*.
 α Orionis - *Betelgeuse*. α Argus - *Canopus*.
 VARIABLE STARS.— ϵ Aurigæ - The limits of magnitude are 3.4 and 4.1.
 α Orionis - The limits of magnitude are 0.3 and 1.1. Period irregular.
 η Geminorum - The limits of magnitude are 3.2 and 4.2. Period 231.4 days.

MEAN PLACES OF STARS, 1924. 205

FOR JANUARY 1d.126

Star's Name.	Mag.	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s	° ' " "		
<i>r</i> Argûs - -	3.2	B 8	6 35 26.240	+ 1.8360	+ .0008	S. 43 7 43.25	- 3.087	- .019
<i>ε</i> Geminorum -	3.2	G 5	6 39 15.438	3.6926	- .0001	N. 25 12 28.04	3.417	- .018
<i>ξ</i> Geminorum -	3.4	F 5	6 41 1.474	3.3759	- .0077	N. 12 58 43.82	3.569	- .193
<i>α</i> Canis Maj. -	-1.6	A 0	6 41 47.937	2.6808	- .0374	S. 16 36 39.19	3.636	- 1.206
<i>α</i> Pictoris - -	3.3	A 5	6 47 24.797	0.6276	- .0104	S. 61 51 35.04	4.117	+ .238
<i>r</i> Argûs - -	2.8	K 0	6 48 3.001	+ 1.4859	+ .0029	S. 50 31 25.42	- 4.172	- .096
<i>θ</i> Canis Maj. -	4.3	K 2	6 50 39.563	2.7971	- .0091	S. 11 56 31.96	4.395	- .007
<i>ε</i> Canis Maj. -	1.6	B 1	6 55 38.319	2.3576	- .0001	S. 28 52 3.73	4.819	+ .003
22 Canis Maj. -	3.7	K 5	6 58 41.481	2.3905	- .0006	S. 27 49 30.03	5.079	+ .002
<i>ζ</i> Geminorum -	var.	G 0	6 59 36.170	3.5604	- .0002	N. 20 40 59.04	5.155	- .007
<i>α</i> ² Canis Maj. -	3.1	B 5 <i>p</i>	6 59 51.051	+ 2.5055	- .0002	S. 23 43 16.84	- 5.175	.000
<i>γ</i> Canis Maj. -	4.1	B 5	7 0 19.223	2.7145	+ .0003	S. 15 31 11.76	5.215	- .010
<i>δ</i> Canis Maj. -	2.0	F 8 <i>p</i>	7 5 17.998	2.4397	- .0015	S. 26 16 17.71	5.634	+ .003
51 H Cephei -	5.3	M a	7 5 27.526	29.0206	- .0582	N. 87 10 15.95	5.648	- .034
51 Geminorum	5.3	M b	7 9 0.552	3.4456	+ .0019	N. 16 17 21.19	5.947	- .042
<i>π</i> Argûs - -	2.7	K 5	7 14 27.513	+ 2.1198	- .0008	S. 36 57 37.73	- 6.398	- .010
<i>δ</i> Geminorum -	3.5	F 0	7 15 35.188	+ 3.5868	- .0010	N. 22 7 24.93	6.491	- .015
<i>δ</i> Volantis - -	4.0	F 5	7 16 52.813	- 0.0221	+ .0004	S. 67 49 5.57	6.599	- .006
<i>η</i> Canis Maj. -	2.4	B 5 <i>p</i>	7 21 5.321	+ 2.3735	- .0005	S. 29 9 13.89	6.945	+ .013
<i>β</i> Canis Min. -	3.1	B 8	7 23 1.836	3.2582	- .0032	N. 8 26 36.98	7.104	- .047
<i>σ</i> Argûs - -	3.3	K 5	7 26 49.113	+ 1.9091	- .0072	S. 43 8 48.65	- 7.414	+ .180
<i>α</i> Geminorum -	2.0	A 0	7 29 45.229	3.8463	- .0144	N. 32 3 25.06	7.651	- .082
Q Carinæ - -	4.9	K 5	7 33 46.600	+ 1.4829	- .0045	S. 52 21 50.58	7.977	- .052
<i>Λ</i> Octantis -	7.8	A 0	7 34 31.617	-48.1949	- .0398	N. 88 37 55.40	8.035	+ .009
<i>α</i> Canis Min. -	0.5	F 5	7 35 19.468	+ 3.1888	- .0472	N. 5 25 14.52	8.099	- 1.036
26 Monocerotis	4.1	K 0	7 37 36.958	+ 2.8719	- .0057	S. 9 22 22.26	- 8.282	- .021
<i>β</i> Geminorum -	1.2	K 0	7 40 40.094	3.7216	- .0470	N. 28 12 39.70	8.524	- .054
<i>ξ</i> Argûs - -	3.5	G 0	7 46 5.875	2.5237	- .0004	S. 24 40 5.15	8.953	.000
<i>χ</i> Geminorum -	5.0	K 0	7 58 51.265	3.6902	- .0012	N. 28 0 30.81	9.935	- .053
<i>ζ</i> Argûs - -	2.3	O d	8 0 54.720	2.1112	- .0044	S. 39 47 18.78	10.091	- .005
<i>ρ</i> Argûs - -	2.9	F 5	8 4 18.419	+ 2.5612	- .0065	S. 24 5 3.18	- 10.347	+ .052
<i>γ</i> Argûs - -	2.2	O a <i>p</i>	8 7 11.495	1.8501	- .0003	S. 47 6 43.73	10.562	- .011
20 Puppis - -	5.1	G 5	8 9 50.377	2.7588	- .0009	S. 15 33 29.80	10.758	+ .001
<i>β</i> Cancri - -	3.8	K 2	8 12 23.702	3.2585	- .0035	N. 9 25 15.04	10.946	- .052
<i>d</i> ¹ Cancri - -	5.9	F 0	8 19 0.885	3.4418	- .0038	N. 18 34 38.20	11.429	- .031
<i>ε</i> Argûs - -	1.7	K 0 <i>p</i>	8 20 57.347	+ 1.2372	- .0042	S. 59 15 52.43	- 11.566	+ .008
30 Monocerotis	4.0	A 0	8 21 51.864	3.0032	- .0039	S. 3 39 26.89	11.631	- .019
4 B Ursæ Min.	7.0	A 0	8 22 39.807	57.6880	- .0377	N. 88 51 40.31	11.687	+ .018
<i>ο</i> Ursæ Maj. -	3.5	G 0	8 23 57.986	5.0213	- .0160	N. 60 58 25.68	11.780	- .112
<i>η</i> Cancri - -	5.5	K 0	8 28 19.024	3.4757	- .0025	N. 20 42 1.24	12.085	- .055
<i>γ</i> Cancri - -	4.7	A 0	8 38 53.487	+ 3.4826	- .0071	N. 21 44 34.29	- 12.812	- .043
<i>α</i> Mali - -	3.7	B 2	8 40 32.262	2.4116	- .0003	S. 32 54 41.99	12.921	+ .011
<i>δ</i> Argûs - -	2.0	A 0	8 42 36.063	+ 1.6550	- .0035	S. 54 25 46.53	- 13.058	- .100

PROPER NAMES.—*α* Canis Majoris - *Sirius*,
α Canis Minoris - *Procyon*.

α Geminorum - *Castor*,
β Geminorum - *Pollux*.

VARIABLE STARS.—*ζ* Geminorum. The limits of magnitude are 3.7 and 4.3. Period 10.2 days.

NOTES.—*α* Canis Majoris. The mean place is that of the centre of the orbit; the apparent places, those of the brighter star. The apparent places are affected with a parallax of 0".38.

α Geminorum. Both mean and apparent places refer to the brighter star.

α Canis Minoris. The mean place is that of the centre of the orbit; the apparent places, those of the brighter star. The apparent places are affected with a parallax of 0".33.

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FOR JANUARY 1^d.126

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s			
ε Hydræ - -	3.5	F 8	8 42 45.190	+ 3.1918	- .0126	N. 6 41 54.96	- 13.068	- .050
ζ Hydræ - -	3.3	K 0	8 51 22.721	3.1798	- .0060	N. 6 14 8.52	13.631	+ .007
ι Ursæ Maj. -	3.1	A 5	8 54 0.800	4.1622	- .0435	N. 48 20 28.01	13.799	- .248
α Cancri - -	4.3	A 3	8 54 19.981	3.2813	+ .0024	N. 12 9 9.99	13.819	- .042
κ Cancri - -	5.1	B 8	9 3 37.989	3.2531	- .0013	N. 10 58 29.70	14.398	- .013
ξ Cancri - -	5.2	G 5	9 4 59.630	+ 3.4527	+ .0011	N. 22 21 13.77	- 14.481	+ .002
λ Argûs - -	2.2	K 5	9 5 11.995	2.2081	- .0015	S. 43 7 31.23	14.491	- .007
β Argûs - -	1.8	A 0	9 12 22.340	0.6977	- .0310	S. 69 24 14.59	14.918	+ .094
83 Cancri - -	6.6	F 5	9 14 44.601	3.3600	- .0076	N. 18 1 42.06	15.056	- .136
ι Argûs - -	2.3	F 0	9 15 3.311	1.6094	- .0035	S. 58 57 21.32	15.074	+ .002
40 Lynceis -	3.3	K 5	9 16 25.839	+ 3.6789	- .0178	N. 34 42 53.50	- 15.152	+ .012
h Mali - -	4.9	M a	9 18 7.444	2.6565	- .0048	S. 25 38 30.32	15.250	- .032
κ Argûs - -	2.6	B 3	9 19 45.504	1.8587	- .0033	S. 54 41 9.36	15.342	- .018
α Hydræ - -	2.2	K 2	9 23 51.191	2.9495	- .0010	S. 8 19 42.13	15.570	+ .033
ψ Argûs - -	3.6	F 5	9 27 42.200	2.3780	- .0181	S. 40 8 1.62	15.779	+ .038
θ Ursæ Maj. -	3.3	F 8	9 27 47.106	+ 4.1280	- .1026	N. 52 1 28.90	- 15.784	- .542
ξ Leonis - -	5.1	G 5	9 27 51.102	3.2423	.0063	N. 11 38 13.86	15.788	- .084
N Velorum -	3.0	K 5	9 28 54.757	1.8268	- .0036	S. 56 41 54.77	15.845	+ .001
κ Hydræ - -	5.0	B 3	9 36 39.766	2.8779	- .0018	S. 13 59 12.16	16.251	- .011
o Leonis - -	3.8	F 5 p	9 37 5.803	3.2137	- .0094	N. 10 14 19.77	16.273	- .037
ε Leonis - -	3.1	G 0 p	9 41 32.463	+ 3.4128	- .0034	N. 24 7 29.46	- 16.496	- .022
μ Leonis - -	4.1	K 0	9 48 26.718	3.4325	- .0162	N. 26 21 56.32	16.832	- .056
π Leonis - -	4.9	M a	9 56 11.922	3.1744	- .0029	N. 8 24 34.23	17.190	- .027
α Leonis - -	1.3	B 8	10 4 19.604	3.2142	- .0169	N. 12 20 21.22	17.545	- .002
q Velorum -	4.1	A 2	10 11 32.481	2.5293	- .0153	S. 41 44 41.91	17.841	+ .032
22 Sextantis -	5.4	F 0	10 13 51.236	+ 2.9922	- .0106	S. 7 41 19.92	- 17.934	+ .004
q Carinæ - -	3.4	K 5	10 14 32.533	2.0044	- .0045	S. 60 57 7.70	17.961	+ .001
γ Leonis (1st *)	2.6	K 0	10 15 47.114	3.2890	+ .0212	N. 20 13 35.64	18.009	- .152
μ Ursæ Maj. -	3.2	K 5	10 17 48.534	3.5895	- .0068	N. 41 52 56.39	18.085	+ .027
μ Hydræ - -	4.1	K 5	10 22 24.842	2.9098	- .0089	S. 16 26 51.96	18.255	- .079
α Antliæ - -	4.4	K 5	10 23 40.315	+ 2.7493	- .0060	S. 30 40 50.77	- 18.300	- .023
ρ Leonis - -	3.9	B 0 p	10 28 48.668	+ 3.1613	- .0006	N. 9 41 53.39	18.479	- .005
10 G Octantis	6.7	A 0	10 35 38.499	- 3.3186	- .0097	S. 85 41 51.23	18.702	- .023
34 Sextantis -	6.6	F 5	10 38 42.090	+ 3.1050	- .0059	N. 3 58 50.66	18.798	+ .028
θ Argûs - -	3.0	B 0	10 40 14.423	2.1385	- .0043	S. 63 59 47.77	18.843	- .027
η Argûs - -	var.	Pec	10 42 6.489	+ 2.3231	- .0002	S. 59 17 4.90	- 18.899	- .009
μ Argûs - -	2.8	G 5	10 43 29.781	2.5687	+ .0066	S. 49 1 7.04	18.938	- .081
l Leonis - -	5.3	A 0	10 45 15.878	3.1556	+ .0001	N. 10 56 51.55	18.989	- .033
v Hydræ - -	3.3	K 0	10 45 52.436	2.9526	+ .0066	S. 15 47 44.26	19.006	+ .195
ι Antliæ - -	4.7	K 0	10 53 10.363	2.7862	+ .0062	S. 36 43 44.21	19.199	- .137
d Leonis - -	5.1	K 0	10 56 38.173	+ 3.0985	+ .0004	N. 4 1 32.97	- 19.284	- .022
β Ursæ Maj. -	2.4	A 0	10 57 16.056	3.6246	+ .0105	N. 56 47 24.48	19.299	+ .026
α Ursæ Maj. -	2.0	K 0	10 59 3.202	+ 3.7378	- .0164	N. 62 9 41.86	19.340	- .071
η Octantis -	6.3	A 0	10 59 52.649	- 0.3301	- .0578	S. 84 11 6.16	19.359	- .005
χ Leonis - -	4.7	F 0	11 1 5.876	+ 3.1190	- .0234	N. 7 44 50.42	- 19.387	- .040

PROPER NAMES.—α Leonis - *Regulus*.

α Ursæ Majoris - *Dubhe*.

VARIABLE STARS.—η Argûs. The limits of magnitude are > 1, and 7.4. Period irregular.

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Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s			
ψ Ursæ Maj. -	3.2	K o	11 5 23.920	+ 3.3872	- .0053	N.44 54 40.25	- 19.478	- .033
β Crateris -	4.5	A 2	11 7 55.063	2.9486	.0000	S. 22 24 38.83	19.530	- .106
δ Leonis -	2.6	A 2	11 10 4.185	3.1833	+ .0108	N.20 56 25.05	19.571	- .141
θ Leonis -	3.4	A o	11 10 15.210	3.1545	- .0049	N.15 50 42.73	19.574	- .085
δ Crateris -	3.8	K o	11 15 32.360	3.0068	- .0088	S. 14 22 1.49	19.669	+ .195
τ Leonis -	5.2	K o	11 24 1.755	+ 3.0848	+ .0008	N. 3 16 29.98	- 19.798	- .017
λ Draconis -	4.1	M a	11 26 54.763	3.5939	- .0072	N.69 45 2.57	19.836	- .021
ξ Hydræ -	3.7	G 5	11 29 15.634	2.9635	- .0158	S. 31 26 13.44	19.864	- .055
λ Centauri -	3.3	B 9	11 32 15.911	2.7616	- .0073	S. 62 35 57.34	19.898	- .027
ν Leonis -	4.5	K o	11 33 3.443	3.0716	.0000	S. 0 24 14.40	19.906	+ .039
ν Virginis -	4.2	M a	11 41 57.225	+ 3.0856	- .0015	N. 6 57 19.35	- 19.983	- .186
β Leonis -	2.2	A 2	11 45 11.087	3.0959	- .0341	N.14 59 49.08	20.003	- .118
β Virginis -	3.8	F 8	11 46 44.187	3.0758	+ .0494	N. 2 11 35.16	20.011	- .275
B Centauri -	4.7	K o	11 47 20.228	2.9996	- .0111	S. 44 45 2.91	20.014	- .046
γ Ursæ Maj. -	2.5	A o	11 49 50.527	3.1546	+ .0115	N.54 7 2.33	20.025	+ .004
π Virginis -	4.6	A 3	11 56 58.699	+ 3.0750	- .0009	N. 7 2 17.20	- 20.043	- .032
o Virginis -	4.2	G 5	12 1 20.306	3.0716	- .0148	N. 9 9 17.86	20.044	+ .032
δ Centauri -	2.9	B 3 p	12 4 24.668	3.1037	- .0050	S. 50 17 57.69	20.041	- .030
ϵ Corvi -	3.2	K o	12 6 12.780	3.0876	- .0051	S. 22 11 49.84	20.038	+ .003
δ Crucis -	3.1	B 3	12 11 5.962	3.1776	- .0050	S. 58 19 34.82	20.021	- .027
δ Ursæ Maj. -	3.4	A 2	12 11 40.495	+ 2.9662	+ .0149	N.57 27 17.40	- 20.018	+ .005
γ Corvi -	2.8	B 8	12 11 53.695	3.0941	- .0112	S. 17 7 12.19	20.018	+ .017
β Chamæleontis -	4.4	B 5	12 13 51.032	3.4837	- .0188	S. 78 53 24.88	20.008	+ .017
6 B Ursæ Min. -	6.3	F o	12 14 31.221	0.4934	- .0704	N.88 7 16.46	20.005	+ .058
η Virginis -	4.0	A o	12 16 1.054	3.0732	- .0036	S. 0 14 40.48	19.996	- .027
α Crucis -	1.6	B 1	12 22 21.393	+ 3.3247	- .0064	S. 62 40 41.36	- 19.950	- .039
δ Corvi -	3.1	A o	12 25 55.778	3.1163	- .0140	S. 16 5 32.95	19.916	- .149
γ Crucis -	1.6	M b	12 26 56.349	3.3113	+ .0026	S. 56 41 16.38	19.907	- .278
β Corvi -	2.8	G 5	12 30 23.430	3.1477	- .0008	S. 22 58 35.93	19.869	- .061
α Muscæ -	2.9	B 3	12 32 37.903	3.5596	- .0088	S. 68 43 1.29	19.842	- .029
γ Centauri -	2.4	A o	12 37 19.031	+ 3.3180	- .0196	S. 48 32 33.70	- 19.779	- .020
γ Virginis (mean) -	2.9	F o	12 37 48.491	3.0768	- .0375	S. 1 1 58.28	19.773	+ .005
ρ Virginis -	5.0	A o	12 38 2.309	3.0312	+ .0059	N.10 39 14.73	19.769	- .107
β Muscæ -	3.3	B 3	12 41 36.133	3.6608	- .0053	S. 67 41 32.58	19.716	- .031
β Crucis -	1.5	B 1	12 43 16.048	3.4947	- .0064	S. 59 16 25.21	19.689	- .033
35 Virginis -	6.7	M a	12 43 59.213	+ 3.0550	- .0004	N. 3 59 14.89	- 19.676	- .012
31 Comæ -	5.1	G o	12 47 59.871	2.9254	- .0023	N.27 57 14.08	19.606	- .024
ψ Virginis -	4.9	M b	12 50 23.888	3.1197	- .0024	S. 9 7 35.59	19.562	- .028
ϵ Ursæ Maj. -	1.7	A o p	12 50 41.463	2.6320	+ .0138	N.56 22 19.46	19.556	- .013
δ Virginis -	3.7	M a	12 51 46.455	3.0528	- .0318	N. 3 48 36.60	19.536	- .060
12 Canum Ven. -	2.9	A o p	12 52 28.525	+ 2.8296	- .0203	N.38 43 42.65	- 19.522	+ .049
ϵ Virginis -	3.0	K o	12 58 23.619	3.0050	- .0186	N.11 22 2.25	19.398	+ .015
θ Virginis -	4.4	A o	13 6 0.761	3.1069	- .0029	S. 5 8 1.11	19.219	- .040
γ Hydræ -	3.3	G 5	13 14 47.134	3.2526	+ .0046	S. 22 46 15.52	18.986	- .053
ι Centauri -	2.9	A 2	13 16 19.009	+ 3.3938	- .0204	S. 36 18 42.72	- 18.943	- .097

PROPER NAMES.— β Leonis - *Denebola*.

NOTE.— α Crucis. Both mean and apparent places are those of the brighter star.

208 MEAN PLACES OF STARS, 1924.

FOR JANUARY 1d.126

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s			
ξ ¹ Ursæ Maj.	2.4	A o p	13 20 52.197	+ 2.4053	+ .0153	N. 55 19 18.77	- 18.809	- .030
α Virginis	1.2	B 2	13 21 11.194	3.1609	- .0028	S. 10 45 54.06	18.800	- .032
ι Virginis	5.6	K 2	13 22 42.068	3.1758	- .0096	S. 12 18 45.14	18.753	- .023
ζ Virginis	3.4	A 2	13 30 49.119	3.0746	- .0195	S. 0 12 27.97	18.491	+ .039
ε Centauri	2.6	B 1	13 35 3.613	3.7895	- .0039	S. 53 4 50.65	18.345	- .039
m Virginis	5.2	M a	13 37 37.221	+ 3.1535	- .0073	S. 8 19 12.16	- 18.252	+ .032
τ Boötis	4.5	F 5	13 43 39.027	2.8849	- .0341	N. 17 50 5.72	18.029	+ .026
η Ursæ Maj.	1.9	B 3	13 44 32.913	2.3789	- .0118	N. 49 41 31.41	17.995	- .023
μ Centauri	3.3	B 2 p	13 45 1.785	3.6069	- .0028	S. 42 5 44.15	17.977	- .019
ζ Centauri	3.1	B 2 p	13 50 47.321	3.7369	- .0070	S. 46 54 54.14	17.748	- .064
η Boötis	2.8	G o	13 51 3.965	+ 2.8611	- .0044	N. 18 46 41.22	- 17.737	- .363
τ Virginis	4.3	A 2	13 57 46.629	3.0509	+ .0010	N. 1 54 42.11	17.456	- .029
β Centauri	0.9	B 1	13 58 26.706	4.2168	- .0033	S. 60 0 25.82	17.427	- .033
π Hydræ	3.5	K o	14 2 2.294	3.4083	+ .0030	S. 26 19 1.29	17.270	- .153
θ Centauri	2.3	K o	14 2 12.168	3.5662	- .0437	S. 35 59 48.41	17.262	- .525
94 Virginis	6.6	A o	14 2 16.112	+ 3.1747	- .0010	S. 8 31 46.79	- 17.258	+ .009
α Draconis	3.6	A o	14 2 19.926	1.6320	- .0071	N. 64 44 19.27	17.256	+ .011
κ Virginis	4.3	K o	14 8 50.338	3.1973	+ .0006	S. 9 55 14.44	16.960	+ .132
α Boötis	0.2	K o	14 12 11.650	2.8136	- .0779	N. 19 34 38.70	16.802	- 2.004
z Libræ	6.3	K o	14 19 20.049	3.2264	- .0014	S. 11 22 3.60	16.451	- .067
f Boötis	5.4	A 5	14 22 55.234	+ 2.7954	- .0052	N. 19 34 4.25	- 16.271	+ .015
ρ Boötis	3.8	K o	14 28 33.313	2.5937	- .0073	N. 30 42 15.61	15.979	+ .113
γ Boötis	3.0	F o	14 29 1.119	2.4260	- .0091	N. 38 38 24.18	15.955	+ .145
η Centauri	2.7	B 3 p	14 30 40.417	3.8036	- .0032	S. 41 49 29.29	15.866	- .032
α Centauri	0.3	G o	14 34 25.463	4.5479	- .4866	S. 60 31 21.39	15.664	+ .721
α Circini	3.4	F o	14 36 20.566	+ 4.8508	- .0320	S. 64 38 43.04	- 15.559	- .238
α Lupi	2.9	B 2	14 36 51.941	3.9808	- .0020	S. 47 3 47.04	15.530	- .036
ε Boötis	2.7	K o p	14 41 40.076	2.6238	- .0035	N. 27 23 37.75	15.259	+ .009
α Libræ	2.9	A 2	14 46 40.210	+ 3.3230	- .0078	S. 15 43 36.64	14.973	- .077
β Ursæ Min.	2.2	K 5	14 50 54.666	- 0.1892	- .0065	N. 74 27 57.76	14.725	+ .003
ξ ² Libræ	5.6	K o	14 52 38.439	+ 3.2523	- .0006	S. 11 6 13.96	- 14.620	- .001
β Lupi	2.8	B 2 p	14 53 32.586	3.9236	- .0070	S. 42 49 44.55	14.568	- .062
κ Centauri	3.4	B 3	14 54 12.555	3.8960	- .0021	S. 41 48 1.09	14.527	- .033
β Boötis	3.6	G 5	14 59 5.002	2.2636	- .0036	N. 40 41 22.50	14.230	- .040
γ Scorpii	3.4	M a	14 59 37.054	3.5123	- .0056	S. 24 59 3.00	14.197	- .048
ψ Boötis	4.7	K o	15 1 11.327	+ 2.5837	- .0133	N. 27 14 35.37	- 14.100	- .014
57 B Ursæ Min.	7.2	K o	15 1 26.994	- 18.9327	- .0071	N. 87 31 32.63	14.084	+ .031
ζ Lupi	3.5	K o	15 6 48.882	+ 4.3092	- .0126	S. 51 48 39.43	13.746	- .066
ι Libræ	4.7	A o p	15 7 53.099	3.4188	- .0032	S. 19 30 18.62	13.678	- .047
γ Triang. Aust.	3.1	A o	15 11 47.284	5.5790	- .0137	S. 68 24 1.60	13.426	- .042
δ Boötis	3.5	K o	15 12 26.341	+ 2.4119	+ .0075	N. 33 35 50.96	- 13.384	- .125
β Libræ	2.7	B 8	15 12 54.871	3.2325	- .0066	S. 9 6 12.45	13.353	- .024
o ² Libræ	6.7	K 2	15 18 47.239	+ 3.3433	- .0005	S. 14 51 49.97	12.964	+ .003
γ ² Ursæ Min.	3.1	A 2	15 20 50.278	- 0.1072	- .0020	N. 72 6 15.78	12.828	+ .013
ι Draconis	3.5	K o	15 23 14.331	+ 1.3332	+ .0014	N. 59 13 54.34	- 12.667	+ .010

PROPER NAMES.—α Virginis - *Spica*.

α Boötis - *Arcturus*.

NOTE.—α Centauri. The mean place is that of the centre of gravity of the system; the apparent places, those of the brighter star. The apparent places are affected with a parallax of 0".75.

MEAN PLACES OF STARS, 1924. 209

FOR JANUARY 1^d.126

Star's Name.	Mag.	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s			
32 Libræ - -	5.9	K o	15 23 58.010	+ 3.3795	+ .0006	S. 16 27 9.41	- 12.615	- .043
ρ Octantis -	5.7	A 2	15 25 30.492	13.3797	+ .0843	S. 84 12 57.78	12.512	+ .081
113 G Lupi -	3.0	B 3	15 30 4.150	3.9918	- .0020	S. 40 54 45.87	12.198	- .049
α Coronæ Bor.	2.3	A o	15 31 28.169	2.5307	+ .0090	N. 26 58 10.33	12.100	- .100
α Serpentis -	2.8	K o	15 40 31.376	2.9447	+ .0089	N. 6 39 49.48	11.460	+ .043
μ Serpentis -	3.6	A o	15 45 39.108	+ 3.1350	- .0058	S. 3 11 55.29	- 11.089	- .028
ζ Ursæ Min.	4.3	A 2	15 46 44.342	- 2.1940	+ .0082	N. 78 1 44.34	11.009	- .004
ε Serpentis -	3.8	A o	15 47 1.546	+ 2.9808	+ .0081	N. 4 42 20.34	10.989	+ .070
β Triang. Aust.	3.0	F o	15 48 25.839	5.2940	- .0290	S. 63 11 52.14	10.886	- .408
γ Serpentis -	3.9	F 8	15 52 56.488	2.7490	+ .0213	N. 15 54 30.86	10.552	- 1.294
π Scorpii - -	3.0	B 2 p	15 54 14.973	+ 3.6263	- .0015	S. 25 53 48.00	- 10.455	- .037
δ Scorpii - -	2.5	B 1 p	15 55 50.134	3.5448	- .0011	S. 22 24 23.89	10.336	- .035
β ¹ Scorpii - -	2.9	B 1	16 1 0.830	3.4859	- .0011	S. 19 35 54.92	9.946	- .028
δ Ophiuchi -	3.0	M a	16 10 21.650	3.1453	- .0031	S. 3 29 58.91	9.228	- 1.144
γ ² Normæ - -	4.1	K o	16 14 8.513	4.4970	- .0216	S. 49 58 14.39	8.933	- .064
ε Ophiuchi -	3.3	K o	16 14 17.877	+ 3.1672	+ .0054	S. 4 30 30.12	- 8.921	+ .037
σ Scorpii - -	3.1	B 1	16 16 33.908	3.6441	- .0011	S. 25 24 42.56	8.743	- .033
γ Herculis -	3.8	F o	16 18 33.996	2.6492	- .0034	N. 19 19 49.95	8.585	+ .037
η Draconis -	2.9	G 5	16 22 57.552	0.8115	- .0020	N. 61 41 9.18	8.236	+ .058
α Scorpii - -	1.2	M a p	16 24 44.648	3.6761	- .0006	S. 26 15 52.73	8.094	- .028
β Herculis -	2.8	K o	16 26 57.075	+ 2.5854	- .0076	N. 21 39 14.83	- 7.916	- .025
λ Ophiuchi -	3.9	A o	16 27 4.718	3.0267	- .0023	N. 2 8 56.27	7.906	- .090
τ Scorpii - -	2.9	B o	16 31 8.848	3.7323	- .0011	S. 28 3 35.14	7.578	- .033
ζ Ophiuchi -	2.7	B o	16 32 58.303	3.3009	+ .0007	S. 10 24 51.64	7.430	+ .022
24 Scorpii - -	5.0	K o	16 37 10.488	3.4692	- .0019	S. 17 35 46.82	7.087	- .002
ζ Herculis -	3.0	G o	16 38 25.248	+ 2.2980	- .0364	N. 31 44 22.64	- 6.984	+ .390
η Herculis -	3.6	K o	16 40 17.376	2.0530	+ .0031	N. 39 3 57.22	6.832	- .093
α Triang. Aust.	1.9	K 2	16 40 36.054	6.3286	+ .0028	S. 68 53 25.67	6.807	- .049
ε Scorpii - -	2.4	K o	16 45 14.192	3.9317	- .0505	S. 34 9 24.66	6.424	- .264
ζ Aræ - - -	3.1	K 5	16 52 19.145	+ 4.9591	- .0015	S. 55 52 19.22	5.835	- .048
ε Ursæ Min.	4.4	G 5	16 53 41.806	- 6.2345	+ .0057	N. 82 9 52.93	- 5.718	- .001
κ Ophiuchi -	3.4	K o	16 54 4.184	+ 2.8585	- .0199	N. 9 29 31.41	5.688	- .011
30 Ophiuchi -	5.0	K o	16 57 3.142	3.1653	- .0018	S. 4 6 35.27	5.434	- .076
ε Herculis -	3.9	A o	16 57 22.868	2.2985	- .0036	N. 31 2 14.53	5.409	+ .023
η Ophiuchi -	2.6	A o	17 6 1.015	3.4364	+ .0017	S. 15 37 55.47	4.678	+ .091
ζ Draconis -	3.2	B 5	17 8 33.833	+ 0.1728	- .0021	N. 65 48 29.16	- 4.462	+ .018
α Herculis -	ar.	M b	17 11 10.873	2.7356	- .0008	N. 14 28 32.91	4.237	+ .029
δ Herculis -	3.2	A o	17 11 54.539	2.4653	- .0019	N. 24 55 40.19	4.176	- .158
π Herculis -	3.4	K 2	17 12 23.936	2.0912	- .0025	N. 36 53 38.13	4.133	- .001
θ Ophiuchi -	3.4	B 3	17 17 20.396	3.6830	- .0006	S. 24 55 30.48	3.709	- .036
β Aræ - - -	2.8	K 2	17 18 58.699	+ 4.9832	- .0004	S. 55 27 35.13	- 3.569	- .027
σ Ophiuchi -	4.4	K o	17 22 44.584	2.9758	+ .0002	N. 4 12 19.14	3.242	+ .008
ν Scorpii - -	2.8	B 3	17 25 35.538	4.0770	- .0024	S. 37 14 12.24	2.998	- .039
α Aræ - - -	3.0	B 3 p	17 25 57.809	+ 4.6376	- .0035	S. 49 49 3.72	- 2.966	- .083

PROPER NAMES.—α Scorpii - *Antares*.

VARIABLE STARS.—α Herculis. The limits of magnitude are 3.1 and 3.9. Period irregular.

210 MEAN PLACES OF STARS, 1924.

FOR JANUARY 1d.126

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s	° ' "0		
λ Scorpii -	1.7	B 2	17 28 26.732	+ 4.0720	- .0003	S. 37 2 59.20	- 2.751	- .027
β Draconis -	3.0	G 0	17 28 42.874	1.3564	- .0017	N. 52 21 25.38	2.728	+ .009
α Ophiuchi -	2.1	A 5	17 31 24.345	2.7760	+ .0080	N. 12 36 50.93	2.494	- .235
θ Scorpii -	2.0	F 0	17 31 51.236	4.3074	- .0009	S. 42 57 3.77	2.456	- .009
κ Scorpii -	2.5	B 2	17 37 13.658	4.1493	- .0015	S. 38 59 32.25	1.988	- .026
η Pavonis -	3.6	K 0	17 38 16.096	+ 5.8858	- .0027	S. 64 41 23.11	- 1.898	- .080
β Ophiuchi -	2.9	K 0	17 39 43.054	2.9657	- .0026	N. 4 35 52.40	1.772	+ .158
ι ¹ Scorpii -	3.1	F 5 p	17 42 15.997	4.1947	- .0011	S. 40 5 56.41	1.549	- .003
μ Herculis -	3.5	G 5	17 43 29.003	2.3711	- .0237	N. 27 45 50.99	1.444	- .749
89 Herculis -	5.5	F 2	17 52 21.256	2.4196	+ .0013	N. 26 34 0.03	0.667	+ .006
γ Draconis -	2.4	K 5	17 54 50.466	+ 1.3934	- .0006	N. 51 29 49.98	- 0.451	- .024
ν Ophiuchi -	3.5	K 0	17 54 50.508	+ 3.3027	- .0006	S. 9 45 56.04	0.451	- .120
δ Ursæ Min. -	4.4	A 0	17 56 44.830	- 19.5106	+ .0169	N. 86 36 50.21	- 0.284	+ .048
γ Sagittarii -	3.1	K 0	18 0 55.447	+ 3.8576	- .0055	S. 30 25 35.52	+ 0.081	- .198
72 Ophiuchi -	3.7	A 2	18 3 44.751	2.8479	- .0045	N. 9 33 7.22	0.327	+ .087
μ Sagittarii -	4.0	B 8 p	18 9 13.052	+ 3.5874	- .0004	S. 21 4 48.34	+ 0.806	- .002
η Sagittarii -	3.2	M b	18 12 29.022	4.0705	- .0117	S. 36 47 9.44	1.091	- .163
δ Sagittarii -	2.8	K 0	18 16 7.705	3.8381	+ .0027	S. 29 51 42.64	1.409	- .032
η Serpentis -	3.4	K 0	18 17 22.568	3.1407	- .0378	S. 2 55 10.78	1.518	- .692
ε Sagittarii -	2.0	A 0	18 19 7.625	3.9854	- .0041	S. 34 25 18.86	1.671	- .122
α Telescopii -	3.8	B 3	18 21 20.313	+ 4.4511	- .0016	S. 46 0 43.27	+ 1.863	- .068
λ Sagittarii -	2.9	K 0	18 23 16.806	3.7059	- .0037	S. 25 27 54.39	2.033	- .188
α Lyræ -	0.1	A 0	18 34 21.915	2.0138	+ .0177	N. 38 42 43.46	2.995	+ .280
4 H Scuti -	4.7	F 0	18 38 6.823	3.2845	+ .0020	S. 9 7 35.59	3.321	- .006
φ Sagittarii -	3.3	B 8	18 40 54.503	3.7449	+ .0034	S. 27 4 13.06	3.562	- .006
λ Pavonis -	4.4	B 2	18 45 10.738	+ 5.5664	- .0030	S. 62 16 35.91	+ 3.925	- .022
30 Sagittarii -	6.2	F 0	18 46 16.311	3.6084	- .0041	S. 22 15 0.99	4.022	- .024
β Lyræ -	var.	B 2 p	18 47 16.422	2.2144	+ .0004	N. 33 16 24.73	4.105	- .005
σ Sagittarii -	2.1	B 3	18 50 33.153	3.7199	- .0003	S. 26 23 33.61	4.386	- .075
ξ Sagittarii -	3.6	K 0	18 53 11.790	+ 3.5774	+ .0018	S. 21 12 28.54	4.611	- .016
λ Ursæ Min. -	6.6	M b	18 54 9.948	- 73.4309	- .1129	N. 89 1 37.59	+ 4.693	+ .005
γ Lyræ -	3.3	A 0	18 56 6.002	+ 2.2442	- .0006	N. 32 35 3.63	4.858	- .006
ε Aquilæ -	4.2	K 0	18 56 10.351	2.7263	- .0042	N. 14 57 50.16	4.864	- .080
ζ Sagittarii -	2.7	A 2	18 57 46.620	3.8196	- .0021	S. 29 59 24.37	5.000	+ .002
ζ Aquilæ -	3.0	A 0	19 1 54.996	2.7577	- .0008	N. 13 44 57.79	5.350	- .099
τ Sagittarii -	3.4	K 0	19 2 11.799	+ 3.7511	- .0046	S. 27 46 58.44	+ 5.376	- .254
λ Aquilæ -	3.6	A 0	19 2 12.935	3.1854	- .0020	S. 4 59 51.27	5.375	- .083
α Coronæ Aust. -	4.1	A 2	19 4 18.135	4.0769	+ .0051	S. 38 1 28.45	5.551	- .118
π Sagittarii -	3.0	F 2	19 5 14.692	3.5688	- .0005	S. 21 8 44.58	5.630	- .036
ψ Sagittarii -	4.9	F 5	19 10 52.887	3.6769	+ .0025	S. 25 23 20.61	6.103	- .035
δ Draconis -	3.2	K 0	19 12 32.561	+ 0.0027	+ .0175	N. 67 31 40.14	+ 6.239	+ .088
ω Aquilæ -	5.1	A 5	19 14 14.947	2.8160	- .0002	N. 11 27 26.16	6.381	+ .014
δ Aquilæ -	3.4	F 0	19 21 39.993	3.0080	+ .0168	N. 2 57 43.63	6.992	+ .082
59 G Telescopii -	5.6	K 2	19 21 42.290	+ 4.8270	- .0009	S. 54 28 45.27	+ 6.999	- .044

PROPER NAMES.—α Lyræ - *Vega*.

VARIABLE STARS.—β Lyræ. The limits of magnitude are 3.4 and 4.1. Period 12.9 days.

MEAN PLACES OF STARS, 1924. 211

FOR JANUARY 1^d.126

Star's Name.	Mag.	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
6 Vulpeculæ	4.6	M a	19 25 32.546	+ 2.5055	−.0097	N.24 30 36.08	+ 7.311	−.110
β Cygni	3.2	K o p	19 27 39.358	2.4192	−.0002	N.27 47 56.62	7.481	−.010
μ Aquilæ	4.7	K o	19 30 22.631	2.9166	+ .0145	N. 7 12 59.89	7.703	−.146
h Sagittarii	4.7	B 9	19 32 5.026	3.6476	+ .0045	S. 25 3 9.63	7.839	−.027
54 Sagittarii	5.5	K o	19 36 22.235	3.4334	+ .0046	S. 16 28 7.48	8.185	−.047
σ Octantis	5.5	F o	19 38 33.176	+91.0721	+ .1055	S. 89 12 33.10	+ 8.356	.000
f Sagittarii	5.1	K o	19 41 55.802	3.5105	−.0099	S. 19 56 41.92	8.626	−.088
44 G Octantis	6.3	K o	19 42 6.292	11.1838	−.0055	S. 81 32 37.25	8.638	+ .009
δ Cygni	3.0	A o	19 42 36.029	1.8705	+ .0055	N.44 56 40.22	8.677	+ .044
γ Aquilæ	2.8	K 2	19 42 38.781	2.8512	+ .0007	N.10 25 37.14	8.680	−.003
α Aquilæ	0.9	A 5	19 47 4.513	+ 2.8910	+ .0360	N. 8 39 59.34	+ 9.028	+ .379
ι Sagittarii	4.2	K o	19 50 1.204	4.1425	−.0017	S. 42 4 9.71	9.260	+ .045
β Aquilæ	3.9	K o	19 51 34.802	2.9442	+ .0025	N. 6 12 57.27	9.378	−.481
g Sagittarii	5.1	A o	19 53 38.496	3.4030	+ .0004	S. 15 41 38.44	9.539	−.081
c Sagittarii	4.6	M b	19 57 59.243	3.6892	+ .0021	S. 27 55 20.46	9.870	+ .018
δ Pavonis	3.6	G 5	20 1 16.881	+ 5.7108	+ .1924	S. 66 22 38.42	+10.125	−.128
θ Aquilæ	3.4	A o	20 7 23.041	3.0936	+ .0020	S. 1 2 52.50	10.576	+ .006
4 Capricorni	6.0	K o	20 13 33.576	3.5246	+ .0012	S. 22 2 45.06	11.034	−.033
α ² Capricorni	3.8	K o	20 13 50.356	3.3257	+ .0040	S. 12 46 53.23	11.052	+ .008
β Capricorni	3.3	G o p	20 16 44.567	3.3695	+ .0023	S. 15 1 20.85	11.263	+ .006
γ Cygni	2.3	F 8 p	20 19 30.017	+ 2.1524	+ .0004	N.40 0 45.64	+11.461	+ .001
α Pavonis	2.1	B 3	20 19 38.665	4.7589	.0000	S. 56 58 48.35	11.472	−.092
ρ Capricorni	5.0	F o	20 24 31.657	3.4249	−.0014	S. 18 3 57.39	11.819	−.016
48 G Octantis	7.1	A o	20 24 43.962	14.6318	+ .0296	S. 84 40 8.67	11.834	+ .034
ε Delphini	4.0	B 5	20 29 34.941	2.8656	+ .0007	N.11 2 38.36	12.173	−.025
α Indi	3.2	K o	20 32 13.553	+ 4.2234	+ .0027	S. 47 33 28.49	+12.357	+ .053
α Delphini	3.9	B 8	20 36 6.495	2.7821	+ .0047	N.15 38 36.01	12.622	+ .017
β Pavonis	3.6	A 5	20 38 7.738	5.4406	−.0079	S. 66 28 40.76	12.759	−.003
α Cygni	1.3	A 2 p	20 38 50.433	2.0445	+ .0004	N.45 0 28.97	12.806	−.002
ε Cygni	2.6	K o	20 43 8.162	2.3983	+ .0294	N.33 41 5.36	13.093	+ .327
ε Aquarii	3.8	A o	20 43 33.795	+ 3.2468	+ .0017	S. 9 46 29.61	+13.122	−.030
μ Aquarii	4.8	A 3	20 48 33.367	3.2345	+ .0025	S. 9 16 10.39	13.451	−.039
32 Vulpeculæ	5.2	K 2	20 51 19.233	2.5568	−.0003	N.27 46 4.27	13.628	+ .004
γ Microscopii	4.7	G 5	20 56 38.056	3.6847	−.0004	S. 32 33 20.93	13.966	−.004
θ Capricorni	4.2	A o	21 1 40.624	3.3691	+ .0051	S. 17 32 9.15	14.279	−.066
61 Cygni (1st *)	5.6	K 5	21 3 29.264	+ 2.3361	+ .3496	N.38 22 29.52	+14.387	+3.251
ζ Cygni	3.4	K o	21 9 42.042	2.5526	−.0002	N.29 54 51.87	14.761	−.061
α Equulei	4.1	F 8 p	21 12 1.499	+ 2.9956	+ .0034	N. 4 55 58.22	14.897	−.085
B.A.C. 7504	7.4	A 3	21 14 49.476	−12.3390	+ .0300	N.86 43 30.34	15.060	+ .030
θ ¹ Microscopii	4.9	A 2 p	21 15 54.374	+ 3.8388	+ .0070	S. 41 7 53.61	15.123	+ .014
α Cephei	2.6	A 5	21 16 46.064	+ 1.4119	+ .0224	N.62 15 47.45	+15.172	+ .050
ι Capricorni	4.3	K o	21 18 1.055	3.3407	+ .0022	S. 17 9 32.67	15.244	+ .004
γ Pavonis	4.3	F 8	21 20 10.828	4.9745	+ .0152	S. 65 42 41.33	15.366	+ .784
ζ Capricorni	3.9	G 5 p	21 22 19.899	+ 3.4284	+ .0004	S. 22 44 28.94	+15.485	+ .020

PROPER NAMES.—α Aquilæ - *Altair*.

α Cygni - *Deneb*.

NOTES.—α Aquilæ. The apparent places are affected with a parallax of 0".23.

61 Cygni. The apparent places are affected with a parallax of 0".30.

212 MEAN PLACES OF STARS, 1924.

FOR JANUARY 1st 1926

Star's Name.	Mag	Spect.	Right Ascension.	Annual Precession.	Annual Proper Motion.	Declination.	Annual Precession.	Annual Proper Motion.
			h m s	s	s	° ′ ″		"
β Aquarii -	3.1	G o	21 27 33.559	+ 3.1581	+ .0012	S. 5 54 22.85	+ 15.772	- .011
β Cephei -	3.3	B 1	21 27 41.221	0.7802	+ .0026	N. 70 13 36.69	15.779	+ .005
ξ Aquarii -	4.8	A 5	21 33 42.456	3.1874	+ .0075	S. 8 11 44.83	16.099	- .023
ϵ Pegasi -	2.5	K o	21 40 27.176	2.9445	+ .0016	N. 9 31 33.02	16.442	- .000
δ Capricorni -	3.0	A 5	21 42 50.892	3.2954	+ .0176	S. 16 28 22.48	16.561	- .297
γ Gruis -	3.2	B 8	21 49 19.891	+ 3.6307	+ .0077	S. 37 43 23.28	+ 16.874	- .021
16 Pegasi -	5.1	B 3	21 49 36.183	2.7284	+ .0005	N. 25 34 1.41	16.887	+ .006
α Aquarii -	3.2	G o	22 1 52.868	3.0807	+ .0010	S. 0 41 22.60	17.441	- .002
α Gruis -	2.2	B 5	22 3 27.014	3.7786	+ .0110	S. 47 19 48.16	17.508	- .174
ι Pegasi -	4.0	F 5	22 3 28.289	2.7698	+ .0219	N. 24 58 23.80	17.509	+ .022
ζ Cephei -	3.6	K o	22 8 12.916	+ 2.0773	+ .0018	N. 57 49 34.64	+ 17.708	+ .010
θ Aquarii -	4.3	K o	22 12 49.462	3.1591	+ .0074	S. 8 9 44.06	17.892	- .018
α Tucanae -	2.9	K 2	22 13 18.407	4.1391	- .0118	S. 60 38 19.97	17.912	- .035
ν Octantis -	5.7	K o	22 17 34.083	12.1410	- .0400	S. 86 21 20.28	18.076	+ .074
γ Aquarii -	4.0	A o	22 17 43.877	3.0906	+ .0081	S. 1 46 14.59	18.082	+ .015
σ Aquarii -	4.9	A o	22 26 37.627	+ 3.1763	.0000	S. 11 4 2.26	+ 18.406	- .026
η Aquarii -	4.1	B 8	22 31 27.085	3.0772	+ .0057	S. 0 30 34.73	18.567	- .053
κ Aquarii -	5.3	K o	22 33 49.286	3.1125	- .0049	S. 4 37 13.61	18.646	- .113
ζ Pegasi -	3.6	B 8	22 37 40.266	2.9862	+ .0054	N. 10 26 2.89	18.766	- .014
β Gruis -	2.2	M b	22 38 8.195	3.5788	+ .0133	S. 47 16 57.74	18.779	- .026
η Pegasi -	3.1	G o	22 39 26.234	+ 2.8091	+ .0011	N. 29 49 23.49	+ 18.819	- .037
ϵ Gruis -	3.7	A 2	22 43 58.282	3.6242	+ .0093	S. 51 43 0.56	18.952	- .059
μ Pegasi -	3.7	K o	22 46 19.985	2.8831	+ .0109	N. 24 11 59.57	19.018	- .041
λ Aquarii -	3.8	M a	22 48 39.027	3.1302	+ .0002	S. 7 59 3.92	19.081	+ .035
δ Aquarii -	3.5	A 2	22 50 37.107	3.1887	- .0034	S. 16 13 31.38	19.134	- .026
α Piscis Aust.	1.3	A 3	22 53 27.288	+ 3.2939	+ .0252	S. 30 1 31.77	+ 19.206	- .171
β Piscium -	4.6	B 5	23 0 0.561	3.0522	+ .0008	N. 3 24 38.11	19.362	- .006
β Pegasi -	var.	M a	23 0 5.249	2.8917	+ .0146	N. 27 40 12.70	19.364	+ .135
α Pegasi -	2.6	A o	23 0 58.410	2.9829	+ .0040	N. 14 47 45.80	19.383	- .039
ϵ^2 Aquarii -	3.8	K o	23 5 23.785	3.1976	+ .0032	S. 21 35 7.03	19.479	+ .041
γ Tucanae -	4.1	F 2	23 13 0.164	+ 3.5195	- .0057	S. 58 39 10.99	+ 19.625	+ .060
γ Piscium -	3.9	K o	23 13 13.498	3.0592	+ .0503	N. 2 52 0.14	19.629	+ .018
ψ^3 Aquarii -	5.2	A o	23 15 0.556	3.1188	+ .0027	S. 10 1 35.54	19.660	- .001
τ Pegasi -	4.7	A 5	23 16 52.350	2.9650	+ .0018	N. 23 19 26.60	19.691	- .012
κ Piscium -	4.9	A 2 p	23 23 2.185	+ 3.0696	+ .0056	N. 0 50 21.90	19.785	- .093
39 H Cephei -	5.6	F o	23 27 42.077	- 0.3800	+ .0646	N. 86 53 17.96	+ 19.846	+ .020
ι Phoenicis -	4.8	A 2 p	23 30 59.413	+ 3.2301	+ .0008	S. 43 2 7.95	19.885	- .004
ι Piscium -	4.3	G o	23 36 2.417	3.0601	+ .0246	N. 5 12 51.26	19.935	- .436
γ Cephei -	3.4	K o	23 36 12.959	2.4630	- .0173	N. 77 12 29.48	19.937	+ .157
λ Piscium -	4.6	A 5	23 38 10.083	3.0698	- .0092	N. 1 21 41.92	19.954	- .154
δ Sculptoris -	4.6	A o	23 44 58.129	+ 3.1204	+ .0059	S. 28 33 3.80	+ 20.002	- .133
ϕ Pegasi -	5.2	M a	23 48 37.121	3.0503	- .0013	N. 18 41 53.26	20.020	- .039
27 Piscium -	5.1	K o	23 54 46.922	3.0749	- .0037	S. 3 58 39.57	20.040	- .068
ω Piscium -	4.0	F 5	23 55 24.456	3.0698	+ .0102	N. 6 26 33.45	20.041	- .108
2 Ceti -	4.6	A o	23 59 50.851	+ 3.0731	+ .0012	S. 17 45 32.59	+ 20.045	- .004

PROPER NAMES.— α Piscis Australis - *Fomalhaut*. α Pegasi - *Märkub*.
 VARIABLE STARS.— β Pegasi. The limits of magnitude are 2.2 and 2.7. Period irregular.

APPARENT PLACES OF STARS, 1924. 213

Mean Midnight.		<i>t</i>	BESSEL'S DAY NUMBERS.			
			Log. A.	Log. B.	Log. C.	Log. D.
Jan.	1	0.00102	-9.13915	+0.95103	-0.52725	+1.30402
	6	0.01471	9.08350	0.94802	0.69855	1.29519
	11	0.02840	9.02131	0.94417	0.81843	1.28265
	16	0.04209	8.95143	0.93957	0.90949	1.26619
	21	0.05578	-8.87181	-1.0.93438	-0.98180	+1.24551
	26	0.06947	8.77945	0.92868	1.04073	1.22021
Feb.	31	0.08316	8.66922	0.92267	1.08950	1.18974
	5	0.09685	8.53161	0.91638	1.13019	1.15335
	10	0.11054	-8.34518	+0.91007	-1.16421	+1.10996
	15	0.12423	8.04297	0.90390	1.19256	1.05801
	20	0.13792	-6.85126	0.89793	1.21594	0.99526
	25	0.15161	+7.95231	0.89254	1.23488	0.91807
Mar.	1	0.16530	+8.25648	+0.88762	-1.24977	+0.82027
	6	0.17899	8.42586	0.88346	1.26089	0.68977
	11	0.19268	8.54258	0.88010	1.26850	0.49780
	16	0.20637	8.63246	0.87772	1.27270	+0.13919
	21	0.22006	+8.70586	+0.87625	-1.27361	-9.59835
	26	0.23375	8.76901	0.87570	1.27125	0.33500
Apr.	31	0.24744	8.82517	0.87613	1.26563	0.59183
	5	0.26113	8.87662	0.87734	1.25668	0.74949
	10	0.27482	+8.92464	+0.87941	-1.24431	-0.86221
	15	0.28851	8.97016	0.88213	1.22832	0.94881
	20	0.30219	9.01393	0.88530	1.20847	1.01813
	25	0.31588	9.05606	0.88897	1.18442	1.07498
May	30	0.32957	+9.09684	+0.89279	-1.15572	-1.12230
	5	0.34326	9.13640	0.89667	1.12172	1.16204
	10	0.35695	9.17468	0.90048	1.08153	1.19553
	15	0.37064	9.21173	0.90410	1.03391	1.22368
	20	0.38433	+9.24748	+0.90733	-0.97704	-1.24717
	25	0.39802	9.28189	0.91014	0.90818	1.26649
June	30	0.41171	9.31484	0.91236	0.82280	1.28203
	4	0.42540	9.34635	0.91395	0.71273	1.29406
	9	0.43909	+9.37639	+0.91480	-0.56085	-1.30282
	14	0.45278	9.40490	0.91492	0.32027	1.30841
	19	0.46647	9.43186	0.91429	-9.72428	1.31095
	24	0.48016	9.45732	0.91278	+0.01397	1.31046
July	29	0.49385	+9.48123	+0.91052	+0.41280	-1.30696
	4	0.50754	+9.50365	+0.90744	+0.61521	-1.30040

214 APPARENT PLACES OF STARS, 1924.

Mean Midnight.		<i>t</i>	BESSEL'S DAY NUMBERS.			
			Log. A.	Log. B.	Log. C.	Log. D.
July	4	0.50754	+9.50365	+0.90744	+0.61521	-1.30040
	9	0.52123	9.52456	0.90358	0.75060	1.29066
	14	0.53492	9.54406	0.89905	0.85135	1.27761
	19	0.54861	9.56212	0.89382	0.93060	1.26104
	24	0.56230	+9.57887	+0.88798	+0.99503	-1.24065
Aug.	29	0.57599	9.59431	0.88164	1.04851	1.21606
	3	0.58968	9.60850	0.87503	1.09344	1.18674
	8	0.60336	9.62158	0.86817	1.13147	1.15198
	13	0.61705	+9.63356	+0.86118	+1.16368	-1.11077
	18	0.63074	9.64456	0.85431	1.19086	1.06174
Sept.	23	0.64443	9.65469	0.84763	1.21357	1.00288
	28	0.65812	9.66399	0.84136	1.23225	0.93101
	2	0.67181	+9.67264	+0.83566	+1.24724	-0.84085
	7	0.68550	9.68070	0.83052	1.25874	0.72249
	12	0.69919	9.68829	0.82624	1.26694	0.55415
Oct.	17	0.71288	9.69556	0.82282	1.27189	0.26851
	22	0.72657	+9.70257	+0.82053	+1.27368	-9.04805
	27	0.74026	9.70948	0.81918	1.27229	+0.21421
	2	0.75395	9.71640	0.81892	1.26768	0.52890
	7	0.76764	9.72343	0.81965	1.25975	0.70781
Nov.	12	0.78133	+9.73065	+0.82138	+1.24835	+0.83210
	17	0.79502	9.73813	0.82397	1.23325	0.92623
	22	0.80871	9.74595	0.82721	1.21416	1.00099
	27	0.82240	9.75416	0.83107	1.19071	1.06205
	1	0.83609	+9.76277	+0.83528	+1.16233	+1.11279
Dec.	6	0.84978	9.77178	0.83960	1.12830	1.15536
	11	0.86347	9.78120	0.84392	1.08761	1.19115
	16	0.87716	9.79099	0.84800	1.03889	1.22117
	21	0.89085	+9.80108	+0.85178	+0.98006	+1.24613
	26	0.90453	9.81142	0.85494	0.90788	1.26656
31	1	0.91822	9.82196	0.85742	0.81695	1.28285
	6	0.93191	9.83258	0.85908	0.69707	1.29530
	11	0.94560	+9.84321	+0.85986	+0.52558	+1.30408
	16	0.95929	9.85378	0.85959	0.23096	1.30933
	21	0.97298	9.86418	0.85830	+8.55388	1.31112
36	26	0.98667	9.87435	0.85591	-0.21256	1.30948
	31	1.00036	+9.88420	+0.85239	-0.51677	+1.30438
	36	1.01405	+9.89370	+0.84776	-0.69183	+1.29571

APPARENT PLACES OF STARS, 1924. 215

BESSEL'S DAY NUMBERS.

Mean Midnight.	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.	
Jan.	1	-9.1392	+0.9510	-0.5273	+1.3040	-7.631	-8.279
	2	9.1285	0.9505	0.5677	1.3025	-7.597	+8.279
	3	9.1176	0.9499	0.6045	1.3009	-7.435	+8.716
	4	9.1065	0.9493	0.6383	1.2992	-6.900	+8.851
	5	9.0951	0.9487	0.6695	1.2973	+7.118	+8.863
	6	-9.0835	+0.9480	-0.6985	+1.2952	+7.505	+8.756
	7	9.0716	0.9473	0.7256	1.2930	+7.644	+8.447
	8	9.0594	0.9466	0.7510	1.2906	+7.678	-7.699
	9	9.0470	0.9458	0.7748	1.2881	+7.635	-8.531
	10	9.0343	0.9450	0.7972	1.2855	+7.505	-8.748
	11	-9.0213	+0.9442	-0.8184	+1.2827	+7.243	-8.826
	12	9.0080	0.9433	0.8385	1.2797	+6.201	-8.799
	13	8.9944	0.9424	0.8576	1.2766	-7.090	-8.699
	14	8.9805	0.9414	0.8757	1.2733	-7.355	-8.462
	15	8.9661	0.9405	0.8930	1.2698	-7.453	-7.602
	16	-8.9514	+0.9396	-0.9095	+1.2662	-7.468	+8.322
	17	8.9364	0.9386	0.9252	1.2624	-7.402	+8.652
	18	8.9209	0.9376	0.9403	1.2585	-7.243	+8.785
	19	8.9050	0.9365	0.9547	1.2543	-6.760	+8.833
	20	8.8886	0.9355	0.9685	1.2500	+6.854	+8.799
	21	-8.8718	+0.9344	-0.9818	+1.2455	+7.257	+8.653
	22	8.8545	0.9332	0.9945	1.2408	+7.391	+8.204
	23	8.8366	0.9321	1.0068	1.2360	+7.388	-8.255
	24	8.8182	0.9310	1.0185	1.2309	+7.227	-8.699
	25	8.7991	0.9299	1.0298	1.2257	+6.502	-8.851
	26	-8.7795	+0.9287	-1.0407	+1.2202	-7.143	-8.875
	27	8.7591	0.9275	1.0512	1.2146	-7.465	-8.792
	28	8.7378	0.9263	1.0613	1.2087	-7.593	-8.519
	29	8.7159	0.9251	1.0711	1.2026	-7.606	+7.699
	30	8.6931	0.9239	1.0805	1.1963	-7.502	+8.602
Feb.	31	-8.6692	+0.9227	-1.0895	+1.1897	-7.190	+8.813
	1	8.6443	0.9214	1.0982	1.1830	+6.660	+8.875
	2	8.6183	0.9201	1.1067	1.1760	+7.381	+8.813
	3	8.5908	0.9189	1.1148	1.1687	+7.588	+8.602
	4	8.5620	0.9176	1.1226	1.1612	+7.656	+7.845
	5	-8.5316	+0.9164	-1.1302	+1.1534	+7.635	-8.415
	6	8.4991	0.9151	1.1375	1.1453	+7.534	-8.716
	7	8.4648	0.9139	1.1445	1.1369	+7.307	-8.813
	8	8.4280	0.9126	1.1513	1.1282	+6.696	-8.820
	9	8.3883	0.9113	1.1579	1.1193	-6.979	-8.740
	10	-8.3452	+0.9101	-1.1642	+1.1100	-7.319	-8.556
	11	8.2980	0.9088	1.1703	1.1003	-7.447	-8.079
	12	8.2457	0.9076	1.1762	1.0903	-7.486	+8.146
	13	8.1872	0.9063	1.1819	1.0799	-7.447	+8.580
	14	8.1206	0.9051	1.1873	1.0692	-7.319	+8.756
	15	-8.0430	+0.9039	-1.1926	+1.0580	-7.014	+8.833
16	-7.9504	+0.9027	-1.1976	+1.0464	+6.298	+8.820	

216 APPARENT PLACES OF STARS, 1924.

BESSEL'S DAY NUMBERS.

Mean Midnight.	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
Feb. 16	- 7.9504	+ 0.9027	- 1.1976	+ 1.0464	+ 6.298	+ 8.820
17	7.8344	0.9015	1.2025	1.0344	+ 7.149	+ 8.716
18	7.6776	0.9003	1.2071	1.0219	+ 7.355	+ 8.415
19	7.4346	0.8991	1.2116	1.0088	+ 7.402	- 7.903
20	- 6.8513	0.8979	1.2159	0.9953	+ 7.319	- 8.613
21	+ 7.1072	+ 0.8968	- 1.2201	+ 0.9811	+ 6.988	- 8.826
22	7.5106	0.8957	1.2240	0.9664	- 6.789	- 8.886
23	7.7135	0.8947	1.2278	0.9510	- 7.347	- 8.845
24	7.8494	0.8936	1.2314	0.9349	- 7.531	- 8.653
25	7.9523	0.8925	1.2349	0.9181	- 7.581	- 7.954
26	+ 8.0346	+ 0.8915	- 1.2382	+ 0.9004	- 7.516	+ 8.447
27	8.1028	0.8905	1.2413	0.8819	- 7.280	+ 8.763
28	8.1608	0.8895	1.2443	0.8624	- 4.298	+ 8.869
29	8.2114	0.8885	1.2471	0.8419	+ 7.289	+ 8.845
Mar. 1	8.2565	0.8876	1.2498	0.8203	+ 7.548	+ 8.699
2	+ 8.2967	+ 0.8867	- 1.2523	+ 0.7974	+ 7.644	+ 8.279
3	8.3333	0.8858	1.2547	0.7730	+ 7.650	- 8.146
4	8.3666	0.8850	1.2569	0.7471	+ 7.572	- 8.633
5	8.3974	0.8842	1.2590	0.7195	+ 7.377	- 8.785
6	8.4259	0.8835	1.2609	0.6898	+ 6.932	- 8.820
7	+ 8.4523	+ 0.8828	- 1.2627	+ 0.6578	- 6.817	- 8.771
8	8.4768	0.8821	1.2644	0.6231	- 7.271	- 8.623
9	8.5000	0.8814	1.2659	0.5854	- 7.435	- 8.279
10	8.5218	0.8807	1.2673	0.5438	- 7.494	+ 7.903
11	8.5426	0.8801	1.2685	0.4978	- 7.477	+ 8.519
12	+ 8.5623	+ 0.8795	- 1.2696	+ 0.4462	- 7.381	+ 8.724
13	8.5810	0.8790	1.2706	0.3875	- 7.179	+ 8.826
14	8.5990	0.8786	1.2714	0.3194	- 6.528	+ 8.833
15	8.6162	0.8781	1.2721	0.2386	+ 6.921	+ 8.763
16	8.6325	0.8777	1.2727	0.1392	+ 7.262	+ 8.556
17	+ 8.6482	+ 0.8774	- 1.2731	+ 0.0098	+ 7.363	+ 7.602
18	8.6633	0.8770	1.2734	9.8247	+ 7.323	- 8.477
19	8.6780	0.8767	1.2736	+ 9.4953	+ 7.097	- 8.763
20	8.6921	0.8765	1.2737	- 8.6233	- 6.143	- 8.875
21	8.7059	0.8763	1.2736	9.5984	- 7.233	- 8.863
22	+ 8.7192	+ 0.8761	- 1.2734	- 9.8756	- 7.477	- 8.732
23	8.7322	0.8759	1.2731	0.0433	- 7.563	- 8.342
24	8.7448	0.8758	1.2726	0.1638	- 7.534	+ 8.204
25	8.7571	0.8757	1.2720	0.2579	- 7.351	+ 8.699
26	8.7690	0.8757	1.2713	0.3350	- 6.660	+ 8.857
27	+ 8.7807	+ 0.8757	- 1.2704	- 0.4003	+ 7.190	+ 8.869
28	8.7922	0.8757	1.2694	0.4569	+ 7.523	+ 8.763
29	8.8034	0.8758	1.2683	0.5069	+ 7.650	+ 8.477
30	8.8144	0.8760	1.2670	0.5515	+ 7.676	- 7.602
31	8.8252	0.8761	1.2656	- 0.5918	+ 7.620	- 8.556
Apr. 1	+ 8.8358	+ 0.8763	- 1.2641	- 0.6286	+ 7.471	- 8.763
2	+ 8.8463	+ 0.8765	- 1.2625	- 0.6623	+ 7.143	- 8.826

APPARENT PLACES OF STARS, 1924. 217

BESSEL'S DAY NUMBERS.

Mean Midnight.	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.	
Apr.	2	+ 8.8463	+ 0.8765	- 1.2625	- 0.6623	+ 7.143	- 8.826
	3	8.8566	0.8768	1.2607	0.6935	- 6.339	- 8.799
	4	8.8666	0.8771	1.2588	0.7225	- 7.190	- 8.690
	5	8.8766	0.8773	1.2567	0.7495	- 7.398	- 8.431
	6	8.8864	0.8777	1.2545	0.7748	- 7.480	- 7.000
	7	+ 8.8961	+ 0.8781	- 1.2522	- 0.7986	- 7.486	+ 8.398
	8	8.9057	0.8785	1.2497	0.8210	- 7.415	+ 8.672
	9	8.9153	0.8789	1.2471	0.8421	- 7.257	+ 8.799
	10	8.9246	0.8794	1.2443	0.8622	- 6.854	+ 8.833
	11	8.9339	0.8799	1.2414	0.8813	+ 6.599	+ 8.792
	12	+ 8.9431	+ 0.8804	- 1.2384	- 0.8994	+ 7.161	+ 8.633
	13	8.9522	0.8810	1.2352	0.9166	+ 7.307	+ 8.176
	14	8.9612	0.8816	1.2318	0.9331	+ 7.298	- 8.255
	15	8.9702	0.8821	1.2283	0.9488	+ 7.104	- 8.690
	16	8.9791	0.8827	1.2247	0.9639	- 4.298	- 8.851
	17	+ 8.9879	+ 0.8834	- 1.2209	- 0.9783	- 7.196	- 8.881
	18	8.9967	0.8840	1.2169	0.9921	- 7.474	- 8.799
	19	9.0053	0.8846	1.2128	1.0054	- 7.579	- 8.531
	20	9.0139	0.8853	1.2085	1.0181	- 7.577	+ 7.602
	21	9.0225	0.8860	1.2040	1.0304	- 7.447	+ 8.613
	22	+ 9.0309	+ 0.8867	- 1.1994	- 1.0422	- 7.030	+ 8.826
23	9.0393	0.8875	1.1946	1.0535	+ 7.022	+ 8.875	
24	9.0477	0.8882	1.1896	1.0645	+ 7.486	+ 8.820	
25	9.0561	0.8890	1.1844	1.0750	+ 7.650	+ 8.613	
26	9.0644	0.8897	1.1791	1.0851	+ 7.710	+ 7.845	
27	+ 9.0726	+ 0.8905	- 1.1735	- 1.0949	+ 7.678	- 8.415	
28	9.0807	0.8912	1.1678	1.1044	+ 7.570	- 8.708	
29	9.0888	0.8920	1.1619	1.1135	+ 7.335	- 8.820	
30	9.0968	0.8928	1.1557	1.1223	+ 6.696	- 8.820	
May	1	9.1049	0.8936	1.1494	1.1308	- 6.988	- 8.748
	2	+ 9.1128	+ 0.8944	- 1.1428	- 1.1390	- 7.327	- 8.556
	3	9.1207	0.8952	1.1360	1.1470	- 7.447	- 8.000
	4	9.1286	0.8959	1.1290	1.1546	- 7.474	+ 8.230
	5	9.1364	0.8967	1.1217	1.1620	- 7.432	+ 8.613
	6	9.1441	0.8974	1.1142	1.1692	- 7.298	+ 8.771
	7	+ 9.1518	+ 0.8982	- 1.1064	- 1.1761	- 6.997	+ 8.833
	8	9.1595	0.8990	1.0984	1.1828	+ 5.997	+ 8.813
	9	9.1671	0.8997	1.0901	1.1893	+ 7.054	+ 8.708
	10	9.1747	0.9005	1.0815	1.1955	+ 7.267	+ 8.380
	11	9.1822	0.9012	1.0727	1.2016	+ 7.285	- 7.903
	12	+ 9.1897	+ 0.9020	- 1.0635	- 1.2074	+ 7.137	- 8.602
	13	9.1971	0.9027	1.0540	1.2130	+ 6.298	- 8.820
	14	9.2044	0.9034	1.0441	1.2185	- 7.124	- 8.886
	15	9.2117	0.9041	1.0339	1.2237	- 7.459	- 8.845
	16	9.2190	0.9048	1.0234	1.2287	- 7.599	- 8.663
	17	+ 9.2262	+ 0.9055	- 1.0124	- 1.2336	- 7.628	- 8.000
	18	+ 9.2333	+ 0.9061	- 1.0010	- 1.2383	- 7.551	+ 8.447

218 APPARENT PLACES OF STARS, 1924.

BESSEL'S DAY NUMBERS.

Mean Midnight.	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
May 18	+ 9.2333	+ 0.9061	- 1.0010	- 1.2383	- 7.551	+ 8.447
19	9.2404	0.9067	0.9893	1.2428	- 7.307	+ 8.771
20	9.2475	0.9073	0.9770	1.2472	+ 5.900	+ 8.875
21	9.2545	0.9079	0.9643	1.2514	+ 7.347	+ 8.863
22	9.2614	0.9085	0.9511	1.2554	+ 7.601	+ 8.716
23	+ 9.2683	+ 0.9091	- 0.9374	- 1.2592	+ 7.703	+ 8.301
24	9.2751	0.9096	0.9231	1.2629	+ 7.710	- 8.176
25	9.2819	0.9101	0.9082	1.2665	+ 7.640	- 8.643
26	9.2886	0.9106	0.8926	1.2699	+ 7.474	- 8.806
27	9.2952	0.9111	0.8764	1.2732	+ 7.118	- 8.845
28	+ 9.3018	+ 0.9115	- 0.8593	- 1.2763	- 6.474	- 8.792
29	9.3084	0.9120	0.8415	1.2792	- 7.201	- 8.633
30	9.3148	0.9124	0.8228	1.2820	- 7.384	- 8.255
31	9.3213	0.9127	0.8031	1.2847	- 7.441	+ 7.954
June 1	9.3276	0.9130	0.7824	1.2873	- 7.415	+ 8.531
2	+ 9.3339	+ 0.9133	- 0.7605	- 1.2897	- 7.302	+ 8.732
3	9.3402	0.9137	0.7373	1.2919	- 7.030	+ 8.820
4	9.3464	0.9139	0.7127	1.2941	- 3.298	+ 8.826
5	9.3525	0.9142	0.6865	1.2961	+ 7.030	+ 8.748
6	9.3586	0.9144	0.6585	1.2980	+ 7.267	+ 8.544
7	+ 9.3646	+ 0.9146	- 0.6285	- 1.2997	+ 7.323	+ 7.699
8	9.3705	0.9147	0.5960	1.3013	+ 7.238	- 8.462
9	9.3764	0.9148	0.5609	1.3028	+ 6.817	- 8.771
10	9.3822	0.9149	0.5224	1.3042	- 6.942	- 8.881
11	9.3880	0.9150	0.4802	1.3054	- 7.409	- 8.869
12	+ 9.3937	+ 0.9150	- 0.4332	- 1.3065	- 7.595	- 8.748
13	9.3993	0.9150	0.3805	1.3075	- 7.664	- 8.380
14	9.4049	0.9149	0.3203	1.3084	- 7.635	+ 8.176
15	9.4104	0.9148	0.2502	1.3092	- 7.491	+ 8.690
16	9.4159	0.9147	0.1665	1.3098	- 7.046	+ 8.851
17	+ 9.4212	+ 0.9146	- 0.0626	- 1.3103	+ 7.061	+ 8.875
18	9.4266	0.9145	9.9257	1.3107	+ 7.502	+ 8.785
19	9.4319	0.9143	9.7243	1.3110	+ 7.660	+ 8.491
20	9.4371	0.9140	- 9.3371	1.3111	+ 7.708	- 7.477
21	9.4422	0.9137	+ 8.9796	1.3111	+ 7.671	- 8.556
22	+ 9.4473	+ 0.9134	+ 9.6108	- 1.3110	+ 7.544	- 8.785
23	9.4524	0.9131	9.8576	1.3108	+ 7.289	- 8.845
24	9.4573	0.9128	0.0140	1.3105	+ 6.528	- 8.813
25	9.4622	0.9124	0.1286	1.3100	- 7.038	- 8.690
26	9.4671	0.9120	0.2191	1.3094	- 7.311	- 8.415
27	+ 9.4718	+ 0.9115	+ 0.2938	- 1.3087	- 7.402	- 6.000
28	9.4766	0.9110	0.3574	1.3079	- 7.395	+ 8.415
29	9.4812	0.9105	0.4128	1.3070	- 7.298	+ 8.681
30	9.4858	0.9100	0.4618	1.3059	- 7.061	+ 8.799
July 1	9.4904	0.9094	0.5057	1.3047	- 5.997	+ 8.839
2	+ 9.4949	+ 0.9088	+ 0.5455	- 1.3034	+ 6.988	+ 8.792
3	+ 9.4993	+ 0.9081	+ 0.5818	- 1.3020	+ 7.271	+ 8.633

APPARENT PLACES OF STARS, 1924. 219

BESSEL'S DAY NUMBERS.

Mean Midnight.	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.	
July	3	+ 9.4993	+ 0.9081	+ 0.5818	- 1.3020	+ 7.271	+ 8.633
	4	9.5037	0.9074	0.6152	1.3004	+ 7.370	+ 8.146
	5	9.5080	0.9067	0.6461	1.2987	+ 7.335	- 8.279
	6	9.5122	0.9060	0.6749	1.2969	+ 7.124	- 8.699
	7	9.5164	0.9052	0.7017	1.2949	- 5.997	- 8.851
	8	+ 9.5205	+ 0.9044	+ 0.7269	- 1.2929	- 7.271	- 8.886
	9	9.5246	0.9036	0.7506	1.2907	- 7.541	- 8.813
	10	9.5286	0.9027	0.7730	1.2883	- 7.656	- 8.556
	11	9.5325	0.9018	0.7941	1.2858	- 7.673	+ 7.301
	12	9.5364	0.9010	0.8142	1.2832	- 7.588	+ 8.591
	13	+ 9.5403	+ 0.9000	+ 0.8332	- 1.2805	- 7.335	+ 8.820
	14	9.5441	0.8990	0.8513	1.2776	- 3.298	+ 8.881
	15	9.5478	0.8980	0.8686	1.2746	+ 7.335	+ 8.833
	16	9.5515	0.8970	0.8852	1.2714	+ 7.581	+ 8.633
	17	9.5551	0.8959	0.9010	1.2681	+ 7.675	+ 8.000
	18	+ 9.5586	+ 0.8949	+ 0.9161	- 1.2646	+ 7.667	- 8.398
	19	9.5621	0.8938	0.9306	1.2610	+ 7.575	- 8.724
	20	9.5656	0.8927	0.9445	1.2573	+ 7.374	- 8.833
21	9.5690	0.8915	0.9579	1.2534	+ 6.911	- 8.839	
22	9.5723	0.8903	0.9708	1.2493	- 6.817	- 8.748	
23	+ 9.5756	+ 0.8892	+ 0.9831	- 1.2451	- 7.247	- 8.531	
24	9.5789	0.8880	0.9950	1.2407	- 7.374	- 7.903	
25	9.5821	0.8868	1.0065	1.2361	- 7.391	+ 8.301	
26	9.5852	0.8856	1.0176	1.2313	- 7.319	+ 8.633	
27	9.5883	0.8843	1.0283	1.2264	- 7.131	+ 8.778	
28	+ 9.5913	+ 0.8830	+ 1.0386	- 1.2213	- 6.553	+ 8.839	
29	9.5943	0.8816	1.0485	1.2161	+ 6.878	+ 8.813	
30	9.5972	0.8804	1.0581	1.2106	+ 7.252	+ 8.699	
31	9.6001	0.8791	1.0674	1.2049	+ 7.391	+ 8.398	
Aug.	1	9.6030	0.8777	1.0764	1.1991	+ 7.402	- 7.845
	2	+ 9.6058	+ 0.8764	+ 1.0851	- 1.1930	+ 7.289	- 8.602
	3	9.6085	0.8750	1.0934	1.1867	+ 6.854	- 8.820
	4	9.6112	0.8737	1.1016	1.1802	- 6.979	- 8.892
	5	9.6139	0.8723	1.1094	1.1735	- 7.425	- 8.851
	6	9.6165	0.8710	1.1170	1.1666	- 7.606	- 8.672
	7	+ 9.6191	+ 0.8696	+ 1.1244	- 1.1594	- 7.662	- 8.079
	8	9.6216	0.8682	1.1315	1.1520	- 7.620	+ 8.415
	9	9.6241	0.8668	1.1384	1.1443	- 7.453	+ 8.763
	10	9.6265	0.8654	1.1450	1.1363	- 6.932	+ 8.881
	11	9.6289	0.8640	1.1514	1.1281	+ 7.111	+ 8.863
	12	+ 9.6313	+ 0.8626	+ 1.1577	- 1.1196	+ 7.491	+ 8.732
	13	9.6336	0.8612	1.1637	1.1108	+ 7.624	+ 8.342
	14	9.6358	0.8598	1.1695	1.1016	+ 7.648	- 8.146
	15	9.6381	0.8584	1.1751	1.0922	+ 7.584	- 8.663
	16	9.6403	0.8570	1.1806	1.0824	+ 7.412	- 8.820
	17	+ 9.6424	+ 0.8556	+ 1.1858	- 1.0722	+ 7.014	- 8.845
	18	+ 9.6446	+ 0.8543	+ 1.1909	- 1.0617	- 6.660	- 8.785

20 APPARENT PLACES OF STARS, 1924.

BESSEL'S DAY NUMBERS.

Mean Midnight.	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
Aug. 18	+ 9.6446	+ 0.8543	+ 1.1909	- 1.0617	- 6.660	- 8.785
19	9.6467	0.8530	1.1957	1.0508	- 7.207	- 8.613
20	9.6487	0.8516	1.2004	1.0395	- 7.366	- 8.176
21	9.6507	0.8503	1.2050	1.0278	- 7.405	+ 8.079
22	9.6527	0.8489	1.2094	1.0156	- 7.355	+ 8.568
23	+ 9.6547	+ 0.8476	+ 1.2136	- 1.0029	- 7.212	+ 8.748
24	9.6566	0.8464	1.2176	0.9897	- 6.830	+ 8.826
25	9.6585	0.8451	1.2215	0.9759	+ 6.620	+ 8.826
26	9.6604	0.8439	1.2253	0.9616	+ 7.173	+ 8.748
27	9.6622	0.8426	1.2288	0.9466	+ 7.355	+ 8.531
28	+ 9.6640	+ 0.8414	+ 1.2322	- 0.9310	+ 7.415	+ 7.477
29	9.6658	0.8401	1.2355	0.9147	+ 7.355	- 8.477
30	9.6675	0.8389	1.2387	0.8976	+ 7.111	- 8.763
31	9.6693	0.8378	1.2417	0.8796	- 6.339	- 8.875
Sept. 1	9.6710	0.8367	1.2445	0.8607	- 7.280	- 8.875
2	+ 9.6726	+ 0.8357	+ 1.2472	- 0.8408	- 7.528	- 8.763
3	9.6743	0.8346	1.2498	0.8199	- 7.626	- 8.415
4	9.6759	0.8335	1.2523	0.7977	- 7.620	+ 8.114
5	9.6775	0.8325	1.2546	0.7742	- 7.499	+ 8.690
6	9.6791	0.8315	1.2567	0.7492	- 7.143	+ 8.857
7	+ 9.6807	+ 0.8305	+ 1.2587	- 0.7225	+ 6.817	+ 8.886
8	9.6823	0.8296	1.2606	0.6939	+ 7.422	+ 8.799
9	9.6838	0.8287	1.2624	0.6632	+ 7.601	+ 8.531
10	9.6853	0.8279	1.2640	0.6299	+ 7.646	- 7.301
11	9.6868	0.8270	1.2656	0.5937	+ 7.603	- 8.556
12	+ 9.6883	+ 0.8262	+ 1.2670	- 0.5541	+ 7.459	- 8.778
13	9.6898	0.8255	1.2682	0.5104	+ 7.137	- 8.851
14	9.6912	0.8248	1.2693	0.4616	- 6.298	- 8.820
15	9.6927	0.8241	1.2703	0.4064	- 7.173	- 8.699
16	9.6941	0.8234	1.2712	0.3430	- 7.366	- 8.415
17	+ 9.6956	+ 0.8228	+ 1.2719	- 0.2685	- 7.428	+ 7.301
18	9.6970	0.8222	1.2725	0.1784	- 7.402	+ 8.462
19	9.6984	0.8217	1.2730	0.0643	- 7.285	+ 8.708
20	9.6998	0.8213	1.2733	9.9089	- 7.022	+ 8.806
21	9.7012	0.8209	1.2736	9.6642	- 3.298	+ 8.826
22	+ 9.7026	+ 0.8205	+ 1.2737	- 9.0481	+ 7.022	+ 8.785
23	9.7040	0.8201	1.2737	+ 9.3766	+ 7.285	+ 8.613
24	9.7054	0.8198	1.2735	9.7694	+ 7.381	+ 8.079
25	9.7067	0.8196	1.2732	9.9722	+ 7.355	- 8.301
26	9.7081	0.8194	1.2728	0.1098	+ 7.173	- 8.699
27	+ 9.7095	+ 0.8192	+ 1.2723	+ 0.2142	+ 6.377	- 8.851
28	9.7109	0.8190	1.2716	0.2982	- 7.143	- 8.892
29	9.7122	0.8189	1.2708	0.3685	- 7.465	- 8.820
30	9.7136	0.8189	1.2699	0.4289	- 7.597	- 8.591
Oct. 1	9.7150	0.8189	1.2689	0.4818	- 7.614	- 7.000
2	+ 9.7164	+ 0.8189	+ 1.2677	+ 0.5289	- 7.528	+ 8.580
3	+ 9.7178	+ 0.8190	+ 1.2664	+ 0.5713	- 7.252	+ 8.820

APPARENT PLACES OF STARS, 1924. 221

BESSEL'S DAY NUMBERS.

Mean Midnight.	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.	
Oct.	3	+ 9.7178	+ 0.8190	+ 1.2664	+ 0.5713	- 7.252	+ 8.820
	4	9.7192	0.8191	1.2649	0.6098	+ 6.444	+ 8.892
	5	9.7206	0.8192	1.2633	0.6451	+ 7.363	+ 8.845
	6	9.7220	0.8194	1.2616	0.6776	+ 7.590	+ 8.663
	7	9.7234	0.8196	1.2598	0.7078	+ 7.667	+ 8.041
	8	+ 9.7249	+ 0.8199	+ 1.2578	+ 0.7359	+ 7.648	- 8.398
	9	9.7263	0.8203	1.2556	0.7622	+ 7.536	- 8.732
	10	9.7277	0.8206	1.2533	0.7869	+ 7.294	- 8.845
	11	9.7292	0.8210	1.2509	0.8101	+ 6.528	- 8.845
	12	9.7307	0.8214	1.2483	0.8321	- 7.054	- 8.756
	13	+ 9.7321	+ 0.8218	+ 1.2456	+ 0.8529	- 7.335	- 8.531
	14	9.7336	0.8223	1.2428	0.8726	- 7.425	- 7.778
15	9.7351	0.8229	1.2398	0.8913	- 7.425	+ 8.322	
16	9.7366	0.8234	1.2366	0.9092	- 7.335	+ 8.653	
17	9.7381	0.8240	1.2333	0.9262	- 7.131	+ 8.792	
18	+ 9.7397	+ 0.8246	+ 1.2298	+ 0.9425	- 6.553	+ 8.839	
19	9.7412	0.8252	1.2261	0.9581	+ 6.803	+ 8.806	
20	9.7428	0.8258	1.2223	0.9730	+ 7.201	+ 8.681	
21	9.7444	0.8265	1.2183	0.9873	+ 7.331	+ 8.362	
22	9.7460	0.8272	1.2142	1.0010	+ 7.339	- 7.845	
23	+ 9.7476	+ 0.8279	+ 1.2098	+ 1.0142	+ 7.201	- 8.602	
24	9.7492	0.8287	1.2053	1.0268	+ 6.599	- 8.820	
25	9.7508	0.8294	1.2006	1.0390	- 7.061	- 8.898	
26	9.7525	0.8302	1.1958	1.0508	- 7.438	- 8.863	
27	9.7542	0.8311	1.1907	1.0621	- 7.593	- 8.699	
28	+ 9.7558	+ 0.8319	+ 1.1854	+ 1.0730	- 7.637	- 8.176	
29	9.7575	0.8327	1.1800	1.0835	- 7.584	+ 8.398	
30	9.7593	0.8336	1.1743	1.0936	- 7.384	+ 8.763	
31	9.7610	0.8344	1.1684	1.1034	- 6.553	+ 8.881	
Nov.	1	9.7628	0.8353	1.1623	1.1128	+ 7.271	+ 8.881
	2	+ 9.7645	+ 0.8361	+ 1.1560	+ 1.1219	+ 7.570	+ 8.748
	3	9.7663	0.8370	1.1494	1.1307	+ 7.680	+ 8.362
	4	9.7681	0.8378	1.1426	1.1392	+ 7.693	- 8.146
	5	9.7700	0.8387	1.1356	1.1474	+ 7.620	- 8.663
	6	9.7718	0.8396	1.1283	1.1554	+ 7.438	- 8.826
	7	+ 9.7736	+ 0.8405	+ 1.1207	+ 1.1630	+ 7.030	- 8.857
	8	9.7755	0.8414	1.1129	1.1704	- 6.745	- 8.799
	9	9.7774	0.8422	1.1048	1.1776	- 7.257	- 8.623
	10	9.7793	0.8431	1.0963	1.1845	- 7.395	- 8.176
	11	9.7812	0.8439	1.0876	1.1912	- 7.422	+ 8.079
	12	+ 9.7831	+ 0.8448	+ 1.0786	+ 1.1976	- 7.359	+ 8.568
	13	9.7851	0.8456	1.0692	1.2038	- 7.196	+ 8.763
	14	9.7870	0.8464	1.0595	1.2098	- 6.803	+ 8.833
	15	9.7890	0.8472	1.0494	1.2156	+ 6.640	+ 8.826
	16	9.7910	0.8480	1.0389	1.2212	+ 7.137	+ 8.732
	17	+ 9.7930	+ 0.8488	+ 1.0280	+ 1.2265	+ 7.302	+ 8.505
	18	+ 9.7950	+ 0.8496	+ 1.0167	+ 1.2317	+ 7.339	+ 7.301

222 APPARENT PLACES OF STARS, 1924.

BESSEL'S DAY NUMBERS.

Mean Midnight.	Log. A.	Log. B.	Log. C.	Log. D.	Log. A'.	Log. B'.
Nov. 18	+ 9.7950	+ 0.8496	+ 1.0167	+ 1.2317	+ 7.339	+ 7.301
19	9.7970	0.8503	1.0050	1.2367	+ 7.238	- 8.491
20	9.7990	0.8511	0.9928	1.2415	+ 6.817	- 8.771
21	9.8011	0.8518	0.9801	1.2461	- 6.942	- 8.881
22	9.8031	0.8525	0.9668	1.2506	- 7.409	- 8.886
23	+ 9.8052	+ 0.8531	+ 0.9530	+ 1.2548	- 7.597	- 8.771
24	9.8073	0.8537	0.9386	1.2589	- 7.673	- 8.431
25	9.8093	0.8544	0.9236	1.2628	- 7.652	+ 8.041
26	9.8114	0.8549	0.9079	1.2666	- 7.521	+ 8.681
27	9.8135	0.8555	0.8914	1.2701	- 7.131	+ 8.857
28	+ 9.8156	+ 0.8560	+ 0.8742	+ 1.2736	+ 6.970	+ 8.892
29	9.8177	0.8566	0.8561	1.2768	+ 7.488	+ 8.813
30	9.8198	0.8570	0.8370	1.2799	+ 7.667	+ 8.556
Dec. 1	9.8220	0.8574	0.8169	1.2829	+ 7.708	- 7.000
2	9.8241	0.8578	0.7957	1.2857	+ 7.671	- 8.556
3	+ 9.8262	+ 0.8582	+ 0.7733	+ 1.2883	+ 7.546	- 8.792
4	9.8283	0.8585	0.7495	1.2908	+ 7.276	- 8.863
5	9.8305	0.8588	0.7241	1.2931	+ 6.298	- 8.833
6	9.8326	0.8591	0.6971	1.2953	- 7.076	- 8.699
7	9.8347	0.8594	0.6680	1.2973	- 7.319	- 8.398
8	+ 9.8368	+ 0.8596	+ 0.6367	+ 1.2992	- 7.384	+ 7.602
9	9.8390	0.8597	0.6029	1.3010	- 7.355	+ 8.505
10	9.8411	0.8598	0.5661	1.3026	- 7.212	+ 8.724
11	9.8432	0.8599	0.5256	1.3041	- 6.854	+ 8.820
12	9.8453	0.8599	0.4808	1.3054	+ 6.444	+ 8.833
13	+ 9.8475	+ 0.8598	+ 0.4307	+ 1.3066	+ 7.104	+ 8.771
14	9.8496	0.8598	0.3739	1.3077	+ 7.311	+ 8.602
15	9.8517	0.8597	0.3084	1.3086	+ 7.374	+ 8.079
16	9.8538	0.8596	0.2310	1.3093	+ 7.315	- 8.301
17	9.8559	0.8594	0.1366	1.3100	+ 7.046	- 8.708
18	+ 9.8580	+ 0.8591	+ 0.0155	+ 1.3105	- 6.528	- 8.863
19	9.8600	0.8589	9.8470	1.3108	- 7.319	- 8.898
20	9.8621	0.8586	9.5676	1.3110	- 7.579	- 8.826
21	9.8642	0.8583	+ 8.5539	1.3111	- 7.691	- 8.602
22	9.8662	0.8579	- 9.4742	1.3111	- 7.701	- 7.477
23	+ 9.8683	+ 0.8575	- 9.8005	+ 1.3109	- 7.624	+ 8.568
24	9.8703	0.8570	9.9847	1.3106	- 7.398	+ 8.820
25	9.8723	0.8565	0.1134	1.3101	- 6.377	+ 8.898
26	9.8743	0.8559	0.2126	1.3095	+ 7.315	+ 8.851
27	9.8763	0.8553	0.2931	1.3087	+ 7.586	+ 8.672
28	+ 9.8783	+ 0.8547	- 0.3609	+ 1.3078	+ 7.685	+ 8.079
29	9.8803	0.8539	0.4194	1.3068	+ 7.685	- 8.380
30	9.8823	0.8532	0.4709	1.3057	+ 7.599	- 8.732
31	9.8842	0.8524	0.5168	1.3044	+ 7.405	- 8.857
32	+ 9.8861	+ 0.8516	- 0.5581	+ 1.3029	+ 6.961	- 8.851

APPARENT PLACES OF STARS, 1924. 223

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>
Jan.	1	0.423	0.9708	107 11	1.3100	350 30	-0.1646	8.943	192
	2	0.412	0.9694	106 48	1.3098	349 34	0.2049	8.911	167
	3	0.402	0.9680	106 25	1.3096	348 38	0.2417	8.878	136
	4	0.392	0.9666	106 3	1.3093	347 41	0.2755	8.862	103
	5	0.382	0.9652	105 41	1.3090	346 44	0.3067	8.889	70
	6	-0.372	0.9638	105 18	1.3087	345 48	-0.3357	8.934	42
	7	0.362	0.9623	104 56	1.3084	344 51	0.3628	8.967	18
	8	0.352	0.9608	104 34	1.3080	343 54	0.3882	8.981	357
	9	0.342	0.9593	104 12	1.3076	342 57	0.4120	8.968	339
	10	0.332	0.9578	103 50	1.3072	342 0	0.4344	8.929	319
	11	-0.322	0.9563	103 27	1.3068	341 3	-0.4556	8.879	298
	12	0.312	0.9548	103 5	1.3064	340 6	0.4757	8.800	273
	13	0.303	0.9532	102 43	1.3060	339 8	0.4948	8.746	244
	14	0.293	0.9517	102 21	1.3056	338 11	0.5129	8.731	213
	15	0.284	0.9502	102 0	1.3051	337 13	0.5302	8.756	184
	16	-0.274	0.9487	101 38	1.3046	336 16	-0.5467	8.796	160
	17	0.265	0.9471	101 17	1.3041	335 18	0.5624	8.830	138
	18	0.256	0.9456	100 55	1.3036	334 20	0.5775	8.847	120
	19	0.247	0.9440	100 34	1.3031	333 22	0.5919	8.839	100
	20	0.238	0.9424	100 12	1.3026	332 24	0.6057	8.810	77
	21	-0.229	0.9408	99 51	1.3020	331 25	-0.6190	8.761	51
	22	0.220	0.9393	99 29	1.3014	330 27	0.6317	8.715	18
	23	0.211	0.9378	99 8	1.3008	329 28	0.6440	8.718	340
	24	0.202	0.9362	98 47	1.3002	328 29	0.6557	8.781	304
	25	0.193	0.9346	98 26	1.2996	327 30	0.6670	8.853	275
	26	-0.185	0.9331	98 5	1.2990	326 31	-0.6779	8.903	250
	27	0.176	0.9315	97 44	1.2984	325 32	0.6884	8.930	227
	28	0.168	0.9300	97 24	1.2978	324 33	0.6985	8.930	203
	29	0.160	0.9284	97 4	1.2972	323 33	0.7083	8.909	176
	30	0.152	0.9269	96 43	1.2966	322 33	0.7177	8.876	148
Feb.	31	-0.144	0.9253	96 23	1.2959	321 34	-0.7267	8.858	116
	1	0.136	0.9238	96 3	1.2953	320 34	0.7354	8.878	83
	2	0.128	0.9223	95 43	1.2946	319 33	0.7439	8.908	53
	3	0.120	0.9208	95 23	1.2940	318 33	0.7520	8.941	27
	4	0.112	0.9193	95 3	1.2933	317 33	0.7598	8.959	4
	5	-0.104	0.9178	94 43	1.2927	316 32	-0.7674	8.956	343
	6	0.097	0.9164	94 24	1.2920	315 31	0.7747	8.935	323
	7	0.089	0.9149	94 4	1.2913	314 30	0.7817	8.885	302
	8	0.082	0.9135	93 45	1.2907	313 29	0.7885	8.825	279
	9	0.075	0.9121	93 26	1.2900	312 28	0.7951	8.765	251
	10	-0.068	0.9107	93 7	1.2893	311 26	-0.8014	8.742	221
	11	0.061	0.9093	92 48	1.2887	310 24	0.8075	8.759	192
	12	0.054	0.9079	92 29	1.2880	309 22	0.8134	8.799	167
	13	0.048	0.9066	92 11	1.2874	308 20	0.8191	8.831	146
	14	0.041	0.9053	91 53	1.2867	307 18	0.8245	8.849	126
	15	-0.035	0.9040	91 35	1.2861	306 16	-0.8298	8.852	107
16	-0.028	0.9027	91 17	1.2854	305 14	-0.8348	8.821	87	

224 APPARENT PLACES OF STARS, 1924.

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>
Feb. 16	−0.028	0.9027	91 17	1.2854	305 14	−0.8348	+0.001	8.821	87
17	0.022	0.9015	90 59	1.2848	304 11	0.8397	+0.004	8.772	62
18	0.015	0.9003	90 41	1.2842	303 8	0.8443	+0.007	8.719	30
19	0.009	0.8991	90 24	1.2836	302 5	0.8488	+0.008	8.709	351
20	−0.002	0.8979	90 6	1.2831	301 2	0.8531	+0.006	8.767	315
21	+0.004	0.8968	89 49	1.2825	299 59	−0.8573	+0.003	8.844	286
22	0.010	0.8957	89 32	1.2819	298 55	0.8612	−0.002	8.891	261
23	0.016	0.8947	89 15	1.2814	297 52	0.8650	−0.007	8.919	237
24	0.022	0.8937	88 58	1.2808	296 48	0.8686	−0.010	8.912	213
25	0.028	0.8927	88 41	1.2803	295 44	0.8721	−0.012	8.886	187
26	+0.033	0.8917	88 24	1.2798	294 40	−0.8754	−0.010	8.854	157
27	0.039	0.8907	88 7	1.2793	293 36	0.8785	−0.006	8.841	123
28	0.044	0.8898	87 51	1.2788	292 32	0.8815	0.000	8.869	90
29	0.050	0.8889	87 35	1.2783	291 28	0.8843	+0.006	8.904	61
Mar. 1	0.055	0.8881	87 19	1.2779	290 24	0.8870	+0.011	8.938	35
2	+0.061	0.8873	87 3	1.2775	289 20	−0.8895	+0.014	8.956	12
3	0.066	0.8865	86 47	1.2771	288 16	0.8919	+0.014	8.957	351
4	0.072	0.8858	86 31	1.2767	287 11	0.8941	+0.011	8.936	330
5	0.077	0.8851	86 16	1.2764	286 6	0.8962	+0.007	8.889	308
6	0.082	0.8845	86 0	1.2761	285 2	0.8981	+0.003	8.834	285
7	+0.087	0.8839	85 45	1.2758	283 57	−0.8999	−0.002	8.782	257
8	0.092	0.8834	85 29	1.2755	282 52	0.9016	−0.006	8.750	228
9	0.097	0.8829	85 14	1.2752	281 47	0.9031	−0.008	8.762	199
10	0.102	0.8824	84 59	1.2749	280 42	0.9045	−0.010	8.800	173
11	0.107	0.8820	84 44	1.2747	279 37	0.9057	−0.009	8.836	152
12	+0.112	0.8816	84 29	1.2745	278 32	−0.9068	−0.007	8.855	132
13	0.117	0.8812	84 14	1.2743	277 27	0.9078	−0.005	8.866	114
14	0.122	0.8809	83 59	1.2741	276 22	0.9086	−0.001	8.835	96
15	0.127	0.8807	83 44	1.2739	275 17	0.9093	+0.003	8.780	74
16	0.132	0.8805	83 30	1.2738	274 12	0.9099	+0.006	8.710	44
17	+0.137	0.8804	83 15	1.2737	273 7	−0.9103	+0.007	8.667	5
18	0.142	0.8803	83 1	1.2737	272 2	0.9106	+0.006	8.714	325
19	0.147	0.8802	82 46	1.2736	270 57	0.9108	+0.004	8.800	293
20	0.151	0.8802	82 32	1.2736	269 52	0.9109	0.000	8.875	268
21	0.156	0.8802	82 17	1.2737	268 47	0.9108	−0.005	8.906	245
22	+0.161	0.8803	82 3	1.2737	267 42	−0.9106	−0.009	8.908	222
23	0.166	0.8804	81 49	1.2738	266 37	0.9103	−0.011	8.884	197
24	0.171	0.8805	81 34	1.2739	265 32	0.9098	−0.011	8.848	167
25	0.176	0.8807	81 20	1.2740	264 28	0.9092	−0.007	8.828	132
26	0.180	0.8810	81 5	1.2741	263 23	0.9085	−0.001	8.860	97
27	+0.185	0.8813	80 51	1.2743	262 19	−0.9076	+0.005	8.904	67
28	0.190	0.8816	80 36	1.2745	261 14	0.9066	+0.010	8.947	41
29	0.195	0.8820	80 22	1.2747	260 10	0.9055	+0.014	8.975	19
30	0.200	0.8824	80 8	1.2749	259 6	0.9042	+0.015	8.978	358
31	0.205	0.8829	79 53	1.2752	258 2	0.9028	+0.013	8.959	337
Apr. 1	+0.210	0.8834	79 39	1.2755	256 58	−0.9013	+0.009	8.918	316
2	+0.216	0.8840	79 25	1.2758	255 54	−0.8997	+0.004	8.861	293

APPARENT PLACES OF STARS, 1924. 225

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>	
Apr.	2	+0.216	0.8840	79 25	1.2758	255 54	-0.8997	+0.004	8.861	293
	3	0.221	0.8846	79 10	1.2761	254 50	0.8979	-0.001	8.800	266
	4	0.225	0.8852	78 56	1.2764	253 47	0.8960	-0.005	8.763	238
	5	0.232	0.8859	78 41	1.2767	252 44	0.8939	-0.008	8.756	208
	6	0.237	0.8866	78 27	1.2771	251 40	0.8917	-0.009	8.782	181
	7	+0.242	0.8874	78 12	1.2775	250 37	-0.8894	-0.009	8.821	158
	8	0.247	0.8882	77 58	1.2779	249 34	0.8869	-0.008	8.846	138
	9	0.253	0.8890	77 43	1.2783	248 31	0.8843	-0.006	8.861	120
	10	0.258	0.8899	77 28	1.2788	247 28	0.8815	-0.002	8.842	102
	11	0.264	0.8908	77 13	1.2792	246 25	0.8786	+0.001	8.796	83
	12	+0.269	0.8918	76 58	1.2797	245 23	-0.8756	+0.004	8.715	56
	13	0.275	0.8928	76 43	1.2802	244 21	0.8724	+0.006	8.637	20
	14	0.281	0.8938	76 28	1.2807	243 19	0.8690	+0.006	8.640	336
	15	0.287	0.8949	76 13	1.2812	242 17	0.8655	+0.004	8.742	297
	16	0.293	0.8960	75 57	1.2818	241 15	0.8619	0.000	8.851	270
	17	+0.299	0.8971	75 42	1.2823	240 13	-0.8581	-0.005	8.915	248
	18	0.305	0.8982	75 26	1.2829	239 12	0.8541	-0.009	8.938	227
	19	0.311	0.8994	75 11	1.2834	238 11	0.8500	-0.012	8.921	204
	20	0.317	0.9006	74 55	1.2840	237 10	0.8457	-0.012	8.880	177
	21	0.323	0.9018	74 40	1.2846	236 9	0.8412	-0.009	8.842	144
	22	+0.330	0.9030	74 24	1.2852	235 9	-0.8366	-0.003	8.847	108
23	0.336	0.9043	74 8	1.2858	234 9	0.8318	+0.003	8.891	74	
24	0.343	0.9056	73 52	1.2864	233 9	0.8268	+0.009	8.955	47	
25	0.349	0.9070	73 36	1.2871	232 9	0.8216	+0.014	8.993	25	
26	0.356	0.9084	73 19	1.2877	231 9	0.8163	+0.016	9.013	4	
27	+0.363	0.9098	73 3	1.2883	230 10	-0.8107	+0.015	8.995	345	
28	0.370	0.9112	72 46	1.2890	229 10	0.8050	+0.011	8.956	326	
29	0.377	0.9126	72 30	1.2896	228 11	0.7991	+0.007	8.898	303	
30	0.384	0.9140	72 13	1.2902	227 12	0.7929	+0.002	8.825	279	
May	1	0.391	0.9155	71 57	1.2909	226 13	0.7866	-0.003	8.773	251
	2	+0.398	0.9170	71 40	1.2915	225 15	-0.7800	-0.007	8.746	220
	3	0.405	0.9185	71 23	1.2921	224 17	0.7732	-0.009	8.756	190
	4	0.413	0.9200	71 6	1.2927	223 19	0.7662	-0.009	8.793	164
	5	0.420	0.9215	70 49	1.2934	222 21	0.7589	-0.008	8.832	143
	6	0.428	0.9230	70 32	1.2940	221 23	0.7514	-0.006	8.852	124
	7	+0.436	0.9246	70 14	1.2946	220 25	-0.7436	-0.003	8.851	106
	8	0.444	0.9262	69 56	1.2952	219 28	0.7356	0.000	8.813	88
	9	0.452	0.9278	69 39	1.2958	218 31	0.7273	+0.004	8.747	66
	10	0.460	0.9294	69 21	1.2964	217 34	0.7187	+0.006	8.645	33
	11	0.468	0.9310	69 3	1.2971	216 37	0.7099	+0.006	8.596	348
	12	+0.476	0.9326	68 45	1.2977	215 41	-0.7007	+0.004	8.686	305
	13	0.484	0.9342	68 27	1.2983	214 44	0.6912	+0.001	8.821	273
	14	0.492	0.9358	68 9	1.2989	213 48	0.6813	-0.004	8.911	251
	15	0.500	0.9374	67 51	1.2995	212 52	0.6711	-0.009	8.957	230
	16	0.509	0.9390	67 33	1.3000	211 56	0.6606	-0.012	8.964	210
	17	+0.517	0.9406	67 15	1.3006	211 0	-0.6496	-0.013	8.933	187
	18	+0.526	0.9422	66 57	1.3011	210 4	-0.6382	-0.011	8.884	159

226 APPARENT PLACES OF STARS, 1924.

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>	
May	18	+0.526	0.9422	66 57	1.3011	210 4	-0.6382	-0.011	8.884	159
	19	0.534	0.9438	66 38	1.3017	209 9	0.6265	-0.006	8.855	125
	20	0.543	0.9455	66 19	1.3022	208 14	0.6142	.000	8.875	89
	21	0.552	0.9471	66 1	1.3027	207 19	0.6015	+0.007	8.932	59
	22	0.561	0.9488	65 42	1.3032	206 24	0.5883	+0.012	8.980	33
	23	+0.570	0.9504	65 23	1.3037	205 29	-0.5746	+0.015	9.013	11
	24	0.579	0.9521	65 4	1.3041	204 34	0.5603	+0.016	9.013	352
	25	0.588	0.9537	64 45	1.3045	203 40	0.5454	+0.013	8.991	333
	26	0.597	0.9554	64 26	1.3050	202 45	0.5298	+0.009	8.942	313
	27	0.606	0.9570	64 7	1.3055	201 51	0.5136	+0.004	8.874	291
	28	+0.616	0.9586	63 47	1.3060	200 57	-0.4965	-0.001	8.794	265
29	0.625	0.9602	63 28	1.3064	200 3	0.4787	-0.005	8.728	233	
30	0.634	0.9618	63 8	1.3068	199 9	0.4600	-0.007	8.714	200	
31	0.644	0.9635	62 49	1.3072	198 15	0.4403	-0.009	8.749	171	
June	1	0.653	0.9651	62 30	1.3076	197 22	0.4196	-0.008	8.794	147
	2	+0.663	0.9667	62 11	1.3079	196 28	-0.3977	-0.006	8.828	127
	3	0.672	0.9683	61 51	1.3082	195 35	0.3745	-0.003	8.842	108
	4	0.682	0.9699	61 32	1.3085	194 41	0.3499	.000	8.826	90
	5	0.692	0.9715	61 12	1.3088	193 48	0.3237	+0.003	8.778	69
	6	0.702	0.9731	60 53	1.3091	192 55	0.2957	+0.006	8.708	43
	7	+0.712	0.9747	60 33	1.3094	192 2	-0.2657	+0.006	8.628	7
	8	0.721	0.9763	60 13	1.3096	191 9	0.2332	+0.005	8.655	320
	9	0.731	0.9778	59 53	1.3098	190 16	0.1981	+0.002	8.782	283
	10	0.741	0.9794	59 34	1.3100	189 23	0.1596	-0.003	8.892	257
	11	0.751	0.9809	59 14	1.3102	188 30	0.1174	-0.008	8.954	235
	12	+0.761	0.9824	58 54	1.3104	187 37	-0.0704	-0.012	8.986	215
	13	0.771	0.9839	58 34	1.3105	186 45	0.0177	-0.014	8.980	195
	14	0.781	0.9854	58 14	1.3107	185 52	9.9575	-0.013	8.943	170
	15	0.791	0.9869	57 54	1.3108	184 59	9.8874	-0.010	8.898	142
	16	0.800	0.9884	57 34	1.3109	184 7	9.8037	-0.003	8.871	107
	17	+0.810	0.9899	57 14	1.3110	183 14	-9.6998	+0.004	8.895	73
	18	0.820	0.9913	56 54	1.3110	182 22	9.5629	+0.010	8.945	44
	19	0.830	0.9928	56 34	1.3111	181 29	9.3615	+0.014	8.986	19
20	0.841	0.9942	56 14	1.3111	180 37	-8.9743	+0.016	9.010	358	
21	0.851	0.9956	55 54	1.3111	179 44	+8.6168	+0.014	9.003	339	
22	+0.861	0.9970	55 34	1.3111	178 52	+9.2480	+0.011	8.968	319	
23	0.871	0.9984	55 15	1.3110	177 59	9.4948	+0.006	8.904	299	
24	0.881	0.9998	54 55	1.3110	177 7	9.6512	+0.001	8.815	276	
25	0.891	1.0012	54 35	1.3109	176 14	9.7658	-0.003	8.729	246	
26	0.901	1.0026	54 16	1.3108	175 22	9.8563	-0.006	8.687	212	
27	+0.911	1.0039	53 56	1.3107	174 29	+9.9310	-0.008	8.704	180	
28	0.920	1.0052	53 37	1.3106	173 37	9.9946	-0.008	8.749	152	
29	0.930	1.0065	53 17	1.3105	172 44	0.0500	-0.006	8.795	130	
30	0.940	1.0078	52 57	1.3103	171 52	0.0990	-0.004	8.826	110	
July	1	0.950	1.0091	52 38	1.3101	170 59	0.1429	.000	8.839	92
	2	+0.960	1.0104	52 18	1.3099	170 6	+0.1827	+0.003	8.812	73
	3	+0.970	1.0117	51 58	1.3097	169 13	+0.2190	+0.006	8.755	49

APPARENT PLACES OF STARS, 1924. 227

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>	
July	3	+0.970	1.0117	51° 58'	1.3097	169 13	+0.2190	+0.006	8.755	49
	4	0.980	1.0130	51 39	1.3095	168 20	0.2524	+0.007	8.691	17
	5	0.990	1.0142	51 19	1.3092	167 27	0.2833	+0.007	8.675	336
	6	0.999	1.0154	51 0	1.3089	166 34	0.3121	+0.004	8.753	298
	7	1.009	1.0166	50 41	1.3086	165 41	0.3389	.000	8.851	268
	8	+1.018	1.0178	50 22	1.3083	164 48	+0.3641	-0.006	8.932	244
	9	1.028	1.0190	50 3	1.3080	163 55	0.3878	-0.011	8.979	223
	10	1.037	1.0202	49 44	1.3077	163 2	0.4102	-0.014	8.990	202
	11	1.047	1.0213	49 25	1.3073	162 8	0.4313	-0.014	8.975	181
	12	1.056	1.0224	49 6	1.3069	161 15	0.4514	-0.012	8.939	153
	13	+1.066	1.0235	48 47	1.3065	160 21	+0.4704	-0.007	8.898	123
	14	1.075	1.0246	48 28	1.3061	159 28	0.4885	.000	8.881	90
	15	1.085	1.0257	48 10	1.3057	158 34	0.5058	+0.007	8.907	58
	16	1.094	1.0268	47 51	1.3053	157 40	0.5224	+0.012	8.943	29
	17	1.103	1.0279	47 33	1.3048	156 46	0.5382	+0.015	8.979	6
	18	+1.112	1.0290	47 15	1.3044	155 52	+0.5533	+0.014	8.984	345
	19	1.121	1.0300	46 57	1.3039	154 57	0.5678	+0.012	8.964	325
	20	1.130	1.0310	46 39	1.3034	154 3	0.5817	+0.007	8.919	305
	21	1.139	1.0320	46 21	1.3029	153 8	0.5951	+0.003	8.851	283
	22	1.148	1.0330	46 3	1.3024	152 14	0.6080	-0.002	8.760	257
	23	+1.156	1.0340	45 46	1.3019	151 19	+0.6203	-0.005	8.691	224
	24	1.165	1.0350	45 28	1.3014	150 24	0.6322	-0.007	8.682	190
	25	1.173	1.0360	45 10	1.3008	149 29	0.6437	-0.008	8.726	158
	26	1.182	1.0369	44 53	1.3003	148 34	0.6548	-0.006	8.777	134
	27	1.191	1.0378	44 36	1.2997	147 38	0.6655	-0.004	8.818	114
	28	+1.199	1.0387	44 19	1.2992	146 43	+0.6758	-0.001	8.841	96
	29	1.207	1.0396	44 2	1.2986	145 47	0.6857	+0.002	8.824	77
30	1.216	1.0405	43 45	1.2980	144 51	0.6953	+0.006	8.789	54	
31	1.224	1.0414	43 29	1.2974	143 55	0.7046	+0.008	8.743	27	
Aug.	1	1.232	1.0423	43 12	1.2968	142 59	+0.7136	+0.008	8.708	352
2	+1.240	1.0432	42 56	1.2962	142 3	+0.7223	+0.006	8.747	314	
3	1.248	1.0441	42 40	1.2956	141 6	0.7306	+0.002	8.830	282	
4	1.255	1.0449	42 24	1.2950	140 9	0.7388	-0.003	8.905	256	
5	1.263	1.0457	42 8	1.2944	139 12	0.7466	-0.008	8.948	233	
6	1.270	1.0466	41 52	1.2938	138 15	0.7542	-0.012	8.971	210	
7	+1.278	1.0474	41 36	1.2932	137 18	+0.7616	-0.014	8.968	187	
8	1.285	1.0482	41 21	1.2925	136 21	0.7687	-0.013	8.942	163	
9	1.293	1.0490	41 6	1.2919	135 23	0.7756	-0.009	8.909	135	
10	1.300	1.0498	40 51	1.2913	134 25	0.7822	-0.003	8.892	103	
11	1.307	1.0506	40 36	1.2907	133 27	0.7886	+0.004	8.889	70	
12	+1.314	1.0513	40 21	1.2900	132 29	+0.7949	+0.010	8.915	41	
13	1.321	1.0520	40 6	1.2894	131 31	0.8009	+0.013	8.940	15	
14	1.328	1.0528	39 52	1.2887	130 33	0.8067	+0.014	8.955	351	
15	1.335	1.0535	39 38	1.2881	129 34	0.8123	+0.012	8.952	329	
16	1.342	1.0543	39 24	1.2875	128 35	0.8178	+0.008	8.924	308	
17	+1.349	1.0550	39 10	1.2868	127 36	+0.8230	+0.003	8.863	286	
18	+1.356	1.0558	38 57	1.2862	126 36	+0.8281	-0.001	8.790	261	

228 APPARENT PLACES OF STARS, 1924.

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>
Aug. 18	+1.356	1.0558	38 57	1.2862	126 36	+0.8281	-.001	8.790	261
19	1.363	1.0565	38 44	1.2856	125 37	0.8329	-.005	8.717	232
20	1.369	1.0573	38 31	1.2850	124 37	0.8376	-.007	8.689	198
21	1.375	1.0580	38 18	1.2844	123 38	0.8422	-.008	8.719	167
22	1.381	1.0588	38 5	1.2838	122 38	0.8466	-.007	8.768	141
23	+1.387	1.0595	37 53	1.2833	121 38	+0.8508	-.005	8.812	120
24	1.393	1.0602	37 41	1.2828	120 37	0.8548	-.002	8.835	101
25	1.400	1.0609	37 29	1.2822	119 37	0.8587	+0.001	8.829	83
26	1.406	1.0616	37 17	1.2817	118 36	0.8625	+0.005	8.802	62
27	1.412	1.0623	37 5	1.2811	117 35	0.8660	+0.007	8.754	37
28	+1.418	1.0630	36 53	1.2806	116 33	-0.8694	+0.008	8.718	3
29	1.424	1.0637	36 42	1.2801	115 32	0.8727	+0.007	8.736	327
30	1.430	1.0644	36 31	1.2796	114 30	0.8759	+0.004	8.802	294
31	1.436	1.0651	36 20	1.2791	113 29	0.8789	-.001	8.875	267
Sept. 1	1.441	1.0659	36 9	1.2787	112 27	0.8817	-.006	8.925	243
2	+1.446	1.0666	35 59	1.2783	111 25	+0.8844	-.010	8.950	221
3	1.452	1.0673	35 49	1.2779	110 23	0.8870	-.013	8.957	197
4	1.457	1.0680	35 39	1.2775	109 21	0.8895	-.013	8.927	171
5	1.462	1.0687	35 29	1.2771	108 18	0.8918	-.010	8.903	142
6	1.468	1.0694	35 19	1.2767	107 16	0.8939	-.004	8.887	111
7	+1.473	1.0701	35 9	1.2763	106 13	-0.8959	+0.002	8.892	80
8	1.479	1.0709	35 0	1.2760	105 10	0.8978	+0.008	8.915	50
9	1.484	1.0717	34 51	1.2757	104 7	0.8996	-0.012	8.939	23
10	1.489	1.0724	34 42	1.2754	103 4	0.9012	+0.014	8.948	359
11	1.494	1.0732	34 33	1.2751	102 1	0.9028	+0.012	8.945	336
12	+1.499	1.0739	34 25	1.2749	100 58	+0.9042	+0.009	8.920	314
13	1.504	1.0747	34 17	1.2747	99 54	0.9054	+0.004	8.881	291
14	1.509	1.0754	34 9	1.2745	98 51	0.9065	-.001	8.821	267
15	1.514	1.0762	34 1	1.2743	97 47	0.9075	-.005	8.765	239
16	1.519	1.0770	33 53	1.2741	96 44	0.9084	-.007	8.727	209
17	+1.524	1.0778	33 46	1.2740	95 40	+0.9091	-.008	8.730	178
18	1.529	1.0786	33 39	1.2739	94 36	0.9097	-.008	8.766	150
19	1.534	1.0794	33 32	1.2738	93 32	0.9102	-.006	8.806	127
20	1.539	1.0803	33 25	1.2737	92 28	0.9105	-.003	8.828	108
21	1.544	1.0812	33 19	1.2737	91 24	0.9108	.000	8.826	90
22	+1.549	1.0820	33 12	1.2737	90 20	+0.9109	+0.003	8.809	71
23	1.554	1.0829	33 6	1.2737	89 16	0.9109	+0.006	8.751	47
24	1.559	1.0838	33 0	1.2737	88 12	0.9107	+0.007	8.696	14
25	1.564	1.0847	32 54	1.2737	87 8	0.9104	+0.007	8.696	336
26	1.569	1.0856	32 48	1.2738	86 4	0.9100	+0.005	8.765	301
27	+1.574	1.0865	32 42	1.2739	85 0	+0.9095	+0.001	8.852	274
28	1.579	1.0874	32 37	1.2741	83 56	0.9088	-.004	8.918	250
29	1.584	1.0883	32 32	1.2742	82 52	0.9080	-.009	8.945	229
30	1.589	1.0893	32 27	1.2744	81 48	0.9071	-.012	8.946	206
Oct. 1	1.594	1.0903	32 22	1.2746	80 44	0.9061	-.013	8.916	181
2	+1.599	1.0913	32 17	1.2748	79 40	+0.9049	-.010	8.890	151
3	+1.604	1.0923	32 12	1.2751	78 35	+0.9036	-.006	8.876	118

APPARENT PLACES OF STARS, 1924. 229

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>	
Oct.	3	+1.604	1.0923	32 12	1.2751	78 35	+0.9036	-.006	8.876	118
	4	1.610	1.0933	32 7	1.2753	77 31	0.9021	+0.001	8.893	86
	5	1.615	1.0943	32 2	1.2756	76 28	0.9005	+0.007	8.924	57
	6	1.621	1.0954	31 58	1.2759	75 24	0.8988	+0.012	8.957	31
	7	1.626	1.0965	31 54	1.2762	74 20	0.8970	+0.014	8.972	7
	8	+1.632	1.0976	31 50	1.2765	73 16	+0.8950	+0.014	8.966	344
	9	1.637	1.0988	31 46	1.2769	72 13	0.8928	+0.011	8.942	322
	10	1.642	1.0999	31 42	1.2773	71 9	0.8905	+0.006	8.905	299
	11	1.647	1.1011	31 39	1.2777	70 5	0.8881	+0.001	8.847	275
	12	1.653	1.1023	31 35	1.2781	69 1	0.8855	-.004	8.788	248
	13	+1.658	1.1035	31 32	1.2786	67 58	+0.8828	-.007	8.741	218
	14	1.664	1.1047	31 28	1.2791	66 54	0.8800	-.008	8.730	186
	15	1.669	1.1059	31 25	1.2796	65 51	0.8770	-.008	8.758	159
	16	1.675	1.1071	31 21	1.2801	64 48	0.8738	-.007	8.795	134
	17	1.681	1.1084	31 18	1.2806	63 45	0.8705	-.004	8.830	114
	18	+1.687	1.1097	31 14	1.2811	62 42	+0.8670	-.001	8.841	96
	19	1.693	1.1110	31 11	1.2816	61 39	0.8633	+0.002	8.814	79
	20	1.699	1.1123	31 7	1.2821	60 36	0.8595	+0.005	8.760	56
	21	1.705	1.1136	31 4	1.2827	59 33	0.8555	+0.007	8.688	28
	22	1.712	1.1150	31 1	1.2832	58 31	0.8514	+0.007	8.646	351
	23	+1.718	1.1164	30 58	1.2838	57 29	+0.8470	+0.005	8.708	309
	24	1.725	1.1178	30 55	1.2844	56 27	0.8425	+0.001	8.823	277
25	1.731	1.1192	30 52	1.2850	55 25	0.8378	-.004	8.916	254	
26	1.738	1.1206	30 49	1.2856	54 23	0.8330	-.008	8.960	233	
27	1.745	1.1221	30 46	1.2863	53 22	0.8279	-.012	8.969	213	
28	+1.752	1.1235	30 43	1.2869	52 20	+0.8226	-.013	8.945	190	
29	1.759	1.1250	30 40	1.2876	51 19	0.8172	-.012	8.908	162	
30	1.765	1.1265	30 37	1.2882	50 17	0.8115	-.007	8.878	130	
31	1.772	1.1280	30 34	1.2889	49 16	0.8056	-.001	8.883	95	
Nov.	1	1.779	1.1295	30 31	1.2895	48 15	0.7995	+0.006	8.928	64
	2	+1.786	1.1310	30 28	1.2902	47 15	+0.7932	+0.011	8.969	37
	3	1.793	1.1326	30 25	1.2908	46 14	0.7866	+0.015	8.994	14
	4	1.801	1.1342	30 22	1.2914	45 13	0.7798	+0.015	8.999	352
	5	1.808	1.1357	30 19	1.2921	44 12	0.7728	+0.013	8.980	331
	6	1.816	1.1373	30 15	1.2927	43 12	0.7655	+0.008	8.938	309
	7	+1.824	1.1389	30 12	1.2934	42 12	+0.7579	+0.003	8.875	287
	8	1.832	1.1405	30 9	1.2941	41 13	0.7501	-.002	8.806	260
	9	1.840	1.1421	30 5	1.2947	40 13	0.7420	-.006	8.744	229
	10	1.848	1.1437	30 2	1.2954	39 14	0.7335	-.008	8.716	197
	11	1.856	1.1454	29 58	1.2960	38 14	0.7248	-.008	8.737	167
	12	+1.864	1.1471	29 54	1.2966	37 15	+0.7158	-.007	8.770	141
	13	1.872	1.1488	29 50	1.2973	36 16	0.7064	-.005	8.819	119
	14	1.881	1.1505	29 46	1.2979	35 17	0.6967	-.002	8.840	101
	15	1.890	1.1522	29 42	1.2985	34 18	0.6866	+0.001	8.830	83
	16	1.899	1.1539	29 38	1.2991	33 19	0.6761	+0.004	8.782	63
	17	+1.907	1.1556	29 34	1.2997	32 20	+0.6652	+0.006	8.711	39
	18	+1.916	1.1573	29 30	1.3003	31 21	+0.6549	+0.007	8.641	3

230 APPARENT PLACES OF STARS, 1924.

QUANTITIES FOR CORRECTING THE PLACES OF STARS.

Mean Midnight.	<i>f</i>	Log. <i>g</i>	<i>G</i>	Log. <i>h</i>	<i>H</i>	Log. <i>i</i>	<i>f'</i>	Log. <i>g'</i>	<i>G'</i>
Nov. 18	+1.916	1.1573	29 30	1.3003	31 21	+0.6539	+0.007	8.641	3
19	1.925	1.1590	29 26	1.3009	30 23	0.6422	+0.005	8.668	318
20	1.934	1.1607	29 21	1.3015	29 25	0.6300	+0.002	8.782	283
21	1.943	1.1624	29 16	1.3020	28 27	0.6173	-0.003	8.892	257
22	1.952	1.1642	29 12	1.3026	27 29	0.6040	-0.008	8.966	236
23	+1.962	1.1659	29 7	1.3031	26 31	+0.5902	-0.012	8.995	217
24	1.971	1.1677	29 2	1.3036	25 34	0.5758	-0.014	8.992	196
25	1.981	1.1694	28 57	1.3041	24 36	0.5608	-0.014	8.957	173
26	1.990	1.1711	28 52	1.3046	23 38	0.5451	-0.010	8.914	144
27	2.000	1.1728	28 47	1.3051	22 41	0.5286	-0.004	8.886	111
28	+2.010	1.1745	28 42	1.3056	21 44	+0.5114	+0.003	8.904	77
29	2.019	1.1763	28 37	1.3060	20 47	0.4933	+0.009	8.952	47
30	2.029	1.1780	28 32	1.3065	19 50	0.4742	+0.014	8.999	21
Dec. 1	2.039	1.1798	28 26	1.3069	18 53	0.4541	+0.016	9.010	359
2	2.049	1.1815	28 20	1.3073	17 56	0.4329	+0.014	9.003	339
3	+2.059	1.1832	28 14	1.3077	16 59	+0.4105	+0.011	8.973	319
4	2.069	1.1850	28 8	1.3081	16 2	0.3867	-0.006	8.915	297
5	2.080	1.1867	28 2	1.3084	15 5	0.3613	+0.001	8.834	273
6	2.090	1.1884	27 56	1.3087	14 9	0.3343	-0.004	8.744	245
7	2.100	1.1901	27 50	1.3090	13 13	0.3052	-0.006	8.688	211
8	+2.110	1.1918	27 44	1.3093	12 16	+0.2739	-0.007	8.687	175
9	2.121	1.1935	27 38	1.3096	11 20	0.2401	-0.007	8.745	145
10	2.131	1.1952	27 31	1.3098	10 24	0.2033	-0.005	8.794	122
11	2.142	1.1969	27 24	1.3100	9 27	0.1628	-0.002	8.830	102
12	2.152	1.1986	27 17	1.3102	8 31	0.1180	+0.001	8.834	85
13	+2.163	1.2003	27 10	1.3104	7 35	+0.0679	+0.004	8.808	67
14	2.174	1.2019	27 3	1.3106	6 39	0.0111	+0.006	8.758	44
15	2.185	1.2036	26 56	1.3108	5 43	9.9456	+0.007	8.689	14
16	2.195	1.2053	26 49	1.3109	4 46	9.8682	+0.006	8.663	334
17	2.206	1.2069	26 42	1.3110	3 50	9.7738	+0.003	8.746	294
18	+2.216	1.2085	26 34	1.3111	2 54	+9.6527	-0.001	8.865	265
19	2.227	1.2101	26 26	1.3111	1 58	9.4842	-0.006	8.951	242
20	2.237	1.2117	26 19	1.3112	1 2	9.2048	-0.012	9.006	221
21	2.248	1.2133	26 12	1.3112	0 6	+8.1911	-0.015	9.026	202
22	2.258	1.2148	26 5	1.3111	359 10	-9.1114	-0.015	9.003	182
23	+2.269	1.2164	25 57	1.3111	358 14	-9.4377	-0.013	8.964	156
24	2.279	1.2179	25 49	1.3110	357 18	9.6219	-0.008	8.919	127
25	2.290	1.2195	25 41	1.3110	356 22	9.7506	-0.001	8.899	93
26	2.300	1.2210	25 33	1.3109	355 26	9.8498	+0.006	8.915	60
27	2.311	1.2225	25 25	1.3108	354 30	9.9303	+0.012	8.956	31
28	+2.321	1.2241	25 17	1.3107	353 34	-9.9981	+0.015	8.990	7
29	2.332	1.2256	25 9	1.3105	352 38	0.0566	+0.015	9.000	346
30	2.343	1.2271	25 1	1.3103	351 41	0.1081	+0.012	8.983	326
31	2.354	1.2286	24 53	1.3101	350 45	0.1540	+0.008	8.945	305
32	+2.365	1.2301	24 44	1.3099	349 48	-0.1953	+0.003	8.865	284

APPARENT PLACES OF STARS, 1924. 231

AT UPPER TRANSIT AT GREENWICH.

α 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	°
	1 33	88 54	1 33	88 54	1 33	88 53	1 33	88 53	1 33	88 53	1 33	88 53
	s		s		s		s		s		s	
1	83.99	6.31	49.55	7.45	20.86	63.10	4.40	54.46	8.02	44.90	29.71	37.85
2	83.05	6.44	48.47	7.42	20.00	62.90	4.12	54.14	8.51	44.59	30.70	37.70
3	82.12	6.58	47.34	7.38	19.12	62.68	3.89	53.81	9.04	44.31	31.68	37.57
4	81.17	6.72	46.15	7.33	18.23	62.44	3.72	53.47	9.61	44.03	32.64	37.44
5	80.16	6.87	44.94	7.26	17.37	62.19	3.61	53.12	10.20	43.75	33.57	37.33
6	79.08	7.02	43.73	7.16	16.56	61.92	3.56	52.79	10.79	43.49	34.45	37.21
7	77.94	7.16	42.54	7.05	15.81	61.65	3.55	52.45	11.38	43.25	35.31	37.09
8	76.74	7.28	41.40	6.92	15.11	61.36	3.57	52.13	11.94	43.01	36.16	36.96
9	75.51	7.37	40.31	6.77	14.47	61.08	3.62	51.81	12.47	42.78	37.02	36.82
10	74.28	7.44	39.26	6.61	13.88	60.80	3.67	51.52	12.98	42.54	37.92	36.68
11	73.07	7.49	38.26	6.46	13.33	60.52	3.70	51.22	13.47	42.30	38.89	36.54
12	71.89	7.54	37.29	6.32	12.80	60.24	3.71	50.93	13.96	42.05	39.94	36.40
13	70.75	7.57	36.35	6.18	12.28	59.97	3.69	50.64	14.49	41.79	41.07	36.28
14	69.64	7.60	35.41	6.04	11.75	59.71	{ 3 65 }	{ 50 35 }	15.08	41.53	42.24	36.18
15	68.56	7.63	34.46	5.89	11.20	59.46	3.60	49.73	15.75	41.26	43.43	36.11
16	67.50	7.65	33.50	5.76	10.62	59.21	3.63	49.40	16.50	41.00	44.59	36.05
17	66.45	7.68	32.51	5.63	10.02	58.95	3.74	49.06	17.33	40.76	45.70	36.00
18	65.38	7.71	31.49	5.49	9.41	58.67	3.95	48.73	18.20	40.54	46.74	35.96
19	64.31	7.75	30.43	5.35	8.80	58.38	4.23	48.40	19.08	40.34	47.73	35.92
20	63.19	7.79	29.35	5.18	8.23	58.08	4.57	48.08	19.93	40.15	48.69	35.88
21	62.03	7.83	28.29	4.99	7.71	57.76	4.95	47.79	20.72	39.98	49.64	35.82
22	60.82	7.85	27.26	4.78	7.28	57.43	5.33	47.51	21.45	39.81	50.61	35.76
23	59.58	7.87	26.29	4.56	6.93	57.10	5.67	47.24	22.15	39.64	51.62	35.70
24	58.30	7.87	25.41	4.33	6.67	56.78	5.96	46.96	22.82	39.45	52.69	35.63
25	57.04	7.84	24.61	4.10	6.46	56.48	6.20	46.70	23.52	39.25	53.80	35.55
26	55.81	7.79	23.87	3.88	6.25	56.19	6.42	46.43	24.26	39.04	54.96	35.49
27	54.65	7.73	23.16	3.68	6.02	55.93	6.65	46.15	25.05	38.83	56.14	35.45
28	53.56	7.66	22.44	3.48	5.75	55.66	6.90	45.85	25.89	38.62	57.33	35.42
29	52.54	7.59	21.68	3.29	5.44	55.38	7.21	45.54	26.79	38.41	58.52	35.40
30	51.55	7.53	20.86	3.10	5.09	55.09	7.59	45.22	27.74	38.21	59.70	35.41
31	50.56	7.48			4.73	54.78	8.02	44.90	28.72	38.02	60.85	35.43
32	49.55	7.45			4.40	54.46			29.71	37.85		

Mean R.A. 1^h 33^m 42^s.610 Mean Dec. + 88° 53' 52".74 Sec δ 51.995 Tan δ + 51.985

232 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

α 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 34	88° 53'	I 34	88° 53'	I 35	88° 53'	I 35	88° 53'	I 35	88° 54'	I 34	88° 54'
	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s
1	0.85	35.43	35.17	38.01	4.40	45.11	22.81	55.05	27.05	6.78	74.14	17.08
2	1.97	35.45	36.11	38.17	5.22	45.37	23.34	55.42	26.87	7.19	73.31	17.38
3	3.04	35.48	37.06	38.33	6.10	45.64	23.84	55.81	26.62	7.59	72.48	17.66
4	4.07	35.51	38.04	38.47	7.01	45.93	24.29	56.20	26.30	7.98	71.66	17.93
5	5.07	35.54	39.07	38.62	7.93	46.23	24.66	56.61	25.95	8.35	70.88	18.18
6	6.07	35.55	40.16	38.77	8.81	46.56	24.94	57.02	25.60	8.71	70.12	18.43
7	7.08	35.56	41.31	38.94	9.62	46.90	25.14	57.42	25.28	9.04	69.40	18.68
8	8.16	35.56	42.49	39.13	10.35	47.25	25.29	57.81	24.99	9.37	68.70	18.93
9	9.31	35.57	43.65	39.35	11.00	47.60	25.43	58.17	24.72	9.70	67.98	19.18
10	10.52	35.58	44.78	39.58	11.59	47.94	25.60	58.53	24.48	10.03	67.25	19.44
11	11.78	35.62	45.84	39.82	12.15	48.26	25.76	58.87	24.24	10.37	66.49	19.70
12	13.05	35.67	46.82	40.07	12.71	48.58	25.97	59.22	23.98	10.73	65.68	19.97
13	14.31	35.75	47.74	40.31	13.29	48.89	26.20	59.57	23.71	11.09	64.82	20.23
14	15.52	35.86	48.61	40.55	13.91	49.20	26.46	59.93	23.39	11.45	63.91	20.49
15	16.67	35.97	49.46	40.77	14.56	49.50	26.71	60.30	23.02	11.82	62.95	20.75
16	17.75	36.09	50.33	40.99	15.24	49.81	26.95	60.68	22.59	12.19	61.94	20.99
17	18.77	36.19	51.23	41.19	15.93	50.12	27.16	61.06	22.11	12.55	60.89	21.20
18	19.77	36.29	52.17	41.40	16.61	50.45	27.33	61.46	21.56	12.91	59.84	21.40
19	20.77	36.37	53.15	41.61	17.28	50.79	27.44	61.86	20.97	13.25	58.82	21.58
20	21.81	36.45	54.16	41.84	17.90	51.14	27.48	62.27	20.36	13.57	57.83	21.76
21	22.89	36.52	55.17	42.07	18.51	51.50	27.46	62.67	19.74	13.88	56.91	21.94
22	24.01	36.60	56.18	42.31	19.04	51.87	27.40	63.06	19.15	14.18	56.05	22.12
23	25.17	36.69	57.18	42.58	19.52	52.24	27.30	63.45	18.62	14.47	55.21	22.30
24	26.35	36.79	58.14	42.85	19.94	52.62	27.18	63.82	18.14	14.77	54.37	22.49
25	27.54	36.90	59.06	43.14	20.32	53.00	27.07	64.17	17.69	15.08	53.48	22.70
26	28.73	37.02	59.93	43.44	20.67	53.36	27.01	64.51	17.24	15.40	52.52	22.91
27	29.90	37.16	60.73	43.73	21.02	53.70	26.99	64.86	16.77	15.73	51.47	23.12
28	31.04	37.32	61.48	44.03	21.40	54.03	27.02	65.21	16.24	16.08	50.34	23.32
29	32.15	37.49	62.20	44.31	21.83	54.36	27.08	65.58	15.62	16.43	49.17	23.49
30	33.20	37.67	62.91	44.58	22.30	54.71	27.13	65.96	14.92	16.77	47.98	23.64
31	34.21	37.84	63.63	44.85	22.81	55.05	27.13	66.37	14.14	17.08	46.80	23.76
32	35.17	38.01	64.40	45.11			27.05	66.78			45.66	23.88

Mean R.A. $1^h 33^m 42^s.610$ Mean Dec. $+ 88^\circ 53' 52''.74$ Sec $\delta 51.995$ Tan $\delta + 51.985$

APPARENT PLACES OF STARS, 1924. 233

AT UPPER TRANSIT AT GREENWICH.

51 H Cephei. Mag. 5.3

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	°
	7 5	87 10	7 5	87 10	7 5	87 10	7 5	87 10	7 5	87 10	7 5	87 10
1	47.37	5.67	47.58	15.53	40.58	23.12	28.34	26.77	16.19	24.84	7.73	18.10
2	47.51	5.96	47.50	15.84	40.28	23.35	27.88	26.82	15.79	24.68	7.56	17.80
3	47.66	6.24	47.41	16.17	39.94	23.57	27.40	26.83	15.41	24.50	7.42	17.51
4	47.83	6.53	47.28	16.50	39.58	23.79	26.93	26.84	15.05	24.31	7.30	17.22
5	48.00	6.84	47.13	16.83	39.20	24.00	26.47	26.83	14.70	24.11	7.19	16.94
6	48.16	7.17	46.95	17.16	38.80	24.20	26.02	26.81	14.38	23.92	7.09	16.68
7	48.30	7.51	46.74	17.48	38.38	24.37	25.57	26.78	14.07	23.73	6.99	16.43
8	48.41	7.86	46.51	17.78	37.97	24.52	25.15	26.73	13.78	23.54	6.87	16.17
9	48.48	8.21	46.27	18.07	37.56	24.66	24.74	26.69	13.50	23.37	6.73	15.92
10	48.53	8.57	46.02	18.34	37.15	24.80	24.35	26.64	13.22	23.20	6.59	15.66
11	48.55	8.91	45.78	18.60	36.76	24.93	23.98	26.60	12.93	23.04	6.45	15.38
12	48.55	9.24	45.54	18.86	36.37	25.04	23.60	26.56	12.63	22.87	6.30	15.08
13	48.55	9.57	45.30	19.10	36.00	25.16	23.22	26.54	12.32	22.70	6.17	14.77
14	48.55	9.88	45.07	19.35	35.64	25.28	22.82	26.52	12.00	22.52	6.08	14.43
15	48.54	10.19	44.86	19.60	35.28	25.42	22.41	26.49	11.66	22.32	6.02	14.10
16	48.53	10.50	44.65	19.86	34.92	25.56	21.98	26.46	11.33	22.10	5.99	13.77
17	48.53	10.80	44.44	20.13	34.55	25.70	21.53	26.41	11.02	21.85	5.99	13.45
18	48.54	11.10	44.21	20.42	34.15	25.84	21.08	26.33	10.75	21.59	6.01	13.14
19	48.55	11.41	43.96	20.70	33.73	25.97	20.64	26.23	10.51	21.32	6.03	12.85
20	48.57	11.74	43.68	20.98	33.30	26.10	20.22	26.11	10.31	21.06	6.03	12.57
21	48.58	12.08	43.38	21.25	32.85	26.20	19.83	25.98	10.12	20.81	6.01	12.30
22	48.57	12.43	43.05	21.51	32.38	26.28	19.47	25.84	9.94	20.57	5.98	12.03
23	48.53	12.78	42.71	21.75	31.94	26.34	19.13	25.71	9.75	20.35	5.94	11.76
24	48.46	13.13	42.37	21.96	31.51	26.38	18.80	25.59	9.54	20.14	5.89	11.46
25	48.36	13.48	42.03	22.16	31.10	26.41	18.48	25.49	9.32	19.92	5.85	11.15
26	48.24	13.81	41.71	22.35	30.71	26.44	18.14	25.40	9.09	19.70	5.82	10.82
27	48.10	14.11	41.41	22.53	30.34	26.47	17.78	25.31	8.84	19.48	5.81	10.48
28	47.97	14.41	41.13	22.71	29.98	26.52	17.40	25.22	8.59	19.23	5.81	10.14
29	47.84	14.70	40.86	22.91	29.61	26.58	17.00	25.11	8.35	18.97	5.84	9.81
30	47.74	14.97	40.58	23.12	29.21	26.65	16.60	24.99	8.12	18.69	5.89	9.48
31	47.66	15.24			28.78	26.71	16.19	24.84	7.91	18.40	5.96	9.15
32	47.58	15.53			28.34	26.77			7.73	18.10		

Mean R.A. 7^h 5^m 27^s.526 Mean Dec. + 87° 10' 15".95 Sec δ 20.262 Tan δ + 20.237

234 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

51 H Cephei. Mag. 5.3

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	°
	7 5	87 9	7 5	87 9	7 5	87 9	7 5	87 9	7 5	87 9	7 6	87 9
1	5 ^s .96	69 ^s .15	11.44	59 ^s .59	22.51	52 ^s .30	36.88	48 ^s .41	53 ^s .01	48 ^s .73	6.46	53 ^s .67
2	6.04	68.83	11.71	59.34	22.90	52.10	37.41	48.31	53.57	48.83	6.83	53.94
3	6.15	68.53	11.96	59.10	23.31	51.89	37.96	48.23	54.10	48.96	7.16	54.21
4	6.25	68.25	12.20	58.84	23.75	51.67	38.54	48.16	54.61	49.10	7.48	54.47
5	6.35	67.96	12.45	58.57	24.22	51.45	39.13	48.11	55.09	49.25	7.78	54.72
6	{ 6 ^s .41 }	{ 67 ^s .68 }	12.71	58.28	24.72	51.25	39.69	48.09	55.54	49.39	8.07	54.96
7	6.56	67.11	13.00	57.97	25.23	51.07	40.24	48.08	55.97	49.52	8.38	55.19
8	6.62	66.81	13.31	57.66	25.75	50.92	40.77	48.09	56.40	49.63	8.69	55.42
9	6.69	66.49	13.66	57.37	26.26	50.79	41.28	48.09	56.84	49.74	9.00	55.65
10	6.78	66.15	14.04	57.09	26.75	50.67	41.76	48.09	57.28	49.85	9.33	55.89
11	6.90	65.80	14.44	56.82	27.22	50.55	42.23	48.09	57.74	49.97	9.66	56.14
12	7.06	65.45	14.84	56.57	27.67	50.43	42.70	48.08	58.21	50.08	9.99	56.40
13	7.25	65.12	15.22	56.35	28.10	50.31	43.17	48.05	58.68	50.21	10.32	56.67
14	7.46	64.80	15.58	56.13	28.53	50.17	43.67	48.03	59.17	50.34	10.64	56.96
15	7.69	64.49	15.92	55.93	28.97	50.01	44.18	48.00	59.65	50.50	10.94	57.27
16	7.91	64.21	16.24	55.72	29.43	49.86	44.71	47.98	60.13	50.67	11.21	57.58
17	8.11	63.94	16.57	55.49	29.89	49.70	45.25	47.97	60.61	50.86	11.46	57.90
18	8.29	63.67	16.90	55.24	30.38	49.55	45.80	47.98	61.06	51.06	11.69	58.22
19	8.46	63.40	17.23	54.99	30.88	49.41	46.35	48.00	61.50	51.28	11.90	58.53
20	8.61	63.12	17.58	54.74	31.39	49.28	46.90	48.04	61.92	51.49	12.11	58.82
21	8.76	62.83	17.95	54.48	31.91	49.17	47.45	48.10	62.31	51.69	12.28	59.10
22	8.92	62.52	18.34	54.23	32.45	49.08	47.97	48.17	62.68	51.89	12.48	59.36
23	9.09	62.20	18.74	53.99	32.98	49.00	48.48	48.26	63.05	52.07	12.71	59.61
24	9.29	61.88	19.17	53.76	33.51	48.93	48.96	48.34	63.43	52.25	12.96	59.87
25	9.51	61.56	19.61	53.55	34.01	48.87	49.43	48.40	63.84	52.41	13.22	60.16
26	9.75	61.25	20.05	53.35	34.50	48.81	49.89	48.45	64.26	52.58	13.48	60.47
27	10.01	60.94	20.49	53.17	34.98	48.76	50.36	48.49	64.71	52.75	13.73	60.79
28	10.29	60.64	20.92	53.00	35.45	48.69	50.85	48.52	65.16	52.95	13.96	61.13
29	10.57	60.35	21.34	52.83	35.91	48.61	51.37	48.55	65.61	53.17	14.14	61.47
30	10.86	60.09	21.74	52.66	36.38	48.51	51.90	48.60	66.05	53.41	14.29	61.82
31	11.16	59.84	22.13	52.49	36.88	48.41	52.45	48.65	66.46	53.67	14.40	62.17
32	11.44	59.59	22.51	52.30			53.01	48.73			14.49	62.50

Mean R.A. 7^h 5^m 27^s.526 Mean Dec. + 87° 10' 15".95 Sec δ 20.262 Tan δ + 20.237

APPARENT PLACES OF STARS, 1924. 235

AT UPPER TRANSIT AT GREENWICH.

4 B Ursæ Minoris. Mag. 7.0

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	°
	8 23	88 51	8 23	88 51	8 22	88 51	8 22	88 51	8 21	88 51	8 21	88 51
	^s		^s		^s		^s		^s		^s	
1	15.56	25.68	26.81	35.14	78.71	44.14	53.89	50.63	82.89	51.75	55.06	47.41
2	16.16	25.92	26.95	35.46	78.25	44.42	52.85	50.78	81.77	51.69	54.33	47.17
3	16.82	26.16	27.08	35.79	77.72	44.72	51.76	50.92	80.67	51.63	53.65	46.92
4	17.52	26.40	27.15	36.14	77.11	45.03	50.65	51.03	79.60	51.54	53.02	46.68
5	18.25	26.66	27.16	36.49	76.44	45.32	49.55	51.13	78.57	51.44	52.42	46.45
6	18.99	26.94	27.09	36.85	75.71	45.60	48.45	51.21	77.57	51.33	51.86	46.23
7	19.70	27.24	26.94	37.20	74.94	45.86	47.38	51.28	76.62	51.21	51.31	46.01
8	20.34	27.56	26.73	37.55	74.15	46.10	46.33	51.35	75.70	51.11	50.74	45.80
9	20.90	27.89	26.49	37.88	73.34	46.34	45.32	51.41	74.82	51.02	50.14	45.59
10	21.39	28.22	26.23	38.20	72.54	46.56	44.34	51.46	73.95	50.93	49.51	45.37
11	21.81	28.55	25.95	38.51	71.75	46.78	43.39	51.53	73.07	50.84	48.85	45.14
12	22.19	28.86	25.67	38.81	70.98	46.99	42.45	51.59	72.17	50.77	48.18	44.88
13	22.53	29.16	25.40	39.11	70.23	47.20	41.50	51.66	71.24	50.69	47.51	44.61
14	22.85	29.46	25.15	39.40	69.51	47.40	40.54	51.74	70.27	50.59	46.90	44.32
15	23.16	29.76	24.92	39.70	68.81	47.62	39.54	51.82	69.25	50.47	46.36	44.02
16	23.49	30.05	24.71	40.01	68.10	47.85	38.48	51.89	68.22	50.34	45.91	43.71
17	23.84	30.34	24.49	40.32	67.37	48.08	37.37	51.94	67.22	50.18	45.54	43.41
18	24.20	30.64	24.26	40.65	66.60	48.32	36.22	51.98	66.28	49.99	45.21	43.12
19	24.57	30.94	23.99	40.98	65.78	48.55	35.06	51.99	65.41	49.80	44.90	42.84
20	24.96	31.25	23.65	41.32	64.88	48.76	33.94	51.98	64.61	49.60	44.58	42.57
21	25.34	31.58	23.25	41.65	63.92	48.96	32.87	51.95	63.87	49.42	44.22	42.32
22	25.70	31.92	22.78	41.98	62.94	49.15	31.86	51.92	63.17	49.24	43.83	42.07
23	26.00	32.26	22.23	42.29	61.94	49.32	30.91	51.88	62.47	49.08	43.40	41.81
24	26.23	32.61	21.65	42.58	60.96	49.46	30.00	51.85	61.73	48.92	42.94	41.54
25	26.38	32.96	21.08	42.85	60.04	49.60	29.09	51.83	60.95	48.77	42.48	41.25
26	26.46	33.31	20.53	43.10	59.16	49.72	28.16	51.83	60.13	48.61	42.04	40.94
27	26.49	33.64	20.04	43.35	58.32	49.85	27.20	51.82	59.27	48.45	41.62	40.63
28	26.50	33.96	19.58	43.60	57.50	49.99	26.18	51.82	58.39	48.27	41.25	40.31
29	26.52	34.26	19.15	43.86	56.67	50.15	25.11	51.81	57.51	48.07	40.94	39.99
30	26.58	34.55	18.71	44.14	55.80	50.31	24.00	51.79	56.65	47.87	40.68	39.65
31	26.68	34.84			54.87	50.47	22.89	51.75	55.83	47.64	40.47	39.33
32	26.81	35.14			53.89	50.63			55.06	47.41		

236 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

4 B Ursæ Minoris. Mag. 7.0

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 8 21 ^m 88 51	^h 8 21 ^m 88 51	^h 8 21 ^m 88 51	^h 8 21 ^m 88 51	^h 8 21 ^m 88 51	^h 8 21 ^m 88 51	^h 8 22 ^m 88 51	^h 8 22 ^m 88 51	^h 8 23 ^m 88 51	^h 8 23 ^m 88 51	^h 8 23 ^m 88 51	^h 8 23 ^m 88 51
1	40.47 ^s 39.33 ^o	42.23 ^s 28.03 ^o	59.81 ^s 19.32 ^o	28.95 ^s 12.18 ^o	6.78 ^s 8.66 ^o	43.43 ^s 10.18 ^o						
2	40.30 ^s 39.02 ^o	42.57 ^s 28.63 ^o	60.49 ^s 19.04 ^o	30.06 ^s 11.96 ^o	8.18 ^s 8.63 ^o	44.58 ^s 10.34 ^o						
3	40.18 ^s 38.71 ^o	42.87 ^s 28.33 ^o	61.21 ^s 18.74 ^o	31.25 ^s 11.76 ^o	9.57 ^s 8.63 ^o	45.65 ^s 10.52 ^o						
4	40.07 ^s 38.42 ^o	43.14 ^s 28.03 ^o	62.00 ^s 18.43 ^o	32.51 ^s 11.56 ^o	10.90 ^s 8.64 ^o	46.66 ^s 10.69 ^o						
5	39.97 ^s 38.13 ^o	43.39 ^s 27.71 ^o	62.86 ^s 18.12 ^o	33.81 ^s 11.38 ^o	12.16 ^s 8.66 ^o	47.64 ^s 10.85 ^o						
6	39.85 ^s 37.84 ^o	43.67 ^s 27.37 ^o	63.79 ^s 17.82 ^o	35.11 ^s 11.23 ^o	13.36 ^s 8.68 ^o	48.59 ^s 11.01 ^o						
7	39.69 ^s 37.55 ^o	44.01 ^s 27.01 ^o	64.79 ^s 17.53 ^o	36.38 ^s 11.09 ^o	14.52 ^s 8.70 ^o	49.55 ^s 11.16 ^o						
8	39.49 ^s 37.26 ^o	44.43 ^s 26.64 ^o	65.82 ^s 17.25 ^o	37.59 ^s 10.97 ^o	15.65 ^s 8.71 ^o	50.51 ^s 11.31 ^o						
9	39.28 ^s 36.95 ^o	44.92 ^s 26.28 ^o	66.85 ^s 16.99 ^o	38.76 ^s 10.86 ^o	16.79 ^s 8.71 ^o	51.51 ^s 11.46 ^o						
10	39.06 ^s 36.62 ^o	45.49 ^s 25.92 ^o	67.84 ^s 16.76 ^o	39.88 ^s 10.75 ^o	17.95 ^s 8.71 ^o	52.54 ^s 11.62 ^o						
11	38.88 ^s 36.28 ^o	46.11 ^s 25.59 ^o	68.79 ^s 16.54 ^o	40.97 ^s 10.62 ^o	19.13 ^s 8.71 ^o	53.58 ^s 11.78 ^o						
12	38.78 ^s 35.92 ^o	46.76 ^s 25.27 ^o	69.70 ^s 16.32 ^o	42.06 ^s 10.47 ^o	20.34 ^s 8.71 ^o	54.63 ^s 11.95 ^o						
13	38.75 ^s 35.56 ^o	47.39 ^s 24.97 ^o	70.56 ^s 16.09 ^o	43.16 ^s 10.33 ^o	21.59 ^s 8.72 ^o	55.70 ^s 12.14 ^o						
14	38.81 ^s 35.20 ^o	47.98 ^s 24.68 ^o	71.41 ^s 15.86 ^o	44.29 ^s 10.18 ^o	22.87 ^s 8.74 ^o	56.75 ^s 12.35 ^o						
15	38.94 ^s 34.85 ^o	48.52 ^s 24.40 ^o	72.27 ^s 15.61 ^o	45.45 ^s 10.04 ^o	24.17 ^s 8.77 ^o	57.79 ^s 12.57 ^o						
16	39.11 ^s 34.51 ^o	49.03 ^s 24.10 ^o	73.16 ^s 15.36 ^o	46.66 ^s 9.89 ^o	25.47 ^s 8.83 ^o	58.77 ^s 12.81 ^o						
17	39.29 ^s 34.19 ^o	49.52 ^s 23.81 ^o	74.08 ^s 15.10 ^o	47.90 ^s 9.76 ^o	26.77 ^s 8.89 ^o	59.71 ^s 13.05 ^o						
18	39.43 ^s 33.89 ^o	50.00 ^s 23.49 ^o	75.06 ^s 14.85 ^o	49.18 ^s 9.64 ^o	28.05 ^s 8.97 ^o	60.58 ^s 13.29 ^o						
19	39.53 ^s 33.59 ^o	50.51 ^s 23.17 ^o	76.08 ^s 14.59 ^o	50.49 ^s 9.54 ^o	29.30 ^s 9.06 ^o	61.39 ^s 13.53 ^o						
20	39.60 ^s 33.29 ^o	51.05 ^s 22.84 ^o	77.13 ^s 14.34 ^o	51.82 ^s 9.45 ^o	30.49 ^s 9.16 ^o	62.15 ^s 13.76 ^o						
21	39.63 ^s 32.97 ^o	51.63 ^s 22.51 ^o	78.22 ^s 14.11 ^o	53.14 ^s 9.38 ^o	31.63 ^s 9.26 ^o	62.91 ^s 13.98 ^o						
22	39.65 ^s 32.65 ^o	52.25 ^s 22.18 ^o	79.36 ^s 13.89 ^o	54.44 ^s 9.32 ^o	32.71 ^s 9.36 ^o	63.68 ^s 14.18 ^o						
23	39.68 ^s 32.32 ^o	52.93 ^s 21.86 ^o	80.50 ^s 13.69 ^o	55.70 ^s 9.27 ^o	33.78 ^s 9.45 ^o	64.49 ^s 14.38 ^o						
24	39.74 ^s 31.98 ^o	53.66 ^s 21.54 ^o	81.64 ^s 13.50 ^o	56.92 ^s 9.22 ^o	34.86 ^s 9.52 ^o	65.36 ^s 14.58 ^o						
25	{ ³⁰ 84 ^o / ⁴⁰ 00 ^o }	{ ³¹ 62 ^o / ³¹ 26 ^o }	54.44 ^s 21.23 ^o	82.76 ^s 13.32 ^o	58.09 ^s 9.17 ^o	66.27 ^s 14.80 ^o						
26	40.21 ^s 30.90 ^o	55.24 ^s 20.93 ^o	83.84 ^s 13.15 ^o	59.23 ^s 9.12 ^o	37.15 ^s 9.65 ^o	67.21 ^s 15.03 ^o						
27	40.46 ^s 30.55 ^o	56.06 ^s 20.65 ^o	84.88 ^s 12.98 ^o	60.37 ^s 9.05 ^o	38.37 ^s 9.72 ^o	68.14 ^s 15.28 ^o						
28	40.76 ^s 30.21 ^o	56.87 ^s 20.37 ^o	85.89 ^s 12.79 ^o	61.54 ^s 8.97 ^o	39.64 ^s 9.80 ^o	69.01 ^s 15.56 ^o						
29	41.10 ^s 29.88 ^o	57.66 ^s 20.11 ^o	86.89 ^s 12.60 ^o	62.76 ^s 8.88 ^o	40.93 ^s 9.91 ^o	69.83 ^s 15.85 ^o						
30	41.47 ^s 29.55 ^o	58.41 ^s 19.85 ^o	87.90 ^s 12.39 ^o	64.05 ^s 8.79 ^o	42.21 ^s 10.03 ^o	70.55 ^s 16.14 ^o						
31	41.86 ^s 29.23 ^o	59.12 ^s 19.59 ^o	88.95 ^s 12.18 ^o	65.39 ^s 8.72 ^o	43.43 ^s 10.18 ^o	71.20 ^s 16.44 ^o						
32	42.23 ^s 28.93 ^o	59.81 ^s 19.32 ^o		66.78 ^s 8.66 ^o		71.78 ^s 16.73 ^o						

Mean R.A. 8^h 22^m 39^s.807 Mean Dec. + 88° 51' 40".31 Sec δ 50.316 Tan δ + 50.306

APPARENT PLACES OF STARS, 1924. 237

AT UPPER TRANSIT AT GREENWICH.

6 B Ursæ Minoris. Mag. 6.3

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	°
	12 14 88 6		12 14 88 7		12 14 88 7		12 14 88 7		12 14 88 7		12 14 88 7	
1	17.48	59.51	37.65	1.71	50.68	8.56	53.93	18.32	45.93	26.81	29.53	31.65
2	18.10	59.47	38.25	1.85	51.03	8.84	53.85	18.67	45.47	27.06	28.88	31.71
3	18.74	59.42	38.88	2.00	51.37	9.14	53.72	19.01	44.99	27.29	28.25	31.75
4	19.40	59.37	39.51	2.17	51.69	9.46	53.56	19.35	44.49	27.51	27.63	31.79
5	20.10	59.33	40.13	2.36	51.97	9.78	53.37	19.68	43.99	27.72	27.04	31.82
6	20.83	59.30	40.72	2.57	52.22	10.12	53.17	20.00	43.49	27.92	26.48	31.85
7	21.58	59.29	41.29	2.80	52.44	10.45	52.96	20.31	43.01	28.11	25.93	31.89
8	22.35	59.31	41.82	3.03	52.61	10.78	52.74	20.61	42.54	28.29	25.38	31.93
9	23.10	59.35	42.31	3.27	52.76	11.11	52.52	20.89	42.09	28.47	24.83	31.98
10	23.83	59.40	42.78	3.51	52.89	11.43	52.31	21.17	41.66	28.64	24.25	32.02
11	24.53	59.48	43.23	3.74	53.02	11.74	52.11	21.45	41.24	28.83	23.64	32.07
12	25.20	59.54	43.66	3.97	53.14	12.05	51.93	21.73	40.81	29.02	22.99	32.11
13	25.85	59.61	44.09	4.20	53.26	12.34	51.76	22.01	40.36	29.23	22.29	32.14
14	26.47	59.69	44.53	4.42	53.40	12.64	51.59	22.30	39.88	29.43	21.59	32.14
15	27.08	59.77	44.98	4.64	53.54	12.93	51.40	22.61	39.35	29.62	20.90	32.12
16	27.70	59.84	45.44	4.84	53.70	13.23	51.17	22.92	38.77	29.80	20.23	32.07
17	28.33	59.90	45.91	5.07	53.86	13.54	50.91	23.23	38.17	29.96	19.58	32.01
18	28.96	59.96	46.40	5.31	54.01	13.87	50.60	23.54	37.55	30.10	18.98	31.95
19	29.61	60.03	46.89	5.55	54.14	14.21	50.24	23.82	36.94	30.22	18.42	31.89
20	30.27	60.09	47.37	5.82	54.23	14.55	49.85	24.09	36.35	30.32	17.87	31.85
21	30.96	60.17	47.82	6.10	54.28	14.90	49.45	24.34	35.80	30.42	17.31	31.81
22	31.67	60.27	48.23	6.40	54.27	15.25	49.06	24.58	35.28	30.51	16.75	31.78
23	32.38	60.39	48.59	6.70	54.22	15.58	48.71	24.80	34.79	30.62	16.16	31.76
24	33.08	60.53	48.91	6.99	54.15	15.89	48.39	25.02	34.29	30.74	15.54	31.73
25	33.75	60.69	49.18	7.28	54.08	16.19	48.08	25.25	33.79	30.86	14.89	31.70
26	34.37	60.85	49.44	7.55	54.02	16.48	47.78	25.49	33.25	31.00	14.22	31.66
27	34.96	61.01	49.72	7.81	53.99	16.76	47.47	25.75	32.69	31.13	13.54	31.60
28	35.50	61.17	50.01	8.05	53.98	17.04	47.14	26.01	32.10	31.26	12.87	31.52
29	36.01	61.32	50.33	8.30	53.99	17.34	46.77	26.28	31.47	31.38	12.21	31.43
30	36.54	61.46	50.68	8.56	53.99	17.66	46.36	26.55	30.83	31.49	11.57	31.32
31	37.08	61.58			53.97	17.99	45.93	26.81	30.18	31.57	10.95	31.21
32	37.65	61.71			53.93	18.32			29.53	31.65		

Mean R.A. 12^h 14^m 31^s.221 Mean Dec. + 88° 7' 16".46 Sec δ 30.502 Tan δ + 30.486

238 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

6 B Ursæ Minoris. Mag. 6.3

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	88° 7'	h m	88° 7'	h m	88° 7'	h m	88° 6'	h m	88° 6'	h m	88° 6'
	12 13	88 7	12 13	88 7	12 13	88 7	12 13	88 6	12 13	88 6	12 14	88 6
	s		s		s		s		s		s	
1	70.95	31.21	54.02	25.66	43.04	16.30	40.04	64.81	46.56	53.34	1.45	44.89
2	70.35	31.09	53.62	25.42	42.79	15.98	40.04	64.40	46.98	52.97	2.13	44.69
3	69.77	30.97	53.22	25.19	42.51	15.65	40.08	63.99	47.43	52.62	2.78	44.52
4	69.22	30.85	52.80	24.96	42.22	15.29	40.15	63.57	47.89	52.29	3.41	44.35
5	68.69	30.74	52.35	24.73	41.94	14.91	40.27	63.15	48.34	51.99	4.01	44.19
6	68.16	30.62	51.87	24.49	41.68	14.52	40.45	62.74	48.77	51.70	4.60	44.03
7	67.62	30.51	51.36	24.24	41.46	14.13	40.65	62.35	49.19	51.41	5.17	43.87
8	67.05	30.41	50.85	23.96	41.30	13.73	40.84	61.98	49.59	51.12	5.75	43.69
9	66.45	30.30	50.35	23.66	41.19	13.34	41.01	61.62	49.97	50.83	6.34	43.51
10	65.82	30.18	49.89	23.34	41.10	12.95	41.18	61.27	50.35	50.53	6.95	43.33
11	65.16	30.04	49.47	23.01	41.03	12.58	41.33	60.92	50.75	50.23	7.58	43.15
12	64.50	29.88	49.10	22.68	40.96	12.23	41.45	60.57	51.16	49.92	8.23	42.98
13	63.86	29.69	48.77	22.36	40.86	11.89	41.57	60.21	51.58	49.60	8.91	42.82
14	63.26	29.49	48.46	22.05	40.73	11.55	41.70	59.85	52.04	49.29	9.62	42.67
15	62.71	29.28	48.15	21.76	40.59	11.21	41.83	59.48	52.53	48.98	10.35	42.53
16	62.19	29.07	47.83	21.48	40.45	10.86	41.99	59.10	53.06	48.69	11.09	42.41
17	61.71	28.87	47.49	21.20	40.31	10.50	42.17	58.71	53.62	48.40	11.83	42.31
18	61.24	28.69	47.13	20.92	40.17	10.12	42.38	58.32	54.20	48.12	12.55	42.23
19	60.75	28.51	46.75	20.64	40.05	9.74	42.63	57.93	54.77	47.87	13.23	42.15
20	60.25	28.35	46.36	20.34	39.95	9.34	42.93	57.56	55.34	47.62	13.87	42.08
21	59.72	28.18	45.97	20.02	39.88	8.94	43.25	57.19	55.89	47.39	14.50	41.99
22	59.17	28.00	45.59	19.69	39.84	8.53	43.58	56.83	56.42	47.16	15.11	41.90
23	58.60	27.81	45.22	19.35	39.84	8.13	43.91	56.49	56.91	46.93	15.72	41.79
24	58.03	27.62	44.88	19.01	39.86	7.74	44.25	56.16	57.39	46.69	16.36	41.68
25	57.45	27.41	44.58	18.66	39.90	7.35	44.56	55.83	57.87	46.43	17.04	41.57
26	56.88	27.19	44.31	18.31	{ 39.92 }	{ 6.98 }	44.83	55.51	58.37	46.17	17.75	41.47
27	56.34	26.95	44.07	17.95	40.09	6.27	45.08	55.18	58.90	45.89	18.51	41.37
28	55.82	26.70	43.86	17.60	40.11	5.91	45.32	54.83	59.48	45.61	19.29	41.30
29	55.33	26.45	43.66	17.27	40.11	5.56	45.57	54.47	60.11	45.35	20.06	41.25
30	54.86	26.18	43.46	16.95	40.07	5.19	45.85	54.10	60.77	45.11	20.82	41.23
31	54.43	25.92	43.26	16.62	40.04	4.81	46.18	53.72	61.45	44.89	21.55	41.23
32	54.02	25.66	43.04	16.30			46.56	53.34			22.24	41.23

Mean R.A. 12^h 14^m 31^s.221 Mean Dec. + 88° 7' 16".46 Sec δ 30.502 Tan δ + 30.486

APPARENT PLACES OF STARS, 1924. 239

AT UPPER TRANSIT AT GREENWICH.

57 B Ursæ Minoris. Mag. 7.2

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	°
	15 I	87 31	15 I	87 31	15 I	87 31	15 I	87 31	15 I	87 31	15 I	87 31
	s		s		s		s		s		s	
1	1.69	24.29	15.69	19.36	30.26	20.27	42.17	26.54	46.34	35.58	42.01	44.69
2	2.01	24.07	16.18	19.27	30.75	20.37	42.47	26.82	46.34	35.92	41.71	44.95
3	2.34	23.83	16.69	19.18	31.25	20.48	42.76	27.12	46.30	36.26	41.40	45.20
4	2.67	23.58	17.23	19.11	31.76	20.61	43.02	27.43	46.24	36.59	41.09	45.43
5	3.04	23.31	17.79	19.05	32.26	20.76	43.25	27.74	46.18	36.92	40.79	45.65
6	3.44	23.05	18.35	19.01	32.75	20.93	43.46	28.05	46.11	37.23	40.50	45.86
7	3.86	22.80	18.91	18.99	33.21	21.12	43.65	28.36	46.03	37.53	40.22	46.08
8	4.31	22.56	19.45	19.00	33.65	21.31	43.82	28.66	45.95	37.82	39.95	46.29
9	4.79	22.34	19.98	19.02	34.06	21.51	44.00	28.95	45.88	38.11	39.68	46.51
10	5.27	22.15	20.49	19.05	34.47	21.70	44.18	29.23	45.82	38.39	39.41	46.74
11	5.75	21.97	20.99	19.07	34.86	21.89	44.36	29.50	45.76	38.66	39.11	46.98
12	6.21	21.80	21.47	19.10	35.24	22.08	44.54	29.76	45.71	38.95	38.78	47.23
13	6.66	21.65	21.96	19.13	35.62	22.27	44.73	30.03	45.66	39.25	38.41	47.47
14	7.10	21.50	22.44	19.15	36.00	22.44	44.93	30.31	45.58	39.56	38.02	47.71
15	7.54	21.35	22.92	19.17	36.39	22.62	45.13	30.60	45.48	39.89	37.59	47.93
16	7.97	21.20	23.41	19.18	36.79	22.79	45.31	30.90	45.34	40.22	37.16	48.12
17	8.39	21.05	23.92	19.19	37.20	22.97	45.47	31.22	45.17	40.54	36.74	48.29
18	8.83	20.90	24.45	19.21	37.62	23.16	45.60	31.55	44.97	40.85	36.35	48.44
19	9.28	20.73	24.98	19.24	38.04	23.37	45.71	31.89	44.76	41.14	35.97	48.59
20	9.75	20.56	25.53	19.28	38.45	23.60	45.77	32.23	44.53	41.41	35.61	48.74
21	10.24	20.39	26.08	19.35	38.83	23.85	45.81	32.55	44.32	41.66	35.27	48.90
22	10.74	20.24	26.61	19.44	39.18	24.11	45.84	32.86	44.13	41.91	34.92	49.08
23	11.27	20.10	27.11	19.55	39.50	24.37	45.87	33.15	43.95	42.15	34.56	49.26
24	11.81	19.97	27.59	19.67	39.79	24.64	45.92	33.43	43.79	42.41	34.18	49.46
25	12.34	19.87	28.05	19.79	40.06	24.89	45.98	33.70	43.64	42.68	33.78	49.65
26	12.87	19.79	28.49	19.90	40.32	25.13	46.05	33.98	43.47	42.96	33.35	49.84
27	13.38	19.72	28.91	20.00	40.59	25.35	46.13	34.27	43.29	43.25	32.90	50.02
28	13.87	19.67	29.34	20.09	40.89	25.56	46.21	34.57	43.08	43.55	32.44	50.19
29	14.33	19.61	29.79	20.18	41.20	25.79	46.28	34.90	42.84	43.84	31.97	50.34
30	14.78	19.54	30.26	20.27	41.53	26.02	46.32	35.23	42.58	44.13	31.50	50.48
31	15.23	19.46			41.86	26.27	46.34	35.58	42.30	44.41	31.03	50.59
32	15.69	19.36			42.17	26.54			42.01	44.69		

Mean R.A. 15^h 26^m.994 Mean Dec. + 87° 31' 32".63 Sec δ 23.164 Tan δ + 23.142

240 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

57 B URSÆ MINORIS. Mag. 7.2

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	°
	15 187 31		15 087 31		15 087 31		15 087 31		15 087 31		15 087 31	
	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s
1	31.03	50.59	75.71	52.13	59.80	48.84	46.74	41.59	38.55	31.05	38.46	19.47
2	30.56	50.70	75.24	52.08	59.32	48.70	46.33	41.32	38.40	30.64	38.65	19.11
3	30.11	50.79	74.76	52.05	58.82	48.55	45.92	41.03	38.27	30.23	38.85	18.77
4	29.67	50.89	74.29	52.02	58.31	48.39	45.51	40.71	38.19	29.82	39.05	18.44
5	29.25	50.98	73.79	52.01	57.77	48.20	45.13	40.37	38.13	29.43	39.23	18.12
6	28.84	51.08	73.26	51.99	57.23	48.00	44.79	40.02	38.07	29.05	39.40	17.79
7	28.42	51.18	72.71	51.96	56.70	47.77	44.47	39.65	38.03	28.69	39.57	17.48
8	27.99	51.29	72.13	51.93	56.20	47.53	44.18	39.29	37.97	28.34	39.74	17.16
9	27.54	51.42	71.54	51.87	55.73	47.27	43.91	38.95	{ ³⁷ / ₃₇ ⁸³ / ₈₃ }	{ ²⁷ / ₂₇ ⁸⁵ / ₈₅ }	39.90	16.83
10	27.06	51.55	70.96	51.79	55.29	47.01	43.65	38.62	37.75	27.30	40.08	16.51
11	26.55	51.67	70.40	51.68	54.88	46.76	43.39	38.31	37.67	26.95	40.27	16.18
12	26.01	51.77	69.85	51.57	54.47	46.52	43.11	38.02	37.59	26.58	40.46	15.83
13.	25.46	51.84	69.33	51.44	54.06	46.30	42.82	37.73	37.53	26.21	40.71	15.48
14	24.91	51.89	68.82	51.32	53.64	46.08	42.53	37.42	37.48	25.82	40.98	15.14
15	24.38	51.92	68.35	51.21	53.20	45.87	42.23	37.11	37.45	25.43	41.26	14.80
16	23.87	51.94	67.87	51.10	52.76	45.66	41.93	36.78	37.46	25.04	41.57	14.46
17	23.38	51.95	67.39	51.00	52.30	45.44	41.63	36.44	37.48	24.65	41.89	14.15
18	22.91	51.97	66.89	50.92	51.84	45.22	41.35	36.09	37.53	24.26	42.21	13.85
19	22.46	52.00	66.38	50.83	51.37	44.97	41.08	35.72	37.60	23.88	42.52	13.57
20	22.00	52.05	65.85	50.75	50.91	44.71	40.83	35.35	37.68	23.50	42.82	13.30
21	21.53	52.10	65.32	50.65	50.47	44.44	40.61	34.97	37.75	23.14	43.12	13.04
22	21.03	52.16	64.77	50.53	50.04	44.15	40.42	34.58	37.82	22.80	43.38	12.78
23	20.52	52.21	64.22	50.39	49.63	43.85	40.24	34.21	37.88	22.47	43.64	12.50
24	19.99	52.25	63.68	50.25	49.25	43.55	40.08	33.84	37.92	22.13	43.91	12.21
25	19.44	52.28	63.14	50.09	48.88	43.25	39.93	33.49	37.95	21.79	44.19	11.90
26	18.89	52.31	62.62	49.92	48.54	42.95	39.77	33.16	37.98	21.42	44.50	11.59
27	18.34	52.32	62.12	49.73	48.20	42.67	39.60	32.83	38.01	21.04	44.85	11.28
28	17.79	52.31	61.63	49.54	47.87	42.39	39.41	32.50	38.07	20.65	45.23	10.97
29	17.25	52.28	61.17	49.35	47.51	42.12	39.20	32.16	38.16	20.25	45.63	10.69
30	16.72	52.24	60.72	49.17	47.14	41.85	38.98	31.80	38.29	19.85	46.05	10.43
31	16.21	52.19	60.27	49.00	46.74	41.59	38.76	31.44	38.46	19.47	46.46	10.19
32	15.71	52.13	59.80	48.84			38.55	31.05			46.87	9.97

Mean R.A. 15^h 1^m 26^s.994 Mean Dec. + 87° 31' 32^s.63 Sec δ 23.164 Tan δ + 23.142

APPARENT PLACES OF STARS, 1924. 241

AT UPPER TRANSIT AT GREENWICH.

ε Ursæ Minoris. Mag. 4.4

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	h m	h m	h m	h m	h m	h m
	16 53	82 9	16 53	82 9	16 53	82 9	16 53	82 9	16 53	82 9	16 53	82 9
	s	s	s	s	s	s	s	s	s	s	s	s
1	32.51	53.07	35.57	44.22	40.01	40.44	44.91	42.37	48.26	49.28	49.30	58.98
2	32.56	52.76	35.69	43.98	40.18	40.38	45.06	42.53	48.33	49.59	49.28	59.32
3	32.62	52.44	35.83	43.73	40.35	40.33	45.21	42.72	48.40	49.91	49.26	59.65
4	32.66	52.11	35.97	43.50	40.53	40.29	45.36	42.91	48.47	50.23	49.23	59.95
5	32.72	51.75	36.12	43.27	40.70	40.27	45.49	43.12	48.53	50.54	49.21	60.25
6	32.78	51.39	36.27	43.07	40.88	40.26	45.62	43.33	48.59	50.84	49.19	60.53
7	32.86	51.03	36.43	42.88	41.05	40.28	45.75	43.54	48.64	51.15	49.17	60.81
8	32.94	50.68	36.58	42.71	41.22	40.32	45.87	43.75	48.70	51.44	49.14	61.09
9	33.03	50.34	36.74	42.56	41.38	40.37	45.99	43.96	48.76	51.71	49.12	61.38
10	33.12	50.00	36.89	42.42	41.55	40.41	46.11	44.16	48.81	51.98	49.10	61.68
11	33.21	49.70	37.04	42.29	41.71	40.46	46.23	44.36	48.86	52.26	49.07	62.00
12	33.31	49.41	37.19	42.16	41.87	40.51	46.35	44.54	48.92	52.54	49.03	62.34
13	33.41	49.12	37.33	42.03	42.02	40.56	46.47	44.73	48.97	52.83	48.99	62.69
14	33.50	48.85	37.47	41.90	42.17	40.60	46.59	44.92	49.02	53.14	48.94	63.03
15	33.60	48.58	37.62	41.76	42.32	40.63	46.71	45.12	49.07	53.47	48.89	63.36
16	33.70	48.31	37.76	41.62	42.48	40.66	46.83	45.34	49.10	53.81	48.83	63.67
17	33.79	48.03	37.92	41.47	42.65	40.69	46.95	45.59	49.14	54.16	48.76	63.96
18	33.89	47.75	38.08	41.32	42.81	40.73	47.07	45.85	49.16	54.50	48.69	64.23
19	33.99	47.47	38.25	41.18	42.98	40.79	47.17	46.12	49.17	54.84	48.63	64.49
20	34.09	47.17	38.42	41.05	43.14	40.88	47.27	46.40	49.19	55.16	48.57	64.74
21	34.20	46.87	38.59	40.94	43.31	40.99	47.36	46.68	49.20	55.47	48.52	65.00
22	34.31	46.57	38.76	40.85	43.47	41.12	47.44	46.95	49.21	55.76	48.46	65.28
23	34.43	46.28	38.93	40.78	43.63	41.26	47.53	47.21	49.23	56.04	48.40	65.57
24	34.56	46.00	39.09	40.73	43.77	41.40	47.62	47.45	49.25	56.33	48.34	65.86
25	34.69	45.73	39.25	40.70	43.90	41.54	47.71	47.68	49.27	56.63	48.28	66.16
26	34.82	45.49	39.40	40.67	44.04	41.67	47.80	47.91	49.29	56.93	48.21	66.47
27	34.96	45.27	39.56	40.63	44.18	41.79	47.89	48.15	49.30	57.25	48.13	66.78
28	35.09	45.06	39.70	40.58	44.32	41.89	47.99	48.41	49.31	57.59	48.05	67.08
29	35.21	44.87	39.85	40.51	44.47	41.99	48.09	48.68	49.32	57.94	47.96	67.37
30	35.33	44.67	40.01	40.44	44.61	42.10	48.18	48.97	49.32	58.29	47.86	67.65
31	35.44	44.45			44.76	42.23	48.26	49.28	49.31	58.64	47.76	67.92
32	35.57	44.22			44.91	42.37			49.30	58.98		

242 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

ε Ursæ Minoris. Mag. 4.4

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	°
	16 53	82 10	16 53	82 10	16 53	82 10	16 53	82 10	16 53	82 9	16 53	82 9
1	47.76	7.92	44.02	14.32	38.95	16.52	33.72	14.21	29.17	67.35	26.76	57.28
2	47.66	8.16	43.88	14.43	38.78	16.53	33.55	14.09	29.04	67.04	26.72	56.98
3	47.57	8.40	43.74	14.55	38.61	16.55	33.37	13.95	28.93	66.71	26.70	56.60
4	47.47	8.63	43.60	14.69	38.43	16.58	33.19	13.79	28.82	66.38	26.68	56.23
5	47.39	8.85	43.46	14.84	38.25	16.60	33.02	13.61	28.72	66.04	26.66	55.88
6	47.30	9.07	43.32	15.00	38.05	16.59	32.85	13.40	28.62	65.72	$\left\{ \begin{smallmatrix} 26.65 \\ 26.64 \end{smallmatrix} \right\}$	$\left\{ \begin{smallmatrix} 55.53 \\ 55.52 \end{smallmatrix} \right\}$
7	47.21	9.31	43.16	15.15	37.86	16.56	32.69	13.18	28.52	65.41	26.62	54.85
8	47.12	9.56	42.99	15.30	37.67	16.50	32.53	12.96	28.43	65.11	26.60	54.52
9	47.03	9.82	42.82	15.44	37.48	16.42	32.38	12.74	28.34	64.82	26.58	54.17
10	46.92	10.09	42.65	15.56	37.31	16.33	32.23	12.54	28.24	64.54	26.56	53.81
11	46.81	10.37	42.47	15.65	37.14	16.25	32.08	12.34	28.15	64.25	26.54	53.45
12	46.69	10.63	42.30	15.72	36.98	16.17	31.94	12.16	28.05	63.96	26.53	53.07
13	46.57	10.88	42.14	15.78	36.81	16.10	31.80	11.98	27.95	63.66	26.53	52.69
14	46.43	11.10	41.98	15.83	36.64	16.03	31.65	11.80	27.85	63.35	26.53	52.30
15	46.30	11.30	41.82	15.88	36.47	15.98	31.50	11.61	27.75	63.02	26.54	51.91
16	46.17	11.47	41.67	15.94	36.30	15.93	31.34	11.42	27.67	62.67	26.56	51.51
17	46.05	11.64	41.51	16.01	36.12	15.88	31.18	11.21	27.59	62.32	26.58	51.13
18	45.92	11.82	41.35	16.09	35.95	15.82	31.03	10.98	27.51	61.95	26.62	50.75
19	45.81	12.00	41.19	16.18	35.76	15.76	30.87	10.75	27.45	61.58	26.65	50.40
20	45.69	12.19	41.02	16.27	35.58	15.67	30.73	10.49	27.39	61.21	26.68	50.06
21	45.57	12.40	40.85	16.35	35.39	15.57	30.59	10.22	27.33	60.84	26.71	49.74
22	45.45	12.61	40.67	16.43	35.21	15.45	30.45	9.94	27.27	60.50	26.73	49.41
23	45.33	12.82	40.49	16.49	35.03	15.32	30.32	9.66	27.22	60.17	26.75	49.08
24	45.19	13.03	40.31	16.53	34.86	15.17	30.20	9.39	27.16	59.86	26.76	48.73
25	45.06	13.24	40.13	16.57	34.70	15.01	30.08	9.12	27.10	59.56	26.78	48.37
26	44.91	13.43	39.96	16.59	34.54	14.85	29.96	8.86	27.03	59.25	26.81	48.00
27	44.76	13.62	39.78	16.58	34.38	14.71	29.84	8.61	26.97	58.91	26.85	47.61
28	44.61	13.79	39.61	16.57	34.22	14.57	29.71	8.38	26.90	58.56	26.90	47.22
29	44.46	13.94	39.44	16.54	34.06	14.44	29.57	8.15	26.85	58.18	26.96	46.84
30	44.31	14.08	39.28	16.52	33.89	14.32	29.44	7.90	26.80	57.78	27.02	46.48
31	44.17	14.20	39.11	16.51	33.72	14.21	29.31	7.64	26.76	57.38	27.09	46.12
32	44.02	14.32	38.95	16.52			29.17	7.35			27.16	45.78

Mean R.A. 16^h 53^m 41^s.806 Mean Dec. + 82° 9' 52".93 Sec δ 7.335 Tan δ + 7.267

APPARENT PLACES OF STARS, 1924. 243

AT UPPER TRANSIT AT GREENWICH.

δ Ursæ Minoris. Mag. 4.4

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	h m	h m	h m	h m	h m	h m
	17 56	86 36	17 56	86 36	17 56	86 36	17 56	86 36	17 56	86 36	17 57	86 36
	s	s	s	s	s	s	s	s	s	s	s	s
1	24.78	55.28	28.62	45.48	37.21	39.65	48.49	38.93	57.75	43.74	2.57	52.46
2	24.78	54.96	28.82	45.20	37.55	39.50	48.88	39.00	58.01	43.99	2.62	52.79
3	24.78	54.65	29.04	44.90	37.91	39.36	49.26	39.09	58.26	44.26	2.65	53.12
4	24.79	54.31	29.27	44.61	38.29	39.24	49.63	39.20	58.49	44.53	2.67	53.44
5	24.79	53.96	29.53	44.32	38.67	39.12	50.00	39.33	58.72	44.79	2.69	53.74
6	24.81	53.60	29.80	44.05	39.06	39.02	50.35	39.47	58.93	45.06	2.70	54.03
7	24.85	53.23	30.09	43.79	39.45	38.95	50.69	39.60	59.12	45.32	2.72	54.31
8	24.91	52.86	30.39	43.55	39.83	38.89	51.02	39.74	59.31	45.58	2.75	54.60
9	24.99	52.49	30.69	43.32	40.21	38.85	51.33	39.88	59.49	45.82	2.78	54.88
10	25.10	52.14	30.99	43.11	40.58	38.82	51.64	40.01	59.67	46.05	2.82	55.18
11	25.22	51.79	31.28	42.91	40.93	38.78	51.95	40.13	59.86	46.29	2.85	55.49
12	25.34	51.46	31.56	42.72	41.29	38.75	52.26	40.26	60.06	46.53	2.86	55.83
13	25.46	51.15	31.84	42.52	41.63	38.71	52.57	40.37	60.26	46.77	2.85	56.18
14	25.59	50.85	32.11	42.32	41.98	38.67	52.89	40.48	60.46	47.03	2.83	56.54
15	25.72	50.55	32.39	42.12	42.33	38.62	53.22	40.60	60.66	47.32	2.78	56.88
16	25.84	50.24	32.67	41.91	42.68	38.56	53.56	40.74	60.84	47.63	2.71	57.22
17	25.95	49.94	32.96	41.69	43.04	38.51	53.90	40.90	61.00	47.94	2.63	57.53
18	26.07	49.64	33.25	41.47	43.42	38.47	54.23	41.08	61.14	48.26	2.54	57.84
19	26.19	49.32	33.56	41.25	43.81	38.44	54.54	41.29	61.26	48.58	2.45	58.12
20	26.32	49.00	33.90	41.04	44.21	38.43	54.84	41.51	61.36	48.89	2.38	58.41
21	26.46	48.67	34.24	40.84	44.61	38.44	55.11	41.74	61.45	49.18	2.32	58.69
22	26.61	48.33	34.59	40.66	44.99	38.47	55.36	41.95	61.53	49.45	2.27	58.98
23	26.79	47.98	34.95	40.51	45.37	38.53	55.60	42.16	61.63	49.71	2.22	59.28
24	26.99	47.65	35.30	40.38	45.72	38.60	55.85	42.35	61.74	49.97	2.17	59.59
25	27.20	47.34	35.64	40.27	46.07	38.66	56.09	42.52	61.87	50.24	2.11	59.92
26	27.42	47.04	35.97	40.17	46.39	38.71	56.35	42.70	61.99	50.52	2.03	60.25
27	27.64	46.77	36.28	40.06	46.71	38.75	56.62	42.88	62.12	50.82	1.93	60.59
28	27.85	46.51	36.58	39.94	47.04	38.78	56.90	43.07	62.24	51.13	1.82	60.93
29	28.06	46.26	36.89	39.80	47.38	38.81	57.19	43.27	62.35	51.46	1.69	61.26
30	28.25	46.01	37.21	39.65	47.74	38.84	57.47	43.50	62.44	51.79	1.55	61.58
31	28.43	45.75			48.11	38.88	57.75	43.74	62.51	52.13	1.40	61.88
32	28.62	45.48			48.49	38.93			62.57	52.46		

Mean R.A. 17^h 56^m 44^s.830 Mean Dec. + 86° 36' 50".21 Sec δ 16.931 Tan δ + 16.901

244 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

δ Ursæ Minoris. Mag. 4.4

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.
	17 56 ^h 86° 37' ^m		17 56 ^h 86° 37' ^m		17 56 ^h 86° 37' ^m		17 56 ^h 86° 37' ^m		17 56 ^h 86° 37' ^m		17 56 ^h 86° 36' ^m	
1	61.40 ^s	1.88	54.55 ^s	10.06	43.60 ^s	14.95	31.07 ^s	15.66	18.63 ^s	11.75	9.98 ^s	63.83
2	61.25 ^s	2.17	54.26 ^s	10.25	43.23 ^s	15.06	30.63 ^s	15.65	18.24 ^s	11.54	9.78 ^s	63.48
3	61.09 ^s	2.45	53.99 ^s	10.44	42.85 ^s	15.18	30.18 ^s	15.62	17.86 ^s	11.30	9.61 ^s	63.13
4	60.93 ^s	2.72	53.71 ^s	10.64	42.44 ^s	15.29	29.73 ^s	15.56	17.50 ^s	11.05	9.45 ^s	62.79
5	60.79 ^s	2.99	53.43 ^s	10.86	42.01 ^s	15.41	29.27 ^s	15.49	17.17 ^s	10.80	9.30 ^s	62.46
6	60.65 ^s	3.25	53.14 ^s	11.08	41.57 ^s	15.51	28.81 ^s	15.39	16.86 ^s	10.55	9.16 ^s	62.15
7	60.50 ^s	3.52	52.83 ^s	11.32	41.12 ^s	15.59	28.37 ^s	15.28	16.56 ^s	10.30	9.01 ^s	61.85
8	60.36 ^s	3.80	52.49 ^s	11.56	40.66 ^s	15.64	27.95 ^s	15.15	16.26 ^s	10.07	8.87 ^s	61.55
9	60.21 ^s	4.10	52.14 ^s	11.78	40.23 ^s	15.67	27.55 ^s	15.03	15.97 ^s	9.86	8.72 ^s	61.25
10	60.05 ^s	4.41	51.77 ^s	11.99	39.80 ^s	15.68	27.16 ^s	14.92	15.67 ^s	9.65	8.56 ^s	60.95
11	59.86 ^s	4.73	51.39 ^s	12.18	39.39 ^s	15.70	26.77 ^s	14.82	15.35 ^s	9.44	8.40 ^s	60.63
12	59.66 ^s	5.05	51.01 ^s	12.34	38.99 ^s	15.71	26.39 ^s	14.73	15.04 ^s	9.22	8.25 ^s	60.30
13	59.43 ^s	5.36	50.64 ^s	12.49	38.60 ^s	15.74	26.01 ^s	14.64	14.72 ^s	8.99	8.10 ^s	59.95
14	59.19 ^s	5.65	50.28 ^s	12.62	38.21 ^s	15.78	25.61 ^s	14.55	14.40 ^s	8.76	7.96 ^s	59.59
15	58.94 ^s	5.92	49.94 ^s	12.75	37.81 ^s	15.83	25.20 ^s	14.46	14.08 ^s	8.50	7.84 ^s	59.23
16	58.69 ^s	6.17	49.62 ^s	12.90	37.40 ^s	15.87	24.79 ^s	14.36	13.77 ^s	8.23	7.74 ^s	58.86
17	58.45 ^s	6.40	49.29 ^s	13.06	36.99 ^s	15.91	24.38 ^s	14.25	13.47 ^s	7.94	7.66 ^s	58.49
18	58.22 ^s	6.63	48.96 ^s	13.23	36.56 ^s	15.95	23.96 ^s	14.12	13.18 ^s	7.64	7.60 ^s	58.13
19	58.01 ^s	6.86	48.61 ^s	13.40	36.13 ^s	15.99	23.54 ^s	13.98	12.90 ^s	7.34	7.54 ^s	57.76
20	57.79 ^s	7.11	48.25 ^s	13.57	35.69 ^s	16.01	23.13 ^s	13.82	12.65 ^s	7.03	7.44 ^s	57.41
21	57.58 ^s	7.37	47.89 ^s	13.74	35.25 ^s	16.01	22.73 ^s	13.65	12.42 ^s	6.73	7.39 ^s	56.76
22	57.36 ^s	7.63	47.52 ^s	13.91	34.79 ^s	16.00	22.34 ^s	13.47	12.19 ^s	6.44	7.34 ^s	56.45
23	57.13 ^s	7.90	47.12 ^s	14.07	34.35 ^s	15.97	21.95 ^s	13.28	11.97 ^s	6.16	7.27 ^s	56.13
24	56.88 ^s	8.18	46.72 ^s	14.21	33.91 ^s	15.94	21.59 ^s	13.09	11.74 ^s	5.90	7.19 ^s	55.86
25	56.62 ^s	8.46	46.32 ^s	14.34	33.49 ^s	15.89	21.24 ^s	12.90	11.50 ^s	5.64	7.11 ^s	55.46
26	56.35 ^s	8.72	45.91 ^s	14.45	33.08 ^s	15.83	20.89 ^s	12.73	11.24 ^s	5.38	7.05 ^s	55.10
27	56.07 ^s	8.98	45.50 ^s	14.54	32.68 ^s	15.78	20.54 ^s	12.57	10.98 ^s	5.11	7.00 ^s	54.71
28	55.77 ^s	9.23	45.11 ^s	14.62	32.28 ^s	15.73	20.18 ^s	12.43	10.72 ^s	4.82	6.98 ^s	54.34
29	55.47 ^s	9.46	44.72 ^s	14.70	31.89 ^s	15.70	19.81 ^s	12.28	10.46 ^s	4.50	6.99 ^s	53.91
30	55.16 ^s	9.67	44.35 ^s	14.77	31.48 ^s	15.68	19.43 ^s	12.12	10.21 ^s	4.17	7.02 ^s	53.51
31	54.85 ^s	9.87	43.97 ^s	14.85	31.07 ^s	15.66	19.03 ^s	11.94 ^s	9.98	3.83	7.06 ^s	53.21
32	54.55 ^s	10.06	43.60 ^s	14.95			18.63 ^s	11.75 ^s			7.11 ^s	52.86

Mean R.A. 17^h 56^m 44^s.830 Mean Dec. + 86° 36' 50".21 Sec δ 16.931 Tan δ + 16.901

APPARENT PLACES OF STARS, 1924. 245

AT UPPER TRANSIT AT GREENWICH.

λ Ursæ Minoris. Mag. 6.6

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	°
	18 53	89	18 53	89	18 53	89	18 54	89	18 54	89	18 55	89
1	8.55	47.13	11.33	36.69	34.31	29.31	11.21	26.19	46.50	28.79	10.44	36.09
2	8.29	46.82	11.69	36.38	35.30	29.09	12.57	26.18	47.61	28.97	10.88	36.40
3	{ 7.98 } { 7.64 }	{ 46.53 } { 46.23 }	12.11	36.06	36.35	28.88	13.93	26.19	48.68	29.16	11.26	36.70
4	7.29	45.91	12.62	35.73	37.48	28.67	15.29	26.21	49.69	29.37	11.60	37.00
5	6.93	45.58	13.21	35.40	38.67	28.47	16.62	26.25	50.66	29.58	11.91	37.28
6	6.62	45.23	13.87	35.08	39.90	28.30	17.91	26.30	51.58	29.79	12.21	37.56
7	6.37	44.88	14.60	34.77	41.14	28.15	19.17	26.35	52.45	30.00	12.53	37.83
8	6.22	44.51	15.37	34.47	42.38	28.02	20.39	26.41	53.30	30.20	12.88	38.10
9	6.16	44.15	16.15	34.20	43.60	27.90	21.57	26.47	54.12	30.39	13.25	38.37
10	6.17	43.78	16.93	33.94	44.79	27.79	22.72	26.53	54.94	30.58	13.63	38.65
11	6.24	43.43	17.71	33.68	45.96	27.68	23.85	26.59	55.79	30.76	14.02	38.94
12	6.34	43.09	18.47	33.44	47.10	27.57	24.97	26.63	56.67	30.95	14.39	39.26
13	6.46	42.76	19.21	33.20	48.21	27.46	26.12	26.67	57.58	31.14	14.70	39.60
14	6.58	42.45	19.93	32.95	49.31	27.34	27.30	26.71	58.52	31.34	14.91	39.95
15	6.69	42.14	20.65	32.70	50.41	27.22	28.52	26.76	59.45	31.57	15.04	40.30
16	6.78	41.82	21.37	32.43	51.52	27.09	29.78	26.82	60.34	31.82	15.07	40.64
17	6.87	41.50	22.10	32.16	52.68	26.96	31.07	26.90	61.16	32.09	15.05	40.96
18	6.95	41.19	22.87	31.89	53.89	26.83	32.35	27.01	61.90	32.37	15.02	41.26
19	7.02	40.87	23.71	31.61	55.16	26.72	33.59	27.14	62.55	32.66	14.99	41.55
20	7.10	40.53	24.62	31.34	56.49	26.63	34.76	27.29	63.12	32.93	14.99	41.83
21	7.22	40.18	25.59	31.07	57.84	26.57	35.85	27.44	63.66	33.19	15.04	42.11
22	7.40	39.82	26.63	30.83	59.18	26.52	36.88	27.59	64.20	33.43	15.13	42.40
23	7.66	39.46	27.69	30.61	60.48	26.49	37.86	27.73	64.77	33.66	15.24	42.70
24	8.00	39.11	28.74	30.41	61.72	26.46	38.82	27.86	65.39	33.89	15.34	43.01
25	8.43	38.76	29.75	30.22	62.89	26.44	39.80	27.98	66.04	34.12	15.42	43.34
26	8.90	38.43	30.71	30.05	64.02	26.43	40.83	28.09	66.73	34.36	15.47	43.68
27	9.38	38.12	31.62	29.88	65.12	26.40	41.91	28.20	67.44	34.62	15.45	44.03
28	9.85	37.83	32.50	29.70	66.23	26.36	43.04	28.32	68.13	34.89	15.37	44.38
29	10.28	37.54	33.38	29.51	67.39	26.31	44.19	28.46	68.78	35.18	15.24	44.72
30	10.67	37.26	34.31	29.31	68.61	26.26	45.35	28.62	69.38	35.48	15.04	45.06
31	11.01	36.98			69.88	26.22	46.50	28.79	69.94	35.79	14.80	45.39
32	11.33	36.69			71.21	26.19			70.44	36.09		

Mean R.A. 18^h 54^m 9^s.948 Mean Dec. + 89° 1' 37".59 Sec δ 58.895 Tan δ + 58.887

246 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

λ Ursæ Minoris. Mag. 6.6

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	°
	18 54 ^s 89 ^I		18 54 ^s 89 ^I		18 53 ^s 89 ²		18 52 ^s 89 ²		18 52 ^s 89 ^I		18 51 ^s 89 ^I	
1	74.80	45.39	58.83	54.75	85.97	1.85	103.78	5.30	57.39	64.32	79.93	58.65
2	74.52	45.69	58.01	55.00	84.81	2.03	102.27	5.38	55.82	64.20	78.90	58.37
3	74.22	45.99	57.23	55.24	83.61	2.23	100.70	5.46	54.29	64.06	77.96	58.08
4	73.92	46.29	56.48	55.49	82.34	2.44	99.06	5.51	52.83	63.89	77.11	57.79
5	73.65	46.58	55.73	55.76	80.99	2.64	97.40	5.53	51.45	63.72	76.29	57.51
6	73.41	46.87	54.95	56.04	79.55	2.83	95.74	5.54	50.15	63.55	75.50	57.25
7	73.19	47.16	54.12	56.33	78.06	3.00	94.13	5.53	48.89	63.39	74.72	57.00
8	72.99	47.47	53.20	56.63	76.55	3.15	92.58	5.51	47.67	63.24	73.92	56.74
9	72.78	47.80	52.19	56.93	75.05	3.28	91.10	5.48	46.44	63.10	73.09	56.49
10	72.52	48.13	51.11	57.22	73.60	3.39	89.67	5.45	45.19	62.96	72.25	56.24
11	72.17	48.47	49.97	57.48	72.20	3.49	88.27	5.43	43.92	62.82	71.40	55.97
12	71.75	48.82	48.82	57.72	70.86	3.59	86.88	5.42	42.62	62.68	70.54	55.69
13	71.23	49.17	47.70	57.94	69.56	3.71	85.48	5.43	41.30	62.54	69.69	55.40
14	70.63	49.50	46.61	58.15	68.27	3.83	84.04	5.44	39.97	62.38	68.86	55.09
15	69.99	49.81	45.57	58.36	66.97	3.96	82.57	5.43	38.62	62.20	68.07	54.76
16	69.35	50.10	44.57	58.57	65.65	4.10	81.07	5.42	37.28	62.01	67.34	54.43
17	68.75	50.38	43.60	58.79	64.28	4.24	79.54	5.40	35.96	61.80	66.68	54.09
18	68.19	50.65	42.62	59.02	62.86	4.38	77.98	5.38	34.68	61.58	66.09	53.75
19	67.67	50.92	41.62	59.26	61.40	4.50	76.41	5.34	33.46	61.35	65.57	53.42
20	67.18	51.19	40.59	59.50	59.90	4.62	74.84	5.28	32.29	61.11	65.09	53.10
21	66.71	51.48	39.50	59.75	58.36	4.72	73.27	5.21	31.19	60.87	64.64	52.79
22	66.22	51.79	38.36	60.00	56.82	4.80	71.74	5.13	30.14	60.65	64.16	52.51
23	65.69	52.11	37.16	60.24	55.27	4.87	70.26	5.02	29.12	60.44	63.64	52.24
24	65.10	52.42	35.93	60.46	53.73	4.93	68.84	4.92	28.08	60.25	63.07	51.97
25	64.46	52.75	34.66	60.67	52.23	4.97	67.46	4.83	27.00	60.06	62.46	51.68
26	63.77	53.06	33.37	60.86	50.77	5.01	66.12	4.75	25.86	59.87	61.83	51.36
27	63.02	53.37	32.06	61.04	49.35	5.04	64.79	4.67	24.68	59.66	61.21	51.02
28	62.23	53.67	30.77	61.21	47.97	5.08	63.42	4.61	23.46	59.44	60.66	50.66
29	61.39	53.96	29.52	61.36	46.61	5.14	62.00	4.55	22.24	59.20	60.20	50.29
30	60.53	54.23	28.31	61.52	45.22	5.21	60.51	4.49	21.05	58.93	59.84	49.92
31	59.68	54.50	27.13	61.68	43.78	5.30	58.97	4.41	19.93	58.65	59.57	49.56
32	58.83	54.75	25.97	61.85			57.39	4.32			59.37	49.22

Mean R.A. 18^h 54^m 9^s.948 Mean Dec. + 89° 1' 37".59 Sec δ 58.895 Tan δ + 58.887

APPARENT PLACES OF STARS, 1924. 247

AT UPPER TRANSIT AT GREENWICH.

B.A.C. 7504. Mag. 7.4

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	°
	21 14	86 43	21 14	86 43	21 14	86 43	21 14	86 43	21 14	86 43	21 15	86 43
	^s		^s		^s		^s		^s		^s	
1	40.66	46.97	34.70	38.24	35.39	28.46	42.42	20.52	52.87	17.60	3.75	20.29
2	40.41	46.76	34.60	37.94	35.49	28.14	42.74	20.32	53.27	17.60	4.07	20.50
3	40.15	46.55	34.48	37.63	35.61	27.81	43.07	20.13	53.66	17.61	4.37	20.70
4	39.87	46.36	34.37	37.30	35.75	27.48	43.42	19.95	54.05	17.64	4.65	20.90
5	39.58	46.16	{ ₃₄ ²⁷	{ ₃₆ ²⁵	35.92	27.15	43.77	19.79	54.44	17.68	4.93	21.10
6	39.28	45.94	34.15	36.21	36.10	26.84	44.12	19.64	54.82	17.72	5.20	21.28
7	38.98	45.70	34.13	35.86	36.30	26.53	44.48	19.51	55.17	17.76	5.46	21.46
8	38.69	45.43	34.13	35.51	36.51	26.23	44.82	19.38	55.52	17.80	5.73	21.63
9	38.41	45.14	34.13	35.17	36.73	25.95	45.15	19.26	55.85	17.84	6.00	21.81
10	38.16	44.84	34.15	34.82	36.94	25.69	45.48	19.15	56.18	17.88	6.29	21.99
11	37.93	44.54	34.17	34.50	37.16	25.43	45.79	19.03	56.51	17.91	6.58	22.19
12	37.72	44.25	34.19	34.18	37.37	25.17	46.10	18.91	56.85	17.94	6.88	22.40
13	37.53	43.95	34.22	33.88	37.58	24.92	46.42	18.77	57.21	17.97	7.19	22.63
14	37.34	43.67	34.23	33.57	37.77	24.67	46.73	18.64	57.58	18.02	7.48	22.88
15	37.16	43.40	34.24	33.26	37.96	24.40	47.07	18.50	57.96	18.07	7.75	23.15
16	36.99	43.12	34.24	32.95	38.16	24.13	47.42	18.37	58.36	18.15	7.99	23.44
17	36.81	42.84	34.25	32.62	38.36	23.85	47.79	18.25	58.74	18.26	8.22	23.72
18	36.63	42.57	34.27	32.28	38.57	23.58	48.17	18.15	59.11	18.39	8.42	23.99
19	36.45	42.31	34.29	31.93	38.80	23.30	48.57	18.08	59.46	18.54	8.62	24.24
20	36.25	42.03	34.33	31.56	39.06	23.03	48.96	18.03	59.80	18.69	8.81	24.48
21	36.05	41.74	34.40	31.19	39.34	22.77	49.33	18.00	60.11	18.83	9.02	24.71
22	35.86	41.43	34.50	30.84	39.64	22.54	49.69	17.98	60.41	18.96	9.23	24.94
23	35.68	41.10	34.61	30.51	39.95	22.33	50.03	17.96	60.71	19.07	9.46	25.18
24	35.50	40.76	34.74	30.19	40.25	22.13	50.35	17.93	61.02	19.18	9.71	25.43
25	35.35	40.42	34.87	29.89	40.54	21.95	50.67	17.88	61.33	19.27	9.95	25.69
26	35.22	40.07	34.99	29.61	40.81	21.77	51.00	17.83	61.66	19.36	10.20	25.97
27	35.11	39.74	35.10	29.34	41.06	21.59	51.35	17.77	62.01	19.48	10.43	26.26
28	35.03	39.41	35.21	29.06	41.31	21.39	51.71	17.70	62.37	19.62	10.65	26.56
29	34.96	39.10	35.30	28.77	41.56	21.18	52.09	17.65	62.73	19.76	10.85	26.87
30	34.88	38.81	35.39	28.46	41.83	20.96	52.48	17.62	63.08	19.92	11.03	27.18
31	34.80	38.53			42.12	20.74	52.87	17.60	63.42	20.10	11.20	27.49
32	34.70	38.24			42.42	20.52			63.75	20.26		

Mean R.A. 21^h 14^m 49^s.476 Mean Dec. + 86° 43' 30".34 Sec δ 17.505 Tan δ + 17.476

248 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

B.A.C. 7504. Mag. 7.4

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	86° 43'	h m	86° 43'	h m	86° 43'	h m	86° 43'	h m	86° 44'	h m	86° 43'
	21 15	86 43	21 15	86 43	21 15	86 43	21 14	86 43	21 14	86 44	21 14	86 43
	^s		^s		^s		^s		^s		^s	
1	11.20	27.49	13.76	37.69	10.69	48.41	62.94	57.40	51.25	3.29	38.64	64.09.
2	11.35	27.80	13.73	38.00	10.54	48.73	62.63	57.69	50.80	3.42	38.20	64.00
3	11.49	28.10	13.71	38.31	10.38	49.07	62.31	57.98	50.34	3.53	37.79	63.90
4	11.62	28.39	13.70	38.64	10.21	49.42	61.96	58.25	49.90	3.62	37.39	63.78
5	11.74	28.67	13.70	38.98	10.02	49.79	61.59	58.51	49.45	3.68	37.01	63.67
6	11.88	28.95	13.71	39.33	9.81	50.15	61.20	58.75	49.02	3.72	36.65	63.57
7	12.02	29.23	13.71	39.70	9.58	50.51	60.81	58.97	48.61	3.77	36.29	63.47
8	12.18	29.51	13.69	40.08	9.33	50.85	60.43	59.18	48.22	3.82	35.93	63.38
9	12.34	29.80	13.65	40.48	9.07	51.17	60.05	59.37	47.83	3.88	35.58	63.29
10	12.51	30.12	13.58	40.88	8.80	51.48	59.69	59.56	47.45	3.96	35.21	63.20
11	12.66	30.46	13.49	41.26	8.53	51.77	59.35	59.75	47.06	4.04	34.83	63.11
12	12.80	30.82	13.38	41.63	8.28	52.04	59.01	59.95	46.66	4.11	34.44	63.01
13	12.91	31.18	13.26	41.98	8.04	52.32	58.67	60.16	46.25	4.18	34.04	62.89
14	13.00	31.55	13.14	42.32	7.81	52.62	58.33	60.37	45.83	4.25	33.65	62.75
15	13.07	31.91	13.03	42.64	7.58	52.92	57.99	60.59	45.40	4.31	33.25	62.60
16	13.12	32.25	12.94	42.96	7.35	53.22	57.63	60.80	44.96	4.34	32.86	62.43
17	13.17	32.57	12.85	43.28	7.11	53.53	57.25	61.01	44.51	4.35	32.48	62.24
18	13.22	32.88	12.77	43.61	6.86	53.85	56.87	61.21	44.06	4.35	32.12	62.04
19	13.28	33.18	12.69	43.96	6.60	54.17	56.46	61.40	43.62	4.34	31.78	61.86
20	13.35	33.49	12.60	44.32	6.32	54.48	56.05	61.57	43.18	4.31	31.45	61.67
21	13.43	33.80	12.51	44.68	6.03	54.79	55.63	61.73	42.76	4.28	31.15	61.49
22	13.52	34.13	12.40	45.05	5.72	55.09	55.21	61.88	42.35	4.24	30.85	61.32
23	13.60	34.47	12.28	45.43	5.41	55.37	54.80	62.02	41.96	4.22	30.54	61.16
24	13.68	34.83	12.14	45.80	5.08	55.64	54.39	62.15	41.58	4.20	30.22	61.01
25	13.74	35.19	11.99	46.16	4.75	55.89	53.99	62.27	41.21	4.20	29.88	60.85
26	13.79	35.56	11.81	46.51	4.42	56.13	53.61	62.40	40.82	4.21	29.53	60.69
27	13.83	35.92	11.62	46.84	4.10	56.37	53.24	62.53	40.41	4.22	29.17	60.50
28	13.84	36.29	11.43	47.16	3.80	56.61	52.87	62.67	39.98	4.22	28.82	60.29
29	13.83	36.65	11.23	47.48	3.51	56.86	52.49	62.83	39.54	4.20	28.47	60.05
30	13.82	37.01	11.04	47.79	3.23	57.12	52.09	62.99	39.09	4.16	28.15	59.80
31	13.79	37.36	10.86	48.09	2.94	57.40	51.68	63.15	38.64	4.09	27.84	59.54
32	13.76	37.69	10.69	48.41			51.25	63.29			27.56	59.28

Mean R.A. 21^h 14^m 49^s.476 Mean Dec. + 86° 43' 30".34 Sec δ 17.505 Tan δ + 17.476

APPARENT PLACES OF STARS, 1924. 249

AT UPPER TRANSIT AT GREENWICH.

39 H Cephei. Mag. 5.6

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	°
	23 27	86° 53'	23 27	86° 53'	23 27	86° 53'	23 27	86° 53'	23 27	86° 53'	23 27	86° 53'
	s		s		s		s		s		s	
1	45.50	35.79	34.55	31.37	28.82	23.25	29.58	13.07	36.79	5.81	48.08	3.14
2	45.14	35.73	34.26	31.18	28.70	22.95	29.72	12.75	37.14	5.62	48.49	3.17
3	44.79	35.69	33.96	30.97	28.58	22.63	29.89	12.43	37.49	5.46	48.88	3.21
4	44.41	35.65	33.64	30.74	28.46	22.29	30.09	12.11	37.85	5.30	49.27	3.25
5	44.02	35.62	33.33	30.49	28.37	21.95	30.29	11.82	38.21	5.17	49.64	3.29
6	43.62	35.58	33.03	30.22	28.29	21.59	30.50	11.54	38.56	5.04	50.00	3.33
7	43.20	35.51	32.74	29.94	28.24	21.24	30.72	11.26	38.91	4.92	50.35	3.36
8	42.77	35.43	32.48	29.65	28.21	20.89	30.94	11.00	39.24	4.80	50.69	3.38
9	42.34	35.31	32.24	29.36	28.20	20.55	31.16	10.75	39.55	4.69	51.04	3.40
10	41.93	35.19	32.02	29.08	28.20	20.21	31.36	10.51	39.87	4.56	51.42	3.42
11	41.53	35.05	31.82	28.79	{ ²⁸ / ₂₈ { ²² / ₂₃ }	{ ¹⁹ / ₁₉ { ⁸⁹ / ₅₇ }	31.55	10.27	40.18	4.43	51.82	3.45
12	41.15	34.90	31.63	28.52	28.25	19.27	31.74	10.02	40.49	4.30	52.22	3.49
13	40.78	34.75	31.44	28.25	28.26	18.96	31.92	9.77	40.83	4.16	52.64	3.56
14	40.44	34.60	31.26	27.98	28.26	18.66	32.11	9.51	41.18	4.03	53.07	3.66
15	40.10	34.46	31.06	27.72	28.26	18.35	32.30	9.24	41.55	3.90	53.49	3.77
16	39.76	34.32	30.86	27.46	28.25	18.05	32.52	8.96	41.94	3.80	53.89	3.90
17	39.43	34.18	30.66	27.19	28.24	17.73	32.77	8.69	42.36	3.72	54.27	4.03
18	39.09	34.05	30.45	26.91	28.24	17.39	33.04	8.43	42.78	3.66	54.62	4.16
19	38.75	33.91	30.23	26.62	28.26	17.05	33.34	8.19	43.18	3.62	54.96	4.28
20	38.40	33.78	30.02	26.31	28.30	16.70	33.65	7.97	43.56	3.60	55.29	4.39
21	38.03	33.63	29.82	25.99	28.38	16.35	33.97	7.78	43.92	3.58	55.62	4.49
22	37.66	33.46	29.64	25.66	28.48	16.02	34.27	7.60	44.26	3.54	55.96	4.58
23	37.28	33.28	29.49	25.32	28.61	15.70	34.56	7.43	44.60	3.50	56.32	4.68
24	36.90	33.07	29.37	24.99	28.75	15.41	34.83	7.26	44.94	3.44	56.69	4.79
25	36.54	32.85	29.27	24.67	28.87	15.13	35.08	7.08	45.29	3.38	57.08	4.91
26	36.20	32.62	29.19	24.37	29.00	14.86	35.32	6.88	45.65	3.32	57.47	5.03
27	35.89	32.39	29.11	24.09	29.11	14.59	35.57	6.67	46.03	3.26	57.87	5.17
28	35.60	32.16	29.03	23.82	29.20	14.31	35.84	6.45	46.42	3.21	58.26	5.32
29	35.34	31.95	28.93	23.54	29.28	14.02	36.14	6.23	46.84	3.17	58.65	5.50
30	35.09	31.75	28.82	23.25	29.36	13.71	36.46	6.02	47.25	3.15	59.01	5.68
31	34.82	31.56			29.46	13.39	36.79	5.81	47.67	3.14	59.36	5.87
32	34.55	31.37			29.58	13.07			48.08	3.14		

Mean R.A. 23^h 27^m 42^s.077 Mean Dec. + 86° 53' 17".96 Sec δ 18.422 Tan δ + 18.395

250 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

39 H Cœphi. Mag. 5.6

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	°
	23 27	86° 53'	23 28	86° 53'	23 28	86° 53'	23 28	86° 53'	23 27	86° 53'	23 27	86° 53'
	^s		^s		^s		^s		^s		^s	
1	59.36	5.87	8.35	13.36	12.80	23.88	12.04	35.11	65.84	45.60	55.43	52.25
2	59.69	6.06	8.53	13.64	12.88	24.22	11.97	35.50	65.55	45.93	55.00	52.38
3	60.00	6.26	8.73	13.93	12.97	24.58	11.87	35.91	65.22	46.23	54.56	52.49
4	60.31	6.44	8.93	14.21	13.07	24.97	11.75	36.31	64.88	46.51	54.14	52.59
5	60.61	6.62	9.15	14.50	13.15	25.37	11.60	36.71	64.53	46.76	53.74	52.68
6	60.90	6.79	9.39	14.80	13.21	25.78	11.44	37.09	64.19	47.00	53.36	52.77
7	61.21	6.95	9.63	15.11	13.25	26.19	11.25	37.46	63.87	47.24	52.99	52.86
8	61.54	7.11	9.88	15.44	13.26	26.61	11.06	37.81	63.57	47.47	52.63	52.95
9	61.89	7.30	10.11	15.79	13.24	27.00	10.86	38.15	63.27	47.71	52.25	53.06
10	62.24	7.50	10.32	16.15	13.20	27.38	10.68	38.47	62.98	47.95	51.87	53.16
11	62.61	7.73	10.50	16.52	13.15	27.74	10.51	38.80	62.69	48.20	51.48	53.26
12	62.98	7.97	10.64	16.88	13.12	28.10	10.34	39.13	62.40	48.45	51.07	53.36
13	63.32	8.23	10.77	17.24	13.10	28.45	10.18	39.46	62.09	48.71	50.66	53.45
14	63.64	8.50	10.88	17.58	13.10	28.80	10.02	39.80	61.76	48.96	50.23	53.52
15	63.93	8.77	11.00	17.91	13.10	29.15	9.87	40.14	61.42	49.21	49.77	53.59
16	64.20	9.03	11.13	18.22	13.10	29.52	9.70	40.49	61.07	49.46	49.32	53.63
17	64.45	9.28	11.27	18.54	13.10	29.90	9.52	40.85	60.70	49.68	48.86	53.65
18	64.69	9.52	11.42	18.86	13.09	30.28	9.32	41.20	60.31	49.90	48.42	53.66
19	64.95	9.75	11.59	19.19	13.08	30.68	9.10	41.55	59.91	50.10	47.99	53.66
20	65.22	9.99	11.75	19.53	13.05	31.08	8.86	41.90	59.51	50.27	47.59	53.66
21	65.50	10.22	11.92	19.88	13.00	31.48	8.60	42.24	59.13	50.44	47.20	53.66
22	65.78	10.46	12.07	20.24	12.93	31.87	8.33	42.55	58.76	50.60	46.84	53.67
23	66.08	10.71	12.20	20.62	12.83	32.26	8.05	42.85	58.41	50.77	46.47	53.69
24	66.39	10.97	12.32	21.00	12.73	32.64	7.78	43.15	58.08	50.94	46.09	53.72
25	66.68	11.24	12.42	21.38	12.61	33.01	7.52	43.44	57.74	51.12	45.70	53.75
26	66.97	11.53	12.51	21.76	12.49	33.36	7.27	43.72	57.40	51.31	45.29	53.78
27	67.25	11.83	12.57	22.14	12.38	33.70	7.03	44.01	57.05	51.52	44.86	53.80
28	67.51	12.14	12.61	22.50	12.27	34.04	6.81	44.30	56.68	51.73	44.41	53.80
29	67.75	12.45	12.65	22.86	12.18	34.38	6.59	44.61	56.28	51.93	43.95	53.77
30	67.97	12.76	12.69	23.21	12.10	34.74	6.36	44.94	55.86	52.10	43.49	53.71
31	68.16	13.07	12.74	23.55	12.04	35.11	6.11	45.27	55.43	52.25	43.06	53.64
32	68.35	13.36	12.80	23.88			5.84	45.60			42.65	53.56

Mean R.A. 23^h 27^m 42^s.077 Mean Dec. + 86° 53' 17".96 Sec δ 18.422 Tan δ + 18.395

APPARENT PLACES OF STARS, 1924. 251

AT UPPER TRANSIT AT GREENWICH.

o Octantis. Mag. 7.2

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	O I I	88 47	O I O	88 47	O I O	88 47	O I O	88 46	O I I	88 46	O I I	88 46
	s	"	s	"	s	"	s	"	s	"	s	"
1	41.85	31.41	73.63	25.15	57.72	15.55	55.19	63.38	6.31	52.87	29.21	44.94
2	40.72	31.29	72.90	24.83	57.48	15.16	55.36	63.03	6.82	52.57	30.04	44.73
3	39.60	31.15	72.24	24.51	57.27	14.78	55.51	62.69	7.33	52.27	30.91	44.53
4	38.52	30.99	71.64	24.20	57.08	14.42	55.64	62.33	7.85	51.96	31.82	44.34
5	37.51	30.82	71.05	23.91	56.87	14.08	55.76	61.97	8.40	51.65	32.79	44.15
6	36.55	30.64	70.45	23.62	56.63	13.73	55.90	61.61	8.98	51.33	33.80	43.97
7	35.64	30.47	69.83	23.35	56.37	13.38	56.06	61.24	9.61	51.01	34.84	43.81
8	34.77	30.31	69.19	23.08	56.09	13.04	56.25	60.86	10.29	50.70	35.87	43.68
9	33.91	30.15	68.52	22.80	55.80	12.68	56.47	60.47	11.02	50.39	36.89	43.55
10	33.03	30.01	67.83	22.52	55.51	12.31	56.75	60.07	11.79	50.09	37.88	43.44
11	32.11	29.87	67.13	22.22	55.23	11.93	57.09	59.68	12.59	49.81	38.81	43.33
12	31.17	29.73	66.43	21.91	54.97	11.55	57.47	59.30	13.40	49.55	39.69	43.22
13	30.20	29.57	65.75	21.59	54.75	11.15	57.90	58.93	14.18	49.30	40.54	43.10
14	29.19	29.40	65.10	21.24	54.58	10.75	58.35	58.58	14.91	49.06	41.38	42.97
15	28.18	29.23	64.48	20.89	54.46	10.33	58.80	58.24	15.60	48.83	42.24	42.82
16	27.17	29.05	63.93	20.54	54.40	9.92	59.22	57.90	16.26	48.58	43.16	42.67
17	26.19	28.85	63.42	20.18	54.39	9.53	59.59	57.58	16.89	48.32	44.13	42.52
18	25.23	28.62	62.97	19.82	54.42	9.14	59.93	57.25	17.53	48.04	45.17	42.38
19	24.31	28.39	62.56	19.47	54.46	8.78	60.23	56.91	18.21	47.76	46.25	42.26
20	23.42	28.14	62.17	19.13	54.48	8.41	60.53	56.55	18.97	47.47	47.35	42.16
21	22.59	27.88	61.79	18.80	54.46	8.06	60.86	56.18	19.80	47.19	48.45	42.09
22	21.82	27.64	61.38	18.48	54.40	7.70	61.25	55.80	20.68	46.93	49.52	42.04
23	21.09	27.40	60.93	18.16	{ 54 31 } { 54 30 }	{ 7 34 } { 6 95 }	61.71	55.42	21.60	46.68	50.53	42.00
24	20.36	27.17	60.43	17.84	54.10	6.55	62.24	55.05	22.54	46.45	51.50	41.96
25	19.61	26.96	59.90	17.50	54.05	6.13	62.82	54.70	23.46	46.24	52.43	41.92
26	18.82	26.75	59.36	17.13	54.06	5.72	63.43	54.36	24.35	46.05	53.34	41.88
27	17.98	26.53	58.85	16.75	54.15	5.29	64.06	54.04	25.21	45.87	54.25	41.84
28	17.10	26.30	58.40	16.36	54.32	4.88	64.67	53.74	26.02	45.69	55.18	41.80
29	16.19	26.05	58.03	15.95	54.52	4.49	65.24	53.45	26.81	45.52	56.12	41.75
30	15.29	25.77	57.72	15.55	54.75	4.11	65.79	53.16	27.61	45.33	57.09	41.70
31	14.43	25.47			54.98	3.74	66.31	52.87	28.40	45.13	58.08	41.65
32	13.63	25.15			55.19	3.38			29.21	44.94		

Mean R.A. o^h 12^m 16^s.875 Mean Dec. — 88° 47' 7".76 Sec δ 47.180 Tan δ — 47.169

252 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

o Octantis. Mag. 7.2

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m		h m		h m		h m		h m		h m	
	O I I	88° 46'	O I 2	88° 46'	O I 2	88° 46'	O I 2	88° 46'	O I 2	88° 47'	O I I	88° 47'
	s		s		s		s		s		s	
1	58.08	41.65	27.94	43.57	49.26	50.44	54.80	59.64	42.87	8.50	78.06	13.48
2	59.11	41.61	28.91	43.73	49.65	50.75	54.58	59.95	42.27	8.70	77.20	13.57
3	60.19	41.57	29.84	43.92	49.98	51.04	54.37	60.24	41.71	8.92	76.30	13.66
4	61.28	41.55	30.70	44.11	50.27	51.32	54.20	60.51	41.15	9.15	75.36	13.76
5	62.39	41.56	31.50	44.30	50.56	51.59	54.07	60.78	40.56	9.39	74.36	13.85
6	63.49	41.58	32.23	44.50	50.87	51.85	53.97	61.07	39.92	9.64	73.31	13.93
7	64.55	41.62	32.92	44.69	51.22	52.10	53.88	61.36	39.22	9.89	72.22	14.00
8	65.55	41.66	33.60	44.86	51.61	52.35	53.79	61.67	38.46	10.14	71.11	14.05
9	66.50	41.71	34.28	45.02	52.04	52.62	53.65	62.00	37.64	10.37	70.01	14.08
10	67.39	41.75	35.01	45.17	52.47	52.91	53.45	62.34	36.78	10.59	68.92	14.10
11	68.25	41.78	35.79	45.33	52.88	53.22	53.19	62.67	35.91	10.79	67.85	14.10
12	69.11	41.80	36.61	45.49	53.24	53.55	52.86	63.00	35.04	10.99	66.81	14.09
13	70.01	41.80	37.46	45.67	53.53	53.88	52.48	63.33	34.16	11.16	65.81	14.08
14	70.97	41.81	38.31	45.87	53.75	54.22	52.06	63.64	33.30	11.32	64.84	14.07
15	71.97	41.82	39.13	46.10	53.93	54.55	51.62	63.94	32.47	11.48	63.90	14.06
16	73.03	41.85	39.89	46.34	54.06	54.88	51.18	64.23	31.66	11.63	62.98	14.05
17	74.12	41.90	40.59	46.60	54.16	55.19	50.74	64.51	30.88	11.79	62.05	14.04
18	75.19	41.97	41.24	46.85	54.24	55.50	50.32	64.78	30.12	11.95	61.10	14.05
19	76.24	42.07	41.83	47.10	54.32	55.81	49.91	65.05	29.36	12.12	60.10	14.05
20	77.23	42.18	42.40	47.35	54.41	56.10	49.52	65.32	28.57	12.29	59.04	14.04
21	78.16	42.30	42.94	47.59	54.51	56.39	49.15	65.59	27.73	12.47	57.94	14.03
22	79.05	42.41	43.48	47.82	54.63	56.69	48.78	65.87	26.84	12.64	56.79	13.99
23	79.92	42.53	44.03	48.06	54.77	56.99	48.40	66.16	25.89	12.80	55.63	13.92
24	80.77	42.65	44.59	48.29	54.91	57.29	47.97	66.45	24.87	12.94	54.50	13.83
25	81.60	42.76	45.17	48.52	55.04	57.62	47.49	66.75	23.81	13.06	53.42	13.72
26	82.43	42.86	45.77	48.76	55.16	57.96	46.94	67.05	22.75	13.16	52.41	13.59
27	83.29	42.97	46.40	49.01	55.24	58.30	46.31	67.34	21.71	13.23	51.46	13.47
28	84.17	43.08	47.03	49.26	55.24	58.65	45.63	67.61	20.72	13.28	50.55	13.35
29	85.07	43.19	47.65	49.54	55.16	58.99	44.91	67.86	19.79	13.34	49.66	13.25
30	86.00	43.30	48.24	49.83	55.01	59.32	44.19	68.08	18.91	13.40	48.76	13.16
31	86.96	43.43	48.79	50.13	54.80	59.64	43.51	68.29	18.06	13.48	47.83	13.08
32	87.94	43.57	49.26	50.44			42.87	68.50			46.84	13.00

Mean R.A. $\alpha^h 12^m 16^s.875$ Mean Dec. — $88^\circ 47' 7''.76$ Sec $\delta 47.180$ Tan $\delta - 47.169$

APPARENT PLACES OF STARS, 1924. 253

AT UPPER TRANSIT AT GREENWICH.

9 B Octantis. Mag. 7.8

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	23I	86° 3'	23I	86° 3'	23I	86° 3'	23I	86° 3'	23I	86° 3'	23I	86° 3'
	s	"	s	"	s	"	s	"	s	"	s	"
1	54.05	50.10	43.63	50.34	34.40	45.55	27.22	36.45	24.18	25.43	25.83	14.64
2	53.71	50.22	43.28	50.22	34.12	45.28	27.07	36.13	24.15	25.09	25.94	14.32
3	53.35	50.32	42.94	50.10	33.86	45.01	26.93	35.81	24.11	24.75	26.06	13.99
4	52.99	50.40	42.63	49.96	33.61	44.75	26.78	35.50	24.08	24.40	26.19	13.66
5	52.65	50.45	42.31	49.83	33.36	44.51	26.61	35.19	24.06	24.04	26.35	13.33
6	52.32	50.49	42.01	49.72	33.11	44.28	26.44	34.87	24.04	23.67	26.52	12.99
7	52.01	50.52	41.70	49.62	32.85	44.04	26.27	34.54	24.03	23.29	26.69	12.66
8	51.71	50.55	41.39	49.52	32.58	43.81	26.10	34.20	24.04	22.91	26.88	12.35
9	51.41	50.59	41.06	49.41	32.31	43.58	25.94	33.85	24.06	22.52	27.08	12.05
10	51.11	50.64	40.73	49.31	32.03	43.34	25.80	33.49	24.09	22.14	27.28	11.78
11	50.81	50.69	40.39	49.20	31.75	43.09	25.66	33.12	24.15	21.76	27.46	11.52
12	50.49	50.76	40.04	49.07	31.48	42.81	25.54	32.75	24.21	21.39	27.63	11.26
13	50.16	50.82	39.70	48.93	31.21	42.52	25.43	32.36	24.28	21.04	27.78	11.00
14	49.83	50.88	39.35	48.79	30.95	42.23	25.34	31.98	24.34	20.71	27.93	10.74
15	49.47	50.93	39.01	48.62	30.70	41.92	25.26	31.60	24.38	20.38	28.08	10.46
16	49.11	50.96	38.68	48.43	30.46	41.60	25.19	31.24	24.41	20.06	28.24	10.17
17	48.76	50.98	38.35	48.24	30.25	41.27	25.11	30.90	24.44	19.73	28.42	9.86
18	48.41	50.98	38.04	48.04	30.04	40.95	25.02	30.57	24.46	19.38	28.62	9.55
19	48.05	50.96	37.75	47.83	29.84	40.64	24.92	30.24	24.50	19.02	28.85	9.25
20	47.70	50.93	37.48	47.62	29.64	40.35	24.82	29.89	24.54	18.64	29.09	8.97
21	47.37	50.89	37.20	47.43	29.44	40.07	24.70	29.55	24.61	18.25	29.33	8.71
22	47.05	50.84	36.91	47.25	29.22	39.79	24.58	29.18	24.70	17.87	29.58	8.46
23	46.73	50.78	36.61	47.08	29.00	39.51	24.48	28.79	24.80	17.49	29.81	8.23
24	46.42	50.73	36.30	46.90	28.76	39.22	24.39	28.39	24.92	17.13	30.05	8.02
25	46.11	50.70	35.98	46.72	28.52	38.91	24.33	27.98	25.04	16.79	30.28	7.82
26	45.79	50.68	35.65	46.53	28.29	38.58	24.30	27.58	25.16	16.47	30.50	7.62
27	45.46	50.66	35.32	46.31	28.06	38.24	24.27	27.19	25.29	16.15	30.72	7.41
28	45.11	50.63	35.00	46.08	27.86	37.87	24.25	26.81	25.40	15.85	30.93	7.20
29	44.64	50.59	34.69	45.82	27.68	37.50	24.24	26.45	25.50	15.56	31.15	6.98
30	44.36	50.53	34.40	45.55	27.52	37.14	{24.21}	{25.19}	25.61	15.27	31.38	6.75
31	44.00	50.44			27.37	36.79	24.18	25.43	25.72	14.96	31.62	6.52
32	43.63	50.34			27.22	36.45			25.83	14.64		

Mean R.A. 2^h 31^m 50^s.086 Mean Dec. — 86° 3' 24".40 Sec δ 14.742 Tan δ — 14.507

254 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

9 B Octantis. Mag. 7-8

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	23I	86° 3'	23I	86° 3'	23I	86° 3'	23I	86° 3'	23I	86° 3'	23I	86° 3'
	s		s		s		s		s		s	
1	31.62	6.52	40.53	2.53	49.90	4.20	56.50	10.77	58.48	20.31	55.12	29.11
2	31.86	6.30	40.87	2.48	50.17	4.38	56.62	11.06	58.45	20.59	54.95	29.34
3	32.13	6.08	41.21	2.46	50.42	4.56	56.72	11.33	58.44	20.87	54.78	29.58
4	32.41	5.86	41.53	2.46	50.66	4.75	56.83	11.60	58.43	21.17	54.60	29.85
5	32.70	5.66	41.85	2.47	50.89	4.92	56.96	11.85	58.41	21.48	54.40	30.11
6	33.00	5.46	42.15	2.50	51.12	5.08	57.10	12.10	58.39	21.81	54.18	30.38
7	33.30	5.29	42.44	2.52	51.36	5.22	57.25	12.36	58.35	22.15	53.95	30.64
8	33.58	5.15	42.71	2.53	51.61	5.36	57.40	12.64	58.30	22.50	53.70	30.88
9	33.85	5.02	42.98	2.53	51.87	5.50	57.54	12.94	58.22	22.84	53.45	31.12
10	34.10	4.88	43.26	2.52	52.15	5.66	57.67	13.25	58.12	23.18	53.19	31.34
11	34.35	4.74	43.56	2.51	52.43	5.84	57.80	13.57	58.02	23.51	52.93	31.54
12	34.59	4.59	43.87	2.48	52.70	6.04	57.91	13.90	57.91	23.83	52.68	31.74
13	34.84	4.43	44.20	2.47	52.96	6.25	57.99	14.24	57.80	24.14	52.42	31.92
14	35.09	4.25	44.54	2.50	53.19	6.49	58.05	14.57	57.68	24.44	52.18	32.10
15	35.37	4.07	44.87	2.53	53.42	6.73	58.11	14.90	57.57	24.72	51.94	32.27
16	35.67	3.90	45.19	2.59	53.64	6.97	58.16	15.22	57.45	25.00	51.71	32.43
17	35.99	3.74	45.51	2.66	53.84	7.21	58.21	15.54	57.35	25.28	51.48	32.60
18	36.31	3.60	45.82	2.75	54.04	7.46	58.26	15.85	57.25	25.56	51.24	32.79
19	36.63	3.49	46.12	2.84	54.23	7.69	58.31	16.14	57.15	25.84	50.99	32.98
20	36.94	3.39	46.40	2.94	54.42	7.92	58.37	16.44	57.05	26.13	50.73	33.18
21	37.25	3.31	46.68	3.04	54.62	8.14	58.43	16.73	56.94	26.43	50.44	33.38
22	37.55	3.24	46.96	3.14	54.81	8.36	58.49	17.03	56.80	26.74	50.13	33.56
23	37.84	3.18	47.23	3.23	55.02	8.59	58.56	17.34	56.64	27.05	49.80	33.72
24	38.12	3.11	47.50	3.31	55.23	8.81	58.62	17.66	56.47	27.36	49.47	33.85
25	38.40	3.04	47.78	3.39	55.44	9.05	58.66	18.01	56.28	27.66	49.15	33.96
26	38.68	2.97	48.07	3.48	55.65	9.31	58.68	18.36	56.07	27.94	48.85	34.05
27	38.96	2.90	48.38	3.56	55.86	9.57	58.68	18.71	55.87	28.20	48.55	34.14
28	39.26	2.83	48.69	3.66	56.06	9.85	58.66	19.06	55.66	28.44	48.26	34.22
29	39.57	2.74	49.00	3.76	56.23	10.15	58.62	19.41	55.47	28.66	47.99	34.31
30	39.87	2.66	49.31	3.89	56.37	10.46	58.57	19.73	55.29	28.88	47.72	34.42
31	40.19	2.59	49.61	4.03	56.50	10.77	58.52	20.03	55.12	29.11	47.44	34.53
32	40.53	2.53	49.90	4.20			58.48	20.31			47.15	34.65

Mean R.A. 2^h 31^m 50^s.086 Mean Dec. — 86° 3' 24".40 Sec δ 14.542 Tan δ — 14.507

APPARENT PLACES OF STARS, 1924. 255

AT UPPER TRANSIT AT GREENWICH.

10 B Octantis. Mag. 8.4.

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	2 50	88° 29	2 49	88° 28	2 49	88° 28	2 49	88° 28	2 49	88° 28	2 49	88° 28
	s	"	s	"	s	"	s	"	s	"	s	"
1	51.43	2.23	84.01	63.21	58.81	59.10	38.21	50.61	28.04	40.27	29.64	29.19
2	50.55	2.37	83.05	63.12	58.03	58.86	37.77	50.30	27.90	39.94	29.85	28.88
3	49.64	2.48	82.15	63.01	57.30	58.61	37.31	49.99	27.76	39.61	30.08	28.55
4	48.72	2.58	81.28	62.90	56.59	58.38	36.84	49.69	27.60	39.27	30.35	28.21
5	47.83	2.65	80.45	62.80	55.90	58.16	36.36	49.39	{27.44}	{38.93}	30.65	27.87
6	46.97	2.72	79.63	62.70	55.20	57.94	35.86	49.09	27.14	38.22	31.00	27.53
7	46.14	2.77	78.80	62.62	54.48	57.72	35.36	48.79	27.03	37.84	31.39	27.20
8	45.34	2.83	77.95	62.53	53.74	57.51	34.87	48.47	26.95	37.46	31.82	26.88
9	44.56	2.90	77.09	62.45	52.97	57.30	34.37	48.13	26.92	37.07	32.27	26.57
10	43.79	2.97	76.20	62.37	52.20	57.07	33.89	47.79	26.94	36.69	32.70	26.28
11	43.00	3.05	75.29	62.29	51.43	56.84	33.44	47.43	26.99	36.32	33.10	26.01
12	42.17	3.13	74.36	62.20	50.66	56.58	33.03	47.06	27.06	35.95	33.48	25.75
13	41.32	3.21	73.42	62.10	49.89	56.32	32.67	46.68	27.15	35.60	33.82	25.49
14	40.45	3.29	72.48	61.97	49.14	56.06	32.35	46.31	27.23	35.26	34.14	25.21
15	39.55	3.35	71.54	61.83	48.42	55.77	32.07	45.95	27.29	34.94	34.45	24.92
16	38.62	3.41	70.63	61.67	47.73	55.47	31.80	45.60	27.31	34.61	34.78	24.62
17	37.68	3.45	69.75	61.49	47.09	55.17	31.52	45.26	27.29	34.29	35.16	24.31
18	36.73	3.48	68.90	61.31	46.49	54.87	31.22	44.94	27.25	33.95	35.60	24.01
19	35.79	3.50	68.08	61.13	45.92	54.57	30.90	44.62	27.23	33.59	36.10	23.71
20	34.87	3.49	67.29	60.95	45.35	54.29	30.55	44.29	27.25	33.22	36.63	23.41
21	33.97	3.47	66.52	60.77	44.77	54.02	30.17	43.96	27.33	32.85	37.19	23.13
22	33.10	3.44	65.75	60.61	44.16	53.76	29.78	43.61	27.46	32.46	37.77	22.87
23	32.26	3.42	64.96	60.45	43.51	53.51	29.42	43.24	27.65	32.09	38.34	22.62
24	31.44	3.40	64.12	60.31	42.83	53.24	29.11	42.85	27.88	31.73	38.90	22.40
25	30.62	3.38	63.25	60.16	42.13	52.95	28.85	42.45	28.13	31.38	39.43	22.18*
26	29.79	3.37	62.34	59.99	41.44	52.64	28.65	42.06	28.38	31.05	39.94	21.97
27	28.92	3.37	61.42	59.79	40.78	52.31	28.51	41.68	28.62	30.73	40.45	21.75
28	27.99	3.38	60.51	59.58	40.17	51.97	28.39	41.31	28.84	30.42	40.96	21.52
29	27.02	3.37	59.63	59.35	39.61	51.62	28.28	40.95	29.06	30.12	41.47	21.30
30	26.02	3.33	58.81	59.10	39.10	51.27	28.16	40.60	29.26	29.82	41.99	21.07
31	25.01	3.28			38.65	50.93	28.04	40.27	29.45	29.51	42.54	20.82
32	24.01	3.21			38.21	50.61			29.64	29.19		

256 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

10 B Octantis. Mag. 8.4.

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	2 49	88° 28'	2 50	88° 28'	2 50	88° 28'	2 50	88° 28'	2 50	88° 28'	2 50	88° 28'
	^s		^s		^s		^s		^s		^s	
1	42.54	20.82	4.28	16.29	28.45	17.32	46.54	23.33	53.28	32.66	45.95	41.60
2	43.12	20.58	5.14	16.22	29.19	17.48	46.88	23.62	53.24	32.94	45.55	41.84
3	43.74	20.34	6.01	16.17	29.87	17.64	47.21	23.89	53.24	33.22	45.14	42.10
4	44.40	20.11	6.85	16.14	30.50	17.80	47.55	24.14	53.25	33.51	44.72	42.37
5	45.09	19.90	7.66	16.13	31.10	17.94	47.90	24.38	53.27	33.82	44.25	42.65
6	45.81	19.69	8.43	16.14	31.70	18.09	48.29	24.62	53.28	34.15	43.73	42.93
7	46.53	19.51	9.15	16.14	32.32	18.22	48.72	24.87	53.24	34.49	43.17	43.20
8	47.22	19.34	9.84	16.14	32.98	18.34	49.16	25.14	53.16	34.84	42.57	43.46
9	47.89	19.18	10.52	16.13	33.68	18.46	49.59	25.42	53.03	35.19	41.94	43.71
10	48.52	19.03	11.22	16.10	34.41	18.60	49.99	25.72	52.85	35.53	41.30	43.94
11	49.11	18.88	11.96	16.06	35.14	18.75	50.36	26.03	52.64	35.86	40.65	44.17
12	49.67	18.72	12.74	16.02	35.88	18.93	50.68	26.36	52.40	36.19	40.00	44.38
13	50.25	18.54	13.55	16.00	36.59	19.12	50.96	26.69	52.15	36.50	39.37	44.58
14	50.86	18.36	14.41	15.99	37.27	19.33	51.20	27.02	51.89	36.81	38.75	44.77
15	51.52	18.16	15.27	16.00	37.91	19.55	51.41	27.34	51.64	37.10	38.15	44.96
16	52.23	17.97	16.13	16.03	38.51	19.78	51.60	27.64	51.40	37.38	37.57	45.15
17	52.99	17.79	16.96	16.08	39.07	20.01	51.77	27.94	51.16	37.66	36.99	45.34
18	53.78	17.63	17.77	16.15	39.61	20.24	51.95	28.24	50.94	37.94	36.41	45.53
19	54.58	17.50	18.55	16.22	40.14	20.45	52.13	28.53	50.72	38.23	35.79	45.73
20	55.36	17.38	19.30	16.29	40.67	20.66	52.32	28.82	50.51	38.52	35.12	45.94
21	56.13	17.28	20.02	16.37	41.20	20.87	52.52	29.10	50.27	38.82	34.41	46.16
22	56.88	17.19	20.73	16.45	41.75	21.08	52.74	29.40	50.00	39.14	33.63	46.36
23	57.61	17.11	21.44	16.52	42.31	21.29	52.96	29.70	49.66	39.46	32.81	46.54
24	58.31	17.02	22.16	16.59	42.89	21.50	53.17	30.02	49.26	39.75	31.97	46.70
25	59.01	16.94	22.89	16.65	43.49	21.72	53.35	30.35	48.80	40.10	31.14	46.84
26	59.70	16.85	23.65	16.71	44.09	21.95	53.47	30.69	48.31	40.39	30.33	46.95
27	60.40	16.76	24.43	16.78	44.67	22.20	53.54	31.04	47.79	40.66	29.55	47.06
28	61.12	16.65	25.23	16.86	45.22	22.46	53.55	31.39	47.28	40.92	28.81	47.16
29	61.86	16.55	26.04	16.94	45.71	22.75	53.51	31.73	46.80	41.15	28.11	47.28
30	62.64	16.46	26.86	17.05	46.15	23.04	53.43	32.06	46.36	41.38	27.40	47.40
31	63.44	16.37	27.67	17.17	46.54	23.33	53.34	32.37	45.95	41.60	26.69	47.53
32	64.28	16.29	28.45	17.32			53.28	32.66			25.94	47.67

Mean R.A. 2^h 50^m 35^s.267 Mean Dec. — 88° 23' 36".99 Sec δ 37.623 Tan δ — 37.610

APPARENT PLACES OF STARS, 1924. 257

AT UPPER TRANSIT AT GREENWICH.

31 G Mensæ. Mag. 6.2.

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	5 45	84 49	5 44	84 49	5 44	84 50	5 44	84 49	5 44	84 49	5 44	84 49
1	8.95	51.30	63.80	59.82	56.48	3.93	47.86	63.49	40.58	58.74	35.62	50.44
2	8.85	51.66	63.56	60.02	56.20	3.96	47.61	63.39	40.38	58.54	35.52	50.16
3	8.73	52.00	63.32	60.19	55.92	3.98	47.36	63.29	40.18	58.34	35.41	49.86
4	8.60	52.33	63.09	60.35	55.65	4.02	47.12	63.20	39.99	58.14	35.30	49.54
5	8.45	52.64	62.86	60.52	55.38	4.06	46.86	63.11	39.79	57.94	35.20	49.22
6	8.31	52.93	62.64	60.69	55.12	4.11	46.61	63.03	39.58	57.72	35.10	48.88
7	8.17	53.21	62.42	60.86	54.86	4.15	46.34	62.95	39.37	57.49	35.02	48.53
8	8.04	53.48	62.20	61.04	54.59	4.19	46.07	62.85	39.17	57.24	34.94	48.17
9	7.91	53.75	61.98	61.23	54.33	4.25	45.80	62.74	38.97	56.98	34.87	47.82
10	7.78	54.03	61.76	61.43	54.05	4.31	45.53	62.62	38.77	56.71	34.81	47.47
11	7.66	54.31	61.53	61.62	53.77	4.35	45.26	62.48	38.59	56.43	34.76	47.14
12	7.53	54.60	61.28	61.81	53.49	4.38	45.00	62.32	38.41	56.13	34.72	46.82
13	7.40	54.91	61.02	62.00	53.19	4.41	44.74	62.15	38.25	55.84	34.68	46.52
14	7.25	55.21	60.76	62.17	52.89	4.42	44.49	61.98	38.10	55.56	34.63	46.25
15	7.09	55.52	60.50	62.33	52.60	4.41	44.25	61.80	37.95	55.29	34.56	45.96
16	6.93	55.83	60.24	62.47	52.31	4.37	44.01	61.61	37.79	55.04	34.49	45.65
17	6.76	56.13	59.96	62.59	52.02	4.33	43.78	61.44	37.64	54.80	$\left\{ \begin{smallmatrix} 34.42 \\ 34.36 \end{smallmatrix} \right\}$	$\left\{ \begin{smallmatrix} 45.33 \\ 44.99 \end{smallmatrix} \right\}$
18	6.58	56.41	59.69	62.69	51.74	4.28	43.56	61.28	37.48	54.56	34.31	44.64
19	6.40	56.68	59.43	62.79	51.47	4.23	43.33	61.14	37.31	54.31	34.27	44.28
20	6.20	56.94	59.18	62.88	51.21	4.19	43.09	61.01	37.14	54.05	34.25	43.91
21	6.01	57.19	58.93	62.97	50.95	4.15	42.84	60.86	36.96	53.77	34.24	43.55
22	5.82	57.42	58.69	63.08	50.68	4.13	42.59	60.71	36.79	53.46	34.24	43.20
23	5.63	57.63	58.44	63.20	50.41	4.12	42.33	60.54	36.63	53.14	34.25	42.86
24	5.45	57.85	58.18	63.32	50.14	4.11	42.08	60.35	36.49	52.81	34.26	42.54
25	5.27	58.07	57.93	63.46	49.85	4.10	41.83	60.13	36.36	52.48	34.27	42.23
26	5.09	58.31	57.65	63.59	49.56	4.07	41.59	59.89	36.25	52.16	34.28	41.92
27	4.91	58.57	57.36	63.71	49.25	4.02	41.37	59.65	36.15	51.86	34.28	41.62
28	4.71	58.83	57.06	63.80	48.95	3.94	41.16	59.41	36.05	51.56	34.29	41.32
29	4.50	59.09	56.77	63.88	48.67	3.84	40.96	59.18	35.95	51.28	34.29	41.01
30	4.28	59.34	56.48	63.93	48.40	3.72	40.77	58.96	35.84	51.00	34.30	40.69
31	4.05	59.59			48.13	3.60	40.58	58.74	35.73	50.72	34.30	40.36
32	3.80	59.82			47.86	3.49			35.62	50.44		

Mean R.A. $5^h 44^m 53^s.032$ Mean Dec. — $84^\circ 49' 37''.44$ Sec δ 11.091 Tan δ — 11.046
 17—24 (NAUTICAL ALMANAC, 1924) S

258 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

31 G Mensæ. Mag. 6.2.

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	5 44	84 49	5 44	84 49	5 44	84 49	5 44	84 49	5 44	84 49	5 44	84 49
1	34.30	40.36	36.93	30.91	42.83	24.89	49.90	24.32	56.21	29.39	59.34	38.17
2	34.31	40.01	37.08	30.62	43.06	24.80	50.11	24.42	56.35	29.61	59.39	38.46
3	34.33	39.66	37.25	30.35	43.30	24.74	50.32	24.52	56.50	29.82	59.44	38.77
4	34.36	39.30	37.42	30.10	43.53	24.68	50.53	24.62	56.66	30.03	59.49	39.10
5	34.41	38.94	37.60	29.86	43.73	24.62	50.74	24.70	56.82	30.26	59.53	39.43
6	34.46	38.59	37.77	29.64	43.94	24.55	50.95	24.77	56.99	30.50	59.57	39.75
7	34.53	38.26	37.93	29.44	44.14	24.47	51.17	24.84	57.15	30.76	59.59	40.14
8	34.60	37.94	38.08	29.24	44.36	24.38	51.41	24.91	57.31	31.04	59.60	40.51
9	34.68	37.64	38.23	29.03	44.58	24.27	51.64	25.01	57.46	31.34	59.60	40.88
10	34.75	37.35	38.38	28.82	44.81	24.16	51.88	25.12	57.60	31.65	59.59	41.25
11	34.80	37.08	38.52	28.60	45.05	24.07	52.12	25.25	57.73	31.96	59.58	41.60
12	34.84	36.79	38.69	28.36	45.30	24.00	52.36	25.39	57.85	32.27	59.55	41.92
13	34.89	36.49	38.86	28.10	45.56	23.96	52.59	25.56	57.96	32.58	59.52	42.26
14	34.95	36.17	39.04	27.85	45.82	23.93	52.81	25.74	58.07	32.88	59.49	42.58
15	35.01	35.85	39.24	27.62	46.06	23.92	53.02	25.92	58.17	33.17	59.47	42.89
16	35.07	35.51	39.45	27.40	46.31	23.92	53.22	26.10	58.27	33.46	59.45	43.20
17	35.14	35.17	39.66	27.20	46.55	23.93	53.42	26.27	58.37	33.73	59.43	43.51
18	35.24	34.84	39.86	27.03	46.78	23.95	53.62	26.45	58.47	34.00	59.41	43.82
19	35.35	34.52	40.07	26.87	47.01	23.96	53.82	26.63	58.58	34.28	59.38	44.14
20	35.47	34.22	40.28	26.71	47.24	23.97	54.01	26.79	58.69	34.56	59.35	44.46
21	35.59	33.92	40.48	26.56	47.46	23.97	54.20	26.95	58.80	34.85	59.31	44.80
22	35.72	33.65	40.67	26.41	47.69	23.96	54.40	27.11	58.90	35.17	59.25	45.22
23	35.84	33.38	40.87	26.27	47.92	23.96	54.60	27.27	58.99	35.50	59.18	45.60
24	35.95	33.12	41.07	26.12	48.16	23.95	54.81	27.44	59.06	35.86	59.09	45.91
25	36.07	32.86	41.27	25.96	48.41	23.95	55.02	27.64	59.13	36.22	58.99	46.22
26	36.18	32.60	41.47	25.79	48.66	23.96	55.23	27.86	59.19	36.58	58.88	46.60
27	36.29	32.33	41.67	25.62	48.92	23.99	55.42	28.11	59.22	36.92	58.78	46.99
28	36.41	32.07	41.88	25.45	49.18	24.04	55.60	28.37	59.25	37.26	58.68	47.11
29	36.52	31.79	42.11	25.29	49.42	24.12	55.77	28.63	59.28	37.58	58.59	47.44
30	36.65	31.50	42.34	25.13	49.66	24.21	55.92	28.89	59.30	37.88	58.51	47.77
31	36.79	31.20	42.59	25.00	49.90	24.32	56.07	29.15	59.34	38.17	58.43	48.01
32	36.93	30.91	42.83	24.89			56.21	29.39			58.34	48.44

Mean R.A. 5^h 44^m 53^s.032 Mean Dec. — 84° 49' 37".44 Sec δ 11.091 Tan δ — 11.046

APPARENT PLACES OF STARS, 1924. 259

AT UPPER TRANSIT AT GREENWICH.

12 B Octantis. Mag. 6.8.

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	85° 56'	h m	85° 56'	h m	85° 56'	h m	85° 56'	h m	85° 56'	h m	85° 56'
	6 0	85° 56'	5 59	85° 56'	5 59	85° 56'	5 59	85° 56'	5 59	85° 56'	5 59	85° 56'
1	12.80	11.41	66.67	20.36	57.56	25.11	46.56	25.43	36.98	21.39	30.13	13.61
2	12.67	11.78	66.37	20.58	57.19	25.17	46.23	25.36	36.72	21.21	29.98	13.35
3	12.53	12.14	66.07	20.78	56.84	25.22	45.92	25.29	36.45	21.02	29.82	13.06
4	12.37	12.49	65.78	20.97	56.50	25.26	45.59	25.22	36.19	20.84	29.66	12.76
5	12.21	12.81	65.50	21.15	56.17	25.31	45.26	25.16	35.92	20.66	29.50	12.45
6	12.04	13.12	65.23	21.33	55.84	25.38	44.93	25.11	35.64	20.46	29.36	12.12
7	11.87	13.41	64.96	21.52	55.52	25.46	44.59	25.04	35.36	20.25	29.22	11.78
8	11.71	13.69	64.70	21.72	55.19	25.53	44.25	24.97	35.08	20.03	29.10	11.43
9	11.57	13.97	64.42	21.93	54.85	25.61	43.90	24.89	34.82	19.79	29.00	11.09
10	11.43	14.25	64.14	22.14	54.50	25.69	43.54	24.79	34.56	19.54	28.91	10.76
11	11.28	14.55	63.85	22.36	54.14	25.76	43.18	24.68	34.30	19.27	28.83	10.43
12	11.14	14.86	63.56	22.58	53.77	25.82	42.83	24.54	34.05	18.99	28.75	10.13
13	10.98	15.18	63.25	22.78	53.41	25.87	42.49	24.39	33.83	18.72	28.67	9.84
14	10.82	15.49	62.93	22.98	53.03	25.90	42.16	24.23	33.61	18.46	28.58	9.56
15	10.64	15.81	62.60	23.15	52.65	25.92	41.83	24.07	33.41	18.21	28.48	9.28
16	10.45	16.13	62.27	23.32	52.27	25.92	41.53	23.91	33.21	17.98	28.37	8.99
17	10.24	16.44	61.93	23.46	51.91	25.90	41.24	23.76	32.99	17.75	28.27	8.68
18	10.03	16.73	61.60	23.58	51.55	25.88	40.94	23.63	32.76	17.53	28.16	8.34
19	9.80	17.02	61.27	23.70	51.21	25.85	40.64	23.50	32.53	17.30	28.06	7.99
20	9.57	17.30	60.94	23.82	50.87	25.83	40.32	23.39	32.29	17.05	27.99	7.63
21	9.33	17.56	60.63	23.93	50.53	25.81	40.00	23.28	32.05	16.78	{ ²⁷ 94 ₂₇ 96}	{ ²⁸ 94 ₂₈ 96}
22	9.10	17.80	60.33	24.06	50.20	25.81	39.67	23.15	31.81	16.50	27.87	6.58
23	8.87	18.03	60.02	24.20	49.86	25.83	39.32	22.99	31.59	16.20	27.86	6.25
24	8.65	18.26	59.71	24.35	49.50	25.85	38.99	22.82	31.39	15.88	27.86	5.93
25	8.44	18.50	59.38	24.50	49.13	25.86	38.66	22.63	31.20	15.57	27.85	5.62
26	8.23	18.76	59.03	24.66	48.75	25.86	38.35	22.42	31.04	15.27	27.84	5.32
27	8.00	19.02	58.67	24.80	48.36	25.83	38.05	22.21	30.88	14.98	27.83	5.02
28	7.77	19.30	58.31	24.92	47.97	25.78	37.77	22.00	30.73	14.70	27.82	4.72
29	7.52	19.58	57.93	25.02	47.60	25.70	37.50	21.79	30.58	14.42	27.80	4.41
30	7.25	19.85	57.56	25.11	47.23	25.62	37.24	21.58	30.44	14.15	27.78	4.09
31	6.97	20.12			46.89	25.52	36.98	21.39	30.29	13.88	27.76	3.77
32	6.67	20.36			46.56	25.43			30.13	13.61		

Mean R.A. 5^h 59^m 51^s.621 Mean Dec. — 85° 55' 59".07 Sec δ 14.100' Tan δ — 14.065

260 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

12 B Octantis. Mag. 6-8.

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	5 59	85 55	5 59	85 55	5 59	85 55	5 59	85 55	5 59	85 55	5 59	85 55
1	27.76	63.77	30.47	54.20	37.55	47.75	46.43	46.58	54.68	51.08	59.12	59.54
2	27.76	63.42	30.66	53.90	37.85	47.64	46.72	46.67	54.87	51.29	59.19	59.84
3	27.77	63.07	30.85	53.61	38.14	47.55	46.99	46.75	55.07	51.49	59.27	60.14
4	27.78	62.72	31.05	53.35	38.41	47.47	47.25	46.83	55.28	51.69	59.34	60.46
5	27.82	62.37	31.25	53.10	38.67	47.40	47.52	46.89	55.51	51.89	59.42	60.79
6	27.87	62.02	31.46	52.87	38.92	47.31	47.80	46.94	55.73	52.12	59.48	61.14
7	27.92	61.69	31.65	52.66	39.18	47.21	48.08	46.98	55.96	52.36	59.52	61.49
8	27.99	61.36	31.83	52.45	39.44	47.10	48.37	47.03	56.17	52.63	59.56	61.86
9	28.06	61.05	32.00	52.24	39.71	46.98	48.68	47.11	56.38	52.91	59.58	62.23
10	28.12	60.76	32.17	52.01	40.00	46.86	48.99	47.20	56.58	53.21	59.59	62.59
11	28.18	60.48	32.35	51.76	40.30	46.75	49.31	47.31	56.76	53.51	59.58	62.94
12	28.23	60.20	32.53	51.51	40.61	46.66	49.61	47.45	56.92	53.81	59.56	63.28
13	28.27	59.90	32.73	51.25	40.93	46.59	49.91	47.59	57.08	54.11	59.55	63.60
14	28.30	59.59	32.95	50.99	41.26	46.54	50.19	47.75	57.23	54.40	59.53	63.92
15	28.35	59.27	33.18	50.74	41.58	46.51	50.47	47.91	57.37	54.68	59.52	64.23
16	28.41	58.94	33.42	50.51	41.89	46.48	50.74	48.08	57.52	54.96	59.50	64.54
17	28.49	58.59	33.68	50.30	42.19	46.47	51.00	48.23	57.66	55.22	59.48	64.85
18	28.59	58.24	33.93	50.12	42.49	46.47	51.26	48.38	57.80	55.48	59.47	65.16
19	28.71	57.91	34.19	49.94	42.78	46.46	51.51	48.53	57.94	55.75	59.46	65.49
20	28.84	57.60	34.44	49.76	43.06	46.45	51.76	48.67	58.09	56.02	59.45	65.84
21	28.98	57.30	34.68	49.60	43.34	46.44	52.01	48.81	58.25	56.30	59.42	66.21
22	29.11	57.02	34.92	49.44	43.63	46.41	52.28	48.95	58.39	56.60	59.36	66.58
23	29.24	56.74	35.16	49.28	43.93	46.39	52.55	49.11	58.53	56.93	59.29	66.96
24	29.38	56.48	35.40	49.11	44.23	46.36	52.82	49.28	58.65	57.27	59.19	67.32
25	29.51	56.21	35.63	48.94	44.53	46.34	53.09	49.46	58.76	57.62	59.07	67.66
26	29.63	55.94	35.87	48.75	44.84	46.33	53.36	49.65	58.84	57.98	58.96	67.99
27	29.76	55.66	36.12	48.56	45.17	46.34	53.62	49.87	58.90	58.32	58.84	68.30
28	29.88	55.39	36.39	48.38	45.50	46.37	53.87	50.12	58.95	58.65	58.73	68.59
29	30.01	55.10	36.67	48.20	45.82	46.42	54.09	50.37	59.00	58.96	58.63	68.88
30	30.16	54.80	36.96	48.02	46.13	46.49	54.29	50.61	59.06	59.26	58.55	69.17
31	30.31	54.50	37.25	47.87	46.43	46.58	54.49	50.85	59.12	59.54	58.46	69.49
32	30.47	54.20	37.55	47.75			54.68	51.08			58.37	69.81

APPARENT PLACES OF STARS, 1924. 261

AT UPPER TRANSIT AT GREENWICH.

A Octantis. Mag. 7.8.

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	88° 37'	h m	88° 38'	h m	88° 38'	h m	88° 38'	h m	88° 38'	h m	88° 38'
1	43.76	57.43	36.36	8.20	76.38	16.45	46.49	21.52	75.61	22.03	47.98	18.03
2	43.81	57.81	35.76	8.53	75.45	16.66	45.50	21.58	74.69	21.97	47.22	17.85
3	43.80	58.20	35.16	8.84	74.55	16.86	44.56	21.66	73.76	21.92	46.45	17.68
4	43.72	58.58	34.56	9.14	73.67	17.05	43.60	21.74	72.83	21.87	45.68	17.48
5	43.59	58.95	33.98	9.43	72.81	17.24	42.62	21.83	71.86	21.83	44.90	17.27
6	43.43	59.30	33.43	9.72	71.99	17.45	41.64	21.92	70.87	21.77	44.12	17.04
7	43.27	59.63	32.91	10.00	71.17	17.66	40.64	22.01	69.87	21.70	43.36	16.80
8	43.13	59.96	32.40	10.29	70.34	17.87	39.60	22.09	68.85	21.62	42.64	16.54
9	43.02	60.28	31.88	10.60	69.50	18.08	38.55	22.17	67.82	21.53	41.97	16.27
10	42.93	60.60	31.35	10.91	68.63	18.30	37.46	22.23	66.80	21.42	41.35	16.01
11	42.85	60.92	30.80	11.23	67.73	18.52	36.35	22.28	65.80	21.29	40.77	15.76
12	42.78	61.26	30.20	11.55	66.79	18.73	35.23	22.31	64.84	21.14	40.22	15.53
13	42.69	61.60	29.57	11.88	65.83	18.94	34.12	22.33	63.91	21.00	39.67	15.31
14	42.57	61.96	28.89	12.19	64.83	19.13	33.03	22.33	63.03	20.85	39.11	15.09
15	42.43	62.33	28.17	12.49	63.80	19.31	31.98	22.33	62.19	20.72	38.51	14.88
16	42.25	62.71	27.42	12.79	62.77	19.46	30.96	22.32	61.36	20.60	37.87	14.67
17	42.02	63.08	26.65	13.07	61.73	19.61	29.98	22.31	60.53	20.50	37.21	14.45
18	41.74	63.45	25.87	13.33	60.72	19.74	29.02	22.32	59.66	20.40	36.53	14.20
19	41.42	63.81	25.08	13.58	59.74	19.87	28.06	22.34	58.75	20.30	35.87	13.93
20	41.06	64.16	24.32	13.82	58.79	20.00	27.07	22.37	57.80	20.18	35.26	13.65
21	40.69	64.49	23.59	14.06	57.88	20.14	26.04	22.41	56.82	20.05	34.70	13.35
22	40.30	64.81	22.89	14.31	56.96	20.29	24.97	22.44	55.85	19.90	34.21	13.05
23	39.92	65.12	22.20	14.56	56.03	20.45	23.86	22.45	54.89	19.73	33.77	12.75
24	39.56	65.43	21.50	14.83	55.07	20.61	22.72	22.44	53.98	19.54	33.37	12.46
25	39.23	65.74	20.78	15.11	54.05	20.78	21.59	22.42	53.13	19.33	32.99	12.17
26	38.92	66.06	20.01	15.40	52.98	20.94	20.49	22.37	52.33	19.13	32.62	11.90
27	38.61	66.40	19.17	15.69	51.87	21.08	19.43	22.30	51.58	18.93	32.26	11.64
28	38.27	66.75	18.27	15.97	50.75	21.19	18.42	22.22	50.86	18.74	31.88	11.38
29	37.89	67.11	17.33	16.22	49.64	21.29	17.46	22.15	50.15	18.55	31.49	11.12
30	37.44	67.48	16.38	16.45	48.55	21.38	16.52	22.08	49.44	18.38	31.09	10.86
31	36.92	67.85			47.50	21.45	15.61	22.03	48.72	18.21	30.67	10.58
32	36.36	68.20			46.49	21.52			47.98	18.03		

Mean R.A. 7^h 34^m 31^s.617 Mean Dec. — 88° 37' 55".40 Sec δ 41.889 Tan δ — 41.877

262 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

A Octantis. Mag. 7.8.

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	7 33	88 38	7 33	88 37	7 33	88 37	7 34	88 37	7 34	88 37	7 34	88 37
	_s		_s		_s		_s		_s		_s	
1	30.67	10.58	26.76	60.63	38.74	51.89	1.43	47.13	28.39	47.76	49.19	53.63
2	30.25	10.29	26.92	60.29	39.44	51.67	2.28	47.09	29.11	47.87	49.68	53.87
3	29.84	10.00	27.13	59.96	40.13	51.47	3.10	47.05	29.86	47.97	50.21	54.12
4	29.45	9.68	27.39	59.63	40.78	51.29	3.87	47.01	30.64	48.07	50.77	54.37
5	29.10	9.35	27.69	59.32	41.39	51.11	4.64	46.96	31.45	48.18	51.33	54.64
6	28.79	9.01	28.00	59.03	41.97	50.93	5.42	46.90	32.31	48.29	51.87	54.93
7	28.53	8.68	28.28	58.76	42.54	50.73	6.24	46.82	33.19	48.41	52.38	55.24
8	28.33	8.37	28.53	58.49	43.11	50.52	7.10	46.75	34.07	48.56	52.85	55.55
9	28.17	8.05	28.74	58.23	43.70	50.30	8.01	46.69	34.94	48.73	53.28	55.88
10	28.02	7.75	28.93	57.96	44.34	50.07	8.96	46.63	35.78	48.92	53.66	56.21
11	27.87	7.48	29.11	57.67	45.04	49.85	9.93	46.60	36.59	49.11	54.01	56.53
12	27.68	7.21	29.32	57.37	45.80	49.63	10.90	46.59	37.35	49.31	54.32	56.85
13	{ _{27.47}	{ _{6.84}	29.57	57.05	46.60	49.43	11.87	46.60	38.07	49.51	54.61	57.16
14	{ _{27.23}	{ _{6.88}	29.87	56.73	47.42	49.26	12.81	46.62	38.77	49.72	54.88	57.46
15	26.97	6.36	30.23	56.41	48.25	49.10	13.72	46.65	39.45	49.91	55.15	57.74
16	26.72	6.04	30.23	56.41	48.25	49.10	13.72	46.65	39.45	49.91	55.15	57.74
16	26.49	5.71	30.65	56.09	49.08	48.95	14.61	46.68	40.11	50.11	55.42	58.03
17	26.32	5.38	31.12	55.80	49.88	48.81	15.48	46.72	40.76	50.30	55.71	58.31
18	26.22	5.04	31.60	55.52	50.67	48.68	16.32	46.75	41.41	50.48	56.02	58.60
19	26.18	4.69	32.09	55.26	51.44	48.55	17.15	46.78	42.08	50.66	56.35	58.91
20	26.18	4.36	32.58	55.00	52.19	48.42	17.98	46.81	42.77	50.84	56.67	59.24
21	26.22	4.04	33.06	54.75	52.94	48.29	18.81	46.83	43.49	51.03	56.96	59.59
22	26.27	3.72	33.53	54.50	53.68	48.15	19.66	46.85	44.22	51.24	57.20	59.95
23	26.33	3.41	33.98	54.25	54.43	48.00	20.54	46.87	44.95	51.49	57.37	60.32
24	26.38	3.12	34.43	54.00	55.20	47.86	21.46	46.90	45.65	51.75	57.48	60.69
25	26.43	2.83	34.87	53.75	56.00	47.71	22.40	46.95	46.29	52.03	57.53	61.06
26	26.47	2.54	35.31	53.49	56.84	47.57	23.35	47.03	46.87	52.31	57.53	61.41
27	26.50	2.24	35.78	53.22	57.73	47.44	24.30	47.12	47.38	52.60	57.52	61.74
28	26.52	1.94	36.28	52.94	58.66	47.33	25.21	47.23	47.84	52.88	57.53	62.06
29	26.55	1.63	36.82	52.67	59.60	47.25	26.08	47.36	48.28	53.14	57.56	62.37
30	26.59	1.31	37.42	52.40	60.53	47.18	26.89	47.50	48.72	53.39	57.62	62.67
31	26.65	0.97	38.06	52.14	61.43	47.13	27.66	47.64	49.19	53.63	57.71	62.99
32	26.76	0.63	38.74	51.89			28.39	47.76			57.81	63.32

Mean R.A. 7^h 34^m 31^s.617 Mean Dec. — 88° 37' 55".40 Sec δ 41.889 Tan δ — 41.877

APPARENT PLACES OF STARS, 1924. 263

AT UPPER TRANSIT AT GREENWICH.

10 G Octantis. Mag. 6.7

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	10 35	85 41	10 36	85 41	10 35	85 41	10 35	85 42	10 35	85 42	10 35	85 42
1	55.59	34.39	0.87	44.19	61.70	55.22	58.33	6.37	51.93	14.45	43.50	18.50
2	55.85	34.66	0.96	44.58	61.63	55.60	58.16	6.65	51.70	14.65	43.23	18.57
3	56.10	34.95	1.02	44.96	61.56	55.97	57.99	6.94	51.47	14.85	42.96	18.64
4	56.33	35.25	1.08	45.33	61.49	56.33	57.83	7.24	51.23	15.05	42.67	18.70
5	56.55	35.56	1.13	45.68	61.42	56.68	57.67	7.55	50.99	15.25	42.37	18.74
6	56.74	35.86	1.19	46.03	61.36	57.03	57.52	7.86	50.74	15.46	42.06	18.76
7	56.92	36.14	1.26	46.37	61.31	57.39	57.35	8.18	50.49	15.66	41.75	18.78
8	57.10	36.42	1.33	46.71	61.26	57.75	57.18	8.50	50.23	15.86	41.43	18.78
9	57.27	36.69	1.41	47.06	61.21	58.11	57.00	8.82	49.94	16.05	41.13	18.76
10	57.46	36.95	1.49	47.42	61.16	58.49	56.81	9.14	49.65	16.22	40.83	18.72
11	57.66	37.21	1.56	47.80	61.10	58.87	56.60	9.46	49.35	16.38	40.55	18.68
12	57.86	37.47	1.63	48.18	61.02	59.26	56.38	9.77	49.05	16.52	40.29	18.65
13	58.07	37.75	1.70	48.57	60.94	59.64	56.15	10.06	48.76	16.63	40.02	18.62
14	58.27	38.04	1.76	48.97	60.85	60.05	55.91	10.32	48.49	16.74	39.78	18.61
15	58.47	38.35	1.79	49.38	60.74	60.44	55.68	10.57	48.22	16.86	39.53	18.62
16	58.66	38.67	1.82	49.78	60.62	60.81	55.44	10.82	47.96	16.99	39.27	18.64
17	58.85	39.01	1.83	50.18	60.48	61.17	55.23	11.06	47.72	17.12	38.99	18.65
18	59.02	39.35	1.82	50.57	60.34	61.53	55.02	11.31	47.47	17.27	38.69	18.63
19	59.18	39.69	1.80	50.95	60.20	61.86	54.83	11.57	47.22	17.43	38.38	18.60
20	59.33	40.03	1.79	51.32	60.07	62.19	54.63	11.84	46.95	17.60	38.07	18.56
21	59.46	40.38	1.78	51.67	59.95	62.51	54.43	12.12	46.66	17.75	37.77	18.49
22	59.58	40.71	1.78	52.01	59.84	62.84	54.22	12.41	46.36	17.88	37.48	18.39
23	59.70	41.04	1.79	52.37	59.74	63.20	53.99	12.71	46.05	17.99	37.20	18.29
24	59.82	41.35	1.81	52.74	59.64	63.57	53.75	12.99	45.73	18.08	36.94	18.18
25	59.94	41.65	1.82	53.14	59.53	63.96	53.48	13.25	45.43	18.15	36.69	18.07
26	60.07	41.96	1.83	53.54	59.40	64.34	53.21	13.48	45.12	18.20	36.44	17.97
27	60.21	42.29	1.83	53.97	59.25	64.72	52.95	13.70	44.83	18.25	36.19	17.88
28	60.36	42.64	1.80	54.39	59.08	65.08	52.68	13.90	44.55	18.29	35.95	17.78
29	60.51	43.00	1.76	54.82	58.89	65.43	52.42	14.08	44.29	18.33	35.71	17.70
30	60.65	43.39	1.70	55.22	58.70	65.76	52.17	14.26	44.03	18.38	35.47	17.61
31	60.77	43.79			58.51	66.07	51.93	14.45	43.77	18.44	35.21	17.52
32	60.87	44.19			58.33	66.37			43.50	18.50		

264 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

10 G Octantis. Mag. 6.7

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	10 35	85 42	10 35	85 42	10 35	85 41	10 35	85 41	10 35	85 41	10 35	85 41
1	35.21	17.52	28.52	11.66	25.67	62.12	27.87	53.06	34.47	46.82	42.98	45.95
2	34.94	17.42	28.33	11.39	25.68	61.79	28.05	52.82	34.70	46.72	43.25	46.00
3	34.67	17.32	28.15	11.10	25.71	61.49	28.22	52.59	34.93	46.60	43.52	46.05
4	34.40	17.19	27.99	10.80	25.75	61.19	28.38	52.37	35.17	46.48	43.81	46.10
5	34.12	17.03	27.84	10.50	25.79	60.91	28.52	52.14	35.42	46.34	44.11	46.16
6	33.85	16.86	27.72	10.21	25.82	60.64	28.66	51.89	35.69	46.20	44.42	46.24
7	33.59	16.69	27.61	9.93	25.83	60.35	28.79	51.63	35.98	46.08	44.74	46.34
8	33.35	16.50	27.51	9.66	25.83	60.06	28.94	51.36	36.28	45.98	45.06	46.45
9	33.12	16.32	27.41	9.41	25.83	59.76	29.10	51.08	36.58	45.89	45.36	46.58
10	32.90	16.15	27.31	9.17	25.83	59.44	29.29	50.81	36.88	45.82	45.65	46.72
11	32.70	15.99	27.19	8.94	25.84	59.10	29.49	50.56	37.19	45.76	45.94	46.87
12	32.50	15.84	27.06	8.69	25.88	58.76	29.70	50.31	37.49	45.72	46.22	47.03
13	32.30	15.71	26.92	8.42	25.94	58.41	29.93	50.07	37.79	45.69	46.48	47.18
14	32.08	15.58	26.78	8.13	26.02	58.07	30.15	49.85	38.08	45.66	46.74	47.34
15	31.85	15.44	26.65	7.82	26.10	57.75	30.38	49.64	38.36	45.64	46.99	47.49
16	31.61	15.27	26.53	7.50	26.20	57.44	30.61	49.44	38.63	45.62	47.23	47.63
17	31.36	15.09	26.43	7.17	26.29	57.13	30.84	49.25	38.90	45.59	47.48	47.77
18	31.12	14.88	26.36	6.84	26.39	56.85	31.06	49.07	39.17	45.55	47.74	47.90
19	30.88	14.66	26.30	6.52	26.49	56.57	31.27	48.89	39.43	45.52	48.01	48.05
20	30.65	14.43	26.24	6.21	26.59	56.29	31.47	48.71	39.70	45.48	48.29	48.21
21	30.44	14.19	26.20	5.90	26.68	56.01	31.67	48.52	40.00	45.45	48.58	48.40
22	30.26	13.95	26.15	5.60	26.76	55.73	31.87	48.32	40.31	45.43	48.87	48.61
23	30.09	13.71	26.11	5.32	26.85	55.44	32.09	48.12	40.62	45.43	49.16	48.84
24	29.92	13.49	26.06	5.04	26.93	55.14	32.32	47.91	40.95	45.45	49.43	49.10
25	29.76	13.26	26.01	4.76	27.01	54.82	32.56	47.71	41.27	45.50	49.68	49.36
26	29.59	13.03	25.95	4.46	27.11	54.50	32.82	47.52	41.60	45.57	49.90	49.61
27	29.42	12.82	25.89	4.15	27.23	54.19	33.10	47.36	41.90	45.66	50.12	49.85
28	29.25	12.60	25.83	3.84	27.37	53.88	33.38	47.22	42.19	45.74	50.33	50.08
29	29.07	12.39	25.77	3.51	27.52	53.59	33.67	47.10	42.46	45.82	50.54	50.31
30	28.89	12.16	{ $\frac{25}{25} \frac{71}{68}$ }	{ $\frac{3}{2} \frac{17}{87}$ }	27.69	53.31	33.95	47.00	42.72	45.89	50.75	50.52
31	28.71	11.92	25.67	2.45	27.87	53.06	34.22	46.91	42.98	45.95	50.97	50.73
32	28.52	11.66	25.67	2.12			34.47	46.82			51.21	50.95

Mean R.A. 10^h 35^m 38^s.499 Mean Dec. — 85° 41' 51".23 Sec δ 13.330 Tan δ — 13.292

APPARENT PLACES OF STARS, 1924. 265

AT UPPER TRANSIT AT GREENWICH.

η Octantis. Mag. 6.3

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	II O	84 IO	II O	84 IO	II O	84 II	II O	84 II	IO 59	84 II	IO 59	84 II
	s	"	s	"	s	"	s	"	s	"	s	"
1	3.93	47.42	8.56	56.67	9.97	7.60	8.29	19.07	64.19	27.82	58.35	32.78
2	4.15	47.67	8.65	57.06	9.95	8.00	8.19	19.38	64.03	28.04	58.15	32.87
3	4.36	47.93	8.72	57.43	9.92	8.37	8.09	19.69	63.88	28.27	57.96	32.96
4	4.55	48.21	8.79	57.79	9.89	8.74	7.99	20.01	63.73	28.49	57.75	33.06
5	4.73	48.50	8.86	58.13	9.87	9.09	7.89	20.32	63.57	28.72	57.55	33.14
6	4.90	48.78	8.93	58.47	9.85	9.45	7.80	20.65	63.40	28.96	57.33	33.20
7	5.06	49.04	9.00	58.80	9.83	9.80	7.71	20.99	63.22	29.19	57.10	33.25
8	5.20	49.30	9.08	59.14	9.82	10.17	7.60	21.33	63.04	29.42	56.87	33.27
9	5.35	49.54	9.17	59.49	9.81	10.54	7.49	21.67	62.85	29.63	56.64	33.28
10	5.51	49.78	9.25	59.84	9.79	10.93	7.37	22.01	62.66	29.83	56.43	33.28
11	5.68	50.02	9.33	60.20	9.78	11.32	7.24	22.34	62.46	30.02	56.22	33.28
12	5.84	50.27	9.41	60.57	9.75	11.73	7.10	22.67	62.25	30.19	56.02	33.27
13	6.01	50.53	9.49	60.96	9.72	12.12	6.95	22.98	62.04	30.34	55.84	33.28
14	6.18	50.80	9.55	61.36	9.68	12.52	6.80	23.28	61.84	30.48	55.66	33.30
15	6.35	51.08	9.60	61.76	9.63	12.92	6.65	23.56	61.65	30.62	55.47	33.33
16	6.52	51.38	9.65	62.16	9.56	13.31	6.49	23.83	61.48	30.78	55.29	33.37
17	6.68	51.70	9.69	62.56	9.49	13.67	6.35	24.09	61.31	30.95	55.09	33.41
18	6.84	52.02	9.71	62.95	9.42	14.03	6.22	24.36	61.15	31.12	54.87	33.44
19	6.98	52.35	9.73	63.33	9.34	14.38	6.10	24.64	60.98	31.30	54.65	33.45
20	7.12	52.68	9.75	63.69	9.27	14.73	5.98	24.93	60.79	31.49	54.42	33.44
21	7.24	53.00	9.77	64.05	9.20	15.07	5.85	25.24	60.59	31.67	54.20	33.40
22	7.36	53.33	9.80	64.40	9.14	15.42	5.72	25.56	60.38	31.85	53.98	33.33
23	7.46	53.64	9.82	64.75	9.09	15.78	5.58	25.87	60.17	32.00	53.77	33.26
24	7.57	53.95	9.85	65.13	9.05	16.15	5.41	26.18	59.94	32.13	53.57	33.18
25	7.68	54.25	9.89	65.51	8.99	16.54	5.24	26.46	59.72	32.23	53.38	33.10
26	7.80	54.55	9.94	65.92	8.93	16.94	5.06	26.72	59.51	32.31	53.20	33.02
27	7.93	54.85	9.97	66.34	8.85	17.34	4.88	26.96	59.30	32.38	53.02	32.95
28	8.06	55.18	9.99	66.76	8.75	17.72	4.70	27.18	59.10	32.45	52.84	32.88
29	8.20	55.53	9.99	67.19	8.64	18.08	4.53	27.40	58.91	32.52	52.65	32.82
30	8.33	55.89	9.97	67.60	8.53	18.43	4.36	27.61	58.72	32.60	52.47	32.76
31	8.46	56.28			8.41	18.76	4.19	27.82	58.53	32.69	52.27	32.70
32	8.56	56.67			8.29	19.07			58.35	32.78		

Mean R.A. 10^h 59^m 52^s.649 Mean Dec. — 84° 11' 6".16 Sec δ 9.870 Tan δ — 9.819

266 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

η Octantis. Mag. 6.3

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	10 59	84 II	10 59	84 II	10 59	84 II	10 59	84 II	10 59	84 II	10 59	84 II
1	52 ^s 27	32 ^s 70	47 ^s 02	27 ^s 63	44 ^s 36	18 ^s 79	45 ^s 36	9 ^s 20	49 ^s 83	2 ^s 32	56 ^s 08	0 ^s 58
2 ¹	52 ^s 08	32 ^s 64	46 ^s 87	27 ^s 37	44 ^s 34	18 ^s 45	45 ^s 47	8 ^s 95	50 ^s 00	2 ^s 19	56 ^s 28	0 ^s 60
3	51 ^s 88	32 ^s 56	46 ^s 72	27 ^s 10	44 ^s 32	18 ^s 13	45 ^s 59	8 ^s 71	50 ^s 17	2 ^s 05	56 ^s 49	0 ^s 62
4	51 ^s 66	32 ^s 45	46 ^s 58	26 ^s 82	44 ^s 33	17 ^s 81	45 ^s 69	8 ^s 47	50 ^s 33	1 ^s 90	56 ^s 72	0 ^s 64
5	51 ^s 45	32 ^s 33	46 ^s 46	26 ^s 54	44 ^s 33	17 ^s 51	45 ^s 78	8 ^s 22	50 ^s 50	1 ^s 75	56 ^s 94	0 ^s 67
6	51 ^s 24	32 ^s 20	46 ^s 35	26 ^s 26	{44 ^s 34}	{17 ^s 24}	45 ^s 87	7 ^s 97	50 ^s 69	1 ^s 60	57 ^s 17	0 ^s 72.
7	51 ^s 05	32 ^s 05	46 ^s 25	25 ^s 99	44 ^s 34	16 ^s 68	45 ^s 95	7 ^s 70	50 ^s 89	1 ^s 45	57 ^s 41	0 ^s 78
8	50 ^s 85	31 ^s 90	46 ^s 17	25 ^s 74	44 ^s 32	16 ^s 40	46 ^s 04	7 ^s 41	51 ^s 10	1 ^s 32	57 ^s 65	0 ^s 86
9	50 ^s 67	31 ^s 74	46 ^s 09	25 ^s 51	44 ^s 30	16 ^s 09	46 ^s 15	7 ^s 12	51 ^s 32	1 ^s 19	57 ^s 89	0 ^s 96
10	50 ^s 51	31 ^s 59	45 ^s 99	25 ^s 29	44 ^s 29	15 ^s 76	46 ^s 27	6 ^s 83	51 ^s 54	1 ^s 08	58 ^s 12	1 ^s 08
11	50 ^s 35	31 ^s 45	45 ^s 89	25 ^s 06	44 ^s 28	15 ^s 43	46 ^s 40	6 ^s 55	51 ^s 76	0 ^s 99	58 ^s 35	1 ^s 20
12	50 ^s 20	31 ^s 33	45 ^s 78	24 ^s 83	44 ^s 28	15 ^s 08	46 ^s 54	6 ^s 28	51 ^s 99	0 ^s 92	58 ^s 56	1 ^s 32
13	50 ^s 04	31 ^s 22	45 ^s 66	24 ^s 58	44 ^s 30	14 ^s 73	46 ^s 69	6 ^s 02	52 ^s 21	0 ^s 86	58 ^s 77	1 ^s 45
14	49 ^s 87	31 ^s 12	45 ^s 54	24 ^s 31	44 ^s 32	14 ^s 39	46 ^s 84	5 ^s 78	52 ^s 42	0 ^s 80	58 ^s 97	1 ^s 58
15	49 ^s 70	31 ^s 00	45 ^s 43	24 ^s 02	44 ^s 36	14 ^s 06	46 ^s 99	5 ^s 55	52 ^s 63	0 ^s 74	59 ^s 16	1 ^s 71
16	49 ^s 52	30 ^s 87	45 ^s 32	23 ^s 71	44 ^s 41	13 ^s 74	47 ^s 14	5 ^s 34	52 ^s 83	0 ^s 69	59 ^s 36	1 ^s 83
17	49 ^s 33	30 ^s 71	45 ^s 22	23 ^s 38	44 ^s 47	13 ^s 43	47 ^s 30	5 ^s 13	53 ^s 02	0 ^s 63	59 ^s 55	1 ^s 94
18	49 ^s 13	30 ^s 54	45 ^s 15	23 ^s 06	44 ^s 53	13 ^s 13	47 ^s 44	4 ^s 92	53 ^s 22	0 ^s 57	59 ^s 75	2 ^s 04
19	48 ^s 94	30 ^s 34	45 ^s 08	22 ^s 75	44 ^s 58	12 ^s 84	47 ^s 59	4 ^s 71	53 ^s 42	0 ^s 51	59 ^s 96	2 ^s 16
20	48 ^s 77	30 ^s 13	45 ^s 01	22 ^s 45	44 ^s 64	12 ^s 56	47 ^s 74	4 ^s 50	53 ^s 62	0 ^s 44	60 ^s 18	2 ^s 30
21	48 ^s 61	29 ^s 92	44 ^s 96	22 ^s 16	44 ^s 69	12 ^s 27	47 ^s 88	4 ^s 29	53 ^s 83	0 ^s 38	60 ^s 41	2 ^s 45
22	48 ^s 45	29 ^s 70	44 ^s 91	21 ^s 87	44 ^s 73	11 ^s 97	48 ^s 01	4 ^s 07	54 ^s 05	0 ^s 33	60 ^s 64	2 ^s 63
23	48 ^s 30	29 ^s 48	44 ^s 86	21 ^s 59	44 ^s 77	11 ^s 68	48 ^s 15	3 ^s 85	54 ^s 29	0 ^s 29	60 ^s 86	2 ^s 84
24	48 ^s 17	29 ^s 27	44 ^s 81	21 ^s 31	44 ^s 81	11 ^s 38	48 ^s 30	3 ^s 62	54 ^s 53	0 ^s 28	61 ^s 08	3 ^s 06
25	48 ^s 03	29 ^s 08	44 ^s 75	21 ^s 03	44 ^s 85	11 ^s 06	48 ^s 47	3 ^s 40	54 ^s 78	0 ^s 29	61 ^s 28	3 ^s 29
26	47 ^s 90	28 ^s 88	44 ^s 69	20 ^s 74	44 ^s 90	10 ^s 73	48 ^s 65	3 ^s 18	55 ^s 02	0 ^s 33	61 ^s 47	3 ^s 52
27	47 ^s 76	28 ^s 68	44 ^s 63	20 ^s 44	44 ^s 97	10 ^s 40	48 ^s 84	2 ^s 99	55 ^s 25	0 ^s 38	61 ^s 65	3 ^s 74
28	47 ^s 61	28 ^s 48	44 ^s 56	20 ^s 13	45 ^s 05	10 ^s 08	49 ^s 04	2 ^s 82	55 ^s 47	0 ^s 44	61 ^s 83	3 ^s 95
29	47 ^s 47	28 ^s 29	44 ^s 50	19 ^s 81	45 ^s 14	9 ^s 77	49 ^s 24	2 ^s 68	55 ^s 69	0 ^s 50	62 ^s 00	4 ^s 15
30	47 ^s 32	28 ^s 08	44 ^s 44	19 ^s 47	45 ^s 24	9 ^s 48	49 ^s 44	2 ^s 56	55 ^s 89	0 ^s 55	62 ^s 17	4 ^s 35
31	47 ^s 17	27 ^s 86	44 ^s 39	19 ^s 13	45 ^s 36	9 ^s 20	49 ^s 64	2 ^s 44	56 ^s 08	0 ^s 58	62 ^s 35	4 ^s 54
32	47 ^s 02	27 ^s 63	44 ^s 36	18 ^s 79			49 ^s 83	2 ^s 32			62 ^s 54	4 ^s 73

Mean R.A. 10^h 59^m 52^s.649 Mean Dec. — 84° 11' 6".16 Sec δ 9^s.870 Tan δ — 9^s.819

APPARENT PLACES OF STARS, 1924. 267

AT UPPER TRANSIT AT GREENWICH.

ρ Octantis. Mag. 5.7

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	15 25	84 12	15 25	84 12	15 25	84 12	15 25	84 12	15 25	84 12	15 25	84 13
	s	"	s	"	s	"	s	"	s	"	s	"
1	23.33	34.00	30.76	32.01	37.96	34.86	44.32	42.02	48.21	51.31	49.23	1.50
2	23.57	33.83	31.03	32.06	38.19	35.06	44.47	42.29	48.29	51.61	49.22	1.81
3	23.81	33.68	31.28	32.13	38.40	35.26	44.62	42.55	48.37	51.91	49.22	2.13
4	24.06	33.56	31.53	32.19	38.61	35.45	44.78	42.81	48.46	52.22	49.21	2.46
5	24.31	33.46	31.76	32.24	38.81	35.63	44.95	43.06	48.54	52.55	49.19	2.79
6	24.54	33.37	31.99	32.30	39.02	35.80	45.11	43.32	48.63	52.87	49.15	3.13
7	24.76	33.29	32.21	32.35	39.23	35.97	45.28	43.60	48.72	53.21	49.10	3.47
8	24.97	33.20	32.44	32.38	39.45	36.14	45.45	43.89	48.79	53.55	49.04	3.80
9	25.18	33.10	32.69	32.41	39.67	36.31	45.62	44.19	48.86	53.92	48.97	4.12
10	25.38	33.00	32.94	32.45	39.90	36.49	45.79	44.49	48.92	54.29	48.89	4.42
11	25.59	32.89	33.19	32.49	40.13	36.68	45.95	44.81	48.95	54.65	48.82	4.70
12	25.80	32.77	33.45	32.55	40.37	36.88	46.10	45.14	48.98	55.01	48.75	4.97
13	26.02	32.66	33.71	32.62	40.61	37.10	46.23	45.48	49.00	55.35	48.69	5.24
14	26.25	32.55	33.98	32.70	40.84	37.33	46.35	45.82	49.02	55.68	48.65	5.50
15	26.49	32.45	34.25	32.80	41.06	37.57	46.47	46.15	49.04	55.99	48.61	5.78
16	26.74	32.36	34.51	32.92	41.27	37.83	46.57	46.46	49.08	56.29	48.57	6.07
17	27.00	32.29	34.77	33.05	41.47	38.10	46.68	46.76	49.12	56.59	48.53	6.37
18	27.26	32.23	35.02	33.19	41.66	38.36	46.80	47.05	49.18	56.91	48.48	6.69
19	27.52	32.18	35.25	33.33	41.84	38.61	46.93	47.33	49.23	57.23	48.41	7.01
20	27.77	32.15	35.48	33.46	42.01	38.84	47.07	47.62	49.28	57.57	48.32	7.32
21	28.01	32.14	35.70	33.59	42.19	39.05	47.22	47.93	49.33	57.94	48.21	7.61
22	28.26	32.13	35.92	33.71	42.39	39.27	47.37	48.26	49.37	58.31	48.10	7.89
23	28.49	32.13	36.15	33.81	42.59	39.49	47.51	48.59	49.38	58.67	47.98	8.15
24	28.71	32.12	36.39	33.92	42.81	39.73	47.64	48.95	49.37	59.03	47.86	8.40
25	28.93	32.09	36.64	34.03	43.03	39.97	47.76	49.31	49.36	59.38	47.75	8.63
26	29.15	32.05	36.91	34.16	43.26	40.23	47.85	49.67	49.33	59.71	47.64	8.86
27	29.39	32.01	37.18	34.30	43.47	40.51	47.93	50.03	49.31	60.03	47.54	9.08
28	29.65	31.98	37.45	34.46	43.67	40.82	48.01	50.37	49.28	60.33	47.44	9.31
29	29.92	31.95	37.71	34.65	43.85	41.13	48.07	50.70	49.26	60.61	47.35	9.55
30	30.20	31.95	37.96	34.86	44.02	41.43	48.14	51.01	49.25	60.90	47.26	9.80
31	30.48	31.97			44.18	41.73	48.21	51.31	49.24	61.20	47.16	10.04
32	30.76	32.01			44.32	42.02			49.23	61.50		

Mean R.A. $15^h 25^m 30^s.492$ Mean Dec. $- 84^\circ 12' 57''.78$ Sec δ 9.923 Tan δ $- 9.872$

268 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

ρ Octantis. Mag. 5.7

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	15 25	84 13	15 25	84 13	15 25	84 13	15 25	84 13	15 25	84 12	15 25	84 12
1	47.16	10.04	42.34	15.42	36.15	15.68	30.96	10.85	28.47	62.34	29.89	53.23
2	47.05	10.29	42.13	15.53	35.94	15.57	30.84	10.59	28.48	62.06	29.99	52.98
3	46.93	10.55	41.92	15.63	35.74	15.44	30.74	10.35	28.47	61.78	30.08	52.71
4	46.81	10.81	41.70	15.70	35.56	15.32	30.64	10.12	28.45	61.51	30.18	52.43
5	46.66	11.07	41.49	15.76	35.40	15.19	30.54	9.91	28.42	61.22	30.28	52.15
6	46.51	11.30	41.29	15.79	35.24	15.08	30.44	9.70	28.39	60.92	30.40	51.87
7	46.35	11.52	41.09	15.81	35.08	14.98	30.32	9.49	28.36	60.61	30.53	51.59
8	46.19	11.71	40.92	15.85	34.92	14.89	30.19	9.27	28.35	60.27	30.68	51.31
9	46.03	11.89	40.76	15.89	34.74	14.82	30.05	9.02	28.35	59.93	30.84	51.04
10	45.88	12.05	40.59	15.95	34.54	14.74	29.91	8.76	28.37	59.60	31.00	50.79
11	45.75	12.22	40.43	16.01	34.33	14.64	29.77	8.49	28.40	59.26	31.17	50.55
12	45.63	12.40	40.25	16.09	34.13	14.52	29.65	8.21	28.43	58.94	31.33	50.34
13	45.51	12.59	40.06	16.16	33.93	14.38	29.55	7.91	28.47	58.62	31.48	50.13
14	45.40	12.80	39.85	16.23	33.73	14.21	29.45	7.60	28.52	58.31	31.64	49.93
15	45.28	13.01	39.63	16.27	33.53	14.03	29.37	7.29	{ ^{28 38} _{28 83} }	{ ^{58 07} _{57 74} }	31.79	49.73
16	45.14	13.23	39.41	16.28	33.36	13.84	29.29	6.99	28.67	57.47	31.94	49.52
17	44.98	13.44	39.19	16.27	33.18	13.65	29.23	6.71	28.72	57.20	32.08	49.31
18	44.81	13.64	38.97	16.25	33.02	13.45	29.17	6.43	28.76	56.92	32.22	49.09
19	44.63	13.81	38.76	16.22	32.87	13.26	29.10	6.17	28.80	56.63	32.37	48.87
20	44.44	13.97	38.56	16.18	32.72	13.08	29.03	5.90	28.83	56.33	32.54	48.64
21	44.25	14.11	38.37	16.14	32.57	12.91	28.96	5.64	28.88	56.03	32.72	48.41
22	44.06	14.23	38.17	16.10	32.42	12.74	28.89	5.38	28.93	55.72	32.92	48.19
23	43.88	14.35	37.99	16.07	32.26	12.57	28.81	5.10	29.00	55.40	33.14	47.99
24	43.71	14.45	37.81	16.03	32.09	12.40	28.73	4.83	29.09	55.08	33.37	47.82
25	43.55	14.55	37.62	16.00	31.93	12.23	28.65	4.53	29.20	54.76	33.59	47.66
26	43.39	14.66	37.43	15.98	31.76	12.04	28.58	4.21	29.32	54.46	33.81	47.51
27	43.23	14.78	37.23	15.96	31.58	11.84	28.52	3.88	29.45	54.19	34.02	47.38
28	43.07	14.91	37.02	15.93	31.41	11.62	28.48	3.54	29.58	53.94	34.22	47.26
29	42.91	15.04	36.82	15.89	31.24	11.37	28.46	3.21	29.70	53.70	34.40	47.12
30	42.73	15.17	36.60	15.84	31.09	11.11	28.46	2.90	29.80	53.47	34.57	46.98
31	42.54	15.30	36.37	15.77	30.96	10.85	28.46	2.61	29.89	53.23	34.75	46.83
32	42.34	15.42	36.15	15.68			28.47	2.34			34.94	46.66

Mean R.A. 15^h 25^m 30^s.492 Mean Dec. — 84° 12' 57".78 Sec δ 9.923 Tan δ — 9.872

APPARENT PLACES OF STARS, 1924. 269

AT UPPER TRANSIT AT GREENWICH.

σ Octantis. Mag. 5.5

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	19 36	89 12	19 36	89 12	19 37	89 12	19 38	89 12	19 39	89 12	19 39	89 12
1	27.23	31.59	41.05	20.60	15.87	12.42	7.10	7.34	0.08	6.62	48.21	10.30
2	27.10	31.22	42.13	20.27	17.47	12.22	8.73	7.26	1.66	6.66	49.56	10.47
3	27.09	30.84	43.20	19.96	19.00	12.02	10.36	7.18	3.27	6.70	50.93	10.65
4	27.22	30.46	44.22	19.67	20.48	11.84	11.99	7.08	4.92	6.74	52.33	10.84
5	27.45	30.10	45.19	19.39	21.90	11.65	13.65	6.99	6.60	6.79	53.73	11.04
6	27.75	29.74	46.11	19.11	23.29	11.44	15.35	6.89	8.33	6.84	55.11	11.27
7	28.06	29.41	46.99	18.83	24.67	11.22	17.09	6.80	10.10	6.90	56.43	11.51
8	28.35	29.08	47.87	18.53	26.09	11.00	18.88	6.71	11.89	6.97	57.68	11.75
9	28.59	28.76	48.77	18.23	27.55	10.79	20.73	6.63	13.68	7.06	58.84	12.00
10	28.78	28.44	49.70	17.91	29.07	10.57	22.63	6.56	15.44	7.17	59.91	12.25
11	28.93	28.13	50.70	17.59	30.64	10.36	24.55	6.51	17.15	7.29	60.91	12.48
12	29.06	27.80	51.76	17.27	32.27	10.15	26.47	6.47	18.80	7.42	61.88	12.70
13	{29 21}	{27 46}	52.89	16.96	33.96	9.94	28.36	6.45	20.36	7.55	62.88	12.91
14	29.61	26.73	54.10	16.65	35.70	9.75	30.22	6.44	21.85	7.68	63.94	13.12
15	29.91	26.37	55.37	16.35	37.48	9.57	32.00	6.44	23.29	7.79	65.07	13.32
16	30.30	26.01	56.70	16.06	39.27	9.42	33.71	6.44	24.73	7.90	66.25	13.52
17	30.77	25.64	58.06	15.79	41.05	9.28	35.36	6.43	26.21	7.99	67.48	13.73
18	31.30	25.28	59.43	15.53	42.75	9.15	36.99	6.40	27.77	8.09	68.71	13.97
19	31.91	24.93	60.76	15.29	44.39	9.02	38.64	6.37	29.41	8.18	69.88	14.23
20	32.58	24.59	62.04	15.05	45.96	8.88	40.37	6.33	31.12	8.29	70.94	14.52
21	33.28	24.27	63.26	14.81	47.50	8.73	42.18	6.29	32.85	8.41	71.91	14.82
22	33.97	23.95	64.44	14.57	49.06	8.57	44.08	6.25	34.56	8.55	72.78	15.11
23	34.63	23.64	65.61	14.31	50.67	8.41	46.03	6.24	36.20	8.72	73.55	15.40
24	35.23	23.34	66.82	14.03	52.36	8.24	48.00	6.25	37.75	8.90	74.26	15.68
25	35.78	23.04	68.11	13.75	54.15	8.07	49.94	6.28	39.20	9.10	74.95	15.95
26	36.31	22.72	69.50	13.46	56.03	7.91	51.81	6.33	40.55	9.29	75.64	16.20
27	36.86	22.38	71.00	13.17	57.96	7.77	53.60	6.39	41.84	9.47	76.34	16.45
28	37.48	22.03	72.60	12.90	59.90	7.65	55.29	6.45	43.10	9.64	77.05	16.70
29	38.21	21.67	74.23	12.65	61.81	7.56	56.92	6.51	44.35	9.82	77.80	16.95
30	39.05	21.30	75.87	12.42	63.65	7.48	58.51	6.57	45.60	9.99	78.57	17.21
31	40.01	20.94			65.41	7.41	60.08	6.62	46.89	10.14	79.36	17.48
32	41.05	20.60			67.10	7.34			48.21	10.30		

Mean R.A. 19^h 38^m 33^s.176 Mean Dec. — 89° 12' 33".10 Sec. δ 72.455 Tan δ — 72.448

270 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

σ Octantis. Mag. 5.5

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	19 40	89 12	19 40	89 12	19 39	89 12	19 38	89 12	19 38	89 12	19 37	89 12
	^s		^s		^s		^s		^s		^s	
1	19:36	17:48	28:01	26:94	69:56	35:75	91:43	40:80	44:97	40:52	68:98	34:97
2	20:14	17:76	27:84	27:28	68:40	35:98	89:93	40:86	43:74	40:41	68:15	34:74
3	20:91	18:06	27:57	27:61	67:23	36:19	88:51	40:90	42:48	40:31	67:26	34:51
4	21:64	18:38	27:21	27:94	66:12	36:39	87:17	40:95	41:17	40:22	66:31	34:27
5	22:28	18:70	26:78	28:25	65:08	36:58	85:87	41:01	39:79	40:14	65:33	34:01
6	22:84	19:03	26:32	28:55	64:10	36:76	84:57	41:07	38:33	40:04	64:37	33:73
7	23:29	19:35	25:87	28:82	63:17	36:96	83:21	41:14	36:81	39:93	63:45	33:44
8	23:65	19:66	25:47	29:09	62:25	37:17	81:78	41:22	35:28	39:80	62:60	33:14
9	23:97	19:96	25:14	29:35	61:30	37:40	80:25	41:30	33:76	39:65	61:83	32:82
10	24:27	20:25	24:87	29:62	60:26	37:63	78:64	41:37	32:28	39:48	61:14	32:50
11	24:61	20:52	24:64	29:90	59:13	37:86	76:97	41:42	30:86	39:30	60:52	32:18
12	25:02	20:78	24:39	30:20	57:89	38:08	75:28	41:45	29:51	39:11	59:97	31:87
13	25:49	21:04	24:07	30:51	56:57	38:29	73:60	41:46	28:23	38:91	59:48	31:57
14	26:03	21:32	23:66	30:83	55:20	38:48	71:96	41:45	27:00	38:72	59:02	31:27
15	26:57	21:61	23:13	31:16	53:80	38:66	70:36	41:44	25:83	38:54	58:58	30:98
16	27:08	21:93	22:50	31:48	52:39	38:81	68:81	41:42	24:70	38:35	58:12	30:70
17	27:50	22:25	21:79	31:79	51:01	38:96	67:31	41:38	23:58	38:17	57:65	30:43
18	27:80	22:59	21:02	32:07	49:66	39:10	65:85	41:35	22:47	37:99	57:14	30:15
19	27:99	22:93	20:22	32:34	48:34	39:24	64:42	41:32	21:34	37:82	56:58	29:85
20	28:09	23:27	19:42	32:60	47:06	39:38	62:99	41:31	20:16	37:65	56:01	29:54
21	28:11	23:59	18:64	32:85	45:79	39:52	61:57	41:30	18:92	37:47	55:47	29:21
22	28:08	23:90	17:89	33:09	44:54	39:65	60:14	41:29	17:65	37:27	55:00	28:86
23	28:03	24:20	17:15	33:34	43:29	39:80	58:65	41:29	16:39	37:05	54:64	28:49
24	27:99	24:49	16:44	33:60	42:01	39:96	57:10	41:27	15:16	36:80	54:41	28:12
25	27:97	24:78	15:73	33:85	40:67	40:12	55:49	41:24	14:00	36:53	54:31	27:76
26	27:97	25:07	15:02	34:11	39:27	40:28	53:84	41:19	12:96	36:25	54:31	27:41
27	27:99	25:36	14:29	34:38	37:79	40:43	52:18	41:11	12:03	35:97	54:35	27:07
28	28:02	25:65	13:51	34:67	36:22	40:55	50:55	41:01	11:21	35:70	54:38	26:76
29	28:06	25:95	12:66	34:95	34:61	40:65	49:02	40:90	10:46	35:44	54:37	26:45
30	28:09	26:27	11:72	35:23	33:01	40:74	47:58	40:77	9:74	35:20	54:30	26:16
31	28:09	26:60	10:68	35:50	31:43	40:80	46:23	40:64	8:98	34:97	54:17	25:85
32	28:01	26:94	9:56	35:75			44:97	40:52			53:99	25:52

APPARENT PLACES OF STARS, 1924. 271

AT UPPER TRANSIT AT GREENWICH.

44 G Octantis. Mag. 6.3

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	19 41	81 32	19 41	81 32	19 41	81 32	19 42	81 32	19 42	81 32	19 42	81 32
	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s	^s
1	54.09	36.36	55.54	25.97	58.92	18.04	3.84	12.83	9.00	11.70	13.81	14.75
2	54.08	36.01	55.65	25.66	59.07	17.84	4.00	12.74	9.15	11.72	13.95	14.90
3	54.09	35.65	55.76	25.38	59.21	17.64	4.16	12.65	9.31	11.74	14.09	15.05
4	54.12	35.29	55.86	25.10	59.36	17.46	4.31	12.56	9.47	11.76	14.23	15.22
5	54.15	34.95	55.95	24.83	59.50	17.27	4.46	12.46	9.64	11.79	14.37	15.40
6	54.19	34.62	56.04	24.56	59.63	17.07	4.63	12.35	9.82	11.82	14.51	15.59
7	54.22	34.31	56.13	24.29	59.76	16.86	4.80	12.24	10.00	11.86	14.65	15.81
8	54.25	34.01	56.21	24.00	59.89	16.64	4.97	12.14	10.18	11.91	14.78	16.04
9	54.27	33.71	56.29	23.71	60.03	16.41	5.16	12.05	10.36	11.98	14.89	16.26
10	54.30	33.41	56.38	23.41	60.17	16.19	5.34	11.97	10.53	12.07	14.99	16.49
11	54.32	33.12	56.48	23.10	60.32	15.98	5.53	11.89	10.70	12.17	15.09	16.70
12	54.33	32.82	56.58	22.79	60.47	15.76	5.72	11.84	10.86	12.29	15.19	16.90
13	54.34	32.49	56.69	22.49	60.64	15.55	5.91	11.82	11.01	12.40	15.30	17.09
14	{ 54.35 } { 32.38 }	{ 32.16 } { 32.81 }	56.81	22.19	60.81	15.36	6.08	11.80	11.16	12.51	15.41	17.26
15	54.41	31.47	56.93	21.90	60.98	15.18	6.25	11.78	11.30	12.60	15.53	17.44
16	54.45	31.12	57.06	21.61	61.16	15.02	6.42	11.77	11.44	12.69	15.66	17.62
17	54.50	30.78	57.20	21.35	61.34	14.88	6.57	11.74	11.59	12.76	15.79	17.82
18	54.56	30.43	57.33	21.10	61.50	14.75	6.74	11.71	11.74	12.83	15.92	18.04
19	54.62	30.10	57.46	20.86	61.65	14.62	6.90	11.66	11.91	12.90	16.04	18.28
20	54.70	29.78	57.58	20.62	61.80	14.47	7.07	11.60	12.09	12.98	16.15	18.54
21	54.78	29.47	57.70	20.39	61.95	14.32	7.24	11.54	12.27	13.09	16.25	18.80
22	54.85	29.18	57.81	20.15	62.09	14.16	7.44	11.49	12.44	13.21	16.34	19.07
23	54.91	28.89	57.92	19.90	62.25	13.98	7.63	11.46	12.60	13.36	16.42	19.34
24	54.96	28.61	58.04	19.63	62.41	13.80	7.82	11.45	12.76	13.52	16.49	19.59
25	55.02	28.32	58.16	19.35	62.59	13.62	8.02	11.46	12.91	13.69	16.56	19.84
26	55.07	28.01	58.29	19.06	62.77	13.45	8.20	11.49	13.04	13.86	16.63	20.07
27	55.12	27.69	58.43	18.78	62.96	13.31	8.37	11.54	13.16	14.02	16.71	20.30
28	55.18	27.35	58.59	18.51	63.15	13.18	8.54	11.59	13.28	14.18	16.79	20.53
29	55.25	26.99	58.76	18.26	63.34	13.08	8.70	11.63	13.41	14.32	16.87	20.76
30	55.34	26.64	58.92	18.04	63.52	12.99	8.85	11.67	13.54	14.46	16.95	21.00
31	55.44	26.30			63.68	12.91	9.00	11.70	13.67	14.60	17.03	21.25
32	55.54	25.97			63.84	12.83			13.81	14.75		

Mean R.A. 19^h 42^m 6^s.292 Mean Dec. — 81° 32' 37".25 Sec δ 6.800 Tan δ — 6.726

272 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

44 G Octantis. Mag. 6.3

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	19 42	81 32	19 42	81 32	19 42	81 32	19 42	81 32	19 42	81 32	19 42	81 32
1	17·03	21·25	18·14	30·08	16·60	38·50	13·19	43·52	9·01	43·58	5·83	38·66
2	17·12	21·51	18·13	30·40	16·49	38·73	13·05	43·57	8·91	43·49	5·76	38·45
3	17·20	21·79	18·11	30·72	16·39	38·94	12·92	43·62	8·80	43·42	5·69	38·25
4	17·28	22·08	18·08	31·04	16·29	39·12	12·81	43·67	8·69	43·34	5·60	38·03
5	17·36	22·38	18·04	31·34	16·20	39·30	12·70	43·73	8·56	43·26	5·51	37·79
6	17·42	22·69	18·00	31·62	16·13	39·47	12·59	43·80	8·42	43·18	5·42	37·54
7	17·46	22·99	17·97	31·87	16·05	39·66	12·47	43·89	8·28	43·10	5·33	37·27
8	17·50	23·28	17·94	32·12	15·97	39·87	12·34	43·98	8·14	42·99	5·26	36·99
9	17·54	23·55	17·92	32·36	15·89	40·09	12·20	44·07	8·00	42·86	5·20	36·70
10	17·58	23·81	17·91	32·62	15·80	40·32	12·05	44·15	7·87	42·71	5·14	36·40
11	17·62	24·05	17·90	32·88	15·70	40·55	11·89	44·21	7·74	42·55	5·08	36·11
12	17·67	24·29	17·88	33·16	15·59	40·77	11·74	44·25	7·62	42·38	5·04	35·83
13	17·73	24·54	17·86	33·46	15·46	40·98	11·58	44·26	7·50	42·21	5·01	35·54
14	17·79	24·79	17·83	33·77	15·33	41·17	11·43	44·27	7·40	42·03	4·97	35·27
15	17·86	25·07	17·79	34·09	15·20	41·35	11·28	44·27	7·30	41·86	4·94	35·01
16	17·92	25·37	17·73	34·39	15·08	41·50	11·14	44·26	7·20	41·70	4·91	34·75
17	17·97	25·68	17·67	34·68	14·96	41·65	11·01	44·24	7·10	41·54	4·87	34·50
18	18·01	25·99	17·60	34·95	14·84	41·78	10·88	44·22	7·00	41·39	4·82	34·24
19	18·03	26·31	17·53	35·21	14·72	41·92	10·75	44·20	6·90	41·24	4·77	33·97
20	18·05	26·62	17·46	35·46	14·60	42·06	10·64	44·20	6·80	41·09	4·72	33·68
21	18·05	26·93	17·39	35·70	14·49	42·20	10·51	44·20	6·69	40·93	4·67	33·37
22	18·05	27·23	17·33	35·94	14·39	42·33	10·38	44·21	6·57	40·76	4·64	33·04
23	18·06	27·51	17·27	36·18	14·28	42·48	10·25	44·21	6·45	40·56	4·61	32·70
24	18·07	27·78	17·21	36·42	14·16	42·65	10·10	44·20	6·34	40·33	4·60	32·36
25	18·07	28·04	17·15	36·66	14·04	42·81	9·95	44·19	6·24	40·08	4·60	32·02
26	18·08	28·32	17·09	36·91	13·91	42·97	9·80	44·15	6·15	39·83	4·61	31·69
27	18·09	28·59	17·04	37·17	13·77	43·12	9·64	44·09	6·07	39·57	4·63	31·38
28	18·10	28·86	16·97	37·45	13·62	43·24	9·50	44·01	6·00	39·33	4·64	31·09
29	18·11	29·14	16·89	37·72	13·47	43·35	9·36	43·91	5·95	39·09	4·65	30·81
30	18·13	29·44	16·80	37·99	13·33	43·45	9·24	43·80	5·89	38·87	4·65	30·54
31	18·14	29·76	16·71	38·26	13·19	43·52	9·12	43·68	5·83	38·66	4·64	30·26
32	18·14	30·08	16·60	38·50			9·01	43·58			4·62	29·96

Mean R.A. 19^h 42^m 6^s.292 Mean Dec. — 81° 32' 37".25 Sec δ 6.800 Tan δ — 6.726

APPARENT PLACES OF STARS, 1924. 273

AT UPPER TRANSIT AT GREENWICH.

48 G Octantis. Mag. 7.1

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	20 24	84 40	20 24	84 39	20 24	84 39	20 24	84 39	20 24	84 39	20 24	84 39
1	25.05	12.54	25.70	61.60	29.74	52.33	36.64	45.22	44.45	42.17	52.25	43.53
2	24.99	12.19	25.81	61.24	29.95	52.06	36.87	45.07	44.69	42.14	52.49	43.62
3	24.95	11.83	25.93	60.89	30.15	51.81	37.09	44.91	44.94	42.10	52.73	43.73
4	24.92	11.47	26.05	60.57	30.34	51.56	37.32	44.76	45.20	42.06	52.97	43.85
5	24.91	11.11	26.16	60.26	30.52	51.32	37.55	44.59	45.45	42.03	53.21	43.99
6	24.91	10.77	26.25	59.96	30.69	51.07	37.78	44.42	45.72	41.99	53.45	44.14
7	24.92	10.44	26.34	59.66	30.86	50.81	38.03	44.26	46.00	41.97	53.69	44.32
8	24.93	10.13	26.42	59.35	31.04	50.54	38.29	44.09	46.28	41.97	53.92	44.50
9	24.92	9.83	26.51	59.02	31.23	50.26	38.56	43.93	46.57	41.98	54.13	44.68
10	24.91	9.53	26.61	58.67	31.43	49.98	38.83	43.78	46.85	42.00	54.32	44.87
11	24.88	9.22	26.71	58.33	31.63	49.70	39.11	43.65	47.12	42.05	54.50	45.05
12	24.86	8.90	26.82	57.98	31.84	49.43	39.40	43.54	47.39	42.11	54.68	45.21
13	24.84	8.57	26.95	57.62	32.06	49.16	39.68	43.44	47.64	42.16	54.87	45.37
14	24.81	8.23	27.09	57.27	32.30	48.90	39.96	43.35	47.88	42.21	55.06	45.50
15	24.80	7.88	27.24	56.93	32.55	48.66	40.22	43.27	48.11	42.26	55.26	45.64
16	24.80	7.52	27.40	56.61	32.79	48.44	40.48	43.19	48.35	42.29	55.48	45.78
17	24.81	7.16	27.57	56.29	33.03	48.23	40.72	43.10	48.58	42.31	55.70	45.95
18	24.84	6.79	27.73	55.99	33.27	48.03	40.96	43.00	48.84	42.32	55.93	46.13
19	24.87	6.43	27.90	55.70	33.49	47.83	41.19	42.89	49.10	42.34	56.15	46.33
20	24.91	6.07	28.05	55.42	33.70	47.63	41.45	42.77	49.38	42.36	56.36	46.55
21	24.96	5.72	28.20	55.14	33.91	47.42	41.71	42.65	49.66	42.40	56.55	46.78
22	25.03	5.39	28.34	54.85	34.11	47.19	42.00	42.53	49.94	42.47	56.72	47.03
23	25.10	5.07	28.47	54.55	34.32	46.96	42.30	42.43	50.22	42.56	56.88	47.27
24	{ ²⁵ / ₂₆ }	{ ⁴ / ₄₄ }	28.60	54.24	34.55	46.71	42.59	42.35	50.48	42.67	57.02	47.49
25	25.24	4.12	28.75	53.91	34.80	46.47	42.89	42.30	50.73	42.79	57.16	47.71
26	25.27	3.79	28.92	53.58	35.06	46.23	43.18	42.27	50.96	42.91	57.31	47.92
27	25.30	3.45	29.11	53.24	35.33	46.02	43.46	42.25	51.18	43.03	57.45	48.13
28	25.35	3.11	29.32	52.92	35.60	45.83	43.73	42.24	51.39	43.14	57.60	48.34
29	25.41	2.74	29.53	52.62	35.88	45.66	43.97	42.23	51.60	43.25	57.76	48.54
30	25.49	2.36	29.74	52.33	36.15	45.51	44.21	42.20	51.81	43.35	57.92	48.76
31	25.59	1.98			36.40	45.36	44.45	42.17	52.03	43.44	58.08	48.98
32	25.70	1.60			36.64	45.22			52.25	43.53		

Mean R.A. 20^h 24^m 43^s.962 Mean Dec. — 84° 40' 8".67 Sec δ 10.763 Tan δ — 10.717

274 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

48 G Octantis. Mag. 7.1

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	°	h m	°	h m	°	h m	°	h m	°	h m	°
	20 24	84 39	20 24	84 39	20 24	84 40	20 24	84 40	20 24	84 40	20 24	84 40
	^s		^s		^s		^s		^s		^s	
1	58.08	48.98	60.90	57.57	59.60	6.74	54.89	13.16	48.27	14.91	42.46	11.26
2	58.25	49.22	60.93	57.90	59.47	7.01	54.68	13.27	48.08	14.86	42.31	11.08
3	58.41	49.46	60.94	58.25	59.33	7.26	54.49	13.37	47.89	14.83	42.15	10.90
4	58.57	49.73	60.94	58.58	59.19	7.49	54.31	13.46	47.69	14.80	41.98	10.71
5	58.71	50.01	60.92	58.89	59.07	7.71	54.14	13.57	47.48	14.79	41.80	10.51
6	58.84	50.30	60.89	59.18	58.97	7.93	53.97	13.70	47.26	14.77	41.62	10.29
7	58.96	50.59	60.87	59.46	58.88	8.15	53.79	13.84	47.03	14.73	41.46	10.05
8	59.07	50.87	60.86	59.72	58.78	8.39	53.60	13.98	46.80	14.67	41.30	9.80
9	59.16	51.14	60.85	59.99	58.68	8.65	53.39	14.13	46.55	14.59	41.14	9.54
10	59.25	51.39	60.86	60.26	58.56	8.91	53.16	14.26	46.32	14.49	41.01	9.28
11	59.34	51.64	60.88	60.53	58.43	9.18	52.93	14.38	46.09	14.38	40.89	9.00
12	59.45	51.87	60.90	60.82	58.29	9.44	52.69	14.48	45.88	14.26	40.78	8.73
13	59.57	52.10	60.90	61.13	58.12	9.70	52.45	14.57	45.68	14.13	40.68	8.47
14	59.70	52.33	60.89	61.46	57.95	9.95	52.21	14.63	45.48	14.00	40.58	8.22
15	59.83	52.58	60.87	61.79	57.77	10.18	51.99	14.68	45.29	13.87	40.48	7.97
16	59.96	52.86	60.82	62.12	57.60	10.39	51.76	14.73	45.11	13.74	40.38	7.72
17	60.08	53.16	60.76	62.44	57.42	10.58	51.54	14.76	44.93	13.62	40.27	7.48
18	60.18	53.47	60.69	62.74	57.25	10.77	51.33	14.80	44.75	13.51	40.16	7.23
19	60.26	53.78	60.61	63.03	57.08	10.95	51.13	14.84	44.56	13.40	40.04	6.98
20	60.32	54.09	60.53	63.32	56.92	11.13	50.93	14.88	44.37	13.30	39.92	6.72
21	60.37	54.40	60.46	63.59	56.76	11.31	50.73	14.93	44.17	13.18	39.80	6.43
22	60.42	54.70	60.39	63.86	56.61	11.51	50.52	14.98	43.96	13.04	39.68	6.12
23	60.45	54.99	60.32	64.12	56.46	11.71	50.31	15.03	43.75	12.89	39.59	5.79
24	60.49	55.26	60.26	64.39	56.30	11.92	50.09	15.09	43.54	12.72	39.52	5.44
25	60.54	55.53	60.21	64.66	56.13	12.12	49.85	15.13	43.34	12.52	39.47	5.10
26	60.58	55.80	60.15	64.94	55.95	12.33	49.60	15.16	43.16	12.30	39.43	4.77
27	60.63	56.08	60.09	65.23	55.75	12.53	49.35	15.16	42.99	12.08	39.40	4.46
28	60.69	56.35	60.02	65.54	55.54	12.72	49.11	15.14	42.85	11.85	39.38	4.16
29	60.75	56.64	59.94	65.85	55.32	12.89	48.87	15.09	42.71	11.64	39.34	3.88
30	60.80	56.94	59.84	66.15	55.10	13.04	48.65	15.03	42.59	11.44	39.28	3.61
31	60.85	57.24	59.72	66.45	54.89	13.16	48.45	14.97	42.46	11.26	39.22	3.32
32	60.90	57.57	59.60	66.74			48.27	14.91			39.15	3.02

Mean R.A. 20^h 24^m 43^s.962 Mean Dec. — 84° 40' 8".67 Sec δ 10.763 Tan δ — 10.717

APPARENT PLACES OF STARS, 1924. 275

AT UPPER TRANSIT AT GREENWICH.

v Octantis. Mag. 5.7

Day.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	86° 21'	h m	86° 21'	h m	86° 21'	h m	86° 20'	h m	86° 20'	h m	86° 20'
1	11.70	35.83	6.85	26.22	7.26	15.09	12.57	64.37	21.17	56.69	31.99	53.01
2	11.43	35.57	6.80	25.83	7.40	14.72	12.80	64.09	21.47	56.51	32.34	52.95
3	11.19	35.29	6.78	25.46	7.53	14.37	13.01	63.80	21.77	56.31	32.70	52.90
4	10.97	34.99	6.76	25.10	7.65	14.02	13.23	63.51	22.08	56.12	33.08	52.86
5	10.77	34.69	6.74	24.75	7.76	13.68	13.44	63.21	22.40	55.92	33.46	52.82
6	10.59	34.39	6.71	24.41	7.85	13.34	13.66	62.91	22.74	55.73	33.85	52.81
7	10.42	34.10	6.68	24.08	7.94	13.00	13.90	62.61	23.09	55.54	34.24	52.81
8	10.26	33.83	6.63	23.74	8.04	12.64	14.15	62.30	23.44	55.36	34.63	52.84
9	10.09	33.56	6.58	23.40	8.13	12.29	14.42	61.98	23.82	55.19	34.99	52.89
10	9.91	33.31	6.53	23.06	8.24	11.92	14.70	61.68	24.21	55.04	35.34	52.93
11	9.72	33.05	6.47	22.69	8.36	11.53	14.99	61.39	24.59	54.91	35.68	52.97
12	9.52	32.79	6.42	22.31	8.51	11.15	15.30	61.10	24.95	54.79	35.99	53.00
13	9.32	32.52	6.39	21.92	8.66	10.77	15.62	60.84	25.31	54.68	36.30	53.02
14	9.12	32.23	6.37	21.53	8.83	10.40	15.93	60.59	25.65	54.57	36.63	53.03
15	8.92	31.92	6.38	21.14	9.02	10.04	16.24	60.35	25.97	54.46	36.97	53.02
16	8.73	31.60	6.40	20.75	9.22	9.67	16.53	60.12	26.29	54.33	37.33	53.01
17	8.55	31.28	6.43	20.35	9.43	9.33	16.80	59.88	26.61	54.20	37.69	53.02
18	8.39	30.95	6.48	19.98	9.64	9.00	17.07	59.64	26.95	54.06	38.07	53.06
19	8.24	30.62	6.54	19.62	9.83	8.68	17.33	59.39	27.30	53.91	38.45	53.11
20	8.12	30.28	6.60	19.26	10.00	8.37	17.59	59.12	27.67	53.77	38.83	53.18
21	8.02	29.93	{ 6.66 6.70 }	{ 18.91 18.97 }	10.16	8.05	17.87	58.85	28.06	53.64	39.19	53.28
22	7.92	29.60	6.73	18.22	10.31	7.72	18.18	58.57	28.46	53.53	39.54	53.38
23	7.82	29.28	6.75	17.87	10.47	7.37	18.51	58.31	28.86	53.44	39.86	53.48
24	7.73	28.97	6.77	17.49	10.64	7.02	18.86	58.05	29.25	53.37	40.16	53.59
25	7.63	28.67	6.80	17.10	10.84	6.66	19.21	57.81	29.63	53.32	40.46	53.70
26	7.51	28.36	6.85	16.69	11.06	6.29	19.57	57.59	29.99	53.29	40.76	53.80
27	7.39	28.05	6.93	16.28	11.30	5.93	19.92	57.40	30.33	53.25	41.06	53.90
28	7.25	27.72	7.02	15.87	11.56	5.58	20.25	57.22	30.67	53.20	41.36	54.00
29	7.12	27.36	7.13	15.47	11.82	5.25	20.57	57.05	31.00	53.15	41.66	54.09
30	7.00	26.99	7.26	15.09	12.08	4.94	20.87	56.87	31.32	53.11	41.97	54.17
31	6.91	26.61			12.33	4.65	21.17	56.69	31.65	53.07	42.29	54.27
32	6.85	26.22			12.57	4.37			31.99	53.01		

Mean R.A. 22^h 17^m 34^s.083 Mean Dec. — 86° 21' 20".28 Sec δ 15.732 Tan δ — 15.701

276 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

v Octantis. Mag. 5.7

Day.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m	° ' "	h m	° ' "	h m	° ' "	h m	° ' "	h m	° ' "	h m	° ' "
	22 17	86 20	22 17	86 21	22 17	86 21	22 17	86 21	22 17	86 21	22 17	86 21
	s	"	s	"	s	"	s	"	s	"	s	"
1	42.29	54.27	50.27	0.28	53.20	9.39	50.29	18.26	42.49	24.26	32.95	24.93
2	42.63	54.38	50.47	0.57	53.16	9.72	50.07	18.49	42.22	24.34	32.66	24.88
3	42.97	54.51	50.66	0.86	53.11	10.03	49.87	18.71	41.96	24.44	32.36	24.83
4	43.30	54.66	50.82	1.15	53.06	10.33	49.69	18.93	41.69	24.55	32.05	24.78
5	43.63	54.82	50.97	1.43	53.02	10.61	49.52	19.15	41.40	24.67	31.72	24.72
6	43.95	54.98	51.09	1.72	52.99	10.88	49.35	19.38	41.10	24.79	31.38	24.64
7	44.25	55.16	51.20	1.99	52.97	11.15	49.18	19.62	40.77	24.90	31.03	24.54
8	44.52	55.35	51.32	2.25	52.96	11.43	49.01	19.88	40.42	25.01	30.69	24.42
9	44.78	55.53	51.45	2.49	52.95	11.73	48.81	20.15	40.07	25.10	30.35	24.29
10	45.02	55.70	51.60	2.73	52.93	12.05	48.58	20.41	39.71	25.17	30.03	24.14
11	45.27	55.86	51.75	2.97	52.90	12.38	48.34	20.67	39.36	25.22	29.72	23.99
12	45.52	56.01	51.91	3.22	52.85	12.71	48.08	20.91	39.02	25.25	29.43	23.83
13	45.78	56.15	52.07	3.50	52.77	13.04	47.80	21.14	38.68	25.28	29.16	23.67
14	46.06	56.29	52.23	3.80	52.67	13.37	47.53	21.35	38.36	25.30	28.90	23.51
15	46.36	56.45	52.35	4.12	52.55	13.69	47.25	21.55	38.05	25.33	28.64	23.37
16	46.67	56.62	52.46	4.44	52.43	13.99	46.98	21.73	37.74	25.35	28.38	23.23
17	46.98	56.81	52.55	4.76	52.30	14.29	46.72	21.91	37.44	25.36	28.11	23.09
18	47.26	57.03	52.61	5.09	52.18	14.58	46.47	22.09	37.14	25.38	27.84	22.95
19	47.52	57.26	52.65	5.40	52.05	14.85	46.23	22.26	36.84	25.41	27.55	22.81
20	47.76	57.50	52.70	5.70	51.92	15.11	45.98	22.44	36.54	25.44	27.25	22.65
21	47.98	57.74	52.74	5.99	51.81	15.38	45.74	22.62	36.21	25.47	26.94	22.47
22	48.19	57.98	52.78	6.27	51.70	15.65	45.50	22.80	35.86	25.49	26.63	22.27
23	48.39	58.21	52.83	6.55	51.60	15.94	45.25	23.00	35.51	25.49	26.34	22.04
24	48.58	58.43	52.88	6.84	51.49	16.23	44.98	23.20	35.14	25.47	26.07	21.79
25	48.77	58.65	52.94	7.13	51.37	16.53	44.68	23.39	34.77	25.43	25.83	21.53
26	48.97	58.86	53.00	7.42	51.24	16.83	44.37	23.57	34.43	25.36	25.60	21.28
27	49.17	59.07	53.06	7.73	51.09	17.14	44.05	23.73	34.11	25.28	25.40	21.04
28	49.39	59.29	53.13	8.04	50.92	17.45	43.72	23.87	33.80	25.18	25.19	20.80
29	49.61	59.52	53.18	8.37	50.72	17.74	43.39	23.99	33.51	25.08	24.99	20.58
30	49.84	59.76	53.21	8.71	50.51	18.01	43.07	24.09	33.23	25.00	24.78	20.36
31	50.06	60.01	53.22	9.05	50.29	18.26	42.77	24.18	32.95	24.93	24.56	20.15
32	50.27	60.28	53.20	9.39			42.49	24.26			24.32	19.93

Mean R.A. $22^h 17^m 34^s.083$ Mean Dec. $- 86^\circ 21' 20''.28$ Sec $\delta 15.732$ Tan $\delta - 15.701$

277 APPARENT PLACES OF STARS, 1924

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Andromedæ. Mag. 2.2		β Cassiopeiæ. Mag. 2.4		γ Pegasi. Mag. 2.9	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	h m 0 4	28° 40'	h m 0 5	58° 43'	h m 0 9	14° 45'
Jan. 0.2	27.012 ¹⁴⁹	20.72 ⁹⁷	6.959 ³²⁷	63.91 ⁷⁶	18.774 ¹²⁶	40.72 ⁸⁸
10.2	26.863 ¹⁴⁴	19.75 ¹²²	6.632 ³¹⁶	63.15 ¹²⁸	18.648 ¹²¹	39.84 ¹⁰⁰
20.2	26.719 ¹³²	18.53 ¹⁴⁴	6.316 ²⁹²	61.87 ¹⁷⁵	18.527 ¹¹²	38.84 ¹⁰⁷
30.1	26.587 ¹¹⁵	17.09 ¹⁵⁸	6.024 ²⁵⁶	60.12 ²¹⁵	18.415 ⁹⁷	37.77 ¹¹⁰
Feb. 9.1	26.472 ⁸⁹	15.51 ¹⁶⁸	5.768 ²⁰⁹	57.97 ²⁴⁶	18.318 ⁷⁶	36.67 ¹⁰⁸
19.1	26.383 ⁵⁹	13.83 ¹⁶⁹	5.559 ¹⁴⁸	55.51 ²⁶⁷	18.242 ⁵⁰	35.59 ¹⁰⁰
29.1	26.324 ²³	12.14 ¹⁶³	5.411 ⁸¹	52.84 ²⁷⁷	18.192 ¹⁹	34.59 ⁸⁸
Mar. 10.0	26.301 ¹⁹	10.51 ¹⁴⁹	5.330 ⁶	50.07 ²⁷⁶	18.173 ¹⁸	33.71 ⁷⁰
20.0	26.320 ⁶³	9.02 ¹²⁷	5.324 ⁷³	47.31 ²⁶⁴	18.191 ⁵⁷	33.01 ⁴⁷
30.0	26.383 ¹¹⁰	7.75 ¹⁰⁰	5.397 ¹⁵³	44.67 ²⁴⁰	18.248 ⁹⁹	32.54 ²⁰
Apr. 9.0	26.493 ¹⁵⁷	6.75 ⁶⁶	5.550 ²³⁰	42.27 ²⁰⁷	18.347 ¹⁴⁰	32.34 ¹⁰
18.9	26.650 ²⁰¹	6.09 ³¹	5.780 ³⁰²	40.20 ¹⁶⁸	18.487 ¹⁸²	32.44 ⁴¹
28.9	26.851 ²⁴¹	5.78 ⁹	6.082 ³⁶⁵	38.52 ¹²¹	18.669 ²²⁰	32.85 ⁷³
May 8.9	27.092 ²⁷⁶	5.87 ⁴⁸	6.447 ⁴¹⁷	37.31 ⁷⁰	18.889 ²⁵³	33.58 ¹⁰⁵
18.8	27.368 ³⁰⁴	6.35 ⁸⁷	6.864 ⁴⁵⁷	36.61 ¹⁹	19.142 ²⁸⁰	34.63 ¹³²
28.8	27.672 ³²³	7.22 ¹²³	7.321 ⁴⁸⁵	36.42 ³⁵	19.422 ²⁹⁹	35.95 ¹⁵⁷
June 7.8	27.995 ³³³	8.45 ¹⁵⁵	7.806 ⁴⁹⁸	36.77 ⁸⁸	19.721 ³¹⁰	37.52 ¹⁷⁹
17.8	28.328 ³³⁵	10.00 ¹⁸⁵	8.304 ⁴⁹⁶	37.65 ¹³⁶	20.031 ³¹⁴	39.31 ¹⁹⁵
27.7	28.663 ³²⁸	11.85 ²⁰⁸	8.800 ⁴⁸³	39.01 ¹⁸²	20.345 ³⁰⁹	41.26 ²⁰⁵
July 7.7	28.991 ³¹¹	13.93 ²²⁶	9.283 ⁴⁵⁷	40.83 ²²³	20.654 ²⁹⁵	43.31 ²¹¹
17.7	29.302 ²⁸⁸	16.19 ²³⁹	9.740 ⁴¹⁹	43.06 ²⁵⁷	20.949 ²⁷⁵	45.42 ²¹²
27.7	29.590 ²⁵⁸	18.58 ²⁴⁵	10.159 ³⁷³	45.63 ²⁸⁷	21.224 ²⁴⁸	47.54 ²⁰⁷
Aug. 6.6	29.848 ²²⁴	21.03 ²⁴⁷	10.532 ³²⁰	48.50 ³¹⁰	21.472 ²¹⁶	49.61 ¹⁹⁷
16.6	30.072 ¹⁸⁵	23.50 ²⁴³	10.852 ²⁶¹	51.60 ³²⁵	21.688 ¹⁸¹	51.58 ¹⁸⁴
26.6	30.257 ¹⁴⁴	25.93 ²³⁴	11.113 ¹⁹⁹	54.85 ³³⁵	21.869 ¹⁴³	53.42 ¹⁶⁷
Sept. 5.5	30.401 ¹⁰³	28.27 ²²⁰	11.312 ¹³⁵	58.20 ³³⁷	22.012 ¹⁰⁴	55.09 ¹⁴⁷
15.5	30.504 ⁶²	30.47 ²⁰⁴	11.447 ⁷¹	61.57 ³³²	22.116 ⁶⁸	56.56 ¹²⁶
25.5	30.566 ²⁴	32.51 ¹⁸⁴	11.518 ⁸	64.89 ³²⁰	22.184 ³²	57.82 ¹⁰⁵
Oct. 5.5	30.590 ¹¹	34.35 ¹⁶⁰	11.526 ⁵¹	68.09 ³⁰²	22.216 ¹	58.87 ⁸¹
15.4	30.579 ⁴³	35.95 ¹³⁵	11.475 ¹⁰⁷	71.11 ²⁷⁸	22.215 ³⁰	59.68 ⁵⁹
25.4	30.536 ⁷¹	37.30 ¹⁰⁸	11.368 ¹⁵⁸	73.89 ²⁴⁶	22.185 ⁵⁶	60.27 ³⁶
Nov. 4.4	30.465 ⁹⁴	38.38 ⁷⁸	11.210 ²⁰⁵	76.35 ²¹⁰	22.129 ⁷⁷	60.63 ¹⁵
14.4	30.371 ¹¹³	39.16 ⁴⁸	11.005 ²⁴⁵	78.45 ¹⁶⁶	22.052 ⁹⁴	60.78 ⁶
24.3	30.258 ¹²⁹	39.64 ¹⁶	10.760 ²⁷⁹	80.11 ¹¹⁹	21.958 ¹⁰⁷	60.72 ²⁷
Dec. 4.3	30.129 ¹⁴¹	39.80 ¹⁶	10.481 ³⁰⁴	81.30 ⁶⁷	21.851 ¹¹⁷	60.45 ⁴⁵
14.3	29.988 ¹⁴⁷	39.64 ⁴⁷	10.177 ³²²	81.97 ¹³	21.734 ¹²³	60.00 ⁶³
24.2	29.841 ¹⁴⁹	39.17 ⁷⁸	9.855 ³²⁸	82.10 ⁴²	21.611 ¹²⁵	59.37 ⁷⁹
34.2	29.692	38.39	9.527	81.68	21.486	58.58
Mean Place	27.321	15.14	6.744	50.30	19.203	39.99
Sec δ , Tan δ	1.140	+0.547	1.927	+1.647	1.034	+0.263
L α , L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α , ω δ	-0.04	0.0	-0.11	0.0	-0.02	0.0
AUTHORITY	A. E.		A. E.		A. F.	

278 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ι Ceti. Mag. 3·8		ζ Tucanae. Mag. 4·3		δ Piscium. Mag. 5·6	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	^h ^m 0 15	[°] ['] 9 14	^h ^m 0 16	[°] ['] 65 18	^h ^m 0 16	[°] ['] 7 45
Jan. 0·2	32·717 ¹¹⁹	50·36 ⁶¹	5·54 ⁴⁰	98·30 ⁷¹	40·707 ¹²¹	63·92 ⁸¹
10·2	32·598 ¹¹⁴	50·97 ⁴⁷	5·14 ³⁸	97·59 ¹²⁷	40·586 ¹¹⁸	63·11 ⁸⁴
20·2	32·484 ¹⁰⁷	51·44 ²⁹	4·76 ³⁴	96·32 ¹⁷⁹	40·468 ¹⁰⁹	62·27 ⁸⁵
30·2	32·377 ⁹²	51·73 ¹²	4·42 ²⁹	94·53 ²²⁷	40·359 ⁹⁶	61·42 ⁸¹
Feb. 9·1	32·285 ⁷²	51·85 ⁹	4·13 ²³	92·26 ²⁶⁷	40·263 ⁷⁷	60·61 ⁷⁵
19·1	32·213 ⁴⁹	51·76 ²⁹	3·90 ¹⁷	89·59 ³⁰²	40·186 ⁵³	59·86 ⁶³
29·1	32·164 ²⁰	51·47 ⁵³	3·73 ¹⁰	86·57 ³²⁹	40·133 ²⁴	59·23 ⁴⁷
Mar. 10·0	32·144 ¹³	50·94 ⁷⁵	3·63 ³	83·28 ³⁴⁸	40·109 ¹¹	58·76 ²⁸
20·0	32·157 ⁵⁰	50·19 ¹⁰⁰	3·60 ⁶	79·80 ³⁶⁰	40·120 ⁴⁹	58·48 ⁵
30·0	32·207 ⁹⁰	49·19 ¹²³	3·66 ¹⁴	76·20 ³⁶⁴	40·169 ⁹⁰	58·43 ²²
Apr. 9·0	32·297 ¹³⁰	47·96 ¹⁴⁵	3·80 ²²	72·56 ³⁶¹	40·259 ¹³¹	58·65 ⁴⁹
18·9	32·427 ¹⁷⁰	46·51 ¹⁶⁶	4·02 ³⁰	68·95 ³⁴⁸	40·390 ¹⁷¹	59·14 ⁷⁷
28·9	32·597 ²⁰⁷	44·85 ¹⁸³	4·32 ³⁸	65·47 ³³⁰	40·561 ²¹⁰	59·91 ¹⁰⁶
May 8·9	32·804 ²⁴¹	43·02 ¹⁹⁶	4·70 ⁴⁴	62·17 ³⁰⁴	40·771 ²⁴⁴	60·97 ¹³⁰
18·9	33·045 ²⁶⁹	41·06 ²⁰⁵	5·14 ⁵¹	59·13 ²⁷⁰	41·015 ²⁷⁰	62·27 ¹⁵⁴
28·8	33·314 ²⁹¹	39·01 ²⁰⁹	5·65 ⁵⁵	56·43 ²³¹	41·285 ²⁹²	63·81 ¹⁷³
June 7·8	33·605 ³⁰³	36·92 ²⁰⁷	6·20 ⁵⁸	54·12 ¹⁸⁶	41·577 ³⁰⁴	65·54 ¹⁸⁸
17·8	33·908 ³¹¹	34·85 ²⁰¹	6·78 ⁶¹	52·26 ¹³⁷	41·881 ³¹⁰	67·42 ¹⁹⁸
27·7	34·219 ³⁰⁷	32·84 ¹⁸⁸	7·39 ⁶²	50·89 ⁸⁴	42·191 ³⁰⁵	69·40 ²⁰¹
July 7·7	34·526 ²⁹⁷	30·96 ¹⁷¹	8·01 ⁵⁹	50·05 ²⁹	42·496 ²⁹⁴	71·41 ²⁰¹
17·7	34·823 ²⁷⁹	29·25 ¹⁴⁹	8·60 ⁵⁷	49·76 ²⁷	42·790 ²⁷⁵	73·42 ¹⁹⁵
27·7	35·102 ²⁵⁴	27·76 ¹²⁴	9·17 ⁵³	50·03 ⁸¹	43·065 ²⁵¹	75·37 ¹⁸⁴
Aug. 6·6	35·356 ²²³	26·52 ⁹⁷	9·70 ⁴⁶	50·84 ¹³²	43·316 ²¹⁹	77·21 ¹⁶⁹
16·6	35·579 ¹⁹⁰	25·55 ⁶⁷	10·16 ³⁹	52·16 ¹⁸⁰	43·535 ¹⁸⁶	78·90 ¹⁵¹
26·6	35·769 ¹⁵¹	24·88 ³⁹	10·55 ³¹	53·96 ²²⁰	43·721 ¹⁴⁹	80·41 ¹³⁰
Sept. 5·6	35·920 ¹¹³	24·49 ⁹	10·86 ²²	56·16 ²⁵³	43·870 ¹¹²	81·71 ¹⁰⁸
15·5	36·033 ⁷⁵	24·40 ¹⁸	11·08 ¹²	58·69 ²⁷⁶	43·982 ⁷⁴	82·79 ⁸⁵
25·5	36·108 ³⁸	24·58 ⁴¹	11·20 ³	61·45 ²⁸⁹	44·056 ⁴⁰	83·64 ⁶²
Oct. 5·5	36·146 ⁴	24·99 ⁶¹	11·23 ⁷	64·34 ²⁹⁰	44·096 ⁷	84·26 ⁴⁰
15·4	36·150 ²⁶	25·60 ⁷⁶	11·16 ¹⁵	67·24 ²⁷⁹	44·103 ²²	84·66 ¹⁹
25·4	36·124 ⁵²	26·36 ⁸⁸	11·01 ²³	70·03 ²⁵⁷	44·081 ⁴⁷	84·85 ⁰
Nov. 4·4	36·072 ⁷³	27·24 ⁹⁴	10·78 ²⁹	72·60 ²²⁵	44·034 ⁶⁹	84·85 ¹⁷
14·4	35·999 ⁹¹	28·18 ⁹⁶	10·49 ³⁵	74·85 ¹⁸⁴	43·965 ⁸⁶	84·68 ³³
24·3	35·908 ¹⁰³	29·14 ⁹⁴	10·14 ³⁸	76·69 ¹³⁵	43·879 ⁹⁹	84·35 ⁴⁷
Dec. 4·3	35·805 ¹¹³	30·08 ⁸⁷	9·76 ⁴¹	78·04 ⁸⁰	43·780 ¹¹⁰	83·88 ⁵⁷
14·3	35·692 ¹¹⁷	30·95 ⁸⁰	9·35 ⁴²	78·84 ²³	43·670 ¹¹⁶	83·31 ⁶⁸
24·3	35·575 ¹¹⁹	31·75 ⁶⁷	8·93 ⁴⁰	79·07 ³⁷	43·554 ¹¹⁸	82·63 ⁷⁷
34·2	35·456	32·42	8·53	78·70	43·436	81·86
Mean Place	33·356	42·38	7·49	75·77	41·164	65·93
Sec δ, Tan δ	1·013	-0·163	2·395	-2·176	1·009	+0·136
L α, L δ	0·00	+0·4	0·00	+0·4	0·00	+0·4
ω α, ω δ	+0·01	+0·1	+0·15	+0·1	-0·01	+0·1
AUTHORITY	A. E.		A. E.			

APPARENT PLACES OF STARS, 1924. 279

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	44 Piscium. Mag. 6.0		β Hydri. Mag. 2.9		α Phœnicis. Mag. 2.4	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.
	h m 0 21	° ′ 1 30	h m 0 21	° ′ 77 40	h m 0 22	° ′ 42 42
Jan. 0.2	29.866 ¹¹⁹	63.32 ⁷⁵	43.57 ⁸⁹	80.06 ⁹⁴	30.859 ¹⁹⁴	85.88 ¹
10.2	29.747 ¹¹⁶	62.57 ⁷²	42.68 ⁸⁴	79.12 ¹⁵³	30.665 ¹⁸⁴	85.87 ⁴⁶
20.2	29.631 ¹⁰⁹	61.85 ⁶⁵	41.84 ⁷⁵	77.59 ²⁰⁷	30.481 ¹⁶⁸	85.41 ⁹⁰
30.2	29.522 ⁹⁶	61.20 ⁵⁶	41.09 ⁶⁶	75.52 ²⁵⁶	30.313 ¹⁴⁷	84.51 ¹³¹
Feb. 9.1	29.426 ⁷⁹	60.64 ⁴⁵	40.43 ⁵⁴	72.96 ²⁹⁶	30.166 ¹²⁰	83.20 ¹⁶⁹
19.1	29.347 ⁵⁵	60.19 ²⁹	39.89 ⁴¹	70.00 ³³⁰	30.046 ⁸⁷	81.51 ²⁰³
29.1	29.292 ²⁷	59.90 ¹¹	39.48 ²⁶	66.70 ³⁵⁴	29.959 ⁴⁹	79.48 ²³⁴
Mar. 10.0	29.265 ⁷	59.79 ¹⁰	39.22 ¹¹	63.16 ³⁷¹	29.910 ⁶	77.14 ²⁵⁸
20.0	29.272 ⁴⁴	59.89 ³³	39.11 ⁴	59.45 ³⁷⁹	29.904 ⁴¹	74.56 ²⁷⁸
30.0	29.316 ⁸⁴	60.22 ⁵⁹	39.15 ¹⁹	55.66 ³⁸⁰	29.945 ⁹⁰	71.78 ²⁹²
Apr. 9.0	29.400 ¹²⁵	60.81 ⁸⁵	39.34 ³⁵	51.86 ³⁷¹	30.035 ¹⁴⁰	68.86 ³⁰⁰
18.9	29.525 ¹⁶⁵	61.66 ¹¹⁰	39.69 ⁵⁰	48.15 ³⁵⁴	30.175 ¹⁹¹	65.86 ³⁰³
28.9	29.690 ²⁰⁴	62.76 ¹³⁴	40.19 ⁶⁴	44.61 ³³⁰	30.366 ²³⁷	62.83 ²⁹⁸
May 8.9	29.894 ²³⁷	64.10 ¹⁵⁶	40.83 ⁷⁷	41.31 ³⁰⁰	30.603 ²⁸¹	59.85 ²⁸⁶
18.9	30.131 ²⁶⁶	65.66 ¹⁷³	41.60 ⁸⁸	38.31 ²⁶⁰	30.884 ³¹⁹	56.99 ²⁶⁹
28.8	30.397 ²⁸⁷	67.39 ¹⁸⁸	42.48 ⁹⁸	35.71 ²¹⁹	31.203 ³⁴⁸	54.30 ²⁴⁵
June 7.8	30.684 ³⁰²	69.27 ¹⁹⁶	43.46 ¹⁰⁵	33.52 ¹⁶⁸	31.551 ³⁷⁰	51.85 ²¹³
17.8	30.986 ³⁰⁷	71.23 ²⁰⁰	44.51 ¹⁰⁹	31.84 ¹¹⁵	31.921 ³⁸²	49.72 ¹⁷⁹
27.7	31.293 ³⁰⁴	73.23 ¹⁹⁸	45.60 ¹¹⁰	30.69 ⁵⁹	32.303 ³⁸³	47.93 ¹³⁷
July 7.7	31.597 ²⁹⁴	75.21 ¹⁹¹	46.70 ¹⁰⁹	30.10 ²	32.686 ³⁷⁵	46.56 ⁹⁵
17.7	31.891 ²⁷⁷	77.12 ¹⁸⁰	47.79 ¹⁰⁴	30.08 ⁵⁶	33.061 ³⁵⁶	45.61 ⁴⁷
27.7	32.168 ²⁵³	78.92 ¹⁶³	48.83 ⁹⁷	30.64 ¹¹²	33.417 ³²⁸	45.14 ¹
Aug. 6.6	32.421 ²²³	80.55 ¹⁴³	49.80 ⁸⁶	31.76 ¹⁶³	33.745 ²⁹¹	45.15 ⁴⁸
16.6	32.644 ¹⁹⁰	81.98 ¹²²	50.66 ⁷³	33.39 ²¹¹	34.036 ²⁴⁹	45.63 ⁹³
26.6	32.834 ¹⁵³	83.20 ⁹⁷	51.39 ⁵⁸	35.50 ²⁵⁰	34.285 ¹⁹⁹	46.56 ¹³⁴
Sept. 5.6	32.987 ¹¹⁷	84.17 ⁷²	51.97 ⁴¹	38.00 ²⁸²	34.484 ¹⁴⁸	47.90 ¹⁶⁹
15.5	33.104 ⁸⁰	84.89 ⁴⁸	52.38 ²²	40.82 ³⁰²	34.632 ⁹⁵	49.59 ¹⁹⁸
25.5	33.184 ⁴⁴	85.37 ²³	52.60 ³	43.84 ³¹¹	34.727 ⁴³	51.57 ²¹⁹
Oct. 5.5	33.228 ¹²	85.60 ²	52.63 ¹⁵	46.95 ³⁰⁹	34.770 ⁷	53.76 ²³⁰
15.4	33.240 ¹⁸	85.62 ¹⁷	52.48 ³³	50.04 ²⁹⁴	34.763 ⁵³	56.06 ²³²
25.4	33.222 ⁴³	85.45 ³³	52.15 ⁵⁰	52.98 ²⁶⁷	34.710 ⁹³	58.38 ²²⁵
Nov. 4.4	33.179 ⁶⁵	85.12 ⁴⁷	51.65 ⁶³	55.65 ²³⁰	34.617 ¹²⁸	60.63 ²⁰⁷
14.4	33.114 ⁸³	84.65 ⁵⁸	51.02 ⁷⁵	57.95 ¹⁸³	34.489 ¹⁵⁴	62.70 ¹⁸³
24.3	33.031 ⁹⁶	84.07 ⁶⁵	50.27 ⁸⁴	59.78 ¹²⁸	34.335 ¹⁷⁴	64.53 ¹⁵⁰
Dec. 4.3	32.935 ¹⁰⁶	83.42 ⁷¹	49.43 ⁸⁹	61.06 ⁶⁸	34.161 ¹⁸⁷	66.03 ¹¹²
14.3	32.829 ¹¹⁴	82.71 ⁷³	48.54 ⁹¹	61.74 ⁷	33.974 ¹⁹⁴	67.15 ⁷⁰
24.3	32.715 ¹¹⁷	81.98 ⁷⁵	47.63 ⁹⁰	61.81 ⁵⁷	33.780 ¹⁹⁴	67.85 ²⁵
34.2	32.598	81.23	46.73	61.24	33.586	68.10
Mean Place	30.358	67.73	46.97	56.17	31.915	67.38
Sec δ, Tan δ	1.000	+0.027	4.687	-4.579	1.361	-0.923
L α, L δ	0.00	+0.4	-0.01	+0.4	0.00	+0.4
ω α, ω δ	0.00	+0.1	+0.31	+0.1	+0.06	+0.1
AUTHORITY			A. E.		A. B.	

280 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	12 Ceti. Mag. 6.0		ε Andromedæ. Mag. 4.5		δ Andromedæ. Mag. 3.5	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	h m 0 26	° ′ 4 22	h m 0 34	28° 53′	h m 0 35	30° 26′
Jan. 0.2	9.107 ₁₂₀	43.93 ₆₉	31.974 ₁₅₃	62.02 ₇₂	15.477 ₁₅₇	47.62 ₇₃
10.2	8.987 ₁₁₇	44.62 ₅₈	31.821 ₁₅₅	61.30 ₁₀₁	15.320 ₁₅₈	46.89 ₁₀₂
20.2	8.870 ₁₁₀	45.20 ₄₇	31.666 ₁₄₈	60.29 ₁₂₃	15.162 ₁₅₂	45.87 ₁₂₃
30.2	8.760 ₉₉	45.67 ₃₃	31.518 ₁₃₇	59.06 ₁₄₂	15.010 ₁₃₉	44.64 ₁₄₄
Feb. 9.1	8.661 ₈₁	46.00 ₁₆	31.381 ₁₁₇	57.64 ₁₅₂	14.871 ₁₁₉	43.20 ₁₅₇
19.1	8.580 ₅₈	46.16 ₃	31.264 ₈₉	56.12 ₁₅₈	14.752 ₉₂	41.63 ₁₆₃
29.1	8.522 ₃₁	46.13 ₂₄	31.175 ₅₆	54.54 ₁₅₆	14.660 ₅₇	40.00 ₁₆₂
Mar. 10.1	8.491 ₃	45.89 ₄₆	31.119 ₁₆	52.98 ₁₄₅	14.603 ₁₇	38.38 ₁₅₃
20.0	8.494 ₃₉	45.43 ₆₉	31.103 ₂₉	51.53 ₁₂₉	14.586 ₂₉	36.85 ₁₃₆
30.0	8.533 ₈₀	44.74 ₉₅	31.132 ₇₇	50.24 ₁₀₆	14.615 ₇₈	35.49 ₁₁₄
Apr. 9.0	8.613 ₁₁₉	43.79 ₁₁₈	31.209 ₁₂₅	49.18 ₇₆	14.693 ₁₂₆	34.35 ₈₅
18.9	8.732 ₁₆₁	42.61 ₁₄₁	31.334 ₁₇₃	48.42 ₄₃	14.819 ₁₇₅	33.50 ₅₁
28.9	8.893 ₁₉₉	41.20 ₁₆₂	31.507 ₂₁₇	47.99 ₈	14.994 ₂₁₉	32.99 ₁₅
May 8.9	9.092 ₂₃₃	39.58 ₁₇₈	31.724 ₂₅₆	47.91 ₃₀	15.213 ₂₅₉	32.84 ₂₂
18.9	9.325 ₂₆₂	37.80 ₁₉₂	31.980 ₂₈₈	48.21 ₆₇	15.472 ₂₉₂	33.06 ₆₀
28.8	9.587 ₂₈₅	35.88 ₂₀₀	32.268 ₃₁₃	48.88 ₁₀₃	15.764 ₃₁₇	33.66 ₉₇
June 7.8	9.872 ₃₀₀	33.88 ₂₀₄	32.581 ₃₂₉	49.91 ₁₃₅	16.081 ₃₃₄	34.63 ₁₃₂
17.8	10.172 ₃₀₇	31.84 ₂₀₂	32.910 ₃₃₇	51.26 ₁₆₅	16.415 ₃₄₀	35.95 ₁₆₁
27.8	10.479 ₃₀₆	29.82 ₁₉₅	33.247 ₃₃₄	52.91 ₁₈₉	16.755 ₃₃₉	37.56 ₁₈₈
July 7.7	10.785 ₂₉₇	27.87 ₁₈₂	33.581 ₃₂₃	54.80 ₂₀₉	17.094 ₃₂₈	39.44 ₂₀₉
17.7	11.082 ₂₈₀	26.05 ₁₆₅	33.904 ₃₀₅	56.89 ₂₂₂	17.422 ₃₀₉	41.53 ₂₂₄
27.7	11.362 ₂₅₇	24.40 ₁₄₄	34.209 ₂₈₀	59.11 ₂₃₂	17.731 ₂₈₄	43.77 ₂₃₅
Aug. 6.6	11.619 ₂₂₈	22.96 ₁₂₀	34.489 ₂₄₈	61.43 ₂₃₅	18.015 ₂₅₃	46.12 ₂₃₉
16.6	11.847 ₁₉₆	21.76 ₉₅	34.737 ₂₁₃	63.78 ₂₃₄	18.268 ₂₁₈	48.51 ₂₃₉
26.6	12.043 ₁₅₉	20.81 ₆₆	34.950 ₁₇₆	66.12 ₂₂₇	18.486 ₁₇₉	50.90 ₂₃₄
Sept. 5.6	12.202 ₁₂₂	20.15 ₃₈	35.126 ₁₃₇	68.39 ₂₁₆	18.665 ₁₄₀	53.24 ₂₂₅
15.5	12.324 ₈₅	19.77 ₁₂	35.263 ₉₇	70.55 ₂₀₃	18.805 ₁₀₀	55.49 ₂₁₀
25.5	12.409 ₄₉	19.65 ₁₂	35.360 ₆₀	72.58 ₁₈₅	18.905 ₆₁	57.59 ₁₉₄
Oct. 5.5	12.458 ₁₅	19.77 ₃₃	35.420 ₂₄	74.43 ₁₆₄	18.966 ₂₆	59.53 ₁₇₅
15.5	12.473 ₁₄	20.10 ₅₁	35.444 ₁₀	76.07 ₁₄₂	18.992 ₉	61.28 ₁₅₁
25.4	12.459 ₄₁	20.61 ₆₅	35.434 ₄₀	77.49 ₁₁₇	18.983 ₄₀	62.79 ₁₂₆
Nov. 4.4	12.418 ₆₃	21.26 ₇₄	35.394 ₆₆	78.66 ₉₁	18.943 ₆₇	64.05 ₉₉
14.4	12.355 ₈₁	22.00 ₈₁	35.328 ₈₉	79.57 ₆₃	18.876 ₉₁	65.04 ₇₀
24.3	12.274 ₉₅	22.81 ₈₃	35.239 ₁₁₁	80.20 ₃₃	18.785 ₁₁₂	65.74 ₄₁
Dec. 4.3	12.179 ₁₀₇	23.64 ₈₂	35.128 ₁₂₈	80.53 ₄	18.673 ₁₃₀	66.15 ₉
14.3	12.072 ₁₁₄	24.46 ₇₉	35.000 ₁₄₀	80.57 ₂₇	18.543 ₁₄₄	66.24 ₂₂
24.3	11.958 ₁₁₇	25.25 ₇₂	34.860 ₁₄₉	80.30 ₅₆	18.399 ₁₅₃	66.02 ₅₃
34.2	11.841	25.97	34.711	79.74	18.246	65.49
Mean Place	9.631	37.24	32.093	57.46	15.572	42.56
Sec δ, Tan δ	1.003	-0.077	1.142	+0.552	1.160	+0.588
L α, L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α, ω δ	+0.01	+0.1	-0.04	+0.1	-0.04	+0.2
AUTHORITY	A. E.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 281

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Cassiopeiæ. Mag. 2.2-2.8		β Ceti. Mag. 2.2		δ Piscium. Mag. 4.6	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. N.
	h m 0 36	56 7	h m 0 39	18 23	h m 0 44	7 10
Jan. 0.2	11.428 ²⁹⁹	26.80 ⁴²	45.947 ¹³²	84.35 ⁵⁵	43.928 ¹²³	14.84 ⁷⁵
10.2	11.129 ³⁰⁰	26.38 ⁹²	45.815 ¹³¹	84.90 ³¹	43.805 ¹²⁵	14.09 ⁷⁷
20.2	10.829 ²⁸⁸	25.46 ¹³⁹	45.684 ¹²⁵	85.21 ⁵	43.680 ¹²¹	13.32 ⁷⁷
30.2	10.541 ²⁶⁵	24.07 ¹⁸¹	45.559 ¹¹³	85.26 ²³	43.559 ¹¹³	12.55 ⁷³
Feb. 9.1	10.276 ²²⁸	22.26 ²¹⁵	45.446 ⁹⁷	85.03 ⁴⁹	43.446 ⁹⁹	11.82 ⁶⁷
19.1	10.048 ¹⁸¹	20.11 ²⁴⁰	45.349 ⁷⁵	84.54 ⁷⁶	43.347 ⁷⁷	11.15 ⁵⁵
29.1	9.867 ¹²²	17.71 ²⁵⁵	45.274 ⁴⁶	83.78 ¹⁰³	43.270 ⁵⁰	10.60 ⁴¹
Mar. 10.1	9.745 ⁵⁵	15.16 ²⁶⁰	45.228 ¹⁴	82.75 ¹²⁹	43.220 ¹⁷	10.19 ²³
20.0	9.690 ¹⁸	12.56 ²⁵³	45.214 ²⁴	81.46 ¹⁵³	43.203 ²¹	9.96 ¹
30.0	9.708 ⁹³	10.03 ²³⁷	45.238 ⁶⁵	79.93 ¹⁷⁶	43.224 ⁶²	9.95 ²³
Apr. 9.0	9.801 ¹⁶⁸	7.66 ²¹⁰	45.303 ¹⁰⁷	78.17 ¹⁹⁶	43.286 ¹⁰⁴	10.18 ⁴⁹
18.9	9.969 ²⁴⁰	5.56 ¹⁷⁶	45.410 ¹⁴⁹	76.21 ²¹¹	43.390 ¹⁴⁷	10.67 ⁷⁶
28.9	10.209 ³⁰⁶	3.80 ¹³⁵	45.559 ¹⁹⁰	74.10 ²²⁵	43.537 ¹⁸⁷	11.43 ¹⁰³
May 8.9	10.515 ³⁶²	2.45 ⁸⁹	45.749 ²²⁷	71.85 ²³²	43.724 ²²⁴	12.46 ¹²⁷
18.9	10.877 ⁴⁰⁹	1.56 ⁴¹	45.976 ²⁶⁰	69.53 ²³⁵	43.948 ²⁵⁵	13.73 ¹⁵⁰
28.8	11.286 ⁴⁴⁴	1.15 ⁹	46.236 ²⁸⁶	67.18 ²³¹	44.203 ²⁸⁰	15.23 ¹⁶⁸
June 7.8	11.730 ⁴⁶⁴	1.24 ⁵⁹	46.522 ³⁰⁵	64.87 ²²²	44.483 ²⁹⁸	16.91 ¹⁸³
17.8	12.194 ⁴⁷⁴	1.83 ¹⁰⁷	46.827 ³¹⁵	62.65 ²⁰⁷	44.781 ³⁰⁷	18.74 ¹⁹³
27.8	12.668 ⁴⁷⁰	2.90 ¹⁵²	47.142 ³¹⁸	60.58 ¹⁸⁸	45.088 ³⁰⁸	20.67 ¹⁹⁷
July 7.7	13.138 ⁴⁵³	4.42 ¹⁹³	47.460 ³¹²	58.70 ¹⁶²	45.396 ³⁰¹	22.64 ¹⁹⁶
17.7	13.591 ⁴²⁷	6.35 ²²⁹	47.772 ²⁹⁷	57.08 ¹³³	45.697 ²⁸⁶	24.60 ¹⁹⁰
27.6	14.018 ³⁹¹	8.64 ²⁶⁰	48.069 ²⁷⁶	55.75 ¹⁰⁰	45.983 ²⁶⁶	26.50 ¹⁷⁹
Aug. 6.6	14.409 ³⁴⁷	11.24 ²⁸⁴	48.345 ²⁴⁹	54.75 ⁶⁵	46.249 ²³⁹	28.29 ¹⁶⁵
16.6	14.756 ²⁹⁷	14.08 ³⁰²	48.594 ²¹⁵	54.10 ²⁹	46.488 ²⁰⁸	29.94 ¹⁴⁷
26.6	15.053 ²⁴³	17.10 ³¹⁵	48.809 ¹⁷⁹	53.81 ⁵	46.696 ¹⁷⁴	31.41 ¹²⁶
Sept. 5.6	15.296 ¹⁸⁶	20.25 ³²¹	48.988 ¹⁴¹	53.86 ³⁹	46.870 ¹³⁹	32.67 ¹⁰⁴
15.5	15.482 ¹²⁸	23.46 ³¹⁹	49.129 ¹⁰¹	54.25 ⁶⁹	47.009 ¹⁰³	33.71 ⁸⁰
25.5	15.610 ⁷¹	26.65 ³¹³	49.230 ⁶³	54.94 ⁹⁵	47.112 ⁶⁹	34.51 ⁵⁸
Oct. 5.5	15.681 ¹⁵	29.78 ²⁹⁹	49.293 ²⁷	55.89 ¹¹⁵	47.181 ³⁶	35.09 ³⁶
15.5	15.696 ⁴⁰	32.77 ²⁷⁹	49.320 ⁷	57.04 ¹²⁹	47.217 ⁵	35.45 ¹⁵
25.4	15.656 ⁹⁰	35.56 ²⁵⁴	49.313 ³⁷	58.33 ¹³⁸	47.222 ²¹	35.60 ³
Nov. 4.4	15.566 ¹³⁷	38.10 ²²¹	49.276 ⁶²	59.71 ¹³⁹	47.201 ⁴⁵	35.57 ²⁰
14.4	15.429 ¹⁸¹	40.31 ¹⁸⁴	49.214 ⁸³	61.10 ¹³⁴	47.156 ⁶⁶	35.37 ³⁴
24.3	15.248 ²¹⁹	42.15 ¹⁴¹	49.131 ¹⁰¹	62.44 ¹²⁵	47.090 ⁸⁴	35.03 ⁴⁶
Dec. 4.3	15.029 ²⁵²	43.56 ⁹⁵	49.030 ¹¹⁴	63.69 ¹⁰⁹	47.006 ⁹⁸	34.57 ⁵⁷
14.3	14.777 ²⁷⁷	44.51 ⁴⁴	48.916 ¹²⁴	64.78 ⁹⁰	46.908 ¹⁰⁹	34.00 ⁶⁴
24.3	14.500 ²⁹⁴	44.95 ⁸	48.792 ¹²⁹	65.68 ⁶⁹	46.799 ¹¹⁹	33.36 ⁷⁰
34.2	14.206	44.87	48.663	66.37	46.680	32.66
Mean Place	11.003	14.77	46.529	72.33	44.227	18.09
Sec δ , Tan δ	1.794	+1.489	1.054	-0.333	1.008	+0.126
L α , L δ	+0.01	+0.4	0.00	+0.4	0.00	+0.4
ω α , ω δ	-0.10	+0.2	+0.02	+0.2	-0.01	+0.2
AUTHORITY	A. E.		A. E.		A. N.	

282 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	20 Ceti. Mag. 4.9		γ Cassiopeiæ. Mag. 2.3		μ Andromedæ. Mag. 3.9	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	h m	° ′	h m	° ′	h m	° ′
	0 49	1 33	0 52	60 18	0 52	38 5
Jan. 0.3	6.968 ⁸ ₁₂₂	29.88 ⁷³	7.18 ³⁵	32.18 ¹³	31.849 ¹⁸²	21.42 ⁵¹
10.2	6.846 ¹²⁴	30.61 ⁶⁴	6.83 ³⁵	32.05 ⁶⁸	31.667 ¹⁸⁶	20.91 ⁸⁶
20.2	6.722 ¹²¹	31.25 ⁵⁵	6.48 ³⁴	31.37 ¹¹⁹	31.481 ¹⁸³	20.05 ¹¹⁸
30.2	6.601 ¹¹³	31.80 ⁴³	6.14 ³³	30.18 ¹⁶⁴	31.298 ¹⁷²	18.87 ¹⁴⁶
Feb. 9.1	6.488 ⁹⁹	32.23 ²⁹	5.81 ²⁸	28.54 ²⁰⁵	31.126 ¹⁵³	17.41 ¹⁶⁶
19.1	6.389 ⁷⁸	32.52 ¹²	5.53 ²⁴	26.49 ²³⁵	30.973 ¹²⁴	15.75 ¹⁸¹
29.1	6.311 ⁵³	32.64 ⁸	5.29 ¹⁷	24.14 ²⁵⁶	30.849 ⁸⁷	13.94 ¹⁸⁷
Mar. 10.1	6.258 ²¹	32.56 ²⁹	5.12 ¹⁰	21.58 ²⁶⁶	30.762 ⁴⁴	12.07 ¹⁸⁵
20.0	6.237 ¹⁶	32.27 ⁵²	5.02 ¹	18.92 ²⁶⁵	30.718 ⁷	10.22 ¹⁷⁴
30.0	6.253 ⁵⁶	31.75 ⁷⁷	5.01 ⁷	16.27 ²⁵⁴	30.725 ⁶⁰	8.48 ¹⁵⁶
Apr. 9.0	6.309 ⁹⁸	30.98 ¹⁰⁰	5.08 ¹⁵	13.73 ²³¹	30.785 ¹¹⁴	6.92 ¹³⁰
19.0	6.407 ¹³⁹	29.98 ¹²⁵	5.23 ²⁴	11.42 ²⁰²	30.899 ¹⁶⁹	5.62 ⁹⁸
28.9	6.546 ¹⁸¹	28.73 ¹⁴⁶	5.47 ³¹	9.40 ¹⁶³	31.068 ²¹⁸	4.64 ⁶²
May 8.9	6.727 ²¹⁷	27.27 ¹⁶⁶	5.78 ³⁸	7.77 ¹¹⁹	31.286 ²⁶⁴	4.02 ²³
18.9	6.944 ²⁴⁹	25.61 ¹⁸²	6.16 ⁴⁴	6.58 ⁷²	31.550 ³⁰³	3.79 ¹⁷
28.8	7.193 ²⁷⁵	23.79 ¹⁹⁴	6.60 ⁴⁷	5.86 ²²	31.853 ³³²	3.96 ⁵⁸
June 7.8	7.468 ²⁹³	21.85 ²⁰⁰	7.07 ⁵¹	5.64 ²⁹	32.185 ³⁵²	4.51 ⁹⁶
17.8	7.761 ³⁰⁴	19.85 ²⁰¹	7.58 ⁵²	5.93 ⁷⁸	32.537 ³⁶³	5.50 ¹³³
27.8	8.065 ³⁰⁶	17.84 ¹⁹⁷	8.10 ⁵²	6.71 ¹²⁵	32.900 ³⁶⁵	6.83 ¹⁶⁶
July 7.7	8.371 ³⁰¹	15.87 ¹⁸⁹	8.62 ⁵¹	7.96 ¹⁷⁰	33.265 ³⁵⁶	8.49 ¹⁹³
17.7	8.672 ²⁸⁸	13.98 ¹⁷⁴	9.13 ⁴⁸	9.66 ²⁰⁹	33.621 ³³⁹	10.42 ²¹⁷
27.7	8.960 ²⁶⁷	12.24 ¹⁵⁶	9.61 ⁴⁵	11.75 ²⁴⁴	33.960 ³¹⁵	12.59 ²³⁵
Aug. 6.7	9.227 ²⁴¹	10.68 ¹³³	10.06 ⁴¹	14.19 ²⁷³	34.275 ²⁸⁵	14.94 ²⁴⁷
16.6	9.468 ²¹²	9.35 ¹⁰⁹	10.47 ³⁵	16.92 ²⁹⁷	34.560 ²⁴⁸	17.41 ²⁵⁴
26.6	9.680 ¹⁷⁸	8.26 ⁸³	10.82 ³⁰	19.89 ³¹³	34.808 ²¹⁰	19.95 ²⁵⁶
Sept. 5.6	9.858 ¹⁴³	7.43 ⁵⁶	11.12 ²³	23.02 ³²⁴	35.018 ¹⁷⁰	22.51 ²⁵³
15.5	10.001 ¹⁰⁷	6.87 ²⁹	11.35 ¹⁷	26.26 ³²⁸	35.188 ¹²⁷	25.04 ²⁴⁴
25.5	10.108 ⁷²	6.58 ⁵	11.52 ¹¹	29.54 ³²⁵	35.315 ⁸⁷	27.48 ²³²
Oct. 5.5	10.180 ³⁹	6.53 ¹⁸	11.63 ⁵	32.79 ³¹⁶	35.402 ⁴⁷	29.80 ²¹⁶
15.5	10.219 ⁹	6.71 ³⁷	11.68 ²	35.95 ³⁰⁰	35.449 ⁹	31.96 ¹⁹⁶
25.4	10.228 ¹⁹	7.08 ⁵²	11.66 ⁷	38.95 ²⁷⁸	35.458 ²⁶	33.92 ¹⁷²
Nov. 4.4	10.209 ⁴³	7.60 ⁶⁵	11.59 ¹⁴	41.73 ²⁴⁹	35.432 ⁵⁹	35.64 ¹⁴⁵
14.4	10.166 ⁶⁵	8.25 ⁷²	11.45 ¹⁹	44.22 ²¹²	35.373 ⁸⁹	37.09 ¹¹⁵
24.4	10.101 ⁸²	8.97 ⁷⁸	11.26 ²³	46.34 ¹⁷²	35.284 ¹¹⁶	38.24 ⁸²
Dec. 4.3	10.019 ⁹⁷	9.75 ⁷⁹	10.03 ²⁸	48.06 ¹²⁵	35.168 ¹⁴⁰	39.06 ⁴⁷
14.3	9.922 ¹⁰⁸	10.54 ⁷⁸	10.75 ³¹	49.31 ⁷⁵	35.028 ¹⁵⁹	39.53 ¹¹
24.3	9.814 ¹¹⁷	11.32 ⁷⁴	10.44 ³⁴	50.06 ²¹	34.869 ¹⁷³	39.64 ²⁷
34.2	9.697	12.06	10.10	50.27	34.696	39.37
Mean Place	7.326	23.36	6.45	19.93	31.720	14.68
Sec δ, Tan δ	1.000	-0.027	2.019	+1.754	1.271	+0.784
L α, L δ	0.00	+0.4	+0.01	+0.4	0.00	+0.4
ω α, ω δ	0.00	+0.2	-0.11	+0.2	-0.05	+0.2
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 283

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Sculptoris. Mag. 4.4		ε Piscium. Mag. 4.5		ζ Piscium. Mag. 5.7	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	h m 0 54	° ′ 29 45	h m 0 58	° ′ 7 28	h m 1 1	° ′ 14 32
Jan. 0.3	56.004 ^s ₁₅₈	81.56 ^s ₄₉	59.597 ^s ₁₂₄	48.98 ^s ₇₃	4.311 ^s ₁₂₉	14.41 ^s ₆₉
10.2	55.846 ^s ₁₅₇	82.05 ^s ₁₄	59.473 ^s ₁₂₈	48.25 ^s ₇₄	4.182 ^s ₁₃₄	13.72 ^s ₇₉
20.2	55.689 ^s ₁₅₂	82.19 ^s ₂₃	59.345 ^s ₁₂₈	47.51 ^s ₇₄	4.048 ^s ₁₃₄	12.93 ^s ₈₆
30.2	55.537 ^s ₁₄₁	81.96 ^s ₆₀	59.217 ^s ₁₂₁	46.77 ^s ₇₁	3.914 ^s ₁₂₈	12.07 ^s ₉₀
Feb. 9.1	55.396 ^s ₁₂₄	81.36 ^s ₉₅	59.096 ^s ₁₀₈	46.06 ^s ₆₅	3.786 ^s ₁₁₅	11.17 ^s ₉₀
19.1	55.272 ^s ₁₀₂	80.41 ^s ₁₂₉	58.988 ^s ₈₉	45.41 ^s ₅₄	3.671 ^s ₉₅	10.27 ^s ₈₆
29.1	55.170 ^s ₇₂	79.12 ^s ₁₆₀	58.899 ^s ₆₃	44.87 ^s ₄₁	3.576 ^s ₆₈	9.41 ^s ₇₇
Mar. 10.1	55.098 ^s ₃₈	77.52 ^s ₁₈₈	58.836 ^s ₃₁	44.46 ^s ₂₃	3.508 ^s ₃₅	8.64 ^s ₆₃
20.0	55.060 ^s ₂	75.64 ^s ₂₁₄	58.805 ^s ₇	44.23 ^s ₂	3.473 ^s ₄	8.01 ^s ₄₅
30.0	55.062 ^s ₄₆	73.50 ^s ₂₃₅	58.812 ^s ₄₇	44.21 ^s ₂₀	3.477 ^s ₄₆	7.56 ^s ₂₂
Apr. 9.0	55.108 ^s ₉₀	71.15 ^s ₂₅₂	58.859 ^s ₉₀	44.41 ^s ₄₆	3.523 ^s ₉₀	7.34 ^s ₄
19.0	55.198 ^s ₁₃₇	68.63 ^s ₂₆₅	58.949 ^s ₁₃₄	44.87 ^s ₇₃	3.613 ^s ₁₃₅	7.38 ^s ₃₁
28.9	55.335 ^s ₁₈₂	65.98 ^s ₂₇₁	59.083 ^s ₁₇₅	45.60 ^s ₉₈	3.748 ^s ₁₇₉	7.69 ^s ₅₉
May 8.9	55.517 ^s ₂₂₃	63.27 ^s ₂₇₃	59.258 ^s ₂₁₃	46.58 ^s ₁₂₃	3.927 ^s ₂₁₇	8.28 ^s ₈₈
18.9	55.740 ^s ₂₅₉	60.54 ^s ₂₆₈	59.471 ^s ₂₄₆	47.81 ^s ₁₄₅	4.144 ^s ₂₅₂	9.16 ^s ₁₁₅
28.8	55.999 ^s ₂₉₂	57.86 ^s ₂₅₆	59.717 ^s ₂₇₄	49.26 ^s ₁₆₅	4.396 ^s ₂₇₈	10.31 ^s ₁₄₀
June 7.8	56.291 ^s ₃₁₄	55.30 ^s ₂₃₈	59.991 ^s ₂₉₂	50.91 ^s ₁₇₈	4.674 ^s ₂₉₉	11.71 ^s ₁₆₀
17.8	56.605 ^s ₃₃₀	52.92 ^s ₂₁₄	60.283 ^s ₃₀₅	52.69 ^s ₁₉₀	4.973 ^s ₃₁₁	13.31 ^s ₁₇₇
27.8	56.935 ^s ₃₃₇	50.78 ^s ₁₈₄	60.588 ^s ₃₀₈	54.59 ^s ₁₉₄	5.284 ^s ₃₁₃	15.08 ^s ₁₈₉
July 7.7	57.272 ^s ₃₃₃	48.94 ^s ₁₅₀	60.896 ^s ₃₀₃	56.53 ^s ₁₉₄	5.597 ^s ₃₀₉	16.97 ^s ₁₉₅
17.7	57.605 ^s ₃₂₂	47.44 ^s ₁₁₂	61.199 ^s ₂₉₁	58.47 ^s ₁₈₉	5.906 ^s ₂₉₇	18.92 ^s ₁₉₈
27.7	57.927 ^s ₃₀₃	46.32 ^s ₇₀	61.490 ^s ₂₇₃	60.36 ^s ₁₇₉	6.203 ^s ₂₇₇	20.90 ^s ₁₉₄
Aug. 6.7	58.230 ^s ₂₇₆	45.62 ^s ₂₈	61.763 ^s ₂₄₈	62.15 ^s ₁₆₅	6.480 ^s ₂₅₃	22.84 ^s ₁₈₆
16.6	58.506 ^s ₂₄₃	45.34 ^s ₁₇	62.011 ^s ₂₁₈	63.80 ^s ₁₄₈	6.733 ^s ₂₂₃	24.70 ^s ₁₇₄
26.6	58.749 ^s ₂₀₅	45.51 ^s ₅₆	62.229 ^s ₁₈₇	65.28 ^s ₁₂₇	6.956 ^s ₁₉₀	26.44 ^s ₁₆₀
Sept. 5.6	58.954 ^s ₁₆₅	46.07 ^s ₉₅	62.416 ^s ₁₅₂	66.55 ^s ₁₀₄	7.146 ^s ₁₅₇	28.04 ^s ₁₄₁
15.5	59.119 ^s ₁₂₂	47.02 ^s ₁₂₉	62.568 ^s ₁₁₈	67.59 ^s ₈₂	7.303 ^s ₁₂₁	29.45 ^s ₁₂₂
25.5	59.241 ^s ₇₉	48.31 ^s ₁₅₅	62.686 ^s ₈₃	68.41 ^s ₆₀	7.424 ^s ₈₇	30.67 ^s ₁₀₁
Oct. 5.5	59.320 ^s ₃₉	49.86 ^s ₁₇₇	62.769 ^s ₅₀	69.01 ^s ₃₇	7.511 ^s ₅₄	31.68 ^s ₈₁
15.5	59.359 ^s ₀	51.63 ^s ₁₈₉	62.819 ^s ₂₀	69.38 ^s ₁₇	7.565 ^s ₂₃	32.49 ^s ₅₉
25.4	59.359 ^s ₃₄	53.52 ^s ₁₉₃	62.839 ^s ₈	69.55 ^s ₂	7.588 ^s ₆	33.08 ^s ₃₉
Nov. 4.4	59.325 ^s ₆₆	55.45 ^s ₁₈₉	62.831 ^s ₃₃	69.53 ^s ₁₈	7.582 ^s ₃₂	33.47 ^s ₂₁
14.4	59.259 ^s ₉₂	57.34 ^s ₁₇₇	62.798 ^s ₅₆	69.35 ^s ₃₃	7.550 ^s ₅₅	33.68 ^s ₂
24.4	59.167 ^s ₁₁₄	59.11 ^s ₁₅₈	62.742 ^s ₇₆	69.02 ^s ₄₄	7.495 ^s ₇₅	33.70 ^s ₁₅
Dec. 4.3	59.053 ^s ₁₃₁	60.69 ^s ₁₃₃	62.666 ^s ₉₂	68.58 ^s ₅₄	7.420 ^s ₉₅	33.55 ^s ₃₁
14.3	58.922 ^s ₁₄₄	62.02 ^s ₁₀₄	62.574 ^s ₁₀₇	68.04 ^s ₆₂	7.325 ^s ₁₀₉	33.24 ^s ₄₆
24.3	58.778 ^s ₁₅₂	63.06 ^s ₆₉	62.467 ^s ₁₁₇	67.42 ^s ₆₉	7.216 ^s ₁₂₂	32.78 ^s ₅₉
34.2	58.626	63.75	62.350	66.73	7.094	32.19
Mean Place	56.599	65.46	59.812	52.64	4.442	15.66
Sec δ, Tan δ	1.152	-0.572	1.009	+0.131	1.033	+0.259
L α, L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α, L δ	+0.04	+0.2	-0.01	+0.3	-0.02	+0.3
AUTHORITY	A. E.		A. E.			

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AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Phoenicis. Mag. 3·4			β Andromedæ. Mag. 2·4			ζ ¹ Piscium. Mag. 5·6							
	R.A.		Dec. S.	R.A.		Dec. N.	R.A.		Dec. N.					
	h	m	°	′	h	m	°	′	h	m	°	′	″	
			47	7			35	12			7	10		
Jan. 0·3	40·813	231	53·98	30	28·390	168	70·06	44	45·369	124	21·75	71		
10·2	40·582	230	54·28	21	28·222	177	69·62	77	45·245	129	21·04	72		
20·2	40·352	221	51·07	70	28·045	177	68·85	106	45·116	130	20·32	73		
30·2	40·131	207	53·37	117	27·868	170	67·79	131	44·986	126	19·59	67		
Feb. 9·2	39·924	183	52·20	161	27·698	153	66·48	150	44·860	116	18·92	62		
19·1	39·741	154	50·59	201	27·545	129	64·98	165	44·744	97	18·30	52		
29·1	39·587	117	48·58	237	27·416	95	63·33	170	44·647	72	17·78	38		
Mar. 10·1	39·470	73	46·21	267	27·321	55	61·63	168	44·575	40	17·40	21		
20·0	39·397	25	43·54	292	27·266	7	59·95	159	44·535	5	17·19	1		
30·0	39·372	28	40·62	310	27·259	44	58·36	141	44·530	37	17·18	22		
Apr. 9·0	39·400	83	37·52	322	27·303	97	56·95	117	44·567	79	17·40	46		
19·0	39·483	140	34·30	329	27·400	150	55·78	88	44·646	124	17·86	72		
28·9	39·623	195	31·01	326	27·550	200	54·90	55	44·770	166	18·58	99		
May 8·9	39·818	246	27·75	317	27·750	246	54·35	17	44·936	205	19·57	121		
18·9	40·064	293	24·58	301	27·996	285	54·18	20	45·141	240	20·78	144		
28·9	40·357	334	21·57	277	28·281	317	54·38	59	45·381	269	22·22	163		
June 7·8	40·691	365	18·80	248	28·598	338	54·97	94	45·650	289	23·85	177		
17·8	41·056	387	16·32	212	28·936	352	55·91	128	45·939	303	25·62	187		
27·8	41·443	398	14·20	169	29·288	355	57·19	159	46·242	308	27·49	193		
July 7·7	41·841	400	12·51	123	29·643	351	58·78	185	46·550	305	29·42	192		
17·7	42·241	390	11·28	72	29·994	336	60·63	206	46·855	294	31·34	186		
27·7	42·631	370	10·56	22	30·330	315	62·69	222	47·149	278	33·20	177		
Aug. 6·7	43·001	340	10·34	30	30·645	288	64·91	233	47·427	254	34·97	163		
16·6	43·341	302	10·64	81	30·933	255	67·24	240	47·681	226	36·60	145		
26·6	43·643	257	11·45	128	31·188	218	69·64	239	47·907	196	38·05	124		
Sept. 5·6	43·900	205	12·73	170	31·406	181	72·03	236	48·103	162	39·29	102		
15·6	44·105	152	14·43	207	31·587	141	74·39	228	48·265	128	40·31	79		
25·5	44·257	97	16·50	233	31·728	102	76·67	216	48·393	94	41·10	56		
Oct. 5·5	44·354	42	18·83	252	31·830	63	78·83	199	48·487	62	41·66	35		
15·5	44·396	11	21·35	260	31·893	28	80·82	181	48·549	32	42·01	14		
25·4	44·385	59	23·95	257	31·921	7	82·63	159	48·581	2	42·15	5		
Nov. 4·4	44·326	103	26·52	244	31·914	40	84·22	134	48·583	23	42·10	20		
14·4	44·223	141	28·96	221	31·874	71	85·56	106	48·560	46	41·90	34		
24·4	44·082	172	31·17	189	31·803	97	86·62	77	48·514	68	41·56	45		
Dec. 4·3	43·910	197	33·06	151	31·706	122	87·39	44	48·446	86	41·11	55		
14·3	43·713	214	34·57	107	31·584	143	87·83	12	48·360	103	40·56	61		
24·3	43·499	223	35·64	58	31·441	160	87·95	22	48·257	115	39·95	67		
34·3	43·276		36·22		31·281		87·73		48·142		39·28			
Mean Place	41·558		33·10		28·229		64·70		45·524		25·90			
Sec δ, Tan δ	1·470		-1·077		1·224		+0·706		1·008		+0·126			
L α, L δ	-0·01		+0·4		+0·01		+0·4		0·00		+0·4			
ω α, ω δ	+0·07		+0·3		-0·05		+0·3		-0·01		+0·3			
AUTHORITY	A. E.			A. E.			A. E.			A. E.			A. E.	

APPARENT PLACES OF STARS, 1924. 285

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Ceti. Mag. 3·8		δ Cassiopeiæ. Mag. 2·8		γ Phœnicis. Mag. 3·4	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m I 20 s	° ′ 8 34	h m I 20 s	° ′ 59 50	h m I 25 s	° ′ 43 42
Jan. 0·3	13·19 ⁶ ₁₂₅	40·34 ⁷⁷	50·74 ⁸ ₃₂₈	38·6 ² ₂₀	3·43 ⁴ ₂₁₃	47·0 ⁷ ₅₉
10·3	13·07 ¹ ₁₃₂	41·11 ⁶⁰	50·42 ⁰ ₃₄₆	38·8 ² ₃₂	3·22 ¹ ₂₁₉	47·6 ⁶ ₁₁
20·2	12·93 ⁹ ₁₃₅	41·71 ⁴³	50·07 ⁴ ₃₄₉	38·5 ⁰ ₈₄	3·00 ² ₂₁₇	47·7 ⁷ ₃₈
30·2	12·80 ⁴ ₁₃₁	42·14 ²³	49·72 ⁵ ₃₃₇	37·6 ⁶ ₁₃₂	2·78 ⁵ ₂₀₈	47·3 ⁹ ₈₄
Feb. 9·2	12·67 ³ ₁₂₁	42·37 ²	49·38 ⁸ ₃₁₁	36·3 ⁴ ₁₇₃	2·57 ⁷ ₁₉₂	46·5 ⁵ ₁₃₀
19·1	12·55 ² ₁₀₄	42·39 ²⁰	49·07 ⁷ ₂₆₈	34·6 ¹ ₂₀₉	2·38 ⁵ ₁₆₇	45·2 ⁵ ₁₇₁
29·1	12·44 ⁸ ₈₁	42·19 ⁴³	48·80 ⁹ ₂₁₃	32·5 ² ₂₃₆	2·21 ⁸ ₁₃₇	43·5 ⁴ ₂₀₉
Mar. 10·1	12·36 ⁷ ₅₂	41·76 ⁶⁷	48·59 ⁶ ₁₄₄	30·1 ⁶ ₂₅₁	2·08 ¹ ₉₈	41·4 ⁵ ₂₄₂
20·1	12·31 ⁵ ₁₇	41·09 ⁹²	48·45 ² ₆₇	27·6 ⁵ ₂₅₆	1·98 ³ ₅₃	39·0 ³ ₂₇₁
30·0	12·29 ⁸ ₂₃	40·17 ¹¹⁶	48·38 ⁵ ₁₆	25·0 ⁹ ₂₅₂	1·93 ⁰ ₃	36·3 ² ₂₉₃
Apr. 9·0	12·32 ¹ ₆₅	39·01 ¹³⁹	48·40 ¹ ₁₀₂	22·5 ⁷ ₂₃₆	1·92 ⁷ ₄₉	33·3 ⁹ ₃₀₉
19·0	12·38 ⁶ ₁₀₈	37·6 ² ₁₆₀	48·50 ³ ₁₈₇	20·2 ¹ ₂₁₂	1·97 ⁶ ₁₀₄	30·3 ⁰ ₃₂₀
29·0	12·49 ¹ ₁₅₂	36·0 ² ₁₈₀	48·69 ⁰ ₂₆₆	18·0 ⁹ ₁₈₀	2·08 ⁰ ₁₅₉	27·1 ⁰ ₃₂₃
May 8·9	12·64 ⁶ ₁₉₁	34·2 ² ₁₉₅	48·95 ⁶ ₃₃₈	16·2 ⁹ ₁₄₁	2·23 ⁹ ₂₁₁	23·8 ⁷ ₃₁₉
18·9	12·83 ⁷ ₂₂₇	32·2 ⁷ ₂₀₇	49·29 ⁴ ₄₀₁	14·8 ⁸ ₉₈	2·45 ⁰ ₂₅₈	20·6 ⁸ ₃₀₈
28·9	13·06 ⁴ ₂₅₈	30·2 ⁰ ₂₁₃	49·69 ⁵ ₄₅₁	13·9 ⁰ ₅₁	2·70 ⁸ ₃₀₀	17·6 ⁰ ₂₉₀
June 7·8	13·32 ² ₂₈₁	28·0 ⁷ ₂₁₅	50·14 ⁶ ₄₈₉	13·3 ⁹ ₃	3·00 ⁸ ₃₃₃	14·7 ⁰ ₂₆₄
17·8	13·60 ³ ₂₉₇	25·9 ² ₂₁₁	50·63 ⁵ ₅₁₂	13·3 ⁶ ₄₆	3·34 ¹ ₃₅₉	12·0 ⁶ ₂₃₂
27·8	13·90 ⁰ ₃₀₅	23·8 ¹ ₂₀₁	51·14 ⁷ ₅₂₂	13·8 ² ₉₂	3·70 ⁰ ₃₇₅	9·7 ⁴ ₁₉₄
July 7·8	14·20 ⁵ ₃₀₅	21·8 ⁰ ₁₈₆	51·66 ⁹ ₅₁₈	14·7 ⁴ ₁₃₆	4·07 ⁵ ₃₈₀	7·8 ⁰ ₁₅₀
17·7	14·51 ⁰ ₂₉₈	19·9 ⁴ ₁₆₅	52·18 ⁷ ₅₀₄	16·1 ⁰ ₁₇₆	4·45 ⁵ ₃₇₅	6·3 ⁰ ₁₀₂
27·7	14·80 ⁸ ₂₈₂	18·2 ⁹ ₁₄₁	52·69 ¹ ₄₇₆	17·8 ⁶ ₂₁₄	4·83 ⁰ ₃₆₀	5·2 ⁸ ₅₂
Aug. 6·7	15·09 ⁰ ₂₆₁	16·8 ⁸ ₁₁₄	53·16 ⁷ ₄₄₀	20·0 ⁰ ₂₄₅	5·19 ⁰ ₃₃₇	4·7 ⁶ ₁
16·7	15·35 ¹ ₂₃₆	15·7 ⁴ ₈₃	53·60 ⁷ ₃₉₆	22·4 ⁵ ₂₇₀	5·52 ⁷ ₃₀₄	4·7 ⁵ ₅₁
26·6	15·58 ⁷ ₂₀₄	14·9 ¹ ₅₁	54·00 ³ ₃₄₄	25·1 ⁵ ₂₉₂	5·83 ¹ ₂₆₆	5·2 ⁶ ₁₀₁
Sept. 5·6	15·79 ¹ ₁₇₂	14·4 ⁰ ₂₀	54·34 ⁷ ₂₉₀	28·0 ⁷ ₃₀₅	6·09 ⁷ ₂₂₁	6·2 ⁷ ₁₄₅
15·6	15·96 ³ ₁₃₈	14·2 ⁰ ₁₁	54·63 ⁷ ₂₃₁	31·1 ² ₃₁₄	6·31 ⁸ ₁₇₃	7·7 ² ₁₈₅
25·5	16·10 ¹ ₁₀₃	14·3 ¹ ₃₈	54·86 ⁸ ₁₇₀	34·2 ⁶ ₃₁₇	6·49 ¹ ₁₂₃	9·5 ⁷ ₂₁₇
Oct. 5·5	16·20 ⁴ ₆₉	14·6 ⁹ ₆₂	55·03 ⁸ ₁₀₉	37·4 ³ ₃₁₃	6·61 ⁴ ₇₂	11·7 ⁴ ₂₄₀
15·5	16·27 ³ ₃₇	15·3 ¹ ₈₂	55·14 ⁷ ₄₈	40·5 ⁶ ₃₀₁	6·68 ⁶ ₂₃	14·1 ⁴ ₂₅₃
25·5	16·31 ⁰ ₇	16·1 ³ ₉₇	55·19 ⁵ ₁₃	43·5 ⁷ ₂₈₄	6·70 ⁹ ₂₃	16·6 ⁷ ₂₅₇
Nov. 4·4	16·31 ⁷ ₂₀	17·1 ⁰ ₁₀₆	55·18 ² ₇₃	46·4 ¹ ₂₆₁	6·68 ⁶ ₆₇	19·2 ⁴ ₂₄₉
14·4	16·29 ⁷ ₄₅	18·1 ⁶ ₁₁₀	55·10 ⁹ ₁₃₀	49·0 ² ₂₃₀	6·61 ⁹ ₁₀₃	21·7 ³ ₂₃₂
24·4	16·25 ² ₆₇	19·2 ⁵ ₁₁₀	54·97 ⁹ ₁₈₅	51·3 ² ₁₉₄	6·51 ⁴ ₁₃₇	24·0 ⁵ ₂₀₅
Dec. 4·4	16·18 ⁵ ₈₇	20·3 ⁶ ₁₀₅	54·79 ⁴ ₂₃₄	53·2 ⁶ ₁₅₂	6·37 ⁷ ₁₆₆	26·1 ⁰ ₁₇₂
14·3	16·09 ⁸ ₁₀₃	21·4 ¹ ₉₆	54·56 ⁰ ₂₇₈	54·7 ⁸ ₁₀₅	6·21 ¹ ₁₈₈	27·8 ² ₁₃₁
24·3	15·99 ⁵ ₁₁₇	22·3 ⁷ ₈₃	54·28 ² ₃₁₂	55·8 ³ ₅₄	6·02 ³ ₂₀₃	29·1 ³ ₈₆
34·3	15·87 ⁸	23·2 ⁰	53·97 ⁰	56·3 ⁷	5·82 ⁰	29·9 ⁹
Mean Place	13·429	30·34	49·779	27·74	3·916	26·49
Sec δ , Tan δ	1·011	-0·151	1·990	+1·721	1·383	-0·956
L α , L δ	0·00	+0·4	+0·02	+0·4	-0·01	+0·4
ω α , ω δ	+0·01	+0·3	-0·11	+0·3	+0·06	+0·4
AUTHORITY	A. E.		A. E.		A. N.	

286 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Piscium. Mag. 3·7		α Eridani. Mag. 0·6		ν Piscium. Mag. 4·7	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m I 27	° ' 14 57	h m I 34	° ' 57 36	h m I 37	° ' 5 6
Jan. 0·3	24·803 ¹²⁷	14·23 ⁵⁹	52·597 ³²⁷	104·99 ⁵⁰	28·427 ¹²⁰	6·70 ⁶⁹
10·3	24·676 ¹³⁷	13·64 ⁷⁰	52·270 ³³³	105·49 ⁶	28·307 ¹³⁰	6·01 ⁶⁸
20·2	24·539 ¹⁴¹	12·94 ⁷⁷	51·937 ³³⁰	105·43 ⁶²	28·177 ¹³⁷	5·33 ⁶⁴
30·2	24·398 ¹⁴⁰	12·17 ⁸¹	51·607 ³¹⁷	104·81 ¹¹⁷	28·040 ¹³⁸	4·69 ⁵⁸
Feb. 9·2	24·258 ¹³¹	11·36 ⁸³	51·290 ²⁹³	103·64 ¹⁶⁷	27·902 ¹³⁰	4·11 ⁵⁰
19·2	24·127 ¹¹⁵	10·53 ⁸⁰	50·997 ²⁶¹	101·97 ²¹³	27·772 ¹¹⁷	3·61 ³⁹
29·1	24·012 ⁹¹	9·73 ⁷³	50·736 ²¹⁸	99·84 ²⁵³	27·655 ⁹⁵	3·22 ²⁵
Mar. 10·1	23·921 ⁶⁰	9·00 ⁶²	50·518 ¹⁶⁸	97·31 ²⁸⁸	27·560 ⁶⁶	2·97 ⁸
20·1	23·861 ²²	8·38 ⁴⁵	50·350 ¹⁰⁹	94·43 ³¹⁶	27·494 ³²	2·89 ¹¹
30·0	23·839 ²⁰	7·93 ²⁶	50·241 ⁴⁵	91·27 ³³⁸	27·462 ⁸	3·00 ³³
Apr. 9·0	23·859 ⁶⁴	7·67 ²	50·196 ²³	87·89 ³⁵¹	27·470 ⁵²	3·33 ⁵⁷
19·0	23·923 ¹¹⁰	7·65 ²⁴	50·219 ⁹⁴	84·38 ³⁵⁸	27·522 ⁹⁶	3·90 ⁸⁰
29·0	24·033 ¹⁵⁵	7·89 ⁵⁰	50·313 ¹⁶⁵	80·80 ³⁵⁶	27·618 ¹⁴⁰	4·70 ¹⁰⁴
May 8·9	24·188 ¹⁹⁷	8·39 ⁷⁷	50·478 ²³²	77·24 ³⁴⁶	27·758 ¹⁸¹	5·74 ¹²⁷
18·9	24·385 ²³⁴	9·16 ¹⁰⁴	50·710 ²⁹⁶	73·78 ³³⁰	27·939 ²¹⁹	7·01 ¹⁴⁷
28·9	24·619 ²⁶⁵	10·20 ¹²⁷	51·006 ³⁵³	70·48 ³⁰⁴	28·158 ²⁵¹	8·48 ¹⁶⁴
June 7·9	24·884 ²⁸⁹	11·47 ¹⁴⁸	51·359 ⁴⁰⁰	67·44 ²⁷²	28·409 ²⁷⁶	10·12 ¹⁷⁷
17·8	25·173 ³⁰⁵	12·95 ¹⁶⁶	51·759 ⁴³⁸	64·72 ²³³	28·685 ²⁹³	11·89 ¹⁸⁶
27·8	25·478 ³¹²	14·61 ¹⁷⁷	52·197 ⁴⁶³	62·39 ¹⁸⁸	28·978 ³⁰³	13·75 ¹⁸⁹
July 7·8	25·790 ³¹³	16·38 ¹⁸⁶	52·660 ⁴⁷⁶	60·51 ¹³⁷	29·281 ³⁰⁵	15·64 ¹⁸⁸
17·7	26·103 ³⁰⁴	18·24 ¹⁸⁸	53·136 ⁴⁷⁶	59·14 ⁸³	29·586 ²⁹⁹	17·52 ¹⁸¹
27·7	26·407 ²⁸⁹	20·12 ¹⁸⁷	53·612 ⁴⁶³	58·31 ²⁶	29·885 ²⁸⁶	19·33 ¹⁶⁹
Aug. 6·7	26·696 ²⁶⁸	21·99 ¹⁸⁰	54·075 ⁴³⁸	58·05 ³¹	30·171 ²⁶⁷	21·02 ¹⁵⁴
16·7	26·964 ²⁴³	23·79 ¹⁶⁹	54·513 ⁴⁰⁰	58·36 ⁸⁷	30·438 ²⁴⁴	22·56 ¹³⁵
26·6	27·207 ²¹³	25·48 ¹⁵⁵	54·913 ³⁵¹	59·23 ¹⁴⁰	30·682 ²¹⁵	23·91 ¹¹³
Sept. 5·6	27·420 ¹⁸¹	27·03 ¹³⁹	55·264 ²⁹⁵	60·63 ¹⁸⁸	30·897 ¹⁸⁵	25·04 ⁸⁹
15·6	27·601 ¹⁴⁸	28·42 ¹²⁰	55·559 ²³¹	62·51 ²³⁰	31·082 ¹⁵⁴	25·93 ⁶⁵
25·6	27·749 ¹¹⁵	29·62 ¹⁰⁰	55·790 ¹⁶³	64·81 ²⁶¹	31·236 ¹²¹	26·58 ⁴²
Oct. 5·5	27·864 ⁸²	30·62 ⁸¹	55·953 ⁹³	67·42 ²⁸⁵	31·357 ⁹⁰	27·00 ¹⁹
15·5	27·946 ⁵¹	31·43 ⁶⁰	56·046 ²³	70·27 ²⁹⁶	31·447 ⁵⁹	27·19 ¹
25·5	27·997 ²²	32·03 ⁴²	56·069 ⁴⁵	73·23 ²⁹⁶	31·506 ²⁹	27·18 ¹⁹
Nov. 4·4	28·019 ⁷	32·45 ²⁴	56·024 ¹⁰⁸	76·19 ²⁸³	31·535 ²	26·99 ³⁴
14·4	28·012 ³³	32·69 ⁶	55·916 ¹⁶⁶	79·02 ²⁶¹	31·537 ²⁴	26·65 ⁴⁵
24·4	27·979 ⁵⁷	32·75 ¹⁰	55·750 ²¹⁵	81·63 ²²⁷	31·513 ⁴⁹	26·20 ⁵⁵
Dec. 4·4	27·922 ⁷⁹	32·65 ²⁴	55·535 ²⁵⁹	83·90 ¹⁸⁵	31·464 ⁷⁰	25·65 ⁶¹
14·3	27·843 ¹⁰⁰	32·41 ³⁸	55·276 ²⁹⁰	85·75 ¹³⁶	31·394 ⁹¹	25·04 ⁶⁵
24·3	27·743 ¹¹⁶	32·03 ⁵⁰	54·986 ³¹³	87·11 ⁸³	31·303 ¹⁰⁹	24·39 ⁶⁷
34·3	27·627	31·53	54·673	87·94	31·194	23·72
Mean Place	24·782	16·32	53·101	81·46	28·445	12·52
Sec δ , Tan δ	1·035	+0·267	1·867	-1·577	1·004	+0·089
L α , L δ	0·00	+0·4	-0·02	+0·4	0·00	+0·4
ω α , ω δ	-0·02	+0·4	+0·10	+0·4	-0·01	+0·4
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 287

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	♋ Piscium. Mag. 4.5		ζ Ceti. Mag. 3.9		ε Cassiopeiæ. Mag. 3.4	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m I 4I	8 46	h m I 47	10 42	h m I 48	63 17
Jan.	0.3 22.711 ¹¹⁹	27.93 ⁶⁴	42.424 ¹²³	46.92 ⁸⁵	55.94 ³⁶	58.01 ⁶³
	10.3 22.592 ¹³²	27.29 ⁶⁷	42.301 ¹³⁶	47.77 ⁶⁶	55.58 ³⁹	58.64 ⁹
	20.3 22.460 ¹³⁹	26.62 ⁶⁷	42.165 ¹⁴³	48.43 ⁴⁶	55.19 ⁴¹	58.73 ⁴⁴
	30.2 22.321 ¹⁴⁰	25.95 ⁶⁵	42.022 ¹⁴⁴	48.89 ²³	54.78 ⁴⁰	58.29 ⁹⁶
Feb.	9.2 22.181 ¹³⁴	25.30 ⁶⁰	41.878 ¹³⁸	49.12 ¹	54.38 ³⁸	57.33 ¹⁴³
	19.2 22.047 ¹²⁰	24.70 ⁵³	41.740 ¹²⁶	49.11 ²⁵	54.00 ³⁵	55.90 ¹⁸⁵
	29.1 21.927 ⁹⁹	24.17 ⁴²	41.614 ¹⁰⁵	48.86 ⁵⁰	53.65 ²⁹	54.05 ²¹⁸
Mar.	10.1 21.828 ⁷⁰	23.75 ²⁷	41.509 ⁷⁸	48.36 ⁷⁵	53.36 ²²	51.87 ²⁴¹
	20.1 21.758 ³⁵	23.48 ⁹	41.431 ⁴⁵	47.61 ¹⁰⁰	53.14 ¹³	49.46 ²⁵⁶
	30.1 21.723 ⁵	23.39 ¹¹	41.386 ⁶	46.61 ¹²⁶	53.01 ⁵	46.90 ²⁵⁹
Apr.	9.0 21.728 ⁴⁹	23.50 ³⁴	41.380 ³⁷	45.35 ¹⁴⁸	52.96 ⁵	44.31 ²⁵¹
	19.0 21.777 ⁹⁴	23.84 ⁵⁹	41.417 ⁸¹	43.87 ¹⁷¹	53.01 ¹⁵	41.80 ²³⁴
	29.0 21.871 ¹³⁸	24.43 ⁸³	41.498 ¹²⁵	42.16 ¹⁸⁹	53.16 ²³	39.46 ²⁰⁸
May	9.0 22.009 ¹⁸¹	25.26 ¹⁰⁶	41.623 ¹⁶⁷	40.27 ²⁰⁵	53.39 ³³	37.38 ¹⁷³
	18.9 22.190 ²¹⁸	26.32 ¹²⁹	41.790 ²⁰⁶	38.22 ²¹⁶	53.72 ⁴⁰	35.63 ¹³⁶
	28.9 22.408 ²⁵¹	27.61 ¹⁴⁸	41.996 ²⁴⁰	36.06 ²²²	54.12 ⁴⁶	34.27 ⁹²
June	7.9 22.659 ²⁷⁷	29.09 ¹⁶⁴	42.236 ²⁶⁸	33.84 ²²³	54.58 ⁵¹	33.35 ⁴⁷
	17.8 22.936 ²⁹⁴	30.73 ¹⁷⁶	42.504 ²⁸⁸	31.61 ²¹⁸	55.09 ⁵⁵	32.88 ²
	27.8 23.230 ³⁰⁵	32.49 ¹⁸³	42.792 ³⁰⁰	29.43 ²⁰⁷	55.64 ⁵⁷	32.90 ⁴⁸
July	7.8 23.535 ³⁰⁷	34.32 ¹⁸⁵	43.092 ³⁰⁵	27.36 ¹⁹¹	56.21 ⁵⁸	33.38 ⁹⁴
	17.8 23.842 ³⁰²	36.17 ¹⁸²	43.397 ³⁰²	25.45 ¹⁶⁹	56.79 ⁵⁷	34.32 ¹³⁸
	27.7 24.144 ²⁸⁹	37.99 ¹⁷⁴	43.699 ²⁹²	23.76 ¹⁴⁴	57.36 ⁵⁵	35.70 ²¹⁸
Aug.	6.7 24.433 ²⁷¹	39.73 ¹⁶²	43.991 ²⁷⁴	22.32 ¹¹³	57.91 ⁵²	37.48 ¹⁷³
	16.7 24.704 ²⁴⁷	41.35 ¹⁴⁷	44.265 ²⁵³	21.19 ⁸²	58.43 ⁴⁸	39.61 ²⁴⁵
	26.6 24.951 ²²¹	42.82 ¹²⁷	44.518 ²²⁵	20.37 ⁴⁷	58.91 ⁴³	42.06 ²⁷¹
Sept.	5.6 25.172 ¹⁹⁰	44.09 ¹⁰⁷	44.743 ¹⁹⁶	19.90 ¹³	59.34 ³⁷	44.77 ²⁹¹
	15.6 25.362 ¹⁵⁸	45.16 ⁸⁵	44.939 ¹⁶²	19.77 ¹⁸	59.71 ³¹	47.68 ³⁰⁶
	25.6 25.520 ¹²⁷	46.01 ⁶³	45.101 ¹³⁰	19.95 ⁵⁰	60.02 ²⁵	50.74 ³¹⁴
Oct.	5.5 25.647 ⁹⁵	46.64 ⁴¹	45.231 ⁹⁷	20.45 ⁷⁶	60.27 ¹⁸	53.88 ³¹⁷
	15.5 25.742 ⁶⁴	47.05 ²¹	45.328 ⁶⁵	21.21 ⁹⁷	60.45 ¹²	57.05 ³¹²
	25.5 25.806 ³⁴	47.26 ³	45.393 ³³	22.18 ¹¹³	60.57 ⁴	60.17 ³⁰²
Nov.	4.5 25.840 ⁷	47.29 ¹²	45.426 ⁴	23.31 ¹²³	60.61 ²	63.19 ²⁸⁵
	14.4 25.847 ²¹	47.17 ²⁷	45.430 ²⁴	24.54 ¹²⁷	60.59 ¹⁰	66.04 ²⁵⁹
	24.4 25.826 ⁴⁵	46.90 ³⁸	45.406 ⁴⁹	25.81 ¹²⁶	60.49 ¹⁶	68.63 ²²⁸
Dec.	4.4 25.781 ⁶⁸	46.52 ⁴⁷	45.357 ⁷³	27.07 ¹²⁰	60.33 ²³	70.91 ¹⁹¹
	14.3 25.713 ⁹⁰	46.05 ⁵⁴	45.284 ⁹⁴	28.27 ¹⁰⁸	60.10 ²⁹	72.82 ¹⁴⁶
	24.3 25.623 ¹⁰⁸	45.51 ⁶⁰	45.190 ¹¹²	29.35 ⁹⁴	59.81 ³³	74.28 ⁹⁷
	34.3 25.515	44.91	45.078	30.29	59.48	75.25
Mean Place	22.676	32.63	42.505	35.46	54.52	47.94
Sec δ, Tan δ	1.012	+0.154	1.018	-0.189	2.225	+1.988
L α, L δ	0.00	+0.4	0.00	+0.4	+0.02	+0.4
ω α, ω δ	-0.01	+0.4	+0.01	+0.5	-0.12	+0.5
AUTHORITY	A. E.		A. E.		A. E.	

288 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Arietis. Mag. 2.7		α Hydri. Mag. 3.0		ν Ceti. Mag. 4.2	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m I 50	° 26	h m I 56	° 55	h m I 56	° 26
Jan. 0.3	26.427 ¹²⁷	12.52 ⁴³	21.80 ³⁸	105.86 ⁷²	25.310 ¹³⁷	58.56 ⁹⁶
10.3	26.300 ¹⁴²	12.09 ⁵⁷	21.42 ⁴⁰	106.58 ¹³	25.173 ¹⁵⁰	59.52 ⁶⁵
20.3	26.158 ¹⁵²	11.52 ⁷⁰	21.02 ⁴¹	106.71 ⁴⁵	25.023 ¹⁵⁸	60.17 ³⁴
30.2	26.006 ¹⁵⁵	10.82 ⁸¹	20.61 ³⁹	106.26 ¹⁰²	24.865 ¹⁶⁰	60.51 ¹
Feb. 9.2	25.851 ¹⁵⁰	10.01 ⁸⁹	20.22 ³⁸	105.24 ¹⁵⁵	24.705 ¹⁵⁴	60.52 ³²
19.2	25.701 ¹³⁶	9.12 ⁹²	19.84 ³⁴	103.69 ²⁰³	24.551 ¹⁴²	60.20 ³²
29.1	25.565 ¹¹³	8.20 ⁹¹	19.50 ³⁰	101.66 ²⁴⁸	24.409 ¹²³	59.55 ⁶⁵
Mar. 10.1	25.452 ⁸⁴	7.29 ⁸⁴	19.20 ²⁴	99.18 ²⁸⁵	24.286 ⁹⁴	58.58 ⁹⁷
20.1	25.368 ⁴⁷	6.45 ⁷⁴	18.96 ¹⁷	96.33 ³¹⁶	24.192 ⁶⁰	57.31 ¹⁵⁶
30.1	25.321 ⁴	5.71 ⁵⁷	18.79 ¹¹	93.17 ³⁴⁰	24.132 ²¹	55.75 ¹⁸²
Apr. 9.0	25.317 ⁴³	5.14 ³⁸	18.68 ³	89.77 ³⁵⁶	24.111 ²²	53.93 ²⁰⁶
19.0	25.360 ⁹¹	4.76 ¹⁴	18.65 ⁵	86.21 ³⁶⁵	24.133 ⁶⁹	51.87 ²²⁷
29.0	25.451 ¹³⁷	4.62 ¹²	18.70 ¹²	82.56 ³⁶⁶	24.202 ¹¹⁵	49.60 ²⁴²
May 9.0	25.588 ¹⁸³	4.74 ⁴⁰	18.82 ²¹	78.90 ³⁵⁹	24.317 ¹⁵⁹	47.18 ²⁵³
18.9	25.771 ²²⁴	5.14 ⁶⁷	19.03 ²⁹	75.31 ³⁴³	24.476 ²⁰⁰	44.65 ²⁵⁸
28.9	25.995 ²⁵⁸	5.81 ⁹⁴	19.32 ³⁵	71.88 ³²⁰	24.676 ²³⁸	42.07 ²⁵⁸
June 7.9	26.253 ²⁸⁵	6.75 ¹¹⁷	19.67 ⁴¹	68.68 ²⁸⁸	24.914 ²⁶⁷	39.49 ²⁵¹
17.8	26.538 ³⁰⁶	7.92 ¹³⁹	20.08 ⁴⁶	65.80 ²⁴⁹	25.181 ²⁹¹	36.98 ²³⁷
27.8	26.844 ³¹⁶	9.31 ¹⁵⁷	20.54 ⁴⁹	63.31 ²⁰⁵	25.472 ³⁰⁷	34.61 ²¹⁸
July 7.8	27.160 ³²¹	10.88 ¹⁷⁰	21.03 ⁵²	61.26 ¹⁵⁴	25.779 ³¹⁴	32.43 ¹⁹⁴
17.8	27.481 ³¹⁵	12.58 ¹⁷⁸	21.55 ⁵³	59.72 ¹⁰⁰	26.093 ³¹²	30.49 ¹⁶²
27.7	27.796 ³⁰⁵	14.36 ¹⁸³	22.08 ⁵³	58.72 ⁴¹	26.405 ³⁰⁵	28.87 ¹²⁷
Aug. 6.7	28.101 ²⁸⁶	16.19 ¹⁸¹	22.61 ⁵⁰	58.31 ¹⁸	26.710 ²⁸⁹	27.60 ⁸⁸
16.7	28.387 ²⁶³	18.00 ¹⁷⁷	23.11 ⁴⁶	58.49 ⁷⁶	26.999 ²⁶⁸	26.72 ⁴⁸
26.6	28.650 ²³⁶	19.77 ¹⁶⁹	23.57 ⁴²	59.25 ¹³²	27.267 ²⁴⁰	26.24 ⁶
Sept. 5.6	28.886 ²⁰⁶	21.46 ¹⁵⁷	23.99 ³⁶	60.57 ¹⁸⁴	27.507 ²¹⁰	26.18 ³⁴
15.6	29.092 ¹⁷⁵	23.03 ¹⁴²	24.35 ³¹	62.41 ²²⁹	27.717 ¹⁷⁷	26.52 ⁷³
25.6	29.277 ¹⁴²	24.45 ¹²⁶	24.66 ²¹	64.70 ²⁶⁵	27.894 ¹⁴¹	27.25 ¹⁰⁶
Oct. 5.5	29.409 ¹¹⁰	25.71 ¹⁰⁹	24.87 ¹⁴	67.35 ²⁹²	28.035 ¹⁰⁵	28.31 ¹³⁵
15.5	29.519 ⁷⁸	26.80 ⁹²	25.01 ⁶	70.27 ³⁰⁶	28.140 ⁷¹	29.66 ¹⁵⁷
25.5	29.597 ⁴⁷	27.72 ⁷³	25.07 ²	73.33 ³¹⁰	28.211 ³⁶	31.23 ¹⁷²
Nov. 4.5	29.644 ¹⁷	28.45 ⁵⁶	25.05 ¹⁰	76.43 ³⁰¹	28.247 ⁴	32.95 ¹⁷⁹
14.4	29.661 ¹³	29.01 ³⁸	24.95 ¹⁷	79.44 ²⁸⁰	28.251 ²⁷	34.74 ¹⁷⁸
24.4	29.648 ⁴⁰	29.39 ²⁰	24.78 ²³	82.24 ²⁴⁹	28.224 ⁵⁵	36.52 ¹⁷¹
Dec. 4.4	29.608 ⁶⁷	29.59 ³	24.55 ²⁹	84.73 ²⁰⁷	28.169 ⁸¹	38.23 ¹⁵⁵
14.3	29.541 ⁹¹	29.62 ¹⁴	24.26 ³³	86.80 ¹⁵⁹	28.088 ¹⁰⁵	39.78 ¹³⁶
24.3	29.450 ¹¹⁴	29.48 ³⁰	23.93 ³⁷	88.39 ¹⁰⁴	27.983 ¹²⁴	41.14 ¹⁰⁹
34.3	29.336	29.18	23.56	89.43	27.859	42.23
Mean Place	26.222	13.66	22.02	81.55	25.398	43.54
Sec δ , Tan δ	1.067	+0.373	2.126	-1.876	1.074	-0.393
L α , L δ	0.00	+0.4	-0.02	+0.3	-0.01	+0.3
ω α , ω δ	-0.02	+0.5	+0.11	+0.5	+0.02	+0.5
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 289

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Andromedæ. Mag. 2.3		α Arietis. Mag. 2.2		β Trianguli. Mag. 3.1	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m I 59	° ' / 41 57	h m 2 2	° ' / 23 6	h m 2 4	° ' / 34 37
Jan. 0.3	14.190 ¹⁷⁷	61.76 ¹⁶	53.372 ¹²⁶	12.89 ³²	61.398 ¹⁴⁹	45.25 ¹
10.3	14.013 ¹⁹⁹	61.92 ²²	53.246 ¹⁴⁵	12.57 ⁴⁸	61.249 ¹⁷⁰	45.24 ²⁹
20.3	13.814 ²¹³	61.70 ⁵⁶	53.101 ¹⁵⁷	12.09 ⁶⁴	61.079 ¹⁸⁴	44.95 ⁵⁷
30.2	13.601 ²¹⁷	61.14 ⁹⁰	52.944 ¹⁶²	11.45 ⁷⁸	60.895 ¹⁹¹	44.38 ⁸³
Feb. 9.2	13.384 ²¹⁰	60.24 ¹¹⁹	52.782 ¹⁵⁹	10.67 ⁸⁸	60.704 ¹⁸⁶	43.55 ¹⁰⁵
19.2	13.174 ¹⁹³	59.05 ¹⁴⁴	52.623 ¹⁴⁷	9.79 ⁹⁴	60.518 ¹⁷²	42.50 ¹²⁴
29.2	12.981 ¹⁶⁴	57.61 ¹⁶²	52.476 ¹²⁷	8.85 ⁹⁷	60.346 ¹⁴⁹	41.26 ¹³⁵
Mar. 10.1	12.817 ¹²⁶	55.99 ¹⁷³	52.349 ⁹⁷	7.88 ⁹⁴	60.197 ¹¹⁵	39.91 ¹⁴²
20.1	12.691 ⁷⁸	54.26 ¹⁷⁶	52.252 ⁵⁹	6.94 ⁸⁵	60.082 ⁷²	38.49 ¹⁴¹
30.1	12.613 ²⁴	52.50 ¹⁷⁰	52.193 ¹⁷	6.09 ⁷²	60.010 ²⁵	37.08 ¹³⁴
Apr. 9.0	12.589 ³⁵	50.80 ¹⁵⁸	52.176 ³⁰	5.37 ⁵⁴	59.985 ²⁹	35.74 ¹¹⁸
19.0	12.624 ⁹⁵	49.22 ¹³⁸	52.206 ⁸⁰	4.83 ³²	60.014 ⁸³	34.56 ⁹⁹
29.0	12.719 ¹⁵⁵	47.84 ¹¹²	52.286 ¹²⁸	4.51 ⁷	60.097 ¹³⁷	33.57 ⁷⁴
May 9.0	12.874 ²¹⁰	46.72 ⁸¹	52.414 ¹⁷⁵	4.44 ²⁰	60.234 ¹⁸⁶	32.83 ⁴⁵
18.9	13.084 ²⁶⁰	45.91 ⁴⁸	52.589 ²¹⁷	4.64 ⁴⁸	60.423 ²³⁹	32.38 ¹³
28.9	13.344 ³⁰³	45.43 ¹¹	52.806 ²⁵⁴	5.12 ⁷⁵	60.659 ²⁷⁶	32.25 ¹⁹
June 7.9	13.647 ³³⁷	45.32 ²⁵	53.060 ²⁸⁴	5.87 ¹⁰¹	60.935 ³¹⁰	32.44 ⁵¹
17.9	13.984 ³⁶³	45.57 ⁶²	53.344 ³⁰⁵	6.88 ¹²³	61.245 ³³²	32.95 ⁸³
27.8	14.347 ³⁷⁷	46.19 ⁹⁶	53.649 ³¹⁹	8.11 ¹⁴³	61.577 ³⁴⁷	33.78 ¹¹¹
July 7.8	14.724 ³⁸³	47.15 ¹²⁷	53.968 ³²⁵	9.54 ¹⁵⁹	61.924 ³⁵⁵	34.89 ¹³⁶
17.8	15.107 ³⁸⁰	48.42 ¹⁵⁶	54.293 ³²²	11.13 ¹⁷⁰	62.279 ³⁵¹	36.25 ¹⁵⁹
27.7	15.487 ³⁶⁷	49.98 ¹⁸⁰	54.615 ³¹²	12.83 ¹⁷⁷	62.630 ³⁴¹	37.84 ¹⁷⁷
Aug. 6.7	15.854 ³⁴⁸	51.78 ²⁰⁰	54.927 ²⁹⁶	14.60 ¹⁷⁹	62.971 ³²⁵	39.61 ¹⁹⁰
16.7	16.202 ³²³	53.78 ²¹⁵	55.223 ²⁷⁵	16.39 ¹⁷⁸	63.296 ³⁰¹	41.51 ¹⁹⁹
26.7	16.525 ²⁹¹	55.93 ²²⁵	55.498 ²⁴⁹	18.17 ¹⁷¹	63.597 ²⁷⁴	43.50 ²⁰⁴
Sept. 5.6	16.816 ²⁵⁸	58.18 ²³²	55.747 ²²⁰	19.88 ¹⁶³	63.871 ²⁴³	45.54 ²⁰⁴
15.6	17.074 ²²⁰	60.50 ²³³	55.967 ¹⁹⁰	21.51 ¹⁵¹	64.114 ²¹⁰	47.58 ²⁰¹
25.6	17.294 ¹⁸²	62.83 ²³¹	56.157 ¹⁵⁸	23.02 ¹³⁷	64.324 ¹⁷⁵	49.59 ¹⁹⁴
Oct. 5.6	17.476 ¹⁴³	65.14 ²²⁴	56.315 ¹²⁵	24.39 ¹²²	64.499 ¹⁴⁰	51.53 ¹⁸⁵
15.5	17.619 ¹⁰²	67.38 ²¹³	56.440 ⁹⁴	25.61 ¹⁰⁵	64.639 ¹⁰⁴	53.38 ¹⁷³
25.5	17.721 ⁶³	69.51 ²⁰⁰	56.534 ⁶²	26.66 ⁸⁹	64.743 ⁶⁸	55.11 ¹⁵⁷
Nov. 4.5	17.784 ²³	71.51 ¹⁸¹	56.596 ³⁰	27.55 ⁷¹	64.811 ³³	56.68 ¹⁴¹
14.4	17.807 ¹⁷	73.32 ¹⁶⁰	56.626 ⁰	28.26 ⁵⁴	64.844 ³	58.09 ¹²⁰
24.4	17.790 ⁵⁵	74.92 ¹³⁴	56.626 ³⁰	28.80 ³⁶	64.841 ³⁷	59.29 ⁹⁸
Dec. 4.4	17.735 ⁹³	76.26 ¹⁰⁶	56.596 ⁶⁰	29.16 ¹⁸	64.804 ⁷¹	60.27 ⁷⁴
14.4	17.642 ¹²⁸	77.32 ⁷⁴	56.536 ⁸⁶	29.34 ¹	64.733 ¹⁰³	61.01 ⁴⁸
24.3	17.514 ¹⁵⁹	78.06 ³⁹	56.450 ¹¹¹	29.35 ¹⁸	64.630 ¹³²	61.49 ¹⁹
34.3	17.355	78.45	56.339	29.17	64.498	61.68
Mean Place	13.577	56.92	53.069	13.67	60.908	42.69
Sec δ , Tan δ	1.345	+0.899	1.087	+0.427	1.215	+0.691
L α , L δ	+0.01	+0.3	+0.01	+0.3	+0.01	+0.3
ω α , ω δ	-0.05	+0.5	-0.02	+0.5	-0.04	+0.5
AUTHORITY	A. E.		A. E.		A. E.	

290 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ξ ¹ Ceti. Mag. 4.5		67 Ceti. Mag. 5.7		φ Eridani. Mag. 3.8	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h ^m 2 8	8 29	^h ^m 2 13	6 46	^h ^m 2 13	5 51
Jan. 0.3	58.334 ¹¹³	21.03 ⁶²	11.564 ¹¹⁵	29.22 ⁸⁹	47.611 ²⁶⁴	71.79 ¹⁰⁵
10.3	58.221 ¹³⁰	20.41 ⁶²	11.449 ¹³²	30.11 ⁷⁴	47.347 ²⁸²	72.84 ⁵³
20.3	58.091 ¹⁴³	19.79 ⁶³	11.317 ¹⁴³	30.85 ⁵⁶	47.065 ²⁹²	73.37 ²
30.2	57.948 ¹⁴⁸	19.16 ⁵⁸	11.174 ¹⁵⁰	31.41 ³⁷	46.773 ²⁹³	73.35 ⁵⁶
Feb. 9.2	57.800 ¹⁴⁷	18.58 ⁵⁵	11.024 ¹⁴⁸	31.78 ¹⁷	46.480 ²⁸³	72.79 ¹⁰⁸
19.2	57.653 ¹³⁸	18.03 ⁴⁷	10.876 ¹³⁹	31.95 ⁵	46.197 ²⁶⁴	71.71 ¹⁵⁶
29.2	57.515 ¹¹⁹	17.56 ³⁷	10.737 ¹²³	31.90 ²⁷	45.933 ²³⁶	70.15 ²⁰²
Mar. 10.1	57.396 ⁹⁴	17.19 ²³	10.614 ⁹⁸	31.63 ⁵¹	45.697 ¹⁹⁷	68.13 ²⁴¹
20.1	57.302 ⁶²	16.96 ⁷	10.516 ⁶⁷	31.12 ⁷⁴	45.500 ¹⁵⁰	65.72 ²⁷⁶
30.1	57.240 ²²	16.89 ¹²	10.449 ²⁹	30.38 ⁹⁹	45.350 ⁹⁷	62.96 ³⁰⁵
Apr. 9.0	57.218 ²²	17.01 ³²	10.420 ¹²	29.39 ¹²³	45.253 ³⁸	59.91 ³²⁶
19.0	57.240 ⁶⁷	17.33 ⁵⁶	10.432 ⁵⁷	28.16 ¹⁴⁵	45.215 ²⁶	56.65 ³⁴¹
29.0	57.307 ¹¹²	17.89 ⁷⁹	10.489 ¹⁰¹	26.71 ¹⁶⁵	45.241 ⁹¹	53.24 ³⁵⁰
May 9.0	57.419 ¹⁵⁷	18.68 ¹⁰¹	10.590 ¹⁴⁶	25.06 ¹⁸²	45.332 ¹⁵³	49.74 ³⁴⁹
18.9	57.576 ¹⁹⁷	19.69 ¹²³	10.736 ¹⁸⁶	23.24 ¹⁹⁷	45.485 ²¹⁵	46.25 ³⁴¹
28.9	57.773 ²³²	20.92 ¹⁴¹	10.922 ²²²	21.27 ²⁰⁷	45.700 ²⁷¹	42.84 ³²⁵
June 7.9	58.005 ²⁶²	22.33 ¹⁵⁷	11.144 ²⁵²	19.20 ²¹¹	45.971 ³¹⁹	39.59 ³⁰¹
17.9	58.267 ²⁸³	23.90 ¹⁶⁸	11.396 ²⁷⁵	17.09 ²¹¹	46.290 ³⁶⁰	36.58 ²⁷⁰
27.8	58.550 ²⁹⁹	25.58 ¹⁷⁶	11.671 ²⁹²	14.98 ²⁰⁴	46.650 ³⁹⁰	33.88 ²³²
July 7.8	58.849 ³⁰⁴	27.34 ¹⁷⁷	11.963 ²⁹⁹	12.94 ¹⁹³	47.040 ⁴¹¹	31.56 ¹⁸⁶
17.8	59.153 ³⁰³	29.11 ¹⁷⁶	12.262 ³⁰¹	11.01 ¹⁷⁵	47.451 ⁴²⁰	29.70 ¹³⁶
27.7	59.456 ²⁹⁶	30.87 ¹⁶⁷	12.563 ²⁹⁴	9.26 ¹⁵⁴	47.871 ⁴¹⁸	28.34 ⁸²
Aug. 6.7	59.752 ²⁸²	32.54 ¹⁵⁶	12.857 ²⁸¹	7.72 ¹²⁷	48.289 ⁴⁰⁴	27.52 ²⁵
16.7	60.034 ²⁶²	34.10 ¹⁴⁰	13.138 ²⁶³	6.45 ⁹⁸	48.693 ³⁸¹	27.27 ³²
26.7	60.296 ²³⁸	35.50 ¹²²	13.401 ²⁴⁰	5.47 ⁶⁶	49.074 ³⁴⁷	27.59 ⁸⁸
Sept. 5.6	60.534 ²¹¹	36.72 ¹⁰⁰	13.641 ²¹³	4.81 ³⁵	49.421 ³⁰⁶	28.47 ¹⁴¹
15.6	60.745 ¹⁸³	37.72 ⁷⁹	13.854 ¹⁸⁴	4.46 ²	49.727 ²⁵⁷	29.88 ¹⁸⁹
25.6	60.928 ¹⁵³	38.51 ⁵⁷	14.038 ¹⁵³	4.44 ²⁷	49.984 ²⁰⁴	31.77 ²³⁰
Oct. 5.6	61.081 ¹²²	39.08 ³⁵	14.191 ¹²³	4.71 ⁵⁵	50.188 ¹⁴⁷	34.07 ²⁶¹
15.5	61.203 ⁹³	39.43 ¹⁵	14.314 ⁹¹	5.26 ⁷⁷	50.335 ⁸⁸	36.68 ²⁸⁴
25.5	61.296 ⁶²	39.58 ²	14.405 ⁶¹	6.03 ⁹⁵	50.423 ³⁰	39.52 ²⁹³
Nov. 4.5	61.358 ³⁴	39.56 ¹⁸	14.466 ³⁰	6.98 ¹⁰⁸	50.453 ²⁷	42.45 ²⁹²
14.4	61.392 ⁵	39.38 ³⁰	14.496 ²	8.06 ¹¹⁵	50.426 ⁸¹	45.37 ²⁸⁰
24.4	61.397 ²³	39.08 ⁴⁰	14.498 ²⁶	9.21 ¹¹⁶	50.345 ¹³⁰	48.17 ²⁵⁶
Dec. 4.4	61.374 ⁴⁹	38.68 ⁴⁸	14.472 ⁵³	10.37 ¹¹⁴	50.215 ¹⁷⁵	50.73 ²²³
14.4	61.325 ⁷⁵	38.20 ⁵⁴	14.419 ⁷⁸	11.51 ¹⁰⁶	50.040 ²¹³	52.96 ¹⁸²
24.3	61.250 ⁹⁸	37.66 ⁵⁷	14.341 ¹⁰⁰	12.57 ⁹⁵	49.827 ²⁴⁵	54.78 ¹³⁶
34.3	61.152	37.09	14.241	13.52	49.582	56.14
Mean Place	58.153	26.72	11.470	18.47	47.614	49.14
Sec δ, Tan δ	1.011	+0.149	1.007	-0.119	1.619	-1.274
L α, L δ	0.00	+0.3	0.00	+0.3	-0.02	+0.3
ω α, ω δ	-0.01	+0.5	+0.01	+0.5	+0.07	+0.5
AUTHORITY				A. E.		A. N.

APPARENT PLACES OF STARS, 1924. 291

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Arietis. Mag. 5.7		σ Ceti. Mag. 1.7-9.6		κ Fornacis. Mag. 5.4	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 2 13	° ' 32	h m 2 15	° ' 19	h m 2 19	° ' 9
Jan. 0.3	53.958 ¹¹⁹	58.71 ³⁵	30.484 ¹¹³	28.57 ⁸⁴	3.947 ¹³⁷	56.17 ¹¹¹
10.3	53.839 ¹³⁸	58.36 ⁴⁸	30.371 ¹³¹	29.41 ⁷⁴	3.810 ¹⁵⁵	57.28 ⁷⁹
20.3	53.701 ¹⁵²	57.88 ⁵⁹	30.240 ¹⁴¹	30.15 ⁵⁹	3.655 ¹⁶⁷	58.07 ⁴⁵
30.2	53.549 ¹⁵⁹	57.29 ⁶⁹	30.099 ¹⁴⁹	30.74 ⁴³	3.488 ¹⁷³	58.52 ⁸
Feb. 9.2	53.390 ¹⁵⁹	56.60 ⁷⁵	29.950 ¹⁴⁸	31.17 ²⁷	3.315 ¹⁷¹	58.60 ²⁷
19.2	53.231 ¹⁴⁹	55.85 ⁸⁰	29.802 ¹⁴¹	31.44 ⁸	3.144 ¹⁶²	58.33 ⁶³
29.2	53.082 ¹³¹	55.05 ⁷⁹	29.661 ¹²³	31.52 ¹²	2.982 ¹⁴⁴	57.70 ⁹⁸
Mar. 10.1	52.951 ¹⁰⁴	54.26 ⁷⁴	29.538 ⁹⁹	31.40 ³⁴	2.838 ¹¹⁹	56.72 ¹³⁰
20.1	52.847 ⁶⁹	53.52 ⁶⁵	29.439 ⁶⁷	31.06 ⁵⁷	2.719 ⁸⁷	55.42 ¹⁶¹
30.1	52.778 ²⁸	52.87 ⁵¹	29.372 ²⁹	30.49 ⁷⁸	2.632 ⁴⁸	53.81 ¹⁹⁰
Apr. 9.0	52.750 ¹⁸	52.36 ³³	29.343 ¹⁰	29.71 ¹⁰³	2.584 ⁴	51.91 ²¹⁴
19.0	52.768 ⁶⁷	52.03 ¹²	29.353 ⁵⁶	28.68 ¹²⁴	2.580 ⁴³	49.77 ²³⁶
29.0	52.835 ¹¹⁴	51.91 ¹²	29.409 ¹⁰¹	27.44 ¹⁴⁵	2.623 ⁹⁰	47.41 ²⁵³
May 9.0	52.949 ¹⁶¹	52.03 ³⁷	29.510 ¹⁴⁴	25.99 ¹⁶³	2.713 ¹³⁶	44.88 ²⁶⁴
18.9	53.110 ²⁰⁴	52.40 ⁶³	29.654 ¹⁸⁶	24.36 ¹⁸⁰	2.849 ¹⁸¹	42.24 ²⁷⁰
28.9	53.314 ²⁴¹	53.03 ⁸⁷	29.840 ²²⁰	22.56 ¹⁹²	3.030 ²²⁰	39.54 ²⁷⁰
June 7.9	53.555 ²⁷¹	53.90 ¹¹⁰	30.060 ²⁵²	20.64 ²⁰⁰	3.250 ²⁵⁴	36.84 ²⁶⁴
17.9	53.826 ²⁹⁴	55.00 ¹³⁰	30.312 ²⁷⁴	18.64 ²⁰¹	3.504 ²⁸²	34.20 ²⁴⁹
27.8	54.120 ³¹⁰	56.30 ¹⁴⁷	30.586 ²⁹¹	16.63 ¹⁹⁷	3.786 ³⁰¹	31.71 ²²⁹
July 7.8	54.430 ³¹⁷	57.77 ¹⁵⁹	30.877 ²⁹⁹	14.66 ¹⁸⁹	4.087 ³¹²	29.42 ²⁰³
17.8	54.747 ³¹⁶	59.36 ¹⁶⁶	31.176 ³⁰⁰	12.77 ¹⁷⁵	4.399 ³¹⁶	27.39 ¹⁷¹
27.7	55.063 ³⁰⁸	61.02 ¹⁷¹	31.476 ²⁹⁴	11.02 ¹⁵⁸	4.715 ³¹²	25.68 ¹³⁴
Aug. 6.7	55.371 ²⁹⁴	62.73 ¹⁷⁰	31.770 ²⁸⁰	9.44 ¹³³	5.027 ²⁹⁹	24.34 ⁹³
16.7	55.665 ²⁷⁵	64.43 ¹⁶⁴	32.050 ²⁶³	8.11 ¹⁰⁸	5.326 ²⁸²	23.41 ⁵⁰
26.7	55.940 ²⁵¹	66.07 ¹⁵⁶	32.313 ²⁴⁰	7.03 ⁷⁹	5.608 ²⁵⁸	22.91 ⁶
Sept. 5.6	56.191 ²²⁵	67.63 ¹⁴⁵	32.553 ²¹⁴	6.24 ⁴⁷	5.866 ²³⁰	22.85 ³⁸
15.6	56.416 ¹⁹⁵	69.08 ¹³⁰	32.767 ¹⁸³	5.77 ¹⁹	6.096 ¹⁹⁸	23.23 ⁷⁹
25.6	56.611 ¹⁶⁵	70.38 ¹¹⁵	32.950 ¹⁵⁶	5.58 ⁹	6.294 ¹⁶⁵	24.02 ¹¹⁶
Oct. 5.6	56.776 ¹³⁴	71.53 ⁹⁹	33.106 ¹²⁶	5.67 ³⁶	6.459 ¹²⁹	25.18 ¹⁴⁸
15.5	56.910 ¹⁰³	72.52 ⁸²	33.232 ⁹⁶	6.03 ⁵⁸	6.588 ⁹⁴	26.66 ¹⁷³
25.5	57.013 ⁷³	73.34 ⁶⁶	33.328 ⁶⁵	6.61 ⁷⁵	6.682 ⁵⁹	28.39 ¹⁸⁹
Nov. 4.5	57.086 ⁴¹	74.00 ⁵⁰	33.393 ³⁵	7.36 ⁸⁹	6.741 ²⁴	30.28 ¹⁹⁹
14.4	57.127 ¹¹	74.50 ³⁴	33.428 ⁴	8.25 ⁹⁶	6.765 ⁹	32.27 ¹⁹⁸
24.4	57.138 ¹⁹	74.84 ¹⁹	33.432 ²²	9.21 ¹⁰²	6.756 ⁴⁰	34.25 ¹⁹¹
Dec. 4.4	57.119 ⁴⁸	75.03 ⁴	33.410 ⁵⁰	10.23 ¹⁰⁰	6.716 ⁷¹	36.16 ¹⁷⁶
14.4	57.071 ⁷⁶	75.07 ¹⁰	33.360 ⁷⁴	11.23 ⁹⁵	6.645 ⁹⁷	37.92 ¹⁵⁵
24.3	56.995 ¹⁰²	74.97 ²⁵	33.296 ⁹⁸	12.18 ⁸⁹	6.548 ¹²²	39.47 ¹²⁷
34.3	56.893	74.72	33.188	13.07	6.426	40.74
Mean Place	53.642	61.04	30.357	18.87	3.892	40.07
Sec δ , Tan δ	1.061	+0.355	1.002	-0.058	1.096	-0.449
L α , L δ	+0.01	+0.3	0.00	+0.3	-0.01	+0.3
ω α , ω δ	-0.02	+0.5	0.00	+0.6	+0.02	+0.6
AUTHORITY	A. N.		A. E.		A. N.	

292 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	δ Hydri. Mag. 4.3		ξ ^a Ceti. Mag. 4.3		ν Ceti. Mag. 5.0	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	° ′	h m	° ′	h m	° ′
	2 20	68 59	2 24	8 7	2 31	5 15
Jan. 0.3	23.73 ^s 54	102.50 ^s 93	7.181 ^s 108	6.41 ^s 61	53.258 ^s 105	37.51 ^s 67
10.3	23.19 56	103.43 34	7.073 127	5.80 61	53.153 126	36.84 65
20.3	22.63 57	103.77 26	6.946 142	5.19 60	53.027 141	36.19 60
30.2	22.06 57	103.51 86	6.804 151	4.59 56	52.886 152	35.59 52
Feb. 9.2	21.49 55	102.65 141	6.653 153	4.03 51	52.734 154	35.07 44
19.2	20.94 51	101.24 193	6.500 145	3.52 43	52.580 149	34.63 35
29.2	20.43 46	99.31 239	6.355 129	3.09 34	52.431 134	34.28 21
Mar. 10.1	19.97 40	96.92 280	6.226 106	2.75 20	52.297 111	34.07 7
20.1	19.57 32	94.12 313	6.120 74	2.55 4	52.186 81	34.00 10
30.1	19.25 23	90.99 340	6.046 36	2.51 14	52.105 44	34.10 30
Apr. 9.0	19.02 13	87.59 359	6.010 7	2.65 34	52.061 1	34.40 49
19.0	18.89 3	84.00 370	6.017 52	2.99 56	52.060 42	34.89 72
29.0	18.86 7	80.30 373	6.069 98	3.55 78	52.102 89	35.61 94
May 9.0	18.93 18	76.57 368	6.167 142	4.33 100	52.191 134	36.55 114
18.9	19.11 27	72.89 354	6.309 185	5.33 120	52.325 176	37.69 133
28.9	19.38 37	69.35 333	6.494 221	6.53 139	52.501 214	39.02 151
June 7.9	19.75 46	66.02 303	6.715 252	7.92 154	52.715 245	40.53 164
17.9	20.21 53	62.99 265	6.967 276	9.46 165	52.960 270	42.17 172
27.8	20.74 58	60.34 221	7.243 293	11.11 171	53.230 288	43.89 177
July 7.8	21.32 63	58.13 170	7.536 302	12.82 174	53.518 298	45.66 177
17.8	21.95 65	56.43 115	7.838 303	14.56 171	53.816 301	47.43 172
27.7	22.60 66	55.28 57	8.141 298	16.27 164	54.117 296	49.15 160
Aug. 6.7	23.26 64	54.71 4	8.439 286	17.91 152	54.413 287	50.75 147
16.7	23.90 62	54.75 66	8.725 269	19.43 136	54.700 270	52.22 128
26.7	24.52 56	55.41 123	8.994 248	20.79 117	54.970 250	53.50 107
Sept. 5.6	25.08 50	56.64 179	9.242 223	21.96 96	55.220 227	54.57 83
15.6	25.58 42	58.43 227	9.465 195	22.92 75	55.447 200	55.40 59
25.6	26.00 33	60.70 267	9.660 167	23.67 52	55.647 172	55.99 36
Oct. 5.6	26.33 22	63.37 298	9.827 137	24.19 30	55.819 143	56.35 12
15.5	26.55 11	66.35 317	9.964 108	24.49 11	55.962 115	56.47 7
25.5	26.66 1	69.52 323	10.072 78	24.60 7	56.077 84	56.40 26
Nov. 4.5	26.67 10	72.75 318	10.150 49	24.53 22	56.161 55	56.14 41
14.4	26.57 20	75.93 299	10.199 19	24.31 34	56.216 25	55.73 51
24.4	26.37 30	78.92 270	10.218 10	23.97 43	56.241 4	55.22 60
Dec. 4.4	26.07 37	81.62 229	10.208 39	23.54 50	56.237 32	54.62 64
14.4	25.70 45	83.91 182	10.169 66	23.04 55	56.205 62	53.98 66
24.3	25.25 51	85.73 127	10.103 91	22.49 58	56.143 87	53.32 66
34.3	24.74	87.00	10.012	21.91	56.056	52.66
Mean Place	23.44	77.52	6.927	12.69	52.986	44.91
Sec δ, Tan δ	2.791	-2.606	1.010	+0.143	1.004	+0.092
L α, L δ	-0.04	+0.3	0.00	+0.3	0.00	+0.3
ω α, ω δ	+0.14	+0.6	-0.01	+0.6	-0.01	+0.6
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 293

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	δ Ceti. Mag. 4.0		γ Ceti. Mag. 3.6		π Ceti. Mag. 4.4	
	R. A.	Dec. S.-N.	R. A.	Dec. N.	R. A.	Dec. S.
	h m 2 35	° ' 0 0	h m 2 39	° ' 2 54	h m 2 40	° ' 14 10
Jan. 0.3	35.376 ¹⁰⁴	S. 3.57 ⁸¹	21.905 ¹⁰¹	50.33 ⁷⁴	30.463 ¹¹³	60.69 ¹¹¹
10.3	35.272 ¹²⁵	4.38 ⁷¹	21.804 ¹²⁴	49.59 ⁶⁸	30.350 ¹³⁶	61.80 ⁸⁸
20.3	35.147 ¹⁴¹	5.09 ⁶¹	21.680 ¹⁴¹	48.91 ⁶⁰	30.214 ¹⁵¹	62.68 ⁶³
30.3	35.006 ¹⁵²	5.70 ⁴⁸	21.539 ¹⁵³	48.31 ⁵¹	30.063 ¹⁶²	63.31 ³⁵
Feb. 9.2	34.854 ¹⁵⁴	6.18 ³⁵	21.386 ¹⁵⁶	47.80 ⁴⁰	29.901 ¹⁶⁵	63.66 ⁷
19.2	34.700 ¹⁵⁰	6.53 ¹⁹	21.230 ¹⁵¹	47.40 ²⁸	29.736 ¹⁶⁰	63.73 ²¹
29.2	34.550 ¹³⁶	6.72 ¹	21.079 ¹³⁹	47.12 ¹³	29.576 ¹⁴⁷	63.52 ⁵⁰
Mar. 10.1	34.414 ¹¹⁴	6.73 ¹⁷	20.940 ¹¹⁷	46.99 ⁴	29.429 ¹²⁵	63.02 ⁷⁹
20.1	34.300 ⁸⁵	6.56 ³⁷	20.823 ⁸⁷	47.03 ²¹	29.304 ⁹⁶	62.23 ¹⁰⁶
30.1	34.215 ⁴⁷	6.19 ⁵⁸	20.736 ⁵²	47.24 ⁴²	29.208 ⁶⁰	61.17 ¹³³
Apr. 9.1	34.168 ⁷	5.61 ⁸⁰	20.684 ¹⁰	47.66 ⁶²	29.148 ²⁰	59.84 ¹⁵⁸
19.0	34.161 ³⁷	4.81 ¹⁰³	20.674 ³⁵	48.28 ⁸⁴	29.128 ²⁶	58.26 ¹⁸²
29.0	34.198 ⁸³	3.78 ¹²³	20.709 ⁸⁰	49.12 ¹⁰⁶	29.154 ⁷¹	56.44 ²⁰²
May 9.0	34.281 ¹²⁸	2.55 ¹⁴⁴	20.789 ¹²⁶	50.18 ¹²⁶	29.225 ¹¹⁷	54.42 ²¹⁶
19.0	34.409 ¹⁶⁹	S. 1.11 ¹⁶⁰	20.915 ¹⁶⁷	51.44 ¹⁴⁴	29.342 ¹⁶⁰	52.26 ²²⁹
28.9	34.578 ²⁰⁷	N. 0.49 ¹⁷⁴	21.082 ²⁰⁷	52.88 ¹⁵⁹	29.502 ¹⁹⁹	49.97 ²³⁵
June 7.9	34.785 ²⁴⁰	2.23 ¹⁸⁴	21.289 ²³⁸	54.47 ¹⁷¹	29.701 ²³⁴	47.62 ²³⁷
17.9	35.025 ²⁶⁵	4.07 ¹⁹⁰	21.527 ²⁶⁵	56.18 ¹⁷⁹	29.935 ²⁶¹	45.25 ²³²
27.8	35.290 ²⁸³	5.97 ¹⁸⁹	21.792 ²⁸³	57.97 ¹⁸¹	30.196 ²⁸¹	42.93 ²²¹
July 7.8	35.573 ²⁹⁵	7.86 ¹⁸⁵	22.075 ²⁹⁴	59.78 ¹⁷⁹	30.477 ²⁹⁶	40.72 ²⁰³
17.8	35.868 ²⁹⁹	9.71 ¹⁷⁴	22.369 ²⁹⁹	61.57 ¹⁷¹	30.773 ³⁰¹	38.69 ¹⁸¹
27.8	36.167 ²⁹⁵	11.45 ¹⁵⁹	22.668 ²⁹⁶	63.28 ¹⁵⁹	31.074 ³⁰⁰	36.88 ¹⁵³
Aug. 6.7	36.462 ²⁸⁶	13.04 ¹⁴⁰	22.964 ²⁸⁷	64.87 ¹⁴³	31.374 ²⁹¹	35.35 ¹²⁰
16.7	36.748 ²⁷¹	14.44 ¹¹⁶	23.251 ²⁷²	66.30 ¹²¹	31.665 ²⁷⁸	34.15 ⁸⁵
26.7	37.019 ²⁵¹	15.60 ⁹¹	23.523 ²⁵³	67.51 ⁹⁹	31.943 ²⁵⁸	33.30 ⁴⁷
Sept. 5.7	37.270 ²²⁸	16.51 ⁶³	23.776 ²³⁰	68.50 ⁷³	32.201 ²³⁴	32.83 ⁹
15.6	37.498 ²⁰²	17.14 ³⁴	24.006 ²⁰⁴	69.23 ⁴⁷	32.435 ²⁰⁷	32.74 ²⁹
25.6	37.700 ¹⁷³	17.48 ⁸	24.210 ¹⁷⁸	69.70 ²²	32.642 ¹⁷⁹	33.03 ⁶⁴
Oct. 5.6	37.873 ¹⁴⁵	17.56 ¹⁸	24.388 ¹⁴⁹	69.92 ²	32.821 ¹⁴⁸	33.67 ⁹⁵
15.5	38.018 ¹¹⁶	17.38 ³⁹	24.537 ¹²⁰	69.90 ²⁴	32.969 ¹¹⁷	34.62 ¹²¹
25.5	38.134 ⁸⁶	16.99 ⁵⁸	24.657 ⁹¹	69.66 ⁴²	33.086 ⁸⁴	35.83 ¹⁴¹
Nov. 4.5	38.220 ⁵⁶	16.41 ⁷²	24.748 ⁶¹	69.24 ⁵⁶	33.170 ⁵³	37.24 ¹⁵⁴
14.5	38.276 ²⁶	15.69 ⁸³	24.809 ³¹	68.68 ⁶⁷	33.223 ²²	38.78 ¹⁶⁰
24.4	38.302 ³	14.86 ⁸⁸	24.840 ²	68.01 ⁷³	33.245 ¹¹	40.38 ¹⁵⁹
Dec. 4.4	38.299 ³²	13.98 ⁸⁰	24.842 ²⁸	67.28 ⁷⁷	33.234 ⁴⁰	41.97 ¹⁵²
14.4	38.267 ⁶¹	13.08 ⁹⁷	24.814 ⁵⁷	66.51 ⁷⁷	33.194 ⁶⁹	43.49 ¹⁴⁰
24.4	38.206 ⁸⁶	12.21 ⁸³	24.757 ⁸⁴	65.74 ⁷⁴	33.125 ⁹⁷	44.89 ¹²¹
34.3	38.120	N. 11.38	24.673	65.00	33.028	46.10
Mean Place	35.122	N. 5.55	21.613	58.65	30.246	47.24
Sec δ, Tan δ	1.000	0.000	1.001	+0.051	1.031	-0.253
L α, L δ	0.00	+0.3	0.00	+0.3	0.00	+0.3
ω α, ω δ	0.00	+0.6	0.00	+0.6	+0.01	+0.6
AUTHORITY	A. E.		A. N.		A. E.	

294 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Fornacis. Mag. 4.5		σ Arietis. Mag. 5.5		ϵ Arietis (mean). Mag. 4.6	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 2 45	° ′ 32 43	h m 2 47	° ′ 14 46	h m 2 54	° ′ 21 2
Jan. 0.3	54.842 ¹⁵²	46.67 ¹³⁹	18.013 ⁹⁹	5.73 ⁴⁰	52.243 ¹⁰¹	10.64 ¹⁷
10.3	54.690 ¹⁷⁶	48.06 ⁹⁹	17.914 ¹²⁵	5.33 ⁴⁶	52.142 ¹²⁸	10.47 ²⁸
20.3	54.514 ¹⁹²	49.05 ⁵⁷	17.789 ¹⁴⁶	4.87 ⁵⁰	52.014 ¹⁵¹	10.19 ⁴⁰
30.3	54.322 ²⁰²	49.62 ¹⁴	17.643 ¹⁵⁸	4.37 ⁵⁴	51.863 ¹⁶⁶	9.79 ⁵¹
Feb. 9.2	54.120 ²⁰⁵	49.76 ²⁹	17.485 ¹⁶⁴	3.83 ⁵⁶	51.697 ¹⁷³	9.28 ⁵⁹
19.2	53.915 ¹⁹⁹	49.47 ⁷²	17.321 ¹⁶⁰	3.27 ⁵⁵	51.524 ¹⁷⁰	8.69 ⁶⁴
29.2	53.716 ¹⁸⁴	48.75 ¹¹³	17.161 ¹⁴⁸	2.72 ⁵²	51.354 ¹⁵⁹	8.05 ⁶⁹
Mar. 10.2	53.532 ¹⁶⁰	47.62 ¹⁵¹	17.013 ¹²⁶	2.20 ⁴⁶	51.195 ¹³⁶	7.36 ⁶⁸
20.1	53.372 ¹²⁸	46.11 ¹⁸⁶	16.887 ⁹⁵	1.74 ³⁶	51.059 ¹⁰⁵	6.68 ⁶³
30.1	53.244 ⁹⁰	44.25 ²¹⁹	16.792 ⁵⁸	1.38 ²²	50.954 ⁶⁷	6.05 ⁵⁴
Apr. 9.1	53.154 ⁴⁴	42.06 ²⁴⁶	16.734 ¹⁵	1.16 ⁶	50.887 ²³	5.51 ⁴¹
19.0	53.110 ⁶	39.60 ²⁶⁹	16.719 ³²	1.10 ¹³	50.864 ²⁶	5.10 ²⁵
29.0	53.116 ⁵⁴	36.91 ²⁸⁶	16.751 ⁷⁹	1.23 ³³	50.890 ⁷⁴	4.85 ⁶
May 9.0	53.170 ¹⁰⁶	34.05 ²⁹⁸	16.830 ¹²⁶	1.56 ⁵⁶	50.964 ¹²⁴	4.79 ¹⁷
19.0	53.276 ¹⁵⁵	31.07 ³⁰²	16.956 ¹⁷⁰	2.12 ⁷⁷	51.088 ¹⁶⁹	4.96 ³⁹
28.9	53.431 ¹⁹⁹	28.05 ³⁰¹	17.126 ²¹⁰	2.89 ⁹⁸	51.257 ²¹²	5.35 ⁶¹
June 7.9	53.630 ²³⁹	25.04 ²⁹¹	17.336 ²⁴⁴	3.87 ¹¹⁶	51.469 ²⁴⁷	5.96 ⁸³
17.9	53.869 ²⁷³	22.13 ²⁷⁴	17.580 ²⁷¹	5.03 ¹³²	51.716 ²⁷⁵	6.79 ¹⁰³
27.9	54.142 ³⁰⁰	19.39 ²⁵⁰	17.851 ²⁹⁰	6.35 ¹⁴⁴	51.991 ²⁹⁷	7.82 ¹¹⁹
July 7.8	54.442 ³¹⁷	16.89 ²²⁰	18.141 ³⁰⁴	7.79 ¹⁵²	52.288 ³¹¹	9.01 ¹³³
17.8	54.759 ³²⁸	14.69 ¹⁸³	18.445 ³⁰⁸	9.31 ¹⁵⁷	52.599 ³¹⁶	10.34 ¹⁴²
27.8	55.087 ³²⁹	12.86 ¹⁴⁰	18.753 ³⁰⁷	10.88 ¹⁵⁵	52.915 ³¹⁶	11.76 ¹⁴⁷
Aug. 6.7	55.416 ³²³	11.46 ⁹⁴	19.060 ²⁹⁷	12.43 ¹⁵⁰	53.231 ³⁰⁸	13.23 ¹⁴⁹
16.7	55.739 ³⁰⁹	10.52 ⁴⁵	19.357 ²⁸³	13.93 ¹⁴¹	53.539 ²⁹⁶	14.72 ¹⁴⁶
26.7	56.048 ²⁹⁰	10.07 ⁶	19.640 ²⁶⁶	15.34 ¹²⁹	53.835 ²⁷⁸	16.18 ¹⁴¹
Sept. 5.7	56.338 ²⁶³	10.13 ⁵⁶	19.906 ²⁴³	16.63 ¹¹⁴	54.113 ²⁵⁶	17.59 ¹³¹
15.6	56.601 ²³²	10.69 ¹⁰³	20.149 ²¹⁹	17.77 ⁹⁸	54.369 ²³²	18.90 ¹²⁰
25.6	56.833 ¹⁹⁹	11.72 ¹⁴⁶	20.368 ¹⁹²	18.75 ⁸¹	54.601 ²⁰⁶	20.10 ¹⁰⁸
Oct. 5.6	57.032 ¹⁶²	13.18 ¹⁸²	20.560 ¹⁶⁴	19.56 ⁶²	54.807 ¹⁷⁸	21.18 ⁹⁴
15.6	57.194 ¹²³	15.00 ²¹¹	20.724 ¹³⁶	20.18 ⁴⁵	54.985 ¹⁴⁸	22.12 ⁸⁰
25.5	57.317 ⁸⁵	17.11 ²³²	20.860 ¹⁰⁵	20.63 ³⁰	55.133 ¹¹⁸	22.92 ⁶⁶
Nov. 4.5	57.402 ⁴⁵	19.43 ²⁴²	20.965 ⁷⁶	20.93 ¹⁶	55.251 ⁸⁷	23.58 ⁵³
14.5	57.447 ⁶	21.85 ²⁴³	21.041 ⁴⁴	21.09 ³	55.338 ⁵⁴	24.11 ⁴¹
24.4	57.453 ³²	24.28 ²³⁴	21.085 ¹³	21.12 ⁸	55.392 ²¹	24.52 ²⁸
Dec. 4.4	57.421 ⁶⁸	26.62 ²¹⁷	21.098 ¹⁹	21.04 ¹⁸	55.413 ¹³	24.80 ¹⁷
14.4	57.353 ¹⁰²	28.79 ¹⁹¹	21.079 ⁵¹	20.86 ²⁵	55.400 ⁴⁷	24.97 ⁵
24.4	57.251 ¹³²	30.70 ¹⁵⁸	21.028 ⁸⁰	20.61 ³⁴	55.353 ⁸⁰	25.02 ⁷
34.3	57.119	32.28	20.948	20.27	55.273	24.95
Mean Place	54.601	28.28	17.590	10.71	51.720	14.10
Sec δ , Tan δ	1.189	-0.643	1.034	+0.264	1.071	+0.385
L α , L δ	-0.01	+0.3	0.00	+0.3	+0.01	+0.3
ω α , ω δ	+0.03	+0.7	-0.01	+0.7	-0.02	+0.7
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 295

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Eridani. Mag. 3.1		α Ceti. Mag. 2.8		γ Persei. Mag. 3.1	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 2 55	$^{\circ}$ $'$ 40 36	h m 2 58	$^{\circ}$ $'$ 3 47	h m 2 59	$^{\circ}$ $'$ 53 12
Jan. 0.3	23.248 ¹⁷⁸	50.98 ¹⁵³	18.646 ⁹³	24.28 ⁷³	18.155 ¹⁹¹	40.42 ¹⁰³
10.3	23.070 ²⁰⁶	52.51 ¹⁰⁸	18.553 ¹¹⁸	23.55 ⁶⁷	17.964 ²³⁵	41.45 ⁶⁴
20.3	22.864 ²²⁴	53.59 ⁶¹	18.435 ¹³⁹	22.88 ⁶⁰	17.729 ²⁶⁹	42.09 ²³
30.3	22.640 ²³⁷	54.20 ¹²	18.296 ¹⁵³	22.28 ⁵¹	17.460 ²⁹²	42.32 ²¹
Feb. 9.2	22.403 ²⁴⁰	54.32 ³⁷	18.143 ¹⁶¹	21.77 ⁴¹	17.168 ³⁰⁰	42.11 ⁶²
19.2	22.163 ²³⁴	53.95 ⁸³	17.982 ¹⁶⁰	21.36 ²⁹	16.868 ²⁹⁴	41.49 ¹⁰¹
29.2	21.929 ²¹⁹	53.12 ¹³⁰	17.822 ¹⁴⁸	21.07 ¹⁵	16.574 ²⁷²	40.48 ¹³⁵
Mar. 10.2	21.710 ¹⁹⁴	51.82 ¹⁷¹	17.674 ¹³⁰	20.92 ⁰	16.302 ²³⁶	39.13 ¹⁶³
20.1	21.516 ¹⁶⁰	50.11 ²⁰⁹	17.544 ¹⁰²	20.92 ¹⁷	16.066 ¹⁸⁶	37.50 ¹⁸⁴
30.1	21.356 ¹¹⁹	48.02 ²⁴³	17.442 ⁶⁷	21.09 ³⁶	15.880 ¹²⁶	35.66 ¹⁹⁶
Apr. 9.1	21.237 ⁷¹	45.59 ²⁷³	17.375 ²⁷	21.45 ⁵⁶	15.754 ⁵⁸	33.70 ²⁰¹
19.0	21.166 ¹⁹	42.86 ²⁹⁵	17.348 ¹⁷	22.01 ⁷⁷	15.696 ¹⁶	31.69 ¹⁹⁶
29.0	21.147 ³⁶	39.91 ³¹³	17.365 ⁶³	22.78 ⁹⁷	15.712 ⁹⁰	29.73 ¹⁸³
May 9.0	21.183 ⁹²	36.78 ³²³	17.428 ¹⁰⁸	23.75 ¹¹⁷	15.802 ¹⁶³	27.90 ¹⁶⁴
19.0	21.275 ¹⁴⁵	33.55 ³²⁶	17.536 ¹⁵²	24.92 ¹³⁵	15.965 ²³¹	26.26 ¹³⁹
28.9	21.420 ¹⁹⁵	30.29 ³²²	17.688 ¹⁹¹	26.27 ¹⁵¹	16.196 ²⁹³	24.87 ¹⁰⁹
June 7.9	21.615 ²⁴⁰	27.07 ³¹⁰	17.879 ²²⁶	27.78 ¹⁶³	16.489 ³⁴⁷	23.78 ⁷⁵
17.9	21.855 ²⁸⁰	23.97 ²⁸⁹	18.105 ²⁵⁴	29.41 ¹⁷¹	16.836 ³⁸⁹	23.03 ³⁹
27.9	22.135 ³¹⁰	21.08 ²⁶²	18.359 ²⁷⁶	31.12 ¹⁷⁴	17.225 ⁴²³	22.64 ³
July 7.8	22.445 ³³³	18.46 ²²⁷	18.635 ²⁸⁹	32.86 ¹⁷⁴	17.648 ⁴⁴⁵	22.61 ³⁵
17.8	22.778 ³⁴⁸	16.19 ¹⁸⁶	18.924 ²⁹⁷	34.60 ¹⁶⁷	18.093 ⁴⁵⁷	22.96 ⁶⁹
27.8	23.126 ³⁵⁴	14.33 ¹³⁹	19.221 ²⁹⁷	36.27 ¹⁵⁶	18.550 ⁴⁵⁹	23.65 ¹⁰³
Aug. 6.7	23.480 ³⁴⁹	12.94 ⁸⁸	19.518 ²⁹¹	37.83 ¹⁴⁰	19.009 ⁴⁵⁰	24.68 ¹³⁴
16.7	23.829 ³³⁷	12.06 ³⁴	19.809 ²⁷⁹	39.23 ¹²¹	19.459 ⁴³⁶	26.02 ¹⁶²
26.7	24.166 ³¹⁸	11.72 ²¹	20.088 ²⁶²	40.44 ⁹⁹	19.895 ⁴¹²	27.64 ¹⁸⁵
Sept. 5.7	24.484 ²⁹¹	11.93 ⁷⁴	20.350 ²⁴³	41.43 ⁷⁴	20.307 ³⁸²	29.49 ²⁰⁶
15.6	24.775 ²⁵⁹	12.67 ¹²⁶	20.593 ²¹⁹	42.17 ⁴⁹	20.689 ³⁴⁸	31.55 ²²²
25.6	25.034 ²²¹	13.93 ¹⁷²	20.812 ¹⁹⁴	42.66 ²³	21.037 ³¹⁰	33.77 ²³⁴
Oct. 5.6	25.255 ¹⁸¹	15.65 ²¹¹	21.006 ¹⁶⁸	42.89 ⁰	21.347 ²⁶⁷	36.11 ²⁴²
15.6	25.436 ¹³⁹	17.76 ²⁴²	21.174 ¹³⁹	42.89 ²¹	21.614 ²²²	38.53 ²⁴⁵
25.5	25.575 ⁹³	20.18 ²⁶³	21.313 ¹¹⁰	42.68 ⁴⁰	21.836 ¹⁷³	40.98 ²⁴⁵
Nov. 4.5	25.668 ⁴⁸	22.81 ²⁷⁴	21.423 ⁸¹	42.28 ⁵⁵	22.009 ¹²⁰	43.43 ²³⁸
14.5	25.716 ³	25.55 ²⁷⁴	21.504 ⁵⁰	41.73 ⁶⁵	22.129 ⁶⁶	45.81 ²²⁸
24.4	25.719 ⁴⁰	28.29 ²⁶³	21.554 ¹⁹	41.08 ⁷²	22.195 ¹⁰	48.09 ²¹¹
Dec. 4.4	25.679 ⁸²	30.92 ²⁴²	21.573 ¹²	40.36 ⁷⁶	22.205 ⁴⁸	50.20 ¹⁸⁹
14.4	25.597 ¹²²	33.34 ²¹³	21.561 ⁴⁴	39.60 ⁷⁵	22.157 ¹⁰⁵	52.09 ¹⁶²
24.4	25.475 ¹⁵⁷	35.47 ¹⁷⁶	21.517 ⁷⁴	38.85 ⁷³	22.052 ¹⁵⁹	53.71 ¹²⁸
34.3	25.318	37.23	21.443	38.12	21.893	54.99
Mean Place	22.901	30.92	18.259	32.78	16.855	36.35
Sec δ , Tan δ	1.317	-0.857	1.002	+0.066	1.670	+1.337
L α , L δ	-0.02	+0.3	0.00	+0.3	+0.02	+0.3
ω α , ω δ	+0.04	+0.7	0.00	+0.7	-0.06	+0.7
AUTHORITY	A. E.		A. E.		A. E.	

296 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	μ Horologii. Mag. 5.2		β Persei. Mag. 2.1-3.2		δ Arietis. Mag. 4.5	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 3 I	60 I	h m 3 3	40 39	h m 3 7	19 26
Jan. 0.4	49.75 ³³	77.93 ¹⁶⁰	13.885 ¹³¹	51.52 ⁵⁹	17.333 ⁹²	20.94 ¹⁹
10.3	49.42 ³⁷	79.53 ¹⁰⁵	13.754 ¹⁶⁷	52.11 ³¹	17.241 ¹²¹	20.75 ²⁸
20.3	49.05 ³⁹	80.58 ⁴⁸	13.587 ¹⁹⁷	52.42 ⁰	17.120 ¹⁴⁵	20.47 ³⁸
30.3	48.66 ⁴¹	81.06 ¹⁰	13.390 ²¹⁶	52.42 ³²	16.975 ¹⁶³	20.09 ⁴⁶
Feb. 9.2	48.25 ⁴¹	80.96 ⁶⁶	13.174 ²²⁵	52.10 ⁶⁰	16.812 ¹⁷²	19.63 ⁵²
19.2	47.84 ³⁹	80.30 ¹²⁰	12.949 ²²⁴	51.50 ⁸⁷	16.640 ¹⁷³	19.11 ⁵⁷
29.2	47.45 ³⁷	79.10 ¹⁷²	12.725 ²⁰⁸	50.63 ¹¹¹	16.467 ¹⁶²	18.54 ⁵⁹
Mar. 10.2	47.08 ³⁴	77.38 ²¹⁸	12.517 ¹⁸¹	49.52 ¹²⁸	16.305 ¹⁴²	17.95 ⁵⁷
20.1	46.74 ²⁹	75.20 ²⁵⁸	12.336 ¹⁴³	48.24 ¹⁴⁰	16.163 ¹¹⁴	17.38 ⁵³
30.1	46.45 ²²	72.62 ²⁹³	12.193 ⁹⁶	46.84 ¹⁴⁵	16.049 ⁷⁷	16.85 ⁴⁴
Apr. 9.1	46.23 ¹⁶	69.69 ³²³	12.097 ⁴²	45.39 ¹⁴³	15.972 ³³	16.41 ³²
19.1	46.07 ⁹	66.46 ³⁴³	12.055 ¹⁶	43.96 ¹³⁵	15.939 ¹³	16.09 ¹⁶
29.0	45.98 ¹	63.03 ³⁵⁸	12.071 ⁷⁶	42.61 ¹¹⁹	15.952 ⁶²	15.93 ³
May 9.0	45.97 ⁷	59.45 ³⁶⁴	12.147 ¹³⁵	41.42 ¹⁰⁰	16.014 ¹¹⁰	15.96 ²³
19.0	46.04 ¹⁴	55.81 ³⁶¹	12.282 ¹⁹¹	40.42 ⁷⁵	16.124 ¹⁵⁷	16.19 ⁴³
28.9	46.18 ²³	52.20 ³⁵¹	12.473 ²⁴¹	39.67 ⁴⁸	16.281 ¹⁹⁸	16.62 ⁶⁵
June 7.9	46.41 ²⁹	48.69 ³³¹	12.714 ²⁸⁵	39.19 ¹⁹	16.479 ²³⁶	17.27 ⁸⁵
17.9	46.70 ³⁵	45.38 ³⁰³	12.999 ³²¹	39.00 ¹⁰	16.715 ²⁶⁶	18.12 ¹⁰³
27.9	47.05 ⁴⁰	42.35 ²⁶⁸	13.320 ³⁴⁷	39.10 ⁴¹	16.981 ²⁸⁸	19.15 ¹¹⁸
July 7.8	47.45 ⁴⁴	39.67 ²²⁶	13.667 ³⁶⁶	39.51 ⁶⁹	17.269 ³⁰⁴	20.33 ¹³⁰
17.8	47.80 ⁴⁷	37.41 ¹⁷⁵	14.033 ³⁷⁵	40.20 ⁹⁴	17.573 ³¹³	21.63 ¹³⁷
27.8	48.36 ⁴⁹	35.66 ¹²¹	14.408 ³⁷⁷	41.14 ¹¹⁸	17.886 ³¹³	23.00 ¹⁴²
Aug. 6.8	48.85 ⁴⁹	34.45 ⁶³	14.785 ³⁷⁰	42.32 ¹³⁹	18.199 ³⁰⁹	24.42 ¹⁴²
16.7	49.34 ⁴⁸	33.82 ²	15.155 ³⁵⁶	43.71 ¹⁵⁵	18.508 ²⁹⁷	25.84 ¹³⁷
26.7	49.82 ⁴⁵	33.80 ⁶⁰	15.511 ³³⁷	45.26 ¹⁶⁸	18.805 ²⁸²	27.21 ¹³¹
Sept. 5.7	50.27 ⁴²	34.40 ¹¹⁹	15.848 ³¹⁵	46.94 ¹⁷⁸	19.087 ²⁶²	28.52 ¹²¹
15.6	50.69 ³⁷	35.59 ¹⁷⁴	16.163 ²⁸⁷	48.72 ¹⁸⁴	19.349 ²³⁹	29.73 ¹⁰⁸
25.6	51.06 ³¹	37.33 ²²³	16.450 ²⁵⁶	50.56 ¹⁸⁷	19.588 ²¹⁵	30.81 ⁹⁵
Oct. 5.6	51.37 ²⁵	39.56 ²⁶⁴	16.706 ²²⁴	52.43 ¹⁸⁷	19.803 ¹⁸⁹	31.76 ⁸¹
15.6	51.62 ¹⁸	42.20 ²⁹⁴	16.930 ¹⁸⁸	54.30 ¹⁸⁴	19.992 ¹⁶⁰	32.57 ⁶⁷
25.5	51.80 ¹¹	45.14 ³¹⁵	17.118 ¹⁵¹	56.14 ¹⁷⁹	20.152 ¹³⁰	33.24 ⁵⁴
Nov. 4.5	51.91 ³	48.29 ³²²	17.269 ¹¹²	57.93 ¹⁶⁹	20.282 ⁹⁹	33.78 ⁴⁰
14.5	51.94 ⁵	51.51 ³¹⁷	17.381 ⁶⁹	59.62 ¹⁵⁹	20.381 ⁶⁷	34.18 ²⁹
24.5	51.89 ¹¹	54.68 ³⁰⁰	17.450 ²⁷	61.21 ¹⁴⁴	20.448 ³⁴	34.47 ¹⁹
Dec. 4.4	51.78 ¹⁸	57.68 ²⁷²	17.477 ¹⁸	62.65 ¹²⁵	20.482 ²	34.66 ⁸
14.4	51.60 ²⁵	60.40 ²³⁴	17.459 ⁶²	63.90 ¹⁰⁴	20.480 ³⁶	34.74 ²
24.4	51.35 ³⁰	62.74 ¹⁸⁹	17.397 ¹⁰⁵	64.94 ⁷⁸	20.444 ⁷⁰	34.72 ¹⁰
34.3	51.05	64.63	17.292	65.72	20.374	34.62
Mean Place	49.04	54.79	12.992	50.32	16.778	25.30
Sec δ , Tan δ	2.002	-1.734	1.318	+0.859	1.060	+0.353
L α , L δ	-0.03	+0.3	+0.02	+0.3	+0.01	+0.3
ω α , ω δ	+0.08	-0.7	-0.04	+0.7	-0.02	+0.7
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 297

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ^1 Arietis. Mag. 5.2		α Persei. Mag. 1.9		σ Tauri. Mag. 3.8	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 3 16	20 52	h m 3 18	49 35	h m 3 20	8 45
Jan. 0.4	50.760 ⁸⁶	22.19 ¹¹	54.470 ¹⁵¹	33.27 ¹⁰⁵	43.764 ⁸¹	37.11 ⁵⁸
10.3	50.674 ¹¹⁹	22.08 ²¹	54.319 ¹⁹⁷	34.32 ⁷¹	43.683 ¹¹⁰	36.53 ⁵⁵
20.3	50.555 ¹⁴⁵	21.87 ³²	54.122 ²³⁴	35.03 ³⁵	43.573 ¹³⁶	35.98 ⁵²
30.3	50.410 ¹⁶⁵	21.55 ⁴⁰	53.888 ²⁶¹	35.38 ⁵	43.437 ¹⁵⁴	35.46 ⁴⁸
Feb. 9.3	50.245 ¹⁷⁶	21.15 ⁴⁹	53.627 ²⁷⁵	35.33 ⁴²	43.283 ¹⁶⁵	34.98 ⁴³
19.2	50.069 ¹⁷⁷	20.66 ⁵⁵	53.352 ²⁷⁵	34.91 ⁷⁸	43.118 ¹⁶⁸	34.55 ³⁶
29.2	49.892 ¹⁶⁹	20.11 ⁵⁹	53.077 ²⁶¹	34.13 ¹¹¹	42.950 ¹⁶¹	34.19 ²⁸
Mar. 10.2	49.723 ¹⁵¹	19.52 ⁵⁹	52.816 ²³²	33.02 ¹³⁸	42.789 ¹⁴⁵	33.91 ¹⁸
20.1	49.572 ¹²²	18.93 ⁵⁷	52.584 ¹⁹⁰	31.64 ¹⁵⁹	42.644 ¹¹⁹	33.73 ⁴
30.1	49.450 ⁸⁷	18.36 ⁴⁹	52.394 ¹³⁷	30.05 ¹⁷³	42.525 ⁸⁶	33.69 ¹⁰
Apr. 9.1	49.363 ⁴³	17.87 ³⁹	52.257 ⁷⁶	28.32 ¹⁷⁹	42.439 ⁴⁶	33.79 ²⁶
19.1	49.320 ⁴	17.48 ²⁵	52.181 ¹⁰	26.53 ¹⁷⁷	42.393 ²	34.05 ⁴⁵
29.0	49.324 ⁵³	17.23 ⁸	52.171 ⁶⁰	24.76 ¹⁶⁸	42.391 ⁴⁴	34.50 ⁶⁴
May 9.0	49.377 ¹⁰¹	17.15 ¹²	52.231 ¹²⁸	23.08 ¹⁵¹	42.435 ⁹⁰	35.14 ⁸³
19.0	49.478 ¹⁵⁰	17.27 ³²	52.359 ¹⁹⁴	21.57 ¹³⁰	42.525 ¹³⁵	35.97 ¹⁰²
29.0	49.628 ¹⁹³	17.59 ⁵⁴	52.553 ²⁵³	20.27 ¹⁰⁴	42.660 ¹⁷⁶	36.99 ¹¹⁹
June 7.9	49.821 ²³⁰	18.13 ⁷³	52.806 ³⁰⁶	19.23 ⁷⁴	42.836 ²¹³	38.18 ¹³²
17.9	50.051 ²⁶¹	18.86 ⁹¹	53.112 ³⁵⁰	18.49 ⁴²	43.049 ²⁴⁴	39.50 ¹⁴⁴
27.9	50.312 ²⁸⁶	19.77 ¹⁰⁷	53.462 ³⁸⁴	18.07 ⁹	43.293 ²⁶⁸	40.94 ¹⁵¹
July 7.8	50.598 ³⁰³	20.84 ¹²⁰	53.846 ⁴¹⁰	17.98 ²⁴	43.561 ²⁸⁵	42.45 ¹⁵⁴
17.8	50.901 ³¹³	22.04 ¹³⁰	54.256 ⁴²⁴	18.22 ⁵⁵	43.846 ²⁹⁵	43.99 ¹⁵³
27.8	51.214 ³¹⁶	23.34 ¹³⁴	54.680 ⁴²⁹	18.77 ⁸⁶	44.141 ²⁹⁹	45.52 ¹⁴⁷
Aug. 6.8	51.530 ³¹¹	24.68 ¹³⁶	55.109 ⁴²⁷	19.63 ¹¹⁴	44.440 ²⁹⁶	46.99 ¹³⁶
16.7	51.841 ³⁰²	26.04 ¹³³	55.536 ⁴¹⁶	20.77 ¹³⁹	44.736 ²⁸⁷	48.35 ¹²³
26.7	52.143 ²⁸⁸	27.37 ¹²⁹	55.952 ³⁹⁸	22.16 ¹⁶⁰	45.023 ²⁷⁴	49.58 ¹⁰⁴
Sept. 5.7	52.431 ²⁶⁹	28.66 ¹¹⁹	56.350 ³⁷⁵	23.76 ¹⁷⁹	45.297 ²⁵⁸	50.62 ⁸⁵
15.7	52.700 ²⁴⁸	29.85 ¹⁰⁹	56.725 ³⁴⁷	25.55 ¹⁹⁴	45.555 ²³⁷	51.47 ⁶⁴
25.6	52.948 ²²⁵	30.94 ⁹⁶	57.072 ³¹⁴	27.49 ²⁰⁵	45.792 ²¹⁴	52.11 ⁴²
Oct. 5.6	53.173 ¹⁹⁸	31.90 ⁸⁵	57.386 ²⁷⁷	29.54 ²¹⁴	46.006 ¹⁹⁰	52.53 ²¹
15.6	53.371 ¹⁷²	32.75 ⁷¹	57.663 ²³⁸	31.68 ²¹⁷	46.196 ¹⁶³	52.74 ²
25.5	53.543 ¹⁴¹	33.46 ⁵⁹	57.901 ¹⁹⁴	33.85 ²¹⁹	46.359 ¹³⁶	52.76 ¹⁵
Nov. 4.5	53.684 ¹¹¹	34.05 ⁴⁷	58.095 ¹⁴⁸	36.04 ²¹⁵	46.495 ¹⁰⁶	52.61 ²⁹
14.5	53.795 ⁷⁸	34.52 ³⁷	58.243 ⁹⁷	38.19 ²⁰⁷	46.601 ⁷⁵	52.32 ⁴⁰
24.5	53.873 ⁴³	34.89 ²⁶	58.340 ⁴⁵	40.26 ¹⁹⁴	46.676 ⁴²	51.92 ⁴⁷
Dec. 4.4	53.916 ⁹	35.15 ¹⁷	58.385 ¹⁰	42.20 ¹⁷⁷	46.718 ⁹	51.45 ⁵³
14.4	53.925 ²⁹	35.32 ⁶	58.375 ⁶⁵	43.97 ¹⁵⁵	46.727 ²⁵	50.92 ⁵⁴
24.4	53.896 ⁶⁴	35.38 ³	58.310 ¹¹⁸	45.52 ¹²⁷	46.702 ⁵⁹	50.38 ⁵⁵
34.4	53.832	35.35	58.192	46.79	46.643	49.83
Mean Place	50.151	26.52	53.237	31.08	43.246	44.76
Sec δ , Tan δ	1.070	+0.381	1.543	+1.175	1.012	+0.154
L α , L δ	+0.01	+0.3	+0.02	+0.3	0.00	+0.3
ω α , ω δ	-0.02	+0.8	-0.05	+0.8	-0.01	+0.8
AUTHORITY			A. E.		A. E.	

298 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	<i>f</i> Tauri. Mag. 4.3		ε Eridani. Mag. 3.8		45 G. Horologii. Mag. 5.6	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 3 26	12 40	h m 3 29	9 42	h m 3 30	50 37
Jan. 0.4	41.042 ⁷⁸	31.47 ⁴²	21.390 ⁸⁹	64.94 ¹²⁰	19.321 ²¹⁶	90.45 ¹⁹⁴
10.3	40.964 ¹⁰⁸	31.05 ⁴⁴	21.301 ¹¹⁹	66.14 ¹⁰⁰	19.105 ²⁵⁴	92.39 ¹⁴⁶
20.3	40.856 ¹³⁵	30.61 ⁴⁴	21.182 ¹⁴³	67.14 ⁷⁹	18.851 ²⁸⁵	93.85 ⁹⁴
30.3	40.721 ¹⁵⁶	30.17 ⁴⁴	21.039 ¹⁶²	67.93 ⁵⁴	18.566 ³⁰⁶	94.79 ⁴¹
Feb. 9.3	40.565 ¹⁶⁷	29.73 ⁴³	20.877 ¹⁷³	68.47 ²⁹	18.260 ³¹⁶	95.20 ¹⁵
19.2	40.398 ¹⁷²	29.30 ⁴⁰	20.704 ¹⁷⁶	68.76 ⁴	17.944 ³¹⁶	95.05 ⁶⁶
29.2	40.226 ¹⁶⁵	28.90 ³⁶	20.528 ¹⁷⁰	68.80 ²³	17.628 ³⁰⁵	94.39 ¹¹⁷
Mar. 10.2	40.061 ¹⁵⁰	28.54 ³⁰	20.358 ¹⁵⁴	68.57 ⁴⁸	17.323 ²⁸¹	93.22 ¹⁶⁵
20.1	39.911 ¹²⁴	28.24 ²⁰	20.204 ¹³⁰	68.09 ⁷⁵	17.042 ²⁴⁷	91.57 ²⁰⁹
30.1	39.787 ⁹¹	28.04 ⁸	20.074 ⁹⁹	67.34 ¹⁰⁰	16.795 ²⁰⁴	89.48 ²⁴⁸
Apr. 9.1	39.696 ⁵¹	27.96 ⁵	19.975 ⁶⁰	66.34 ¹²⁴	16.591 ¹⁵²	87.00 ²⁸¹
19.1	39.645 ⁷	28.01 ²²	19.915 ¹⁸	65.10 ¹⁴⁸	16.439 ⁹⁴	84.19 ³⁰⁹
29.0	39.638 ⁴⁰	28.23 ⁴⁰	19.897 ²⁷	63.62 ¹⁶⁹	16.345 ³³	81.10 ³³⁰
May 9.0	39.678 ⁸⁸	28.63 ⁵⁹	19.924 ⁷⁴	61.93 ¹⁸⁷	16.312 ³³	77.80 ³⁴⁴
19.0	39.766 ¹³²	29.22 ⁷⁷	19.998 ¹¹⁷	60.06 ²⁰²	16.345 ⁹⁶	74.36 ³⁴⁹
29.0	39.898 ¹⁷⁵	29.99 ⁹⁶	20.115 ¹⁶⁰	58.04 ²¹²	16.441 ¹⁵⁸	70.87 ³⁴⁷
June 7.9	40.073 ²¹³	30.95 ¹¹¹	20.275 ¹⁹⁷	55.92 ²¹⁷	16.599 ²¹⁶	67.40 ³³⁶
17.9	40.286 ²⁴³	32.06 ¹²⁴	20.472 ²²⁹	53.75 ²¹⁸	16.815 ²⁶⁸	64.04 ³¹⁷
27.9	40.529 ²⁶⁹	33.30 ¹³⁵	20.701 ²⁵⁵	51.57 ²¹¹	17.083 ³¹²	60.87 ²⁸⁹
July 7.8	40.798 ²⁸⁷	34.65 ¹⁴⁰	20.956 ²⁷³	49.46 ²⁰¹	17.395 ³⁴⁹	57.98 ²⁵⁴
17.8	41.085 ²⁹⁸	36.05 ¹⁴³	21.229 ²⁸⁶	47.45 ¹⁸³	17.744 ³⁷⁶	55.44 ²¹¹
27.8	41.383 ³⁰²	37.48 ¹⁴⁰	21.515 ²⁹²	45.62 ¹⁶⁰	18.120 ³⁹²	53.33 ¹⁶¹
Aug. 6.8	41.685 ³⁰⁰	38.88 ¹³³	21.807 ²⁹⁰	44.02 ¹³²	18.512 ⁴⁰⁰	51.72 ¹⁰⁸
16.7	41.985 ²⁹²	40.21 ¹²³	22.097 ²⁸⁴	42.70 ¹⁰¹	18.912 ³⁹⁵	50.64 ⁴⁹
26.7	42.277 ²⁸¹	41.44 ¹¹⁰	22.381 ²⁷¹	41.69 ⁶⁶	19.307 ³⁸⁴	50.15 ¹¹
Sept. 5.7	42.558 ²⁶⁴	42.54 ⁹⁴	22.652 ²⁵⁵	41.03 ³⁰	19.691 ³⁶⁰	50.26 ⁷⁰
15.7	42.822 ²⁴⁴	43.48 ⁷⁷	22.907 ²³⁵	40.73 ⁷	20.051 ³³⁰	50.96 ¹²⁸
25.6	43.066 ²²³	44.25 ⁵⁷	23.142 ²¹¹	40.80 ⁴²	20.381 ²⁹²	52.24 ¹⁸⁰
Oct. 5.6	43.289 ¹⁹⁸	44.82 ³⁹	23.353 ¹⁸⁶	41.22 ⁷⁴	20.673 ²⁴⁷	54.04 ²²⁷
15.6	43.487 ¹⁷²	45.21 ²³	23.539 ¹⁵⁹	41.96 ¹⁰²	20.920 ¹⁹⁸	56.31 ²⁶⁴
25.5	43.659 ¹⁴⁴	45.44 ⁷	23.698 ¹²⁹	42.98 ¹²⁴	21.118 ¹⁴⁴	58.95 ²⁹¹
Nov. 4.5	43.803 ¹¹⁵	45.51 ⁶	23.827 ⁹⁹	44.22 ¹⁴¹	21.262 ⁸⁷	61.86 ³⁰⁷
14.5	43.918 ⁸⁴	45.45 ¹⁷	23.926 ⁶⁷	45.63 ¹⁵¹	21.349 ³¹	64.93 ³¹²
24.5	44.002 ⁵⁰	45.28 ²⁵	23.993 ³³	47.14 ¹⁵¹	21.380 ²⁷	68.05 ³⁰³
Dec. 4.4	44.052 ¹⁵	45.03 ³⁰	24.026 ¹	48.67 ¹⁵¹	21.353 ⁸⁴	71.08 ²⁸⁵
14.4	44.067 ¹⁹	44.73 ³⁵	24.025 ³⁴	50.18 ¹⁴¹	21.269 ¹³⁶	73.93 ²⁵⁶
24.4	44.048 ⁵⁴	44.38 ³⁸	23.991 ⁶⁸	51.59 ¹²⁸	21.133 ¹⁸⁵	76.49 ²¹⁸
34.4	43.994	44.00	23.923	52.87	20.948	78.67
Mean Place	40.472	38.24	20.920	52.21	18.520	69.47
Sec δ, Tan δ	1.025	+0.225	1.015	-0.171	1.577	-1.219
· L α, L δ	0.00	+0.2	0.00	+0.2	-0.02	+0.2
ω α, ω δ	-0.01	+0.8	+0.01	+0.8	+0.05	+0.8
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 299

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	♄ Eridani. Mag. 4.3		♃ Tauri. Mag. 6.2		♁ Persei. Mag. 3.1	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	° ′	h m	° ′	h m	° ′
	3 30	21 52	3 36	25 4	3 37	47 32
Jan. 0.4	26.243 ¹⁰³	88.93 ¹⁵⁵	14.461 ⁷⁸	61.65 ¹⁰	31.565 ¹²³	45.95 ¹¹⁰
10.3	26.140 ¹³³	90.48 ¹²⁵	14.383 ¹¹³	61.75 ⁰	31.442 ¹⁷¹	47.05 ⁷⁹
20.3	26.007 ¹⁵⁹	91.73 ⁹³	14.270 ¹⁴⁴	61.75 ¹⁴	31.271 ²¹²	47.84 ⁴⁶
30.3	25.848 ¹⁷⁷	92.66 ⁵⁷	14.126 ¹⁶⁸	61.61 ²⁶	31.059 ²⁴³	48.30 ¹²
Feb. 9.3	25.671 ¹⁹⁰	93.23 ²³	13.958 ¹⁸⁴	61.35 ³⁹	30.816 ²⁶²	48.42 ²⁴
19.2	25.481 ¹⁹²	93.46 ¹⁴	13.774 ¹⁸⁹	60.96 ⁴⁹	30.554 ²⁶⁷	48.18 ⁵⁹
29.2	25.289 ¹⁸⁷	93.32 ⁵⁰	13.585 ¹⁸³	60.47 ⁵⁹	30.287 ²⁵⁹	47.59 ⁹¹
Mar. 10.2	25.102 ¹⁷⁰	92.82 ⁸⁵	13.402 ¹⁶⁸	59.88 ⁶⁵	30.028 ²³⁵	46.68 ¹¹⁷
20.1	24.932 ¹⁴⁷	91.97 ¹¹⁸	13.234 ¹⁴¹	59.23 ⁶⁶	29.793 ¹⁹⁹	45.51 ¹⁴⁰
30.1	24.785 ¹¹⁴	90.79 ¹⁵⁰	13.093 ¹⁰⁶	58.57 ⁶⁴	29.594 ¹⁵¹	44.11 ¹⁵⁵
Apr. 9.1	24.671 ⁷⁶	89.29 ¹⁷⁹	12.987 ⁶²	57.93 ⁵⁹	29.443 ⁹⁵	42.56 ¹⁶²
19.1	24.595 ³²	87.50 ²⁰⁵	12.925 ¹⁶	57.34 ⁴⁷	29.348 ³¹	40.94 ¹⁶⁴
29.0	24.563 ¹⁵	85.45 ²²⁷	12.909 ³⁵	56.87 ³⁵	29.317 ³⁴	39.30 ¹⁵⁷
May 9.0	24.578 ⁶²	83.18 ²⁴⁵	12.944 ⁸⁵	56.52 ¹⁷	29.351 ¹⁰⁰	37.73 ¹⁴⁵
19.0	24.640 ¹¹⁰	80.73 ²⁵⁸	13.029 ¹³⁵	56.35 ²	29.451 ¹⁶⁵	36.28 ¹²⁶
29.0	24.750 ¹⁵³	78.15 ²⁶⁵	13.164 ¹⁸⁰	56.37 ²¹	29.616 ²²⁴	35.02 ¹⁰⁴
June 7.9	24.903 ¹⁹⁴	75.50 ²⁶⁶	13.344 ²²³	56.58 ⁴²	29.840 ²⁷⁷	33.98 ⁷⁸
17.9	25.097 ²²⁸	72.84 ²⁵⁹	13.567 ²⁵⁴	57.00 ⁶¹	30.117 ³²³	33.20 ⁴⁸
27.9	25.325 ²⁵⁷	70.25 ²⁴⁷	13.821 ²⁸³	57.61 ⁷⁸	30.440 ³⁵⁹	32.72 ¹⁹
July 7.8	25.582 ²⁷⁸	67.78 ²²⁷	14.104 ³⁰³	58.39 ⁹⁴	30.799 ³⁸⁶	32.53 ¹¹
17.8	25.860 ²⁹⁴	65.51 ²⁰¹	14.407 ³¹⁶	59.33 ¹⁰⁷	31.185 ⁴⁰⁵	32.64 ⁴⁰
27.8	26.154 ³⁰¹	63.50 ¹⁶⁹	14.723 ³²²	60.40 ¹¹⁵	31.590 ⁴¹³	33.04 ⁶⁹
Aug. 6.8	26.455 ³⁰²	61.81 ¹³¹	15.045 ³²¹	61.55 ¹²⁰	32.003 ⁴¹⁵	33.73 ⁹⁴
16.7	26.757 ²⁹⁷	60.50 ⁸⁹	15.366 ³¹⁵	62.75 ¹²³	32.418 ⁴⁰⁸	34.67 ¹¹⁷
26.7	27.054 ²⁸⁵	59.61 ⁴⁵	15.681 ³⁰⁴	63.98 ¹²¹	32.826 ³⁹⁵	35.84 ¹³⁹
Sept. 5.7	27.339 ²⁶⁹	59.16 ¹	15.985 ²⁸⁸	65.19 ¹¹⁸	33.221 ³⁷⁶	37.23 ¹⁵⁵
15.7	27.608 ²⁴⁷	59.17 ⁴⁵	16.273 ²⁶⁸	66.37 ¹¹¹	33.597 ³⁵²	38.78 ¹⁷⁰
25.6	27.855 ²²³	59.62 ⁸⁸	16.541 ²⁴⁸	67.48 ¹⁰⁵	33.949 ³²⁵	40.48 ¹⁸²
Oct. 5.6	28.078 ¹⁹⁶	60.50 ¹²⁷	16.789 ²²³	68.53 ⁹⁵	34.274 ²⁹²	42.30 ¹⁹¹
15.6	28.274 ¹⁶⁵	61.77 ¹⁵⁹	17.012 ¹⁹⁶	69.48 ⁸⁶	34.566 ²⁵⁵	44.21 ¹⁹⁶
25.5	28.439 ¹³⁴	63.36 ¹⁸⁶	17.208 ¹⁶⁷	70.34 ⁷⁷	34.821 ²¹⁶	46.17 ¹⁹⁹
Nov. 4.5	28.573 ⁹⁹	65.22 ²⁰³	17.375 ¹³⁶	71.11 ⁶⁸	35.037 ¹⁷²	48.16 ¹⁹⁷
14.5	28.672 ⁶⁵	67.25 ²¹²	17.511 ¹⁰²	71.79 ⁵⁹	35.209 ¹²⁵	50.13 ¹⁹³
24.5	28.737 ²⁸	69.37 ²¹²	17.613 ⁶⁵	72.38 ⁵⁰	35.334 ⁷³	52.06 ¹⁸³
Dec. 4.4	28.765 ⁸	71.49 ²⁰⁵	17.678 ²⁸	72.88 ⁴¹	35.407 ²⁰	53.89 ¹⁷⁰
14.4	28.757 ⁴⁵	73.54 ¹⁹⁰	17.706 ¹³	73.29 ³¹	35.427 ³⁵	55.59 ¹⁵²
24.4	28.712 ⁷⁹	75.44 ¹⁶⁸	17.693 ⁵²	73.60 ²¹	35.392 ⁸⁸	57.11 ¹²⁹
34.4	28.633	77.12	17.641	73.81	35.304	58.40
Mean Place	25.741	73.43	13.730	65.67	30.340	45.27
Sec δ, Tan δ	1.078	-0.402	1.104	+0.468	1.481	+1.093
L α, L δ	-0.01	+0.2	+0.01	+0.2	+0.02	+0.2
ω α, ω δ	+0.02	+0.8	-0.02	+0.8	-0.04	+0.8

AUTHORITY

A. E.

300 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	δ Eridani. Mag. 3·7		17 Tauri. Mag. 3·8		η Tauri. Mag. 3·0	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 3 39	° ′ 10 0	h m 3 40	° ′ 23 52	h m 3 42	° ′ 23 52
Jan. 0·4	36·906 ₈₀	83·70 ₁₂₄	22·244 ₇₃	27·48 ₇	58·517 ₇₁	11·89 ₈
10·3	36·826 ₁₁₁	84·94 ₁₀₄	22·171 ₁₁₀	27·55 ₃	58·446 ₁₀₈	11·97 ₃
20·3	36·715 ₁₃₈	85·98 ₈₂	22·061 ₁₄₀	27·52 ₁₅	58·338 ₁₄₀	11·94 ₁₄
30·3	36·577 ₁₅₉	86·80 ₅₉	21·921 ₁₆₆	27·37 ₂₆	58·198 ₁₆₅	11·80 ₂₅
Feb. 9·3	36·418 ₁₇₂	87·39 ₃₃	21·755 ₁₈₁	27·11 ₃₇	58·033 ₁₈₁	11·55 ₃₆
19·2	36·246 ₁₇₈	87·72 ₈	21·574 ₁₈₇	26·74 ₄₆	57·852 ₁₈₈	11·19 ₄₅
29·2	36·068 ₁₇₅	87·80 ₁₉	21·387 ₁₈₄	26·28 ₅₅	57·664 ₁₈₃	10·74 ₅₃
Mar. 10·2	35·893 ₁₆₀	87·61 ₄₅	21·203 ₁₆₇	25·73 ₅₉	57·481 ₁₆₉	10·21 ₅₈
20·2	35·733 ₁₃₈	87·16 ₇₂	21·036 ₁₄₃	25·14 ₆₀	57·312 ₁₄₄	9·63 ₅₉
30·1	35·595 ₁₀₉	86·44 ₉₇	20·893 ₁₀₈	24·54 ₅₉	57·168 ₁₁₀	9·04 ₅₇
Apr. 9·1	35·486 ₇₁	85·47 ₁₂₃	20·785 ₆₆	23·95 ₅₁	57·058 ₆₈	8·47 ₅₁
19·1	35·415 ₃₀	84·24 ₁₄₆	20·719 ₁₉	23·44 ₄₁	56·990 ₂₂	7·96 ₄₁
29·0	35·385 ₁₆	82·78 ₁₆₈	20·700 ₃₀	23·03 ₂₈	56·968 ₂₈	7·55 ₂₈
May 9·0	35·401 ₆₁	81·10 ₁₈₆	20·730 ₈₀	22·75 ₁₁	56·996 ₇₈	7·27 ₁₁
19·0	35·462 ₁₀₆	79·24 ₂₀₃	20·810 ₁₃₀	22·64 ₈	57·074 ₁₂₆	7·16 ₆
29·0	35·568 ₁₄₉	77·21 ₂₁₃	20·940 ₁₇₅	22·72 ₂₇	57·200 ₁₇₃	7·22 ₂₆
June 7·9	35·717 ₁₈₇	75·08 ₂₂₀	21·115 ₂₁₆	22·99 ₄₆	57·373 ₂₁₃	7·48 ₄₅
17·9	35·904 ₂₂₀	72·88 ₂₂₁	21·331 ₂₅₀	23·45 ₆₄	57·586 ₂₄₈	7·93 ₆₃
27·9	36·124 ₂₄₈	70·67 ₂₁₆	21·581 ₂₇₈	24·09 ₈₁	57·834 ₂₇₆	8·56 ₇₉
July 7·9	36·372 ₂₆₈	68·51 ₂₀₅	21·859 ₂₉₉	24·90 ₉₆	58·110 ₂₉₈	9·35 ₉₄
17·8	36·640 ₂₈₂	66·46 ₁₈₈	22·158 ₃₁₂	25·86 ₁₀₆	58·408 ₃₁₁	10·29 ₁₀₄
27·8	36·922 ₂₉₁	64·58 ₁₆₆	22·470 ₃₁₈	26·92 ₁₁₅	58·719 ₃₁₈	11·33 ₁₁₃
Aug. 6·8	37·213 ₂₉₁	62·92 ₁₃₈	22·788 ₃₁₉	28·07 ₁₁₉	59·037 ₃₁₉	12·46 ₁₁₇
16·7	37·504 ₂₈₆	61·54 ₁₀₇	23·107 ₃₁₂	29·26 ₁₁₉	59·356 ₃₁₄	13·63 ₁₁₈
26·7	37·790 ₂₇₆	60·47 ₇₂	23·419 ₃₀₃	30·45 ₁₁₈	59·670 ₃₀₃	14·81 ₁₁₅
Sept. 5·7	38·066 ₂₆₂	59·75 ₃₅	23·722 ₂₈₇	31·63 ₁₁₃	59·973 ₂₈₉	15·96 ₁₁₁
15·7	38·328 ₂₄₄	59·40 ₂	24·009 ₂₆₉	32·76 ₁₀₄	60·262 ₂₇₁	17·07 ₁₀₄
25·6	38·572 ₂₂₃	59·42 ₃₈	24·278 ₂₄₈	33·80 ₉₇	60·533 ₂₅₀	18·11 ₉₅
Oct. 5·6	38·795 ₁₉₈	59·80 ₇₁	24·526 ₂₂₅	34·77 ₈₇	60·783 ₂₂₇	19·06 ₈₆
15·6	38·993 ₁₇₃	60·51 ₉₉	24·751 ₁₉₈	35·64 ₇₈	61·010 ₂₀₁	19·92 ₇₇
25·6	39·166 ₁₄₄	61·50 ₁₂₄	24·949 ₁₇₀	36·42 ₆₈	61·211 ₁₇₂	20·69 ₆₇
Nov. 4·5	39·310 ₁₁₄	62·74 ₁₄₀	25·119 ₁₃₈	37·10 ₅₉	61·383 ₁₄₂	21·36 ₅₈
14·5	39·424 ₈₂	64·14 ₁₅₂	25·257 ₁₀₆	37·69 ₅₀	61·525 ₁₀₈	21·94 ₅₀
24·5	39·506 ₄₉	65·66 ₁₅₅	25·363 ₇₀	38·19 ₄₂	61·633 ₇₂	22·44 ₄₁
Dec. 4·4	39·555 ₁₃	67·21 ₁₅₄	25·433 ₃₁	38·61 ₃₄	61·705 ₃₄	22·85 ₃₄
14·4	39·568 ₂₂	68·75 ₁₄₄	25·464 ₈	38·95 ₂₅	61·739 ₆	23·19 ₂₅
24·4	39·546 ₅₇	70·19 ₁₃₂	25·456 ₄₈	39·20 ₁₆	61·733 ₄₅	23·44 ₁₆
34·4	39·489	71·51	25·408	39·36	61·688	23·60
Mean Place	36·373	71·02	21·515	31·96	57·780	16·46
Sec δ, Tan δ	1·015	-0·177	1·094	+0·443	1·094	+0·443
L α, L δ	0·00	+0·2	+0·01	+0·2	+0·01	+0·2
ω α, ω δ	+0·01	+0·8	-0·02	+0·8	-0·02	+0·8
AUTHORITY	A. N.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 301

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Hydr. Mag. 3.2		ζ Persei. Mag. 2.9		ϵ Persei. Mag. 3.0	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	°	h m	°	h m	°
	3 48	74 28	3 49	31 39	3 52	39 47
Jan. 0.4	26.59 ⁶⁴	42.32 ²⁰⁵	21.873 ⁷⁵	29.85 ⁴⁴	45.975 ⁸⁶	28.47 ⁸⁴
10.4	25.95 ⁷³	44.37 ¹⁵²	21.798 ¹¹⁵	30.29 ²⁹	45.889 ¹³⁰	29.31 ⁶²
20.3	25.22 ⁷⁹	45.89 ⁹⁶	21.683 ¹⁵⁰	30.58 ¹¹	45.759 ¹⁷⁰	29.93 ³⁷
30.3	24.43 ⁸⁵	46.85 ³⁸	21.533 ¹⁷⁹	30.69 ⁸	45.589 ²⁰²	30.30 ⁹
Feb. 9.3	23.58 ⁸⁶	47.23 ²¹	21.354 ¹⁹⁶	30.61 ²⁷	45.387 ²²³	30.39 ¹⁷
19.2	22.72 ⁸⁶	47.02 ⁷⁸	21.158 ²⁰⁵	30.34 ⁴⁵	45.164 ²³¹	30.22 ⁴³
29.2	21.86 ⁸³	46.24 ¹³¹	20.953 ²⁰²	29.89 ⁶¹	44.933 ²²⁸	29.79 ⁶⁹
Mar. 10.2	21.03 ⁷⁸	44.93 ¹⁸²	20.751 ¹⁸⁶	29.28 ⁷⁴	44.705 ²¹²	29.10 ⁸⁹
20.2	20.25 ⁷²	43.11 ²²⁷	20.565 ¹⁶⁰	28.54 ⁸³	44.493 ¹⁸²	28.21 ¹⁰⁶
30.1	19.53 ⁶²	40.84 ²⁶⁷	20.405 ¹²⁵	27.71 ⁸⁸	44.311 ¹⁴³	27.15 ¹¹⁸
Apr. 9.1	18.91 ⁵¹	38.17 ³⁰¹	20.280 ⁸¹	26.83 ⁸⁷	44.168 ⁹⁶	25.97 ¹²³
19.1	18.40 ⁴⁰	35.16 ³²⁸	20.199 ³⁰	25.96 ⁸²	44.072 ⁴¹	24.74 ¹²³
29.1	18.00 ²⁶	31.88 ³⁴⁷	20.169 ²²	25.14 ⁷²	44.031 ¹⁸	23.51 ¹¹⁶
May 9.0	17.74 ¹³	28.41 ³⁵⁹	20.191 ⁷⁵	24.42 ⁵⁸	44.049 ⁷⁶	22.35 ¹⁰⁵
19.0	17.61 ¹	24.82 ³⁶⁴	20.266 ¹²⁸	23.84 ⁴¹	44.125 ¹³⁴	21.30 ⁸⁹
29.0	17.62 ¹⁵	21.18 ³⁵⁹	20.394 ¹⁷⁷	23.43 ²²	44.259 ¹⁸⁷	20.41 ⁶⁹
June 7.9	17.77 ²⁹	17.59 ³⁴⁵	20.571 ²²¹	23.21 ¹	44.446 ²³⁶	19.72 ⁴⁷
17.9	18.06 ⁴²	14.14 ³²⁴	20.792 ²⁵⁸	23.20 ²¹	44.682 ²⁷⁸	19.25 ²³
27.9	18.48 ⁵⁴	10.90 ²⁹³	21.050 ²⁹⁰	23.41 ⁴⁰	44.960 ³¹³	19.02 ²
July 7.9	19.02 ⁶⁴	7.97 ²⁵⁵	21.340 ³¹³	23.81 ⁶⁰	45.273 ³³⁹	19.04 ²⁵
17.8	19.66 ⁷²	5.42 ²⁰⁸	21.653 ³²⁹	24.41 ⁷⁷	45.612 ³⁵⁷	19.29 ⁴⁸
27.8	20.38 ⁷⁸	3.34 ¹⁵⁷	21.982 ³³⁸	25.18 ⁹¹	45.969 ³⁶⁸	19.77 ⁷⁰
Aug. 6.8	21.16 ⁸³	1.77 ⁹⁸	22.320 ³³⁹	26.09 ¹⁰³	46.337 ³⁷¹	20.47 ⁸⁸
16.8	21.99 ⁸⁴	0.79 ³⁹	22.659 ³³⁶	27.12 ¹¹²	46.708 ³⁶⁹	21.35 ¹⁰⁵
26.7	22.83 ⁸³	0.40 ²⁵	22.995 ³²⁶	28.24 ¹¹⁷	47.077 ³⁵⁸	22.40 ¹¹⁸
Sept. 5.7	23.66 ⁸⁰	0.65 ⁸⁸	23.321 ³¹¹	29.41 ¹²⁰	47.435 ³⁴⁴	23.58 ¹³⁰
15.7	24.46 ⁷⁴	1.53 ¹⁴⁷	23.632 ²⁹⁴	30.61 ¹²¹	47.779 ³²⁵	24.88 ¹³⁷
25.6	25.20 ⁶⁵	3.00 ²⁰³	23.926 ²⁷³	31.82 ¹²⁰	48.104 ³⁰²	26.25 ¹⁴⁴
Oct. 5.6	25.85 ⁵⁵	5.03 ²⁵⁰	24.199 ²⁴⁸	33.02 ¹¹⁷	48.406 ²⁷⁶	27.69 ¹⁴⁸
15.6	26.40 ⁴²	7.53 ²⁸⁹	24.447 ²²²	34.19 ¹¹³	48.682 ²⁴⁷	29.17 ¹⁵⁰
25.6	26.82 ²⁸	10.42 ³¹⁸	24.669 ¹⁹²	35.32 ¹⁰⁹	48.929 ²¹³	30.67 ¹⁵¹
Nov. 4.5	27.10 ¹⁴	13.60 ³³²	24.861 ¹⁵⁸	36.41 ¹⁰³	49.142 ¹⁷⁷	32.18 ¹⁴⁸
14.5	27.24 ¹	16.92 ³³⁷	25.019 ¹²²	37.44 ⁹⁶	49.319 ¹³⁶	33.66 ¹⁴⁵
24.5	27.23 ¹⁷	20.29 ³²⁷	25.141 ⁸³	38.40 ⁸⁹	49.455 ⁹¹	35.11 ¹³⁷
Dec. 4.5	27.06 ³¹	23.56 ³⁰⁵	25.224 ⁴¹	39.29 ⁸⁰	49.546 ⁴⁵	36.48 ¹²⁸
14.4	26.75 ⁴⁵	26.61 ²⁷³	25.265 ²	40.09 ⁶⁹	49.591 ⁴	37.76 ¹¹⁵
24.4	26.30 ⁵⁶	29.34 ²³¹	25.263 ⁴⁶	40.78 ⁵⁶	49.587 ⁵⁴	38.91 ⁹⁸
34.4	25.74	31.65	25.217	41.34	49.533	39.89
Mean Place	23.80	19.93	21.003	32.97	44.931	30.12
Sec δ , Tan δ	3.735	-3.599	1.175	+0.617	1.301	+0.833
L α , L δ	-0.08	+0.2	+0.01	+0.2	+0.02	+0.2
ω α , ω δ	+0.13	+0.8	-0.02	+0.8	-0.03	+0.8
AUTHORITY	A. E.		A. E.		A. E.	

302 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Eridani. Mag. 3.2		A Tauri. Mag. 4.5		43 Tauri. Mag. 5.7	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	° ' "	h m	° ' "	h m	° ' "
	3 54	13 43	4 0	21 52	4 4	19 24
Jan. 0.4	29.584 ⁷⁵	39.03 ¹⁴⁵	12.715 ⁵⁷	26.07 ¹	44.904 ⁵²	27.13 ⁹
10.4	29.509 ¹⁰⁸	40.48 ¹²²	12.658 ⁹⁵	26.08 ⁴	44.852 ⁹⁰	27.04 ¹⁴
20.4	29.401 ¹³⁸	41.70 ⁹⁷	12.563 ¹³⁰	26.04 ¹³	44.762 ¹²⁵	26.90 ¹⁸
30.3	29.263 ¹⁶¹	42.67 ⁷⁰	12.433 ¹⁵⁷	25.91 ²¹	44.637 ¹⁵⁴	26.72 ²³
Feb. 9.3	29.102 ¹⁷⁷	43.37 ⁴¹	12.276 ¹⁷⁷	25.70 ²⁸	44.483 ¹⁷³	26.49 ²⁹
19.3	28.925 ¹⁸⁵	43.78 ¹¹	12.099 ¹⁸⁷	25.42 ³⁶	44.310 ¹⁸⁴	26.20 ³⁴
29.2	28.740 ¹⁸³	43.89 ¹⁹	11.912 ¹⁸⁶	25.06 ⁴²	44.126 ¹⁸⁵	25.86 ³⁶
Mar. 10.2	28.557 ¹⁷²	43.70 ⁴⁸	11.726 ¹⁷⁵	24.64 ⁴⁵	43.941 ¹⁷³	25.50 ³⁹
20.2	28.385 ¹⁵¹	43.22 ⁷⁷	11.551 ¹⁵³	24.19 ⁴⁷	43.768 ¹⁵³	25.11 ³⁶
30.2	28.234 ¹²²	42.45 ¹⁰⁶	11.398 ¹²¹	23.72 ⁴⁴	43.615 ¹²³	24.75 ³³
Apr. 9.1	28.112 ⁸⁷	41.39 ¹³³	11.277 ⁸³	23.28 ³⁹	43.492 ⁸⁴	24.42 ²⁶
19.1	28.025 ⁴⁶	40.06 ¹⁵⁷	11.194 ³⁷	22.89 ²⁹	43.408 ⁴²	24.16 ¹⁶
29.1	27.979 ²	38.49 ¹⁸⁰	11.157 ¹¹	22.60 ¹⁷	43.366 ⁶	24.00 ³
May 9.1	27.977 ⁴⁴	36.69 ²⁰⁰	11.168 ⁶⁰	22.43 ²	43.372 ⁵⁵	23.97 ¹²
19.0	28.021 ⁹⁰	34.69 ²¹⁵	11.228 ¹⁰⁸	22.41 ¹⁴	43.427 ¹⁰²	24.09 ²⁷
29.0	28.111 ¹³³	32.54 ²²⁷	11.336 ¹⁵⁵	22.55 ³¹	43.529 ¹⁴⁸	24.36 ⁴⁴
June 8.0	28.244 ¹⁷³	30.27 ²³¹	11.491 ¹⁹⁶	22.86 ⁴⁸	43.677 ¹⁸⁹	24.80 ⁶⁰
17.9	28.417 ²⁰⁸	27.96 ²³²	11.687 ²³²	23.34 ⁶⁴	43.866 ²²⁵	25.40 ⁷⁵
27.9	28.625 ²³⁸	25.64 ²²⁵	11.919 ²⁶²	23.98 ⁷⁹	44.091 ²⁵⁵	26.15 ⁸⁸
July 7.9	28.863 ²⁶¹	23.39 ²¹³	12.181 ²⁸⁴	24.77 ⁹⁰	44.346 ²⁷⁸	27.03 ⁹⁷
17.9	29.124 ²⁷⁷	21.26 ¹⁹⁴	12.465 ³⁰¹	25.67 ¹⁰⁰	44.624 ²⁹⁴	28.00 ¹⁰⁵
27.8	29.401 ²⁸⁸	19.32 ¹⁷⁰	12.766 ³¹⁰	26.67 ¹⁰⁵	44.918 ³⁰⁴	29.05 ¹⁰⁸
Aug. 6.8	29.689 ²⁹²	17.62 ¹³⁹	13.076 ³¹⁴	27.72 ¹⁰⁸	45.222 ³⁰⁸	30.13 ¹⁰⁹
16.8	29.981 ²⁹⁰	16.23 ¹⁰⁵	13.390 ³¹¹	28.80 ¹⁰⁶	45.530 ³⁰⁷	31.22 ¹⁰⁴
26.7	30.271 ²⁸²	15.18 ⁶⁷	13.701 ³⁰⁴	29.86 ¹⁰³	45.837 ³⁰⁰	32.26 ⁹⁸
Sept. 5.7	30.553 ²⁷⁰	14.51 ²⁷	14.005 ²⁹²	30.89 ⁹⁶	46.137 ²⁸⁹	33.24 ⁹⁰
15.7	30.823 ²⁵⁴	14.24 ¹³	14.297 ²⁷⁷	31.85 ⁸⁷	46.426 ²⁷⁶	34.14 ⁷⁹
25.7	31.077 ²³⁵	14.37 ⁵²	14.574 ²⁵⁹	32.72 ⁷⁸	46.702 ²⁵⁷	34.93 ⁶⁶
Oct. 5.6	31.312 ²¹¹	14.89 ⁸⁹	14.833 ²³⁸	33.50 ⁶⁸	46.959 ²³⁸	35.59 ⁵⁵
15.6	31.523 ¹⁸⁶	15.78 ¹²⁰	15.071 ²¹⁵	34.18 ⁵⁷	47.197 ²¹⁵	36.14 ⁴³
25.6	31.709 ¹⁵⁷	16.98 ¹⁴⁶	15.286 ¹⁸⁷	34.75 ⁴⁸	47.412 ¹⁸⁸	36.57 ³²
Nov. 4.6	31.866 ¹²⁸	18.44 ¹⁶⁶	15.473 ¹⁵⁹	35.23 ⁴¹	47.600 ¹⁶¹	36.89 ²⁴
14.5	31.994 ⁹⁴	20.10 ¹⁷⁷	15.632 ¹²⁵	35.64 ³²	47.761 ¹²⁹	37.13 ¹⁵
24.5	32.088 ⁶⁰	21.87 ¹⁸²	15.757 ⁹⁰	35.96 ²⁶	47.890 ⁹³	37.28 ¹⁰
Dec. 4.5	32.148 ²³	23.69 ¹⁷⁹	15.847 ⁵²	36.22 ²¹	47.983 ⁵⁵	37.38 ⁵
14.4	32.171 ¹⁴	25.48 ¹⁶⁹	15.899 ¹¹	36.43 ¹⁴	48.038 ¹⁵	37.43 ⁰
24.4	32.157 ⁵⁰	27.17 ¹⁵⁴	15.910 ³⁰	36.57 ⁹	48.053 ²⁵	37.43 ⁴
34.4	32.107	28.71	15.880	36.66	48.028	37.39
Mean Place	28.980	25.55	11.917	31.71	44.148	33.45
Sec δ, Tan δ	1.029	-0.244	1.078	+0.401	1.060	+0.352
L α, L δ	-0.01	+0.2	+0.01	+0.2	+0.01	+0.2
ω α, ω δ	+0.01	+0.9	-0.01	+0.9	-0.01	+0.9
AUTHORITY	A. E.					

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AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α ¹ Eridani. Mag. 4·1		α Horologii. Mag. 3·8		α Reticuli. Mag. 3·4	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 4 8	° ′ 7 1	h m 4 11	° ′ 42 28	h m 4 13	° ′ 62 39
Jan. 0·4	9·936 ⁵⁸	76·77 ¹²⁶	29·955 ¹³⁶	71·51 ²²⁹	28·23 ²⁹	70·05 ²⁴³
10·4	9·878 ⁹⁴	78·03 ¹⁰⁹	29·819 ¹⁷⁹	73·80 ¹⁸⁸	27·94 ³⁶	72·48 ¹⁹⁶
20·4	9·784 ¹²⁵	79·12 ⁸⁹	29·640 ²¹⁶	75·68 ¹⁴³	27·58 ⁴¹	74·44 ¹⁴⁵
30·3	9·659 ¹⁵¹	80·01 ⁶⁷	29·424 ²⁴⁵	77·11 ⁹⁵	27·17 ⁴⁵	75·89 ⁸⁹
Feb. 9·3	9·508 ¹⁶⁹	80·68 ⁴⁵	29·179 ²⁶⁵	78·06 ⁴⁵	26·72 ⁴⁷	76·78 ³¹
19·3	9·339 ¹⁸⁰	81·13 ²²	28·914 ²⁷⁶	78·51 ⁵	26·25 ⁴⁹	77·09 ²⁵
29·2	9·159 ¹⁸⁰	81·35 ³	28·638 ²⁷⁴	78·46 ⁵⁵	25·76 ⁴⁸	76·84 ⁸⁰
Mar. 10·2	8·979 ¹⁷²	81·32 ²⁶	28·364 ²⁶²	77·91 ¹⁰²	25·28 ⁴⁶	76·04 ¹³³
20·2	8·807 ¹⁵³	81·06 ⁵¹	28·102 ²³⁹	76·89 ¹⁴⁸	24·82 ⁴³	74·71 ¹⁸²
30·2	8·654 ¹²⁶	80·55 ⁷⁵	27·863 ²⁰⁶	75·41 ¹⁹⁰	24·39 ³⁷	72·89 ²²⁶
Apr. 9·1	8·528 ⁹²	79·80 ⁹⁸	27·657 ¹⁶⁶	73·51 ²²⁷	24·02 ³²	70·63 ²⁶⁶
19·1	8·436 ⁵²	78·82 ¹²²	27·491 ¹¹⁹	71·24 ²⁶⁰	23·70 ²⁵	67·97 ²⁹⁹
29·1	8·384 ⁹	77·60 ¹⁴³	27·372 ⁶⁶	68·64 ²⁸⁷	23·45 ¹⁷	64·98 ³²⁶
May 9·1	8·375 ³⁶	76·17 ¹⁶²	27·306 ¹⁰	65·77 ³⁰⁹	23·28 ⁸	61·72 ³⁴⁵
19·0	8·411 ⁸¹	74·55 ¹⁷⁸	27·296 ⁴⁵	62·68 ³²¹	23·20 ¹	58·27 ³⁵⁷
29·0	8·492 ¹²⁴	72·77 ¹⁹¹	27·341 ¹⁰¹	59·47 ³²⁹	23·19 ⁹	54·70 ³⁶⁰
June 8·0	8·616 ¹⁶⁴	70·86 ²⁰⁰	27·442 ¹⁵⁴	56·18 ³²⁷	23·28 ¹⁶	51·10 ³⁵⁴
17·9	8·780 ¹⁹⁹	68·86 ²⁰³	27·596 ²⁰²	52·91 ³¹⁸	23·44 ²⁴	47·56 ³⁴⁰
27·9	8·979 ²²⁹	66·83 ²⁰¹	27·798 ²⁴⁵	49·73 ³⁰⁰	23·68 ³²	44·16 ³¹⁷
July 7·9	9·208 ²⁵²	64·82 ¹⁹⁴	28·043 ²⁸²	46·73 ²⁷⁴	24·00 ³⁸	40·99 ²⁸⁴
17·9	9·460 ²⁷⁰	62·88 ¹⁸¹	28·325 ³¹¹	43·99 ²³⁹	24·38 ⁴³	38·15 ²⁴⁴
27·8	9·730 ²⁸²	61·07 ¹⁶¹	28·636 ³³²	41·60 ¹⁹⁸	24·81 ⁴⁷	35·71 ¹⁹⁶
Aug. 6·8	10·012 ²⁸⁷	59·46 ¹³⁸	28·968 ³⁴⁵	39·62 ¹⁵⁰	25·28 ⁵⁰	33·75 ¹⁴¹
16·8	10·299 ²⁸⁶	58·08 ¹⁰⁹	29·313 ³⁵⁰	38·12 ⁹⁷	25·78 ⁵¹	32·34 ⁸³
26·7	10·585 ²⁸²	56·99 ⁷⁸	29·663 ³⁴⁷	37·15 ⁴⁰	26·29 ⁵²	31·51 ²⁰
Sept. 5·7	10·867 ²⁷¹	56·21 ⁴³	30·010 ³³⁷	36·75 ¹⁸	26·81 ⁵⁰	31·31 ⁴⁴
15·7	11·138 ²⁵⁸	55·78 ⁷	30·347 ³¹⁸	36·93 ⁷⁷	27·31 ⁴⁸	31·75 ¹⁰⁶
25·7	11·396 ²⁴¹	55·71 ²⁶	30·665 ²⁹⁵	37·70 ¹³¹	27·79 ⁴³	32·81 ¹⁶⁵
Oct. 5·6	11·637 ²²⁰	55·97 ⁶⁰	30·960 ²⁶⁴	39·01 ¹⁸²	28·22 ³⁹	34·46 ²¹⁹
15·6	11·857 ¹⁹⁸	56·57 ⁸⁸	31·224 ²²⁹	40·83 ²²⁵	28·61 ³²	36·65 ²⁶⁵
25·6	12·055 ¹⁷²	57·45 ¹¹³	31·453 ¹⁸⁷	43·08 ²⁶²	28·93 ²⁴	39·30 ³⁰⁰
Nov. 4·6	12·227 ¹⁴³	58·58 ¹³¹	31·640 ¹⁴⁴	45·70 ²⁸⁶	29·17 ¹⁷	42·30 ³²⁵
14·5	12·370 ¹¹²	59·89 ¹⁴⁴	31·784 ⁹⁴	48·56 ³⁰⁰	29·34 ⁹	45·55 ³³⁸
24·5	12·482 ⁷⁸	61·33 ¹⁴⁹	31·878 ⁴⁷	51·56 ³⁰²	29·43 ⁰	48·93 ³³⁷
Dec. 4·5	12·560 ⁴²	62·82 ¹⁵⁰	31·925 ⁶	54·58 ²⁹⁴	29·43 ⁹	52·30 ³²⁴
14·4	12·602 ⁴	64·32 ¹⁴³	31·919 ⁵⁶	57·52 ²⁷⁶	29·34 ¹⁶	55·54 ³⁰¹
24·4	12·606 ³²	65·75 ¹³²	31·863 ¹⁰⁵	60·28 ²⁴⁷	29·18 ²⁵	58·55 ²⁶⁶
34·4	12·574	67·07	31·758	62·75	28·93	61·21
Mean Place	9·282	64·77	28·985	53·27	26·43	49·75
Sec δ, Tan δ	1·008	-0·123	1·356	-0·916	2·178	-1·934
L α, L δ	0·00	+0·2	-0·02	+0·2	-0·05	+0·2
ω α, ω δ	0·00	+0·9	+0·03	+0·9	+0·06	+0·9
AUTHORITY	A. E.		A. E.		A. E.	

304 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ν^1 Eridani. Mag. 3.6		γ Tauri. Mag. 3.9		ϵ Tauri. Mag. 3.6	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 4 14	° 58'	h m 4 15	° 26'	h m 4 24	° 0'
Jan. 0.4	61.787 ¹⁰²	75.32 ²¹⁴	28.698 ⁴²	35.33 ²⁷	11.398 ³⁶	40.28 ⁹
10.4	61.685 ¹⁴²	77.46 ¹⁷⁹	28.656 ⁸²	35.06 ²⁸	11.362 ⁷⁷	40.19 ¹²
20.4	61.543 ¹⁷⁷	79.25 ¹⁴⁰	28.574 ¹¹⁷	34.78 ²⁸	11.285 ¹¹⁵	40.07 ¹⁵
30.3	61.366 ²⁰⁶	80.65 ⁹⁷	28.457 ¹⁴⁶	34.50 ²⁸	11.170 ¹⁴⁶	39.92 ¹⁸
Feb. 9.3	61.160 ²²⁶	81.62 ⁵¹	28.311 ¹⁶⁸	34.22 ²⁹	11.024 ¹⁶⁹	39.74 ²²
19.3	60.934 ²³⁶	82.13 ⁶	28.143 ¹⁸⁰	33.93 ²⁹	10.855 ¹⁸⁴	39.52 ²⁶
29.3	60.698 ²³⁷	82.19 ³⁹	27.963 ¹⁸³	33.64 ²⁸	10.671 ¹⁸⁸	39.26 ²⁹
Mar. 10.2	60.461 ²²⁶	81.80 ⁸³	27.780 ¹⁷⁴	33.36 ²⁶	10.483 ¹⁸⁰	38.97 ³⁰
20.2	60.235 ²⁰⁸	80.97 ¹²⁶	27.606 ¹⁵⁶	33.10 ²¹	10.303 ¹⁶²	38.67 ²⁸
30.2	60.027 ¹⁷⁸	79.71 ¹⁶⁴	27.450 ¹²⁷	32.89 ¹⁵	10.141 ¹³⁶	38.39 ²⁷
Apr. 9.1	59.849 ¹⁴¹	78.07 ²⁰⁰	27.323 ⁹²	32.74 ⁶	10.005 ¹⁰⁰	38.12 ²¹
19.1	59.708 ⁹⁷	76.07 ²³¹	27.231 ⁵⁰	32.68 ⁵	9.905 ⁵⁸	37.91 ¹³
29.1	59.611 ⁵⁰	73.76 ²⁵⁹	27.181 ⁵	32.73 ¹⁹	9.847 ¹²	37.78 ¹
May 9.1	59.561 ⁰	71.17 ²⁸¹	27.176 ⁴²	32.92 ³³	9.835 ³⁶	37.77 ¹²
19.0	59.561 ⁵²	68.36 ²⁹⁵	27.218 ⁹⁰	33.25 ⁴⁸	9.871 ⁸³	37.89 ²⁵
29.0	59.613 ¹⁰¹	65.41 ³⁰⁶	27.308 ¹³⁴	33.73 ⁶⁴	9.954 ¹²⁹	38.14 ⁴⁰
June 8.0	59.714 ¹⁴⁹	62.35 ³⁰⁶	27.442 ¹⁷⁵	34.37 ⁷⁹	10.083 ¹⁷¹	38.54 ⁵⁵
18.0	59.863 ¹⁹²	59.29 ³⁰⁰	27.617 ²¹²	35.16 ⁹¹	10.254 ²⁰⁸	39.09 ⁶⁸
27.9	60.055 ²³¹	56.29 ²⁸⁵	27.829 ²⁴¹	36.07 ¹⁰¹	10.462 ²⁴⁰	39.77 ⁷⁹
July 7.9	60.286 ²⁶²	53.44 ²⁶⁴	28.070 ²⁶⁶	37.08 ¹⁰⁸	10.702 ²⁶⁶	40.56 ⁸⁹
17.9	60.548 ²⁸⁸	50.80 ²³³	28.336 ²⁸³	38.16 ¹¹²	10.968 ²⁸⁵	41.45 ⁹⁵
27.8	60.836 ³⁰⁵	48.47 ¹⁹⁷	28.619 ²⁹⁵	39.28 ¹¹²	11.253 ²⁹⁷	42.40 ⁹⁸
Aug. 6.8	61.141 ³¹⁷	46.50 ¹⁵³	28.914 ³⁰⁰	40.40 ¹⁰⁹	11.550 ³⁰⁵	43.38 ⁹⁷
16.8	61.458 ³²¹	44.97 ¹⁰⁵	29.214 ³⁰⁰	41.49 ¹⁰¹	11.855 ³⁰⁶	44.35 ⁹³
26.8	61.779 ³¹⁸	43.92 ⁵³	29.514 ²⁹⁵	42.50 ⁹⁰	12.161 ³⁰³	45.28 ⁸⁷
Sept. 5.7	62.097 ³⁰⁸	43.39 ²	29.809 ²⁸⁷	43.40 ⁷⁸	12.464 ²⁹⁵	46.15 ⁷⁸
15.7	62.405 ²⁹³	43.41 ⁵⁵	30.096 ²⁷⁴	44.18 ⁶³	12.759 ²⁸³	46.93 ⁶⁶
25.7	62.698 ²⁷³	43.96 ¹⁰⁸	30.370 ²⁵⁹	44.81 ⁴⁸	13.042 ²⁶⁹	47.59 ⁵⁵
Oct. 5.7	62.971 ²⁴⁶	45.04 ¹⁵⁶	30.629 ²³⁹	45.29 ³²	13.311 ²⁵²	48.14 ⁴³
15.6	63.217 ²¹⁷	46.60 ¹⁹⁷	30.868 ²¹⁹	45.61 ¹⁸	13.563 ²³¹	48.57 ³²
25.6	63.434 ¹⁸³	48.57 ²³²	31.087 ¹⁹⁴	45.79 ⁷	13.794 ²⁰⁶	48.89 ²²
Nov. 4.6	63.617 ¹⁴⁵	50.89 ²⁵⁷	31.281 ¹⁶⁷	45.86 ⁴	14.000 ¹⁷⁹	49.11 ¹³
14.5	63.762 ¹⁰⁴	53.46 ²⁷²	31.448 ¹³⁵	45.82 ¹²	14.179 ¹⁴⁸	49.24 ⁷
24.5	63.866 ⁶¹	56.18 ²⁷⁶	31.583 ¹⁰²	45.70 ¹⁸	14.327 ¹¹³	49.31 ³
Dec. 4.5	63.927 ¹⁷	58.94 ²⁷¹	31.685 ⁶⁴	45.52 ²¹	14.440 ⁷⁵	49.34 ¹
14.5	63.944 ³⁰	61.65 ²⁵⁵	31.749 ²⁵	45.31 ²³	14.515 ³⁴	49.33 ⁴
24.4	63.914 ⁷³	64.20 ²³¹	31.774 ¹⁷	45.08 ²⁴	14.549 ⁸	49.29 ⁵
34.4	63.841	66.51	31.757	44.84	14.541	49.24
Mean Place	60.937	58.46	27.946	42.78	10.595	47.27
Sec δ , Tan δ	1.206	-0.674	1.037	+0.276	1.058	+0.345
L α , L δ	-0.02	+0.2	+0.01	+0.2	+0.01	+0.2
ω α , ω δ	+0.02	+0.9	-0.01	+0.9	-0.01	+0.9
AUTHORITY	A. E.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 305

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Tauri. Mag. 1·1		α Doradus. Mag. 3·5		53 Eridani. Mag. 4·0	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 4 31	° ' 16 21	h m 4 32	° ' 55 11	h m 4 34	° ' 14 26
Jan. 0·4	34·242 ³⁰	20·23 ²³	22·730 ¹⁹⁰	85·12 ²⁶²	42·641 ⁴⁷	78·52 ¹⁶⁷
10·4	34·212 ⁷¹	20·00 ²³	22·540 ²⁴⁸	87·74 ²¹⁸	42·594 ⁸⁶	80·19 ¹⁴⁴
20·4	34·141 ¹⁰⁹	19·77 ²³	22·292 ²⁹⁸	89·92 ¹⁷¹	42·508 ¹²³	81·63 ¹¹⁹
30·3	34·032 ¹⁴¹	19·54 ²³	21·994 ³³⁷	91·63 ¹²⁰	42·385 ¹⁵¹	82·82 ⁹¹
Feb. 9·3	33·891 ¹⁶⁵	19·31 ²⁴	21·657 ³⁶⁵	92·83 ⁶⁴	42·234 ¹⁷⁵	83·73 ⁶¹
19·3	33·726 ¹⁸¹	19·07 ²⁵	21·292 ³⁸⁰	93·47 ¹⁰	42·059 ¹⁸⁹	84·34 ³⁰
29·3	33·545 ¹⁸⁶	18·82 ²⁴	20·912 ³⁸³	93·57 ⁴⁶	41·870 ¹⁹⁵	84·64 ¹
Mar. 10·2	33·359 ¹⁸⁰	18·58 ²³	20·529 ³⁷²	93·11 ⁹⁷	41·675 ¹⁸⁹	84·63 ³¹
20·2	33·179 ¹⁶⁴	18·35 ²¹	20·157 ³⁴⁷	92·14 ¹⁴⁸	41·486 ¹⁷⁴	84·32 ⁶²
30·2	33·015 ¹³⁹	18·14 ¹⁵	19·810 ³¹²	90·66 ¹⁹⁴	41·312 ¹⁵¹	83·70 ⁹¹
Apr. 9·1	32·876 ¹⁰⁴	17·99 ⁹	19·498 ²⁶⁵	88·72 ²³⁵	41·161 ¹¹⁹	82·79 ¹¹⁹
19·1	32·772 ⁶⁴	17·90 ¹	19·233 ²¹⁰	86·37 ²⁷²	41·042 ⁸²	81·60 ¹⁴⁶
29·1	32·708 ¹⁹	17·91 ¹³	19·023 ¹⁴⁸	83·65 ³⁰³	40·960 ⁴⁰	80·14 ¹⁶⁹
May 9·1	32·689 ²⁸	18·04 ²⁵	18·875 ⁸²	80·62 ³²⁵	40·920 ⁵	78·45 ¹⁹¹
19·0	32·717 ⁷⁴	18·29 ⁴⁰	18·793 ¹¹	77·37 ³⁴²	40·925 ⁵⁰	76·54 ²⁰⁸
29·0	32·791 ¹²⁰	18·69 ⁵³	18·782 ⁵⁷	73·95 ³⁵¹	40·975 ⁹⁵	74·46 ²²¹
June 8·0	32·911 ¹⁶²	19·22 ⁶⁷	18·839 ¹²⁶	70·44 ³⁵⁰	41·070 ¹³⁶	72·25 ²²⁹
18·0	33·073 ¹⁹⁸	19·89 ⁷⁹	18·965 ¹⁹¹	66·94 ³⁴¹	41·206 ¹⁷³	69·96 ²³¹
27·9	33·271 ²³¹	20·68 ⁸⁹	19·156 ²⁵⁰	63·53 ³²³	41·379 ²⁰⁷	67·65 ²²⁷
July 7·9	33·502 ²⁵⁷	21·57 ⁹⁵	19·406 ³⁰²	60·30 ²⁹⁵	41·586 ²³⁴	65·38 ²¹⁶
17·9	33·759 ²⁷⁶	22·52 ¹⁰¹	19·708 ³⁴⁷	57·35 ²⁶¹	41·820 ²⁵⁷	63·22 ²⁰⁰
27·8	34·035 ²⁹¹	23·53 ¹⁰⁰	20·055 ³⁸²	54·74 ²¹⁶	42·077 ²⁷²	61·22 ¹⁷⁸
Aug. 6·8	34·326 ²⁹⁸	24·53 ⁹⁸	20·437 ⁴⁰⁸	52·58 ¹⁶⁶	42·349 ²⁸³	59·44 ¹⁴⁸
16·8	34·624 ³⁰¹	25·51 ⁹¹	20·845 ⁴²⁴	50·92 ¹⁰⁹	42·632 ²⁸⁷	57·96 ¹¹⁴
26·8	34·925 ²⁹⁹	26·42 ⁸²	21·269 ⁴²⁸	49·83 ⁴⁹	42·919 ²⁸⁶	56·82 ⁷⁶
Sept. 5·7	35·224 ²⁹²	27·24 ⁷⁰	21·697 ⁴²³	49·34 ¹⁴	43·205 ²⁸¹	56·06 ³⁵
15·7	35·516 ²⁸³	27·94 ⁵⁷	22·120 ⁴⁰⁵	49·48 ⁷⁶	43·486 ²⁷⁰	55·71 ⁶
25·7	35·799 ²⁶⁹	28·51 ⁴³	22·525 ³⁷⁹	50·24 ¹³⁷	43·756 ²⁵⁷	55·77 ⁴⁷
Oct. 5·7	36·068 ²⁵²	28·94 ²⁸	22·904 ³⁴³	51·61 ¹⁹²	44·013 ²⁴⁰	56·24 ⁸⁷
15·6	36·320 ²³²	29·22 ¹⁵	23·247 ²⁹⁷	53·53 ²⁴²	44·253 ²¹⁸	57·11 ¹²¹
25·6	36·552 ²¹⁰	29·37 ⁴	23·544 ²⁴⁶	55·95 ²⁸²	44·471 ¹⁹³	58·32 ¹⁵¹
Nov. 4·6	36·762 ¹⁸³	29·41 ⁵	23·790 ¹⁸⁶	58·77 ³¹¹	44·664 ¹⁶⁵	59·83 ¹⁷⁴
14·5	36·945 ¹⁵³	29·36 ¹²	23·976 ¹²¹	61·88 ³²⁹	44·829 ¹³⁴	61·57 ¹⁸⁹
24·5	37·098 ¹¹⁸	29·24 ¹⁷	24·097 ⁵⁵	65·17 ³³⁵	44·963 ⁹⁸	63·46 ¹⁹⁷
Dec. 4·5	37·216 ⁸¹	29·07 ¹⁸	24·152 ¹⁵	68·52 ³²⁷	45·061 ⁶¹	65·43 ¹⁹⁶
14·5	37·297 ⁴⁰	28·89 ²¹	24·137 ⁸⁴	71·79 ³¹⁰	45·122 ²⁰	67·39 ¹⁸⁹
24·4	37·337 ¹	28·68 ²⁰	24·053 ¹⁵⁰	74·89 ²⁸¹	45·142 ²⁰	69·28 ¹⁷⁵
34·4	37·336	28·48	23·903	77·70	45·122	71·03
Mean Place	33·442	27·91	21·175	66·54	41·867	65·37
Sec δ, Tan δ	1·042	+0·293	1·752	-1·439	1·033	-0·258
L α, L δ	+0·01	+0·2	-0·03	+0·1	-0·01	+0·1
ω α, ω δ	-0·01	+0·9	+0·03	+0·9	+0·01	+0·9
AUTHORITY	A. E.		A. E.		A. E.	

306 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	τ Tauri. Mag. 4.3		μ Eridani. Mag. 4.2		π^3 Orionis. Mag. 3.3	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	° ' "	h m	° ' "	h m	° ' "
	4 37	22 48	4 41	3 23	4 45	6 49
Jan.	0.4 41.756 ²⁶	37.92 ¹²	42.848 ²⁹	45.68 ¹²¹	43.557 ¹⁹	38.14 ⁷²
	10.4 41.730 ⁷⁰	38.04 ⁷	42.819 ⁷⁰	46.89 ¹⁰⁶	43.538 ⁶¹	37.42 ⁶⁵
	20.4 41.660 ¹¹⁰	38.11 ³	42.749 ¹⁰⁵	47.95 ⁹⁰	43.477 ⁹⁹	36.77 ⁵⁵
	30.3 41.550 ¹⁴⁴	38.14 ⁴	42.644 ¹³⁸	48.85 ⁷⁰	43.378 ¹³¹	36.22 ⁴⁶
Feb.	9.3 41.406 ¹⁷¹	38.10 ¹¹	42.506 ¹⁶²	49.55 ⁵¹	43.247 ¹⁵⁸	35.76 ³⁶
	19.3 41.235 ¹⁸⁹	37.99 ¹⁸	42.344 ¹⁷⁸	50.06 ³¹	43.089 ¹⁷⁴	35.40 ²⁶
	29.3 41.046 ¹⁹⁴	37.81 ²⁵	42.166 ¹⁸⁴	50.37 ¹¹	42.915 ¹⁸²	35.14 ¹⁶
Mar.	10.2 40.852 ¹⁹⁰	37.56 ³¹	41.982 ¹⁸¹	50.48 ¹¹	42.733 ¹⁷⁹	34.98 ⁵
	20.2 40.662 ¹⁷³	37.25 ³⁴	41.801 ¹⁶⁷	50.37 ³²	42.554 ¹⁶⁶	34.93 ⁶
	30.2 40.489 ¹⁴⁷	36.91 ³⁶	41.634 ¹⁴⁴	50.05 ⁵³	42.388 ¹⁴²	34.99 ¹⁹
Apr.	9.2 40.342 ¹¹³	36.55 ³⁴	41.490 ¹¹⁴	49.52 ⁷⁴	42.246 ¹¹²	35.18 ³³
	19.1 40.229 ⁷¹	36.21 ³⁰	41.376 ⁷⁷	48.78 ⁹⁴	42.134 ⁷⁵	35.51 ⁴⁷
	29.1 40.158 ²⁵	35.91 ²¹	41.299 ³⁶	47.84 ¹¹⁵	42.059 ³³	35.98 ⁶³
May	9.1 40.133 ²⁴	35.70 ¹²	41.263 ⁸	46.69 ¹³⁴	42.026 ¹²	36.61 ⁷⁷
	19.0 40.157 ⁷²	35.58 ⁰	41.271 ⁵³	45.35 ¹⁵⁰	42.038 ⁵⁷	37.38 ⁹²
	29.0 40.229 ¹¹⁹	35.58 ¹⁴	41.324 ⁹⁶	43.85 ¹⁶³	42.095 ¹⁰⁰	38.30 ¹⁰⁶
June	8.0 40.348 ¹⁶³	35.72 ²⁸	41.420 ¹³⁶	42.22 ¹⁷⁴	42.195 ¹⁴¹	39.36 ¹¹⁸
	18.0 40.511 ²⁰²	36.00 ⁴¹	41.556 ¹⁷⁴	40.48 ¹⁷⁹	42.336 ¹⁷⁹	40.54 ¹²⁶
	27.9 40.713 ²³⁵	36.41 ⁵³	41.730 ²⁰⁵	38.69 ¹⁸¹	42.515 ²¹⁰	41.80 ¹³¹
July	7.9 40.948 ²⁶³	36.94 ⁶⁵	41.935 ²³²	36.88 ¹⁷⁷	42.725 ²³⁷	43.11 ¹³³
	17.9 41.211 ²⁸⁵	37.59 ⁷³	42.167 ²⁵⁴	35.11 ¹⁶⁷	42.962 ²⁵⁹	44.44 ¹³⁰
	27.9 41.496 ²⁹⁹	38.32 ⁷⁸	42.421 ²⁶⁸	33.44 ¹⁵²	43.221 ²⁷³	45.74 ¹²³
Aug.	6.8 41.795 ³⁰⁹	39.10 ⁸⁰	42.689 ²⁷⁸	31.92 ¹³²	43.494 ²⁸³	46.97 ¹¹¹
	16.8 42.104 ³¹²	39.90 ⁸¹	42.967 ²⁸³	30.60 ¹⁰⁸	43.777 ²⁸⁸	48.08 ⁹⁷
	26.8 42.416 ³¹¹	40.71 ⁷⁷	43.250 ²⁸³	29.52 ⁷⁹	44.065 ²⁸⁸	49.05 ⁷⁸
Sept.	5.7 42.727 ³⁰⁶	41.48 ⁷³	43.533 ²⁷⁹	28.73 ⁴⁸	44.353 ²⁸⁵	49.83 ⁵⁶
	15.7 43.033 ²⁹⁶	42.21 ⁶⁶	43.812 ²⁷⁰	28.25 ¹⁶	44.638 ²⁷⁷	50.39 ³³
	25.7 43.329 ²⁸³	42.87 ⁵⁷	44.082 ²⁵⁸	28.09 ¹⁶	44.915 ²⁶⁵	50.72 ¹¹
Oct.	5.7 43.612 ²⁶⁷	43.44 ⁵⁰	44.340 ²⁴²	28.25 ⁴⁸	45.180 ²⁵¹	50.83 ¹²
	15.6 43.879 ²⁴⁸	43.94 ⁴²	44.582 ²²⁴	28.73 ⁷⁵	45.431 ²³⁴	50.71 ³³
	25.6 44.127 ²²⁴	44.36 ³⁵	44.806 ²⁰²	29.48 ¹⁰⁰	45.665 ²¹²	50.38 ⁵⁰
Nov.	4.6 44.351 ¹⁹⁸	44.71 ³⁰	45.008 ¹⁷⁶	30.48 ¹¹⁸	45.877 ¹⁸⁸	49.88 ⁶⁴
	14.6 44.549 ¹⁶⁶	45.01 ²⁶	45.184 ¹⁴⁷	31.66 ¹³¹	46.065 ¹⁵⁸	49.24 ⁷³
	24.5 44.715 ¹³⁰	45.27 ²²	45.331 ¹¹³	32.97 ¹³⁸	46.223 ¹²⁷	48.51 ⁸⁰
Dec.	4.5 44.845 ⁹¹	45.49 ²⁰	45.444 ⁷⁷	34.35 ¹⁴⁰	46.350 ⁸⁹	47.71 ⁸⁰
	14.5 44.936 ⁴⁹	45.69 ¹⁸	45.521 ³⁸	35.75 ¹³⁵	46.439 ⁵⁰	46.91 ⁷⁹
	24.4 44.985 ⁴	45.87 ¹⁶	45.559 ²	37.10 ¹²⁶	46.489 ⁸	46.12 ⁷⁴
	34.4 44.989	46.03	45.557	38.36	46.497	45.38
Mean Place	40.887	44.65	42.082	34.43	42.770	47.71
Sec δ , Tan δ	1.085	+0.421	1.002	-0.059	1.007	+0.120
L α , L δ	+0.01	+0.1	0.00	+0.1	0.00	+0.1
ω α , ω δ	-0.01	+0.9	0.00	+0.9	0.00	+0.9
AUTHORITY	A. E.		A. N.			

APPARENT PLACES OF STARS, 1924. 307

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ι Aurigæ. Mag. 2·9		ε Aurigæ. Mag. 3·4-4·1		η Aurigæ. Mag. 3·3	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	° ′	h m	° ′	h m	° ′
	4 52	33 2	4 56	43 42	5 1	41 7
Jan. 0·4	3·514 ¹⁶	44·20 ⁶⁸	31·998 ²²	40·04 ¹²⁷	12·159 ¹³	54·52 ¹¹⁴
10·4	3·498 ⁶⁷	44·88 ⁶⁰	31·976 ⁸¹	41·31 ¹¹²	12·146 ⁷¹	55·66 ¹⁰²
20·4	3·431 ¹¹³	45·48 ⁴⁸	31·895 ¹³⁴	42·43 ⁹⁴	12·075 ¹²²	56·68 ⁸⁶
30·3	3·318 ¹⁵⁴	45·96 ³⁴	31·761 ¹⁸²	43·37 ⁷¹	11·953 ¹⁶⁹	57·54 ⁶⁵
Feb. 9·3	3·164 ¹⁸⁵	46·30 ¹⁷	31·579 ²¹⁹	44·08 ⁴⁵	11·784 ²⁰⁶	58·19 ⁴³
19·3	2·979 ²⁰⁷	46·47 ⁰	31·360 ²⁴⁴	44·53 ¹⁶	11·578 ²³²	58·62 ¹⁶
29·3	2·772 ²¹⁷	46·47 ¹⁹	31·116 ²⁵⁵	44·69 ¹²	11·346 ²⁴⁴	58·78 ⁹
Mar. 10·2	2·555 ²¹⁴	46·28 ³⁵	30·861 ²⁵³	44·57 ⁴¹	11·102 ²⁴²	58·69 ³⁴
20·2	2·341 ¹⁹⁸	45·93 ⁴⁹	30·608 ²³⁶	44·16 ⁶⁶	10·860 ²²⁸	58·35 ⁵⁸
30·2	2·143 ¹⁷²	45·44 ⁶²	30·372 ²⁰⁷	43·50 ⁸⁸	10·632 ¹⁹⁹	57·77 ⁷⁸
Apr. 9·2	1·971 ¹³⁶	44·82 ⁶⁹	30·165 ¹⁶⁵	42·62 ¹⁰⁵	10·433 ¹⁶²	56·99 ⁹⁴
19·1	1·835 ⁹²	44·13 ⁷⁴	30·000 ¹¹⁶	41·57 ¹¹⁷	10·271 ¹¹⁴	56·05 ¹⁰⁴
29·1	1·743 ⁴²	43·39 ⁷³	29·884 ⁵⁹	40·40 ¹²⁴	10·157 ⁶⁰	55·01 ¹¹¹
May 9·1	1·701 ⁹	42·66 ⁶⁹	29·825 ⁰	39·16 ¹²⁵	10·097 ⁴	53·90 ¹¹¹
19·0	1·710 ⁶³	41·97 ⁶²	29·825 ⁶⁰	37·91 ¹²¹	10·093 ⁵⁵	52·79 ¹⁰⁸
29·0	1·773 ¹¹³	41·35 ⁵⁰	29·885 ¹²⁰	36·70 ¹¹³	10·148 ¹¹⁰	51·71 ⁹⁹
June 8·0	1·886 ¹⁶²	40·85 ³⁸	30·005 ¹⁷⁵	35·57 ⁹⁹	10·258 ¹⁶⁵	50·72 ⁸⁷
18·0	2·048 ²⁰⁶	40·47 ²²	30·180 ²²⁵	34·58 ⁸⁴	10·423 ²¹⁴	49·85 ⁷³
27·9	2·254 ²⁴⁴	40·25 ⁸	30·405 ²⁷⁰	33·74 ⁶⁶	10·637 ²⁵⁷	49·12 ⁵⁶
July 7·9	2·498 ²⁷⁵	40·17 ⁷	30·675 ³⁰⁸	33·08 ⁴⁷	10·894 ²⁹⁴	48·56 ³⁸
17·9	2·773 ³⁰¹	40·24 ²¹	30·983 ³³⁹	32·61 ²⁷	11·188 ³²³	48·18 ²¹
27·9	3·074 ³²⁰	40·45 ³³	31·322 ³⁶¹	32·34 ⁷	11·511 ³⁴⁶	47·97 ³
Aug. 6·8	3·394 ³³²	40·78 ⁴⁵	31·683 ³⁷⁷	32·27 ¹²	11·857 ³⁶²	47·94 ¹⁴
16·8	3·726 ³³⁹	41·23 ⁵⁴	32·060 ³⁸⁶	32·39 ³¹	12·219 ³⁷²	48·08 ³⁰
26·8	4·065 ³⁴¹	41·77 ⁶⁰	32·446 ³⁹⁰	32·70 ⁴⁷	12·591 ³⁷⁵	48·38 ⁴⁴
Sept. 5·7	4·406 ³³⁷	42·37 ⁶⁶	32·836 ³⁸⁸	33·17 ⁶³	12·966 ³⁷⁴	48·82 ⁵⁷
15·7	4·743 ³³⁰	43·03 ⁷⁰	33·224 ³⁸⁰	33·80 ⁷⁷	13·340 ³⁶⁷	49·39 ⁷⁰
25·7	5·073 ³¹⁸	43·73 ⁷²	33·604 ³⁶⁷	34·57 ⁹⁰	13·707 ³⁵⁷	50·09 ⁸⁰
Oct. 5·7	5·391 ³⁰²	44·45 ⁷⁴	33·971 ³⁵¹	35·47 ¹⁰²	14·064 ³⁴¹	50·89 ⁹⁰
15·6	5·693 ²⁸⁴	45·19 ⁷⁶	34·322 ³²⁹	36·49 ¹¹⁴	14·405 ³²¹	51·79 ⁹⁹
25·6	5·977 ²⁶⁰	45·95 ⁷⁸	34·651 ³⁰²	37·63 ¹²³	14·726 ²⁹⁷	52·78 ¹⁰⁸
Nov. 4·6	6·237 ²³¹	46·73 ⁷⁹	34·953 ²⁶⁸	38·86 ¹³²	15·023 ²⁶⁴	53·86 ¹¹⁵
14·6	6·468 ¹⁹⁷	47·52 ⁸⁰	35·221 ²²⁹	40·18 ¹³⁸	15·287 ²²⁷	55·01 ¹²¹
24·5	6·665 ¹⁵⁹	48·32 ⁸¹	35·450 ¹⁸³	41·56 ¹⁴³	15·514 ¹⁸⁴	56·22 ¹²⁶
Dec. 4·5	6·824 ¹¹⁵	49·13 ⁸¹	35·633 ¹³¹	42·99 ¹⁴⁵	15·698 ¹³⁵	57·48 ¹²⁸
14·5	6·939 ⁶⁷	49·94 ⁷⁹	35·764 ⁷⁶	44·44 ¹⁴³	15·833 ⁸¹	58·76 ¹²⁷
24·4	7·006 ¹⁷	50·73 ⁷⁵	35·840 ¹⁷	45·87 ¹³⁵	15·914 ²⁵	60·03 ¹²²
34·4	7·023	51·48	35·857	47·22	15·939	61·25
Mean Place	2·488	49·88	30·736	44·54	10·961	59·58
Sec δ, Tan δ	1·193	+0·651	1·383	+0·956	1·328	+0·873
L α, L δ	+0·02	+0·1	+0·02	+0·1	+0·02	+0·1
ω α, ω δ	-0·01	+1·0	-0·02	+1·0	-0·02	+1·0
AUTHORITY	A. E.		A. E.		A. E.	

308 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ε Leporis. Mag. 3·3			β Eridani. Mag. 2·9			μ Leporis. Mag. 3·3					
	R. A.		Dec. S.	R. A.		Dec. S.	R. A.		Dec. S.			
	h	m	°	′	h	m	°	′	h	m	°	′
	5	2	22	28	5	4	5	10	5	9	16	17
Jan. 0·4	15·5	18 ³⁷	33·22 ²¹¹		7·624 ¹⁴		71·93 ¹³⁷		31·924 ²¹		52·57 ¹⁹⁰	
10·4	15·4	81 ⁸⁰	35·33 ¹⁸⁶		7·610 ⁵⁵		73·30 ¹²¹		31·903 ⁶⁴		54·47 ¹⁶⁸	
20·4	15·4	120 ¹²⁰	37·19 ¹⁵⁵		7·555 ⁹⁴		74·51 ¹⁰³		31·839 ¹⁰⁵		56·15 ¹⁴²	
30·4	15·2	155 ¹⁵⁵	38·74 ¹²¹		7·461 ¹³⁰		75·54 ⁸²		31·734 ¹³⁹		57·57 ¹¹²	
Feb. 9·3	15·1	182 ¹⁸²	39·95 ⁸⁷		7·331 ¹⁵⁷		76·36 ⁶⁰		31·595 ¹⁶⁹		58·69 ⁸²	
19·3	14·9	202 ²⁰²	40·82 ⁴⁹		7·174 ¹⁷⁷		76·96 ³⁷		31·426 ¹⁸⁹		59·51 ⁴⁹	
29·3	14·7	211 ²¹¹	41·31 ¹¹		6·997 ¹⁸⁶		77·33 ¹⁶		31·237 ¹⁹⁹		60·00 ¹⁷	
Mar. 10·2	14·5	211 ²¹¹	41·42 ²⁷		6·811 ¹⁸⁶		77·49 ⁸		31·038 ²⁰¹		60·17 ¹⁶	
20·2	14·3	200 ²⁰⁰	41·15 ⁶³		6·625 ¹⁷⁷		77·41 ³⁰		30·837 ¹⁹¹		60·01 ⁴⁸	
30·2	14·1	179 ¹⁷⁹	40·52 ⁹⁸		6·448 ¹⁵⁷		77·11 ⁵³		30·646 ¹⁷¹		59·53 ⁸⁰	
Apr. 9·2	13·9	151 ¹⁵¹	39·54 ¹³²		6·291 ¹³⁰		76·58 ⁷⁵		30·475 ¹⁴⁵		58·73 ¹⁰⁹	
19·1	13·7	115 ¹¹⁵	38·22 ¹⁶³		6·161 ⁹⁵		75·83 ⁹⁷		30·330 ¹¹¹		57·64 ¹³⁷	
29·1	13·6	74 ⁷⁴	36·59 ¹⁹¹		6·066 ⁵⁵		74·86 ¹¹⁷		30·219 ⁷¹		56·27 ¹⁶³	
May 9·1	13·6	30 ³⁰	34·68 ²¹⁶		6·011 ¹⁴		73·69 ¹³⁶		30·148 ²⁹		54·64 ¹⁸⁶	
19·1	13·5	15 ¹⁵	32·52 ²³⁵		5·997 ³¹		72·33 ¹⁵³		30·119 ¹⁷		52·78 ²⁰⁶	
29·0	13·5	61 ⁶¹	30·17 ²⁵⁰		6·028 ⁷⁴		70·80 ¹⁶⁷		30·136 ⁵⁹		50·72 ²²⁰	
June 8·0	13·6	105 ¹⁰⁵	27·67 ²⁵⁸		6·102 ¹¹⁴		69·13 ¹⁷⁷		30·195 ¹⁰³		48·52 ²³⁰	
18·0	13·7	146 ¹⁴⁶	25·09 ²⁶¹		6·216 ¹⁵²		67·36 ¹⁸³		30·298 ¹⁴²		46·22 ²³⁵	
27·9	13·8	182 ¹⁸²	22·48 ²⁵⁷		6·368 ¹⁸⁷		65·53 ¹⁸⁴		30·440 ¹⁷⁷		43·87 ²³²	
July 7·9	14·0	215 ²¹⁵	19·91 ²⁴⁴		6·555 ²¹⁵		63·69 ¹⁸⁰		30·617 ²⁰⁸		41·55 ²²³	
17·9	14·2	241 ²⁴¹	17·47 ²²⁵		6·770 ²³⁹		61·89 ¹⁷⁰		30·825 ²³⁴		39·32 ²⁰⁹	
27·9	14·5	263 ²⁶³	15·22 ²⁰⁰		7·009 ²⁵⁷		60·19 ¹⁵⁴		31·059 ²⁵⁵		37·23 ¹⁸⁶	
Aug. 6·8	14·7	278 ²⁷⁸	13·22 ¹⁶⁶		7·266 ²⁷⁰		58·65 ¹³⁴		31·314 ²⁷⁰		35·37 ¹⁵⁹	
16·8	15·0	288 ²⁸⁸	11·56 ¹²⁹		7·536 ²⁷⁸		57·31 ¹⁰⁹		31·584 ²⁸⁰		33·78 ¹²³	
26·8	15·3	292 ²⁹²	10·27 ⁸⁵		7·814 ²⁸¹		56·22 ⁷⁹		31·864 ²⁸⁵		32·55 ⁸⁶	
Sept. 5·8	15·6	293 ²⁹³	9·42 ³⁸		8·095 ²⁸¹		55·43 ⁴⁶		32·149 ²⁸⁵		31·69 ⁴⁴	
15·7	15·9	286 ²⁸⁶	9·04 ¹⁰		8·376 ²⁷⁶		54·97 ¹³		32·434 ²⁸²		31·25 ¹	
25·7	16·2	277 ²⁷⁷	9·14 ⁵⁷		8·652 ²⁶⁷		54·84 ²²		32·716 ²⁷³		31·26 ⁴³	
Oct. 5·7	16·5	262 ²⁶²	9·71 ¹⁰⁴		8·919 ²⁵⁴		55·06 ⁵⁴		32·989 ²⁶⁰		31·69 ⁸⁶	
15·6	16·7	242 ²⁴²	10·75 ¹⁴⁵		9·173 ²³⁹		55·60 ⁸⁵		33·249 ²⁴⁴		32·55 ¹²³	
25·6	17·0	219 ²¹⁹	12·20 ¹⁸¹		9·412 ²¹⁹		56·45 ¹¹¹		33·493 ²²²		33·78 ¹⁵⁸	
Nov. 4·6	17·2	191 ¹⁹¹	14·01 ²¹⁰		9·631 ¹⁹⁴		57·56 ¹³²		33·715 ¹⁹⁷		35·36 ¹⁸³	
14·6	17·4	158 ¹⁵⁸	16·11 ²³⁰		9·825 ¹⁶⁶		58·88 ¹⁴⁶		33·912 ¹⁶⁷		37·19 ²⁰³	
24·5	17·5	121 ¹²¹	18·41 ²⁴¹		9·991 ¹³⁴		60·34 ¹⁵⁵		34·079 ¹³²		39·22 ²¹³	
Dec. 4·5	17·7	81 ⁸¹	20·82 ²⁴³		10·125 ⁹⁷		61·89 ¹⁵⁶		34·211 ⁹⁴		41·35 ²¹⁶	
14·5	17·7	38 ³⁸	23·25 ²³⁶		10·222 ⁵⁷		63·45 ¹⁵²		34·305 ⁵²		43·51 ²¹¹	
24·5	17·8	7 ⁷	25·61 ²²⁰		10·279 ¹⁵		64·97 ¹⁴²		34·357 ⁹		45·62 ¹⁹⁷	
34·4	17·8		27·81		10·294		66·39		34·366		47·59	
Mean Place	14·5		19·60		6·793		60·56		31·020		39·91	
Sec δ, Tan δ	1·0		-0·414		1·004		-0·091		1·042		-0·292	
L α, L δ	-0·01		+0·1		0·00		+0·1		-0·01		+0·1	
ω α, ω δ	+0·01		+1·0		0·00		+1·0		0·00		+1·0	
AUTHORITY	A. E.			A. E.			A. E.					

APPARENT PLACES OF STARS, 1924. 309

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Orionis. Mag. 0.3		α Aurigæ. Mag. 0.2		σ Orionis. Mag. 4.6	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m 5 10	8 17	h m 5 11	45 55	h m 5 17	0 27
Jan. 0.4	53.928 ¹¹	29.58 ¹⁵⁴	5.648 ⁶	15.49 ¹⁴¹	53.740 ³	33.18 ¹¹⁷
10.4	53.917 ⁵³	31.12 ¹³⁶	5.642 ⁶⁹	16.90 ¹²⁸	53.743 ⁴²	34.35 ¹⁰⁴
20.4	53.864 ⁹³	32.48 ¹¹⁶	5.573 ¹²⁷	18.18 ¹¹¹	53.701 ⁸²	35.39 ⁸⁸
30.4	53.771 ¹²⁹	33.64 ⁹²	5.446 ¹⁷⁹	19.29 ⁸⁸	53.619 ¹¹⁹	36.27 ⁷⁰
Feb. 9.3	53.642 ¹⁵⁷	34.56 ⁶⁸	5.267 ²²¹	20.17 ⁶¹	53.500 ¹⁴⁹	36.97 ⁵⁴
19.3	53.485 ¹⁷⁸	35.24 ⁴³	5.046 ²⁵⁰	20.78 ³²	53.351 ¹⁷²	37.51 ³⁵
29.3	53.307 ¹⁹⁰	35.67 ¹⁷	4.796 ²⁶⁶	21.10 ¹	53.179 ¹⁸⁴	37.86 ¹⁷
Mar. 10.2	53.117 ¹⁹⁰	35.84 ⁹	4.530 ²⁶⁶	21.11 ²⁹	52.995 ¹⁸⁶	38.03 ¹
20.2	52.927 ¹⁸¹	35.75 ³⁴	4.264 ²⁵³	20.82 ⁵⁷	52.809 ¹⁷⁸	38.02 ¹⁹
30.2	52.746 ¹⁶²	35.41 ⁵⁹	4.011 ²²⁵	20.25 ⁸³	52.631 ¹⁶¹	37.83 ³⁸
Apr. 9.2	52.584 ¹³⁶	34.82 ⁸³	3.786 ¹⁸⁵	19.42 ¹⁰⁴	52.470 ¹³⁴	37.45 ⁵⁶
19.1	52.448 ¹⁰²	33.99 ¹⁰⁷	3.601 ¹³⁶	18.38 ¹¹⁹	52.336 ¹⁰¹	36.89 ⁷⁴
29.1	52.346 ⁶⁴	32.92 ¹³⁰	3.465 ⁸⁰	17.19 ¹³⁰	52.235 ⁶³	36.15 ⁹²
May 9.1	52.282 ²¹	31.62 ¹⁴⁹	3.385 ²⁰	15.89 ¹³⁵	52.172 ²¹	35.23 ¹⁰⁹
19.1	52.261 ²²	30.13 ¹⁶⁷	3.365 ⁴³	14.54 ¹³³	52.151 ²³	34.14 ¹²⁵
29.0	52.283 ⁶⁶	28.46 ¹⁸¹	3.408 ¹⁰³	13.21 ¹²⁹	52.174 ⁶⁵	32.89 ¹³⁸
June 8.0	52.349 ¹⁰⁶	26.65 ¹⁹²	3.511 ¹⁶²	11.92 ¹¹⁸	52.239 ¹⁰⁶	31.51 ¹⁴⁸
18.0	52.455 ¹⁴⁵	24.73 ¹⁹⁷	3.673 ²¹⁵	10.74 ¹⁰⁴	52.345 ¹⁴³	30.03 ¹⁵⁶
27.9	52.600 ¹⁷⁹	22.76 ¹⁹⁷	3.888 ²⁶³	9.70 ⁸⁹	52.488 ¹⁷⁸	28.47 ¹⁵⁸
July 7.9	52.779 ²⁰⁸	20.79 ¹⁹¹	4.151 ³⁰⁴	8.81 ⁷⁰	52.666 ²⁰⁸	26.89 ¹⁵⁷
17.9	52.987 ²³⁴	18.88 ¹⁸¹	4.455 ³³⁸	8.11 ⁵¹	52.874 ²³²	25.32 ¹⁵⁰
27.9	53.221 ²⁵³	17.07 ¹⁶⁴	4.793 ³⁶⁴	7.60 ³¹	53.106 ²⁵¹	23.82 ¹³⁷
Aug. 6.8	53.474 ²⁶⁷	15.43 ¹⁴¹	5.157 ³⁸⁴	7.29 ¹¹	53.357 ²⁶⁵	22.45 ¹²²
16.8	53.741 ²⁷⁶	14.02 ¹¹³	5.541 ³⁹⁶	7.18 ⁸	53.622 ²⁷⁶	21.23 ¹⁰⁰
26.8	54.017 ²⁸¹	12.89 ⁸¹	5.937 ⁴⁰³	7.26 ²⁷	53.898 ²⁸⁰	20.23 ⁷⁵
Sept. 5.8	54.298 ²⁸²	12.08 ⁴⁷	6.340 ⁴⁰⁴	7.53 ⁴⁴	54.178 ²⁸¹	19.48 ⁴⁷
15.7	54.580 ²⁷⁷	11.61 ⁹	6.744 ³⁹⁹	7.97 ⁶¹	54.459 ²⁷⁹	19.01 ¹⁶
25.7	54.857 ²⁷⁰	11.52 ²⁷	7.143 ³⁸⁹	8.58 ⁷⁷	54.738 ²⁷²	18.85 ¹³
Oct. 5.7	55.127 ²⁵⁸	11.79 ⁶⁴	7.532 ³⁷⁴	9.35 ⁹¹	55.010 ²⁶³	18.98 ⁴²
15.6	55.385 ²⁴³	12.43 ⁹⁶	7.906 ³⁵⁴	10.26 ¹⁰⁶	55.273 ²⁵⁰	19.40 ⁷⁰
25.6	55.628 ²²³	13.39 ¹²⁵	8.260 ³²⁸	11.32 ¹¹⁸	55.523 ²³⁰	20.10 ⁹²
Nov. 4.6	55.851 ²⁰⁰	14.64 ¹⁴⁷	8.588 ²⁹⁵	12.50 ¹³⁰	55.753 ²⁰⁹	21.02 ¹¹²
14.6	56.051 ¹⁷¹	16.11 ¹⁶⁴	8.883 ²⁵⁴	13.80 ¹⁴⁰	55.962 ¹⁸²	22.14 ¹²³
24.5	56.222 ¹³⁸	17.75 ¹⁷²	9.137 ²⁰⁹	15.20 ¹⁴⁸	56.144 ¹⁵¹	23.37 ¹³²
Dec. 4.5	56.360 ¹⁰¹	19.47 ¹⁷⁶	9.346 ¹⁵⁶	16.68 ¹⁵³	56.295 ¹¹⁴	24.69 ¹³³
14.5	56.461 ⁶¹	21.23 ¹⁷⁰	9.502 ⁹⁷	18.21 ¹⁵³	56.409 ⁷⁴	26.02 ¹²⁹
24.5	56.522 ¹⁸	22.93 ¹⁶¹	9.599 ³⁵	19.74 ¹⁴⁹	56.483 ³²	27.31 ¹²²
34.4	56.540	24.54	9.634	21.23	56.515	28.53
Mean Place Sec δ , Tan δ	53.069 1.011	17.90 -0.146	4.313 1.438	20.55 +1.033	52.887 1.000	22.51 -0.008
L α , L δ ω α , ω δ	0.00 0.00	+0.1 +1.0	+0.03 -0.01	+0.1 +1.0	0.00 0.00	+0.1 +1.0
AUTHORITY	A. E.		A. E.		A. E.	

310 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Orionis (mean). Mag. 3·4		γ Orionis. Mag. 1·7		β Tauri. Mag. 1·8	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 5 20	° ′ 2 27	h m 5 21	° ′ 6 16	h m 5 21	28 32
Jan. 0·4	40·185 ₃	68·17 ₁₂₉	4·087 ₉	45·40 ₈₂	30·167 ₁₆	33·48 ₄₅
10·4	40·188 ₄₀	69·46 ₁₁₃	4·096 ₃₅	44·58 ₇₂	30·183 ₃₆	33·93 ₄₄
20·4	40·148 ₈₁	70·59 ₉₇	4·061 ₇₆	43·86 ₆₀	30·147 ₈₃	34·37 ₃₉
30·4	40·067 ₁₁₉	71·56 ₇₇	3·985 ₁₁₅	43·26 ₄₉	30·064 ₁₂₇	34·76 ₃₂
Feb. 9·3	39·948 ₁₄₉	72·33 ₅₉	3·870 ₁₄₆	42·77 ₃₈	29·937 ₁₆₃	35·08 ₂₃
19·3	39·799 ₁₇₂	72·92 ₃₈	3·724 ₁₇₀	42·39 ₂₅	29·774 ₁₈₉	35·31 ₁₁
29·3	39·627 ₁₈₄	73·30 ₁₉	3·554 ₁₈₂	42·14 ₁₅	29·585 ₂₀₅	35·42 ₁
Mar. 10·3	39·443 ₁₈₈	73·49 ₂	3·372 ₁₈₅	41·99 ₃	29·380 ₂₀₇	35·41 ₁₃
20·2	39·255 ₁₇₉	73·47 ₂₂	3·187 ₁₇₇	41·96 ₉	29·173 ₁₉₉	35·28 ₂₅
30·2	39·076 ₁₆₃	73·25 ₄₂	3·010 ₁₆₁	42·05 ₂₁	28·974 ₁₇₈	35·03 ₃₃
Apr. 9·2	38·913 ₁₃₇	72·83 ₆₂	2·849 ₁₃₄	42·26 ₃₃	28·796 ₁₄₉	34·70 ₄₁
19·1	38·776 ₁₀₄	72·21 ₈₁	2·715 ₁₀₀	42·59 ₄₇	28·647 ₁₁₀	34·29 ₄₅
29·1	38·672 ₆₆	71·40 ₁₀₁	2·615 ₆₂	43·06 ₆₁	28·537 ₆₆	33·84 ₄₆
May 9·1	38·606 ₂₄	70·39 ₁₁₈	2·553 ₂₀	43·67 ₇₅	28·471 ₁₉	33·38 ₄₃
19·1	38·582 ₁₈	69·21 ₁₃₄	2·533 ₂₃	44·42 ₈₇	28·452 ₃₁	32·95 ₃₈
29·0	38·600 ₆₁	67·87 ₁₄₈	2·556 ₆₇	45·29 ₁₀₀	28·483 ₈₀	32·57 ₃₀
June 8·0	38·661 ₁₀₂	66·39 ₁₅₉	2·623 ₁₀₈	46·29 ₁₁₀	28·563 ₁₂₇	32·27 ₂₁
18·0	38·763 ₁₄₀	64·80 ₁₆₅	2·731 ₁₄₆	47·39 ₁₁₈	28·690 ₁₆₉	32·06 ₁₁
28·0	38·903 ₁₇₅	63·15 ₁₆₈	2·877 ₁₈₀	48·57 ₁₂₂	28·859 ₂₀₈	31·95 ₁
July 7·9	39·078 ₂₀₃	61·47 ₁₆₅	3·057 ₂₁₀	49·79 ₁₂₃	29·067 ₂₄₁	31·94 ₁₀
17·9	39·281 ₂₂₉	59·82 ₁₅₇	3·267 ₂₃₅	51·02 ₁₂₀	29·308 ₂₆₉	32·04 ₁₉
27·9	39·510 ₂₄₉	58·25 ₁₄₄	3·502 ₂₅₄	52·22 ₁₁₃	29·577 ₂₉₀	32·23 ₂₆
Aug. 6·8	39·759 ₂₆₃	56·81 ₁₂₆	3·756 ₂₆₉	53·35 ₁₀₂	29·867 ₃₀₆	32·49 ₃₃
16·8	40·022 ₂₇₄	55·55 ₁₀₄	4·025 ₂₇₉	54·37 ₈₆	30·173 ₃₁₈	32·82 ₃₆
26·8	40·296 ₂₇₉	54·51 ₇₆	4·304 ₂₈₄	55·23 ₆₇	30·491 ₃₂₃	33·18 ₃₈
Sept. 5·8	40·575 ₂₈₁	53·75 ₄₇	4·588 ₂₈₆	55·90 ₄₅	30·814 ₃₂₅	33·56 ₃₉
15·7	40·856 ₂₇₉	53·28 ₁₅	4·874 ₂₈₃	56·35 ₂₃	31·139 ₃₂₃	33·95 ₃₉
25·7	41·135 ₂₇₂	53·13 ₁₇	5·157 ₂₇₇	56·58 ₂	31·462 ₃₁₇	34·34 ₃₇
Oct. 5·7	41·407 ₂₆₃	53·30 ₄₈	5·434 ₂₆₈	56·56 ₂₄	31·779 ₃₀₇	34·71 ₃₆
15·7	41·670 ₂₅₀	53·78 ₇₇	5·702 ₂₅₆	56·32 ₄₆	32·086 ₂₉₂	35·07 ₃₅
25·6	41·920 ₂₃₂	54·55 ₁₀₂	5·958 ₂₃₈	55·86 ₆₄	32·378 ₂₇₄	35·42 ₃₅
Nov. 4·6	42·152 ₂₁₀	55·57 ₁₂₁	6·196 ₂₁₆	55·22 ₇₈	32·652 ₂₄₉	35·77 ₃₆
14·6	42·362 ₁₈₃	56·78 ₁₃₅	6·412 ₁₉₀	54·44 ₈₈	32·901 ₂₂₁	36·13 ₃₈
24·5	42·545 ₁₅₂	58·13 ₁₄₃	6·602 ₁₅₈	53·56 ₉₄	33·122 ₁₈₅	36·51 ₄₁
Dec. 4·5	42·697 ₁₁₅	59·56 ₁₄₆	6·760 ₁₂₃	52·62 ₉₄	33·307 ₁₄₄	36·92 ₄₄
14·5	42·812 ₇₅	61·02 ₁₄₁	6·883 ₈₂	51·68 ₉₁	33·451 ₉₈	37·36 ₄₆
24·5	42·887 ₃₃	62·43 ₁₃₃	6·965 ₃₉	50·77 ₈₅	33·549 ₄₉	37·82 ₄₉
34·4	42·920	63·76	7·004	49·92	33·598	38·31
Mean Place	39·323	57·29	3·231	55·29	29·177	40·88
Sec δ, Tan δ	1·001	-0·043	1·006	+0·110	1·138	+0·544
L α, L δ	0·00	+0·1	0·00	+0·1	+0·01	+0·1
ω α, ω δ	0·00	+1·0	0·00	+1·0	-0·01	+1·0
AUTHORITY	A. N.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 311

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Leporis. Mag. 3.0		20 G. Pictoris. Mag. 5.5		δ Orionis. Mag. 2.5	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 5 24	$^{\circ}$ $'$ 20 48	h m 5 28	$^{\circ}$ $'$ 47 7	h m 5 28	$^{\circ}$ $'$ 0 21
Jan. 0.4	60.330 ¹⁴	81.59 ²¹⁶	5.603 ⁷⁶	71.49 ²⁹⁸	8.259 ¹¹	25.73 ¹²⁰
10.4	60.316 ⁵⁸	83.75 ¹⁹³	5.527 ¹³⁴	74.47 ²⁶⁷	8.270 ³³	26.93 ¹⁰⁶
20.4	60.258 ¹⁰²	85.68 ¹⁶⁴	5.393 ¹⁸⁹	77.14 ²²⁸	8.237 ⁷⁵	27.99 ⁹⁰
30.4	60.156 ¹⁴⁰	87.32 ¹³³	5.204 ²³⁵	79.42 ¹⁸⁴	8.162 ¹¹³	28.89 ⁷²
Feb. 9.3	60.016 ¹⁷¹	88.65 ⁹⁹	4.969 ²⁷³	81.26 ¹³⁶	8.049 ¹⁴⁵	29.61 ⁵⁵
19.3	59.845 ¹⁹⁴	89.64 ⁶⁴	4.696 ³⁰¹	82.62 ⁸⁵	7.904 ¹⁶⁹	30.16 ³⁷
29.3	59.651 ²⁰⁷	90.28 ²⁷	4.395 ³¹⁶	83.47 ³⁴	7.735 ¹⁸³	30.53 ¹⁹
Mar. 10.3	59.444 ²¹¹	90.55 ⁹	4.079 ³¹⁹	83.81 ¹⁷	7.552 ¹⁸⁶	30.72 ⁰
20.2	59.233 ²⁰³	90.46 ⁴⁵	3.760 ³¹¹	83.64 ⁶⁹	7.366 ¹⁸¹	30.72 ¹⁸
30.2	59.030 ¹⁸⁷	90.01 ⁸⁰	3.449 ²⁹¹	82.95 ¹¹⁶	7.185 ¹⁶⁴	30.54 ³⁶
Apr. 9.2	58.843 ¹⁶¹	89.21 ¹¹³	3.158 ²⁶⁰	81.79 ¹⁶³	7.021 ¹³⁹	30.18 ⁵³
19.1	58.682 ¹²⁹	88.08 ¹⁴⁴	2.898 ²²⁰	80.16 ²⁰³	6.882 ¹⁰⁸	29.65 ⁷²
29.1	58.553 ⁹⁰	86.64 ¹⁷²	2.678 ¹⁷⁴	78.13 ²⁴²	6.774 ⁷⁰	28.93 ⁹⁰
May 9.1	58.463 ⁴⁸	84.92 ¹⁹⁸	2.504 ¹²⁰	75.71 ²⁷³	6.704 ³⁰	28.03 ¹⁰⁷
19.1	58.415 ⁴	82.94 ²¹⁸	2.384 ⁶⁵	72.98 ²⁹⁹	6.674 ¹⁴	26.96 ¹²¹
29.0	58.411 ⁴⁰	80.76 ²³⁶	2.319 ⁸	69.99 ³¹⁸	6.688 ⁵⁶	25.75 ¹³⁴
June 8.0	58.451 ⁸⁴	78.40 ²⁴⁶	2.311 ⁵¹	66.81 ³²⁹	6.744 ⁹⁶	24.41 ¹⁴⁵
18.0	58.535 ¹²⁵	75.94 ²⁵⁰	2.362 ¹⁰⁶	63.52 ³³¹	6.840 ¹³⁴	22.96 ¹⁵²
28.0	58.660 ¹⁶²	73.44 ²⁴⁹	2.468 ¹⁵⁹	60.21 ³²⁵	6.974 ¹⁷⁰	21.44 ¹⁵⁵
July 7.9	58.822 ¹⁹⁵	70.95 ²⁴⁰	2.627 ²⁰⁸	56.96 ³¹⁰	7.144 ²⁰⁰	19.89 ¹⁵³
17.9	59.017 ²²⁴	68.55 ²²⁴	2.835 ²⁵²	53.86 ²⁸⁶	7.344 ²²⁴	18.36 ¹⁴⁷
27.9	59.241 ²⁴⁶	66.31 ²⁰⁰	3.087 ²⁸⁹	51.00 ²⁵³	7.568 ²⁴⁶	16.89 ¹³⁵
Aug. 6.8	59.487 ²⁶⁶	64.31 ¹⁷¹	3.376 ³¹⁹	48.47 ²¹¹	7.814 ²⁶¹	15.54 ¹¹⁹
16.8	59.753 ²⁷⁸	62.60 ¹³⁴	3.695 ³⁴⁴	46.36 ¹⁶²	8.075 ²⁷²	14.35 ⁹⁸
26.8	60.031 ²⁸⁶	61.26 ⁹³	4.039 ³⁵⁸	44.74 ¹⁰⁸	8.347 ²⁷⁹	13.37 ⁷⁴
Sept. 5.8	60.317 ²⁹⁰	60.33 ⁴⁸	4.397 ³⁶⁷	43.66 ⁴⁹	8.626 ²⁸¹	12.63 ⁴⁵
15.7	60.607 ²⁸⁸	59.85 ²	4.764 ³⁶⁶	43.17 ¹⁴	8.907 ²⁸¹	12.18 ¹⁶
25.7	60.895 ²⁸²	59.83 ⁴⁷	5.130 ³⁵⁸	43.31 ⁷⁵	9.188 ²⁷⁵	12.02 ¹⁴
Oct. 5.7	61.177 ²⁷¹	60.30 ⁹²	5.488 ³⁴¹	44.06 ¹³⁵	9.463 ²⁶⁸	12.16 ⁴³
15.7	61.448 ²⁵⁶	61.22 ¹³⁵	5.829 ³¹⁷	45.41 ¹⁹⁰	9.731 ²⁵⁵	12.59 ⁷¹
25.6	61.704 ²³⁶	62.57 ¹⁷¹	6.146 ²⁸³	47.31 ²³⁸	9.986 ²³⁸	13.30 ⁹⁴
Nov. 4.6	61.940 ²¹¹	64.28 ²⁰²	6.429 ²⁴⁴	49.69 ²⁷⁹	10.224 ²¹⁷	14.24 ¹¹³
14.6	62.151 ¹⁸⁰	66.30 ²²⁴	6.673 ¹⁹⁷	52.48 ³⁰⁷	10.441 ¹⁹¹	15.37 ¹²⁶
24.5	62.331 ¹⁴⁶	68.54 ²³⁷	6.870 ¹⁴³	55.55 ³²⁶	10.632 ¹⁶⁰	16.63 ¹³³
Dec. 4.5	62.477 ¹⁰⁵	70.91 ²⁴¹	7.013 ⁸⁶	58.81 ³³²	10.792 ¹²³	17.96 ¹³⁶
14.5	62.582 ⁶³	73.32 ²³⁷	7.099 ²⁵	62.13 ³²⁷	10.915 ⁸⁴	19.32 ¹³²
24.5	62.645 ¹⁷	75.69 ²²⁵	7.124 ³⁶	65.40 ³¹⁰	10.999 ⁴¹	20.64 ¹²⁴
34.4	62.662	77.94	7.088	68.50	11.040	21.88
Mean Place	59.338	68.94	4.006	57.10	7.388	15.14
Sec δ , Tan δ	1.070	-0.380	1.470	-1.077	1.000	-0.006
L α , L δ	-0.01	+0.1	-0.03	+0.1	0.00	+0.1
ω α , ω δ	0.00	+1.0	+0.01	+1.0	0.00	+1.0
AUTHORITY	A. N.				A. E.	

312 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Leporis. Mag. 2.7		ι Orionis. Mag. 2.9		ϵ Orionis. Mag. 1.7	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 5 29	° ' 17 52	h m 5 31	° ' 5 57	h m 5 32	° ' 1 14
Jan. 0.5	23.65 ¹ ₈ 6	44.70 ²⁰⁵	43.797 ⁸	42.40 ¹⁵⁰	22.261 ¹⁵	67.86 ¹²⁶
10.4	23.645 ⁵¹	46.75 ¹⁸⁴	43.805 ³⁴	43.90 ¹³³	22.276 ³⁰	69.12 ¹¹¹
20.4	23.594 ⁹⁴	48.59 ¹⁵⁸	43.771 ⁷⁷	45.23 ¹¹⁵	22.246 ⁷³	70.23 ⁹⁵
30.4	23.500 ¹³¹	50.17 ¹²⁸	43.694 ¹¹⁵	46.38 ⁹³	22.173 ¹¹¹	71.18 ⁷⁷
Feb. 9.3	23.369 ¹⁶³	51.45 ⁹⁶	43.579 ¹⁴⁷	47.31 ⁷⁰	22.062 ¹⁴⁴	71.95 ⁵⁹
19.3	23.206 ¹⁸⁸	52.41 ⁶³	43.432 ¹⁷²	48.01 ⁴⁶	21.918 ¹⁶⁸	72.54 ³⁸
29.3	23.018 ²⁰¹	53.04 ²⁸	43.260 ¹⁸⁵	48.47 ²³	21.750 ¹⁸²	72.92 ¹⁹
Mar. 10.3	22.817 ²⁰⁵	53.32 ⁵	43.075 ¹⁹¹	48.70 ⁰	21.568 ¹⁸⁷	73.11 ²
20.2	22.612 ¹⁹⁹	53.27 ⁴⁰	42.884 ¹⁸⁴	48.70 ²⁴	21.381 ¹⁸²	73.13 ¹⁹
30.2	22.413 ¹⁸²	52.87 ⁷¹	42.700 ¹⁶⁹	48.46 ⁴⁸	21.199 ¹⁶⁶	72.94 ³⁷
Apr. 9.2	22.231 ¹⁵⁹	52.16 ¹⁰³	42.531 ¹⁴⁴	47.98 ⁶⁹	21.033 ¹⁴²	72.57 ⁵⁶
19.2	22.072 ¹²⁶	51.13 ¹³³	42.387 ¹¹⁴	47.29 ⁹²	20.891 ¹¹¹	72.01 ⁷⁴
29.1	21.946 ⁸⁹	49.80 ¹⁶⁰	42.273 ⁷⁷	46.37 ¹¹²	20.780 ⁷⁴	71.27 ⁹³
May 9.1	21.857 ⁴⁸	48.20 ¹⁸⁴	42.196 ³⁶	45.25 ¹³²	20.706 ³³	70.34 ¹¹⁰
19.1	21.809 ⁴	46.36 ²⁰⁵	42.160 ⁵	43.93 ¹⁴⁹	20.673 ⁹	69.24 ¹²⁵
29.0	21.805 ³⁹	44.31 ²²¹	42.165 ⁴⁸	42.44 ¹⁶³	20.682 ⁵¹	67.99 ¹³⁸
June 8.0	21.844 ⁸²	42.10 ²³²	42.213 ⁹⁰	40.81 ¹⁷⁴	20.733 ⁹²	66.61 ¹⁴⁸
18.0	21.926 ¹²²	39.78 ²³⁸	42.303 ¹²⁷	39.07 ¹⁸⁰	20.825 ¹²⁹	65.13 ¹⁵⁶
28.0	22.048 ¹⁵⁹	37.40 ²³⁶	42.430 ¹⁶³	37.27 ¹⁸²	20.954 ¹⁶⁶	63.57 ¹⁵⁸
July 7.9	22.207 ¹⁹¹	35.04 ²²⁹	42.593 ¹⁹³	35.45 ¹⁷⁸	21.120 ¹⁹⁶	61.99 ¹⁵⁶
17.9	22.398 ²²⁰	32.75 ²¹⁴	42.786 ²²⁰	33.67 ¹⁷⁰	21.316 ²²¹	60.43 ¹⁵⁰
27.9	22.618 ²⁴³	30.61 ¹⁹³	43.006 ²⁴⁰	31.97 ¹⁵⁴	21.537 ²⁴³	58.93 ¹³⁸
Aug. 6.9	22.861 ²⁶⁰	28.68 ¹⁶⁵	43.246 ²⁵⁸	30.43 ¹³⁴	21.780 ²⁵⁸	57.55 ¹²⁰
16.8	23.121 ²⁷⁵	27.03 ¹³¹	43.504 ²⁷⁰	29.09 ¹¹⁰	22.038 ²⁷⁰	56.35 ¹⁰⁰
26.8	23.306 ²⁸²	25.72 ⁹³	43.774 ²⁷⁷	27.99 ⁸⁰	22.308 ²⁷⁸	55.35 ⁷⁴
Sept. 5.8	23.678 ²⁸⁷	24.79 ⁵⁰	44.051 ²⁸⁰	27.19 ⁴⁷	22.586 ²⁸¹	54.61 ⁴⁵
15.7	23.965 ²⁸⁶	24.29 ⁵	44.331 ²⁸⁰	26.72 ¹³	22.867 ²⁸¹	54.16 ¹⁵
25.7	24.251 ²⁸⁰	24.24 ⁴⁰	44.611 ²⁷⁵	26.59 ²³	23.148 ²⁷⁶	54.01 ¹⁶
Oct. 5.7	24.531 ²⁷⁰	24.64 ⁸⁵	44.886 ²⁶⁸	26.82 ⁵⁸	23.424 ²⁶⁹	54.17 ⁴⁶
15.7	24.801 ²⁵⁸	25.49 ¹²⁵	45.154 ²⁵⁵	27.40 ⁸⁹	23.693 ²⁵⁶	54.63 ⁷⁴
25.6	25.059 ²³⁷	26.74 ¹⁶⁰	45.409 ²³⁹	28.29 ¹¹⁷	23.949 ²⁴¹	55.37 ⁹⁹
Nov. 4.6	25.296 ²¹⁴	28.34 ¹⁹⁰	45.648 ²¹⁷	29.46 ¹³⁹	24.190 ²²⁰	56.36 ¹¹⁸
14.6	25.510 ¹⁸⁵	30.24 ²¹¹	45.865 ¹⁹¹	30.85 ¹⁵⁶	24.410 ¹⁹⁴	57.54 ¹³²
24.6	25.695 ¹⁵¹	32.35 ²²⁴	46.056 ¹⁵⁹	32.41 ¹⁶⁵	24.604 ¹⁶³	58.86 ¹⁴⁰
Dec. 4.5	25.846 ¹¹²	34.59 ²²⁹	46.215 ¹²³	34.06 ¹⁶⁸	24.767 ¹²⁷	60.26 ¹⁴¹
14.5	25.958 ⁶⁹	36.88 ²²⁵	46.338 ⁸³	35.74 ¹⁶⁵	24.894 ⁸⁸	61.67 ¹³⁹
24.5	26.027 ²⁵	39.13 ²¹⁴	46.421 ⁴⁰	37.39 ¹⁵⁵	24.982 ⁴⁴	63.06 ¹³⁰
34.4	26.052	41.27	46.461	38.94	25.026	64.36
Mean Place	22.677	32.47	42.900	31.31	21.382	57.21
Sec δ , Tan δ	1.051	-0.323	1.005	-0.104	1.000	-0.022
L α , L δ	-0.01	+0.1	0.00	0.0	0.00	0.0
ω α , ω δ	0.00	+1.0	0.00	+1.0	0.00	+1.0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 313

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Doradus. Mag. 3·8		ζ Tauri. Mag. 3·0		ζ Orionis. Mag. 2·0	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m	° ′	h m	° ′	h m	° ′
	5 32	62 32	5 33	21 5	5 36	1 58
Jan. 0·5	60·58 ^s 17	37·74 ^s 319	7·045 ^s 26	42·22 ^s 2	56·308 ^s 17	65·03 ^s 130
10·4	60·41 25	40·93 285	7·071 22	42·24 5	56·325 27	66·33 116
20·4	60·16 32	43·78 245	7·049 69	42·29 7	56·298 70	67·49 100
30·4	59·84 39	46·23 198	6·980 112	42·36 8	56·228 109	68·49 79
Feb. 9·3	59·45 44	48·21 147	6·868 147	42·44 6	56·119 142	69·28 62
19·3	59·01 48	49·68 93	6·721 174	42·50 3	55·977 167	69·90 41
29·3	58·53 50	50·61 39	6·547 191	42·53 1	55·810 183	70·31 21
Mar. 10·3	58·03 49	51·00 16	6·356 195	42·52 5	55·627 188	70·52 2
20·2	57·54 49	50·84 71	6·161 190	42·47 9	55·439 183	70·54 19
30·2	57·05 47	50·13 122	5·971 172	42·38 11	55·256 168	70·35 37
Apr. 9·2	56·58 42	48·91 171	5·799 146	42·27 12	55·088 145	69·98 57
19·2	56·16 37	47·20 216	5·653 112	42·15 12	54·943 114	69·41 76
29·1	55·79 31	45·04 254	5·541 72	42·03 8	54·829 77	68·65 94
May 9·1	55·48 24	42·50 289	5·469 27	41·95 3	54·752 38	67·71 111
19·1	55·24 16	39·61 315	5·442 18	41·92 4	54·714 5	66·60 128
29·0	55·08 8	36·46 335	5·460 64	41·96 11	54·719 47	65·32 141
June 8·0	55·00 0	33·11 347	5·524 109	42·07 21	54·766 87	63·91 151
18·0	55·00 8	29·64 349	5·633 149	42·28 28	54·853 126	62·40 158
28·0	55·08 17	26·15 343	5·782 186	42·56 36	54·979 161	60·82 161
July 7·9	55·25 24	22·72 326	5·968 218	42·92 43	55·140 191	59·21 159
17·9	55·49 31	19·46 301	6·186 245	43·35 47	55·331 218	57·62 152
27·9	55·80 37	16·45 265	6·431 267	43·82 49	55·549 239	56·10 140
Aug. 6·9	56·17 42	13·80 223	6·698 284	44·31 49	55·788 256	54·70 123
16·8	56·59 46	11·57 170	6·982 295	44·80 46	56·044 268	53·47 100
26·8	57·05 49	9·87 113	7·277 303	45·26 41	56·312 276	52·47 74
Sept. 5·8	57·54 51	8·74 53	7·580 306	45·67 34	56·588 280	51·73 45
15·7	58·05 51	8·21 15	7·886 306	46·01 25	56·868 281	51·28 14
25·7	58·56 50	8·36 79	8·192 301	46·26 17	57·149 277	51·14 17
Oct. 5·7	59·06 48	9·15 141	8·493 294	46·43 8	57·426 270	51·31 49
15·7	59·54 43	10·56 200	8·787 283	46·51 1	57·696 259	51·80 78
25·6	59·97 38	12·56 252	9·070 266	46·52 5	57·955 243	52·58 102
Nov. 4·6	60·35 32	15·08 294	9·336 245	46·47 8	58·198 223	53·60 123
14·6	60·67 25	18·02 326	9·581 219	46·39 11	58·421 198	54·83 136
24·6	60·92 16	21·28 345	9·800 186	46·28 9	58·619 168	56·19 145
Dec. 4·5	61·08 7	24·73 353	9·986 148	46·19 6	58·787 131	57·64 147
14·5	61·15 2	28·26 348	10·134 105	46·13 3	58·918 91	59·11 144
24·5	61·13 11	31·74 331	10·239 59	46·10 2	59·009 49	60·55 136
34·4	61·02	35·05	10·298 59	46·12	59·058 49	61·91
Mean Place	57·94	23·15	6·117	50·73	55·417	54·36
Sec δ, Tan δ	2·168	-1·924	1·072	+0·386	1·001	-0·035
L α, L δ	-0·05	0·0	+0·01	0·0	0·00	0·0
ω α, ω δ	+0·01	+1·0	0·00	+1·0	0·00	+1·0
AUTHORITY	A. E.		A. E.			

314 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Columbæ. Mag. 2·7		ι 30 Tauri. Mag. 5·5		κ Orionis. Mag. 2·2	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m 5 36	° ′ 34 6	h m 5 42	° ′ 17 41	h m 5 44	° ′ 9 41
Jan. 0·5	55·064 ₂₇	63·16 ₂₇₁	61·212	58·10 ₁₉	10·040 ₁₇	55·03 ₁₇₃
10·4	55·037 ₇₇	65·87 ₂₄₄	61·247 ₃₅	57·91 ₁₃	10·057 ₂₈	56·76 ₁₅₆
20·4	54·960 ₁₂₅	68·31 ₂₁₁	61·234 ₅₉	57·78 ₈	10·029 ₇₁	58·32 ₁₃₄
30·4	54·835 ₁₆₈	70·42 ₁₇₃	61·175 ₁₀₃	57·70 ₄	9·958 ₁₁₂	59·66 ₁₁₀
Feb. 9·4	54·667 ₂₂₂	72·15 ₁₃₀	61·072 ₁₄₀	57·66 ₂	9·846 ₁₄₄	60·76 ₈₄
19·3	54·465 ₂₂₉	73·45 ₈₇	60·932 ₁₆₇	57·64 ₁	9·702 ₁₇₂	61·60 ₅₇
29·3	54·236 ₂₄₅	74·32 ₄₁	60·765 ₁₈₅	57·63 ₁	9·530 ₁₈₇	62·17 ₃₁
Mar. 10·3	53·991 ₂₅₀	74·73 ₄	60·580 ₁₉₂	57·62 ₁	9·343 ₁₉₄	62·48 ₃
20·2	53·741 ₂₄₄	74·69 ₄₉	60·388 ₁₈₈	57·61 ₁	9·149 ₁₉₀	62·51 ₂₄
30·2	53·497 ₂₂₈	74·20 ₉₂	60·200 ₁₇₃	57·60 ₁	8·959 ₁₇₇	62·27 ₄₉
Apr. 9·2	53·269 ₂₀₃	73·28 ₁₃₃	60·027 ₁₄₉	57·59 ₀	8·782 ₁₅₄	61·78 ₇₆
19·2	53·066 ₁₇₀	71·95 ₁₇₂	59·878 ₁₁₆	57·59 ₃	8·628 ₁₂₅	61·02 ₁₀₀
29·1	52·896 ₁₃₀	70·23 ₂₀₆	59·762 ₇₈	57·62 ₉	8·503 ₈₉	60·02 ₁₂₃
May 9·1	52·766 ₈₅	68·17 ₂₃₆	59·684 ₃₅	57·71 ₁₄	8·414 ₅₀	58·79 ₁₄₄
19·1	52·681 ₃₉	65·81 ₂₆₁	59·649 ₉	57·85 ₂₁	8·364 ₈	57·35 ₁₆₂
29·1	52·642 ₁₀	63·20 ₂₈₀	59·658 ₅₄	58·06 ₃₀	8·356 ₃₄	55·73 ₁₇₈
June 8·0	52·652 ₅₈	60·40 ₂₉₂	59·712 ₉₆	58·36 ₃₈	8·390 ₇₅	53·95 ₁₈₉
18·0	52·710 ₁₀₄	57·48 ₂₉₈	59·808 ₁₃₇	58·74 ₄₆	8·465 ₁₁₃	52·06 ₁₉₆
28·0	52·814 ₁₄₇	54·50 ₂₉₄	59·945 ₁₇₃	59·20 ₅₁	8·578 ₁₄₉	50·10 ₁₉₇
July 7·9	52·961 ₁₈₇	51·56 ₂₈₃	60·118 ₂₀₅	59·71 ₅₇	8·727 ₁₈₂	48·13 ₁₉₃
17·9	53·148 ₂₂₁	48·73 ₂₆₄	60·323 ₂₃₃	60·28 ₅₈	8·909 ₂₀₉	46·20 ₁₈₃
27·9	53·369 ₂₅₂	46·09 ₂₃₆	60·556 ₂₅₄	60·86 ₅₉	9·118 ₂₃₂	44·37 ₁₆₇
Aug. 6·9	53·621 ₂₇₅	43·73 ₂₀₀	60·810 ₂₇₂	61·45 ₅₅	9·350 ₂₅₀	42·70 ₁₄₅
16·8	53·896 ₂₉₅	41·73 ₁₅₈	61·082 ₂₈₅	62·00 ₄₉	9·600 ₂₆₅	41·25 ₁₁₈
26·8	54·191 ₃₀₇	40·15 ₁₀₉	61·367 ₂₉₃	62·49 ₄₀	9·865 ₂₇₄	40·07 ₈₅
Sept. 5·8	54·498 ₃₁₄	39·06 ₅₆	61·660 ₂₉₉	62·89 ₃₀	10·139 ₂₈₀	39·22 ₅₀
15·8	54·812 ₃₁₆	38·50 ₁	61·959 ₂₉₉	63·19 ₁₈	10·419 ₂₈₂	38·72 ₁₁
25·7	55·128 ₃₁₀	38·49 ₅₅	62·258 ₂₉₈	63·37 ₆	10·701 ₂₇₉	38·61 ₂₇
Oct. 5·7	55·438 ₃₀₀	39·04 ₁₁₁	62·556 ₂₉₁	63·43 ₆	10·980 ₂₇₂	38·88 ₆₅
15·7	55·738 ₂₈₂	40·15 ₁₆₁	62·847 ₂₈₂	63·37 ₁₇	11·252 ₂₆₂	39·53 ₁₀₀
25·6	56·020 ₂₆₀	41·76 ₂₀₆	63·129 ₂₆₇	63·20 ₂₅	11·514 ₂₄₆	40·53 ₁₃₁
Nov. 4·6	56·280 ₂₃₀	43·82 ₂₄₄	63·396 ₂₄₇	62·95 ₃₀	11·760 ₂₂₆	41·84 ₁₅₇
14·6	56·510 ₁₉₅	46·26 ₂₇₂	63·643 ₂₂₃	62·65 ₃₄	11·986 ₂₀₀	43·41 ₁₇₆
24·6	56·705 ₁₅₄	48·98 ₂₉₀	63·866 ₁₉₁	62·31 ₃₄	12·186 ₁₆₉	45·17 ₁₈₇
Dec. 4·5	56·859 ₁₀₈	51·88 ₂₉₇	64·057 ₁₅₅	61·97 ₃₁	12·355 ₁₃₂	47·04 ₁₉₁
14·5	56·967 ₅₉	54·85 ₂₉₄	64·212 ₁₁₃	61·66 ₂₆	12·487 ₉₂	48·95 ₁₈₉
24·5	57·026 ₇	57·79 ₂₈₁	64·325 ₆₇	61·40 ₂₁	12·579 ₄₈	50·84 ₁₇₉
34·5	57·033	60·60	64·392	61·19	12·627	52·63
Mean Place	53·818	50·06	60·300	67·11	9·101	43·88
Sec δ , Tan δ	1·208	-0·677	1·050	+0·319	1·014	-0·171
$L \alpha$, $L \delta$	-0·02	0·0	+0·01	0·0	0·00	0·0
$\omega \alpha$, $\omega \delta$	0·00	+1·0	0·00	+1·0	0·00	+1·0
AUTHORITY	A. E.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 315

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Columbæ. Mag. 3·2		α Orionis. Mag. 1·0-1·4		β Aurigæ. Mag. 2·1	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 5 48	° ' 28	h m 5 51	° ' 23	h m 5 53	° ' 56
Jan. 0·5	18·078 ₁₇	58·28 ₂₈₁	4·310 ₃₈	29·11 ₈₀	58·564 ₅₂	21·61 ₁₄₂
10·4	18·061 ₇₁	61·09 ₂₅₅	4·348 ₉	28·31 ₇₁	58·616 ₁₄	23·03 ₁₃₈
20·4	17·990 ₁₂₀	63·64 ₂₂₃	4·339 ₅₅	27·60 ₅₉	58·602 ₇₈	24·41 ₁₂₈
30·4	17·870 ₁₆₅	65·87 ₁₈₄	4·284 ₉₆	27·01 ₄₆	58·524 ₁₃₆	25·69 ₁₁₄
Feb. 9·4	17·705 ₂₀₃	67·71 ₁₄₃	4·188 ₁₃₁	26·55 ₃₅	58·388 ₁₈₆	26·83 ₉₄
19·3	17·502 ₂₃₁	69·14 ₉₈	4·057 ₁₆₀	26·20 ₂₃	58·202 ₂₂₆	27·77 ₇₀
29·3	17·271 ₂₅₀	70·12 ₅₃	3·897 ₁₇₈	25·97 ₁₂	57·976 ₂₅₁	28·47 ₄₂
Mar. 10·3	17·021 ₂₅₇	70·65 ₆	3·719 ₁₈₆	25·85 ₁	57·725 ₂₆₃	28·89 ₁₃
20·3	16·764 ₂₅₃	70·71 ₃₉	3·533 ₁₈₃	25·84 ₉	57·462 ₂₅₉	29·02 ₁₅
30·2	16·511 ₂₃₉	70·32 ₈₄	3·350 ₁₇₀	25·93 ₁₉	57·203 ₂₄₃	28·87 ₄₃
Apr. 9·2	16·272 ₂₁₅	69·48 ₁₂₇	3·180 ₁₄₉	26·12 ₃₀	56·960 ₂₁₂	28·44 ₆₇
19·2	16·057 ₁₈₃	68·21 ₁₆₆	3·031 ₁₁₈	26·42 ₄₁	56·748 ₁₇₁	27·77 ₈₈
29·1	15·874 ₁₄₅	66·55 ₂₀₁	2·913 ₈₃	26·83 ₅₃	56·577 ₁₂₂	26·89 ₁₀₅
May 9·1	15·729 ₁₀₀	64·54 ₂₃₄	2·830 ₄₄	27·36 ₆₅	56·455 ₆₈	25·84 ₁₁₆
19·1	15·629 ₅₄	62·20 ₂₆₁	2·786 ₂	28·01 ₇₆	56·387 ₁₀	24·68 ₁₂₃
29·1	15·575 ₅	59·59 ₂₈₁	2·784 ₄₁	28·77 ₈₇	56·377 ₄₈	23·45 ₁₂₅
June 8·0	15·570 ₄₃	56·78 ₂₉₅	2·825 ₈₂	29·64 ₉₅	56·425 ₁₀₆	22·20 ₁₂₂
18·0	15·613 ₉₀	53·83 ₃₀₂	2·907 ₁₂₀	30·59 ₁₀₃	56·531 ₁₆₀	20·98 ₁₁₆
28·0	15·703 ₁₃₅	50·81 ₃₀₀	3·027 ₁₅₅	31·62 ₁₀₆	56·691 ₂₀₉	19·82 ₁₀₇
July 8·0	15·838 ₁₇₅	47·81 ₂₉₀	3·182 ₁₈₇	32·68 ₁₀₈	56·900 ₂₅₅	18·75 ₉₆
17·9	16·013 ₂₁₃	44·91 ₂₇₂	3·369 ₂₁₄	33·76 ₁₀₅	57·155 ₂₉₂	17·79 ₈₂
27·9	16·226 ₂₄₄	42·19 ₂₄₆	3·583 ₂₃₇	34·81 ₉₈	57·447 ₃₂₄	16·97 ₆₈
Aug. 6·9	16·470 ₂₇₁	39·73 ₂₀₉	3·820 ₂₅₅	35·79 ₈₈	57·771 ₃₅₁	16·29 ₅₂
16·8	16·741 ₂₉₁	37·64 ₁₆₈	4·075 ₂₆₈	36·67 ₇₄	58·122 ₃₇₁	15·77 ₃₇
26·8	17·032 ₃₀₇	35·96 ₁₂₀	4·343 ₂₇₉	37·41 ₅₆	58·493 ₃₈₆	15·40 ₂₁
Sept. 5·8	17·339 ₃₁₇	34·76 ₆₅	4·622 ₂₈₄	37·97 ₃₅	58·879 ₃₉₅	15·19 ₆
15·8	17·656 ₃₂₂	34·11 ₁₀	4·906 ₂₈₇	38·32 ₁₃	59·274 ₃₉₉	15·13 ₁₀
25·7	17·978 ₃₁₆	34·01 ₄₈	5·193 ₂₈₅	38·45 ₉	59·673 ₃₉₈	15·23 ₂₅
Oct. 5·7	18·294 ₃₀₉	34·49 ₁₀₄	5·478 ₂₈₁	38·36 ₃₂	60·071 ₃₉₂	15·48 ₄₁
15·7	18·603 ₂₉₃	35·53 ₁₅₇	5·759 ₂₇₂	38·04 ₅₂	60·463 ₃₈₀	15·89 ₅₇
25·6	18·896 ₂₇₂	37·10 ₂₀₃	6·031 ₂₅₉	37·52 ₆₉	60·843 ₃₆₂	16·46 ₇₂
Nov. 4·6	19·168 ₂₄₃	39·13 ₂₄₃	6·290 ₂₄₁	36·83 ₈₃	61·205 ₃₃₆	17·18 ₈₉
14·6	19·411 ₂₀₈	41·56 ₂₇₄	6·531 ₂₁₆	36·00 ₉₃	61·541 ₃₀₃	18·07 ₁₀₄
24·6	19·619 ₁₆₇	44·30 ₂₉₄	6·747 ₁₈₈	35·07 ₉₇	61·844 ₂₆₂	19·11 ₁₁₉
Dec. 4·5	19·786 ₁₂₁	47·24 ₃₀₃	6·935 ₁₅₂	34·10 ₉₇	62·106 ₂₁₂	20·30 ₁₃₀
14·5	19·907 ₇₀	50·27 ₃₀₂	7·087 ₁₁₃	33·13 ₉₃	62·318 ₁₅₆	21·60 ₁₃₉
24·5	19·977 ₁₇	53·29 ₂₉₀	7·200 ₆₈	32·20 ₈₅	62·474 ₉₅	22·99 ₁₄₄
34·5	19·994	56·19	7·268	31·35	62·569	24·43
Mean Place	16·755	45·76	3·419	38·98	57·278	29·03
Sec δ , Tan δ	1·233	-0·721	1·008	+0·130	1·413	+0·998
L α , L δ	-0·02	0·0	0·00	0·0	+0·03	0·0
ω α , ω δ	0·00	+1·0	0·00	+1·0	0·00	+1·0
AUTHORITY	A. N.		A. E.		A. E.	

316 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Aurigæ. Mag. 2.7		ι Geminorum. Mag. 4.3		ν Orionis. Mag. 4.4	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 5 54	° ' " 12	h m 5 59	° ' " 15	h m 6 3	° ' " 46
Jan. 0.5	33.443	23.48	30.988	58.57	14.904	34.29
10.4	33.495	24.45	31.042	58.69	14.957	33.89
20.4	33.489	25.41	31.045	58.86	14.962	33.57
30.4	33.425	26.32	30.997	59.08	14.918	33.35
Feb. 9.4	33.309	27.14	30.903	59.31	14.831	33.20
19.3	33.149	27.82	30.768	59.52	14.705	33.11
29.3	32.952	28.33	30.602	59.70	14.548	33.08
Mar. 10.3	32.732	28.65	30.414	59.83	14.370	33.09
20.3	32.502	28.75	30.216	59.90	14.182	33.12
30.2	32.274	28.65	30.019	59.91	13.994	33.19
Apr. 9.2	32.062	28.34	29.835	59.85	13.818	33.28
19.2	31.877	27.87	29.673	59.76	13.663	33.40
29.1	31.727	27.24	29.543	59.63	13.536	33.57
May 9.1	31.622	26.51	29.451	59.49	13.445	33.80
19.1	31.566	25.71	29.401	59.36	13.393	34.09
29.1	31.562	24.88	29.396	59.27	13.384	34.44
June 8.0	31.610	24.05	29.436	59.23	13.417	34.87
18.0	31.709	23.25	29.521	59.24	13.493	35.37
28.0	31.857	22.52	29.647	59.31	13.608	35.93
July 8.0	32.048	21.87	29.812	59.44	13.760	36.54
17.9	32.279	21.32	30.010	59.62	13.944	37.18
27.9	32.543	20.86	30.239	59.84	14.157	37.81
Aug. 6.9	32.836	20.51	30.491	60.08	14.393	38.42
16.8	33.152	20.26	30.764	60.32	14.650	38.97
26.8	33.485	20.10	31.052	60.54	14.921	39.43
Sept. 5.8	33.831	20.03	31.352	60.72	15.204	39.78
15.8	34.185	20.05	31.660	60.85	15.495	40.00
25.7	34.542	20.14	31.971	60.92	15.791	40.07
Oct. 5.7	34.899	20.31	32.283	60.92	16.087	39.98
15.7	35.251	20.57	32.591	60.86	16.380	39.75
25.6	35.593	20.91	32.892	60.75	16.667	39.39
Nov. 4.6	35.919	21.34	33.180	60.62	16.942	38.93
14.6	36.223	21.88	33.451	60.47	17.200	38.38
24.6	36.498	22.52	33.696	60.34	17.435	37.78
Dec. 4.5	36.737	23.27	33.912	60.25	17.642	37.18
14.5	36.933	24.11	34.090	60.22	17.813	36.62
24.5	37.078	25.03	34.225	60.25	17.944	36.11
34.5	37.169	26.01	34.313	60.36	18.029	35.67
Mean Place	32.327	31.41	30.038	67.51	13.996	43.76
Sec δ , Tan δ	1.256	+0.759	1.089	+0.430	1.034	+0.264
L α , L δ	+0.02	0.0	+0.01	0.0	+0.01	0.0
ω α , ω δ	0.00	+1.0	0.00	+1.0	0.00	+1.0
AUTHORITY	A. E.				A. E.	

APPARENT PLACES OF STARS, 1924. 317

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Geminorum. Mag. 3.2-4.2		ζ Canis Majoris. Mag. 3.1		μ Geminorum. Mag. 3.2							
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.						
	^h 6	^m 10	[°] 22	['] 31	^h 6	^m 17	[°] 30	['] 1	^h 6	^m 18	[°] 22	['] 33
Jan.	0.5	18.399 ^s 64	39.42	6	24.911 ^s 25	55.34	277	22.739	73	5.04	5	
	10.5	18.463 13	39.48	13	24.936 28	58.11	256	22.812	21	5.09	12	
	20.4	18.476 38	39.61	19	24.908 78	60.67	228	22.833	30	5.21	19	
	30.4	18.438 85	39.80	21	24.830 125	62.95	196	22.803	79	5.40	23	
Feb.	9.4	18.353 127	40.01	23	24.705 165	64.91	157	22.724	121	5.63	24	
	19.3	18.226 160	40.24	20	24.540 197	66.48	118	22.603	155	5.87	23	
	29.3	18.066 183	40.44	16	24.343 221	67.66	77	22.448	181	6.10	20	
Mar.	10.3	17.883 196	40.60	12	24.122 233	68.43	34	22.267	194	6.30	15	
	20.3	17.687 196	40.72	6	23.889 234	68.77	9	22.073	196	6.45	9	
	30.2	17.491 185	40.78	1	23.655 226	68.68	51	21.877	187	6.54	4	
Apr.	9.2	17.306 165	40.79	3	23.429 207	68.17	92	21.690	167	6.58	0	
	19.2	17.141 136	40.76	7	23.222 181	67.25	129	21.523	140	6.58	5	
	29.2	17.005 99	40.69	8	23.041 148	65.96	165	21.383	104	6.53	6	
May	9.1	16.906 58	40.61	7	22.893 109	64.31	197	21.279	64	6.47	6	
	19.1	16.848 15	40.54	5	22.784 68	62.34	224	21.215	22	6.41	5	
	29.1	16.833 29	40.49	0	22.716 24	60.10	247	21.193	22	6.36	2	
June	8.0	16.862 73	40.49	3	22.692 21	57.63	264	21.215	66	6.34	1	
	18.0	16.935 115	40.52	8	22.713 64	54.99	274	21.281	107	6.35	6	
	28.0	17.050 153	40.60	13	22.777 106	52.25	276	21.388	146	6.41	10	
July	8.0	17.203 188	40.73	18	22.883 145	49.49	270	21.534	180	6.51	13	
	17.9	17.391 218	40.91	20	23.028 180	46.79	259	21.714	211	6.64	16	
	27.9	17.609 243	41.11	21	23.208 213	44.20	237	21.925	238	6.80	16	
Aug.	6.9	17.852 265	41.32	20	23.421 240	41.83	208	22.163	259	6.96	14	
	16.9	18.117 281	41.52	18	23.661 262	39.75	171	22.422	278	7.10	12	
	26.8	18.398 295	41.70	12	23.923 282	38.04	128	22.700	291	7.22	7	
Sept.	5.8	18.693 303	41.82	6	24.205 295	36.76	80	22.991	302	7.29	1	
	15.8	18.996 309	41.88	0	24.500 304	35.96	27	23.293	309	7.30	7	
	25.7	19.305 311	41.88	8	24.804 307	35.69	27	23.602	312	7.23	14	
Oct.	5.7	19.616 310	41.80	14	25.111 304	35.96	80	23.914	312	7.09	20	
	15.7	19.926 304	41.66	20	25.415 296	36.76	133	24.226	307	6.89	26	
	25.7	20.230 293	41.46	24	25.711 281	38.09	179	24.533	297	6.63	29	
Nov.	4.6	20.523 276	41.22	24	25.992 260	39.88	220	24.830	282	6.34	30	
	14.6	20.799 253	40.98	23	26.252 232	42.08	253	25.112	261	6.04	28	
	24.6	21.052 224	40.75	18	26.484 196	44.61	275	25.373	231	5.76	23	
Dec.	4.6	21.276 188	40.57	13	26.680 156	47.36	288	25.604	196	5.53	16	
	14.5	21.464 145	40.44	4	26.836 109	50.24	290	25.800	154	5.37	8	
	24.5	21.609 98	40.40	3	26.945 58	53.14	284	25.954	107	5.29	1	
	34.5	21.707	40.43		27.003	55.98		26.061		5.30		
Mean Place	17.457	48.63	23.643	44.75	21.801	14.40						
Sec δ , Tan δ	1.083	+0.415	1.155	-0.578	1.083	+0.415						
$L \alpha$, $L \delta$	+0.01	0.0	-0.02	0.0	+0.01	0.0						
$\omega \alpha$, $\omega \delta$	0.00	+1.0	0.00	+1.0	0.00	+1.0						
AUTHORITY	A. E.		A. E.		A. E.							

318 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Canis Majoris. Mag. 2.0		α Argus. Mag. -0.9		ν Geminorum. Mag. 4.1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 6 19	° ' 17 54	h m 6 22	° ' 52 39	h m 6 24	° ' 20 15
Jan.	0.5 22.216 ⁴²	71.72 ²²⁷	18.017 ²¹	23.81 ³⁴⁰	27.968 ⁷⁸	32.30 ¹⁰
	10.5 22.258 ⁶	73.99 ²⁰⁸	17.996 ⁹³	27.21 ³¹⁸	28.046 ²⁷	32.20 ¹
	20.4 22.252 ⁵⁴	76.07 ¹⁸⁴	17.903 ¹⁶¹	30.39 ²⁸⁷	28.073 ²⁵	32.19 ⁶
	30.4 22.198 ⁹⁸	77.91 ¹⁵⁶	17.742 ²²²	33.26 ²⁴⁸	28.048 ⁷³	32.25 ¹⁴
Feb.	9.4 22.100 ¹³⁷	79.47 ¹²⁵	17.520 ²⁷⁴	35.74 ²⁰⁴	27.975 ¹¹⁵	32.39 ¹⁷
	19.4 21.963 ¹⁶⁹	80.72 ⁹³	17.246 ³¹⁷	37.78 ¹⁵⁷	27.860 ¹⁵¹	32.56 ¹⁸
	29.3 21.794 ¹⁹⁰	81.65 ⁵⁹	16.929 ³⁴⁵	39.35 ¹⁰⁵	27.709 ¹⁷⁶	32.74 ¹⁷
Mar.	10.3 21.604 ²⁰³	82.24 ²⁵	16.584 ³⁶²	40.40 ⁵³	27.533 ¹⁹⁰	32.91 ¹⁵
	20.3 21.401 ²⁰⁴	82.49 ⁹	16.222 ³⁶⁶	40.93 ⁰	27.343 ¹⁹⁴	33.06 ¹³
	30.2 21.197 ¹⁹⁶	82.40 ⁴²	15.856 ³⁵⁶	40.93 ⁵¹	27.149 ¹⁸⁵	33.19 ⁹
Apr.	9.2 21.001 ¹⁸⁰	81.98 ⁷⁵	15.500 ³³⁵	40.42 ¹⁰²	26.964 ¹⁶⁷	33.28 ⁶
	19.2 20.821 ¹⁵⁴	81.23 ¹⁰⁴	15.165 ³⁰⁴	39.40 ¹⁴⁹	26.797 ¹⁴¹	33.34 ⁴
	29.2 20.667 ¹²³	80.19 ¹³³	14.861 ²⁶¹	37.91 ¹⁹⁴	26.656 ¹⁰⁷	33.38 ⁴
May	9.1 20.544 ⁸⁶	78.86 ¹⁶⁰	14.600 ²¹⁴	35.97 ²³³	26.549 ⁶⁸	33.42 ⁵
	19.1 20.458 ⁴⁷	77.26 ¹⁸²	14.386 ¹⁵⁹	33.64 ²⁶⁸	26.481 ²⁶	33.47 ⁷
	29.1 20.411 ⁷	75.44 ²⁰²	14.227 ¹⁰¹	30.96 ²⁹⁵	26.455 ¹⁷	33.54 ¹⁰
June	8.1 20.404 ³⁵	73.42 ²¹⁶	14.126 ⁴¹	28.01 ³¹⁶	26.472 ⁵⁸	33.64 ¹⁵
	18.0 20.439 ⁷⁴	71.26 ²²⁴	14.085 ²¹	24.85 ³²⁹	26.530 ¹⁰⁰	33.79 ¹⁸
	28.0 20.513 ¹¹²	69.02 ²²⁸	14.106 ⁸¹	21.56 ³³²	26.630 ¹³⁷	33.97 ²¹
July	8.0 20.625 ¹⁴⁷	66.74 ²²⁴	14.187 ¹³⁹	18.24 ³²⁷	26.767 ¹⁷²	34.18 ²⁴
	17.9 20.772 ¹⁷⁹	64.50 ²¹⁴	14.326 ¹⁹⁵	14.97 ³¹³	26.939 ²⁰³	34.42 ²⁶
	27.9 20.951 ²⁰⁶	62.36 ¹⁹⁷	14.521 ²⁴⁶	11.84 ²⁸⁸	27.142 ²²⁸	34.68 ²⁴
Aug.	6.9 21.157 ²²⁹	60.39 ¹⁷³	14.767 ²⁹⁰	8.96 ²⁵³	27.370 ²⁵⁰	34.92 ²²
	16.9 21.386 ²⁵⁰	58.66 ¹⁴²	15.057 ³³⁰	6.43 ²¹¹	27.620 ²⁷⁰	35.14 ¹⁶
	26.8 21.636 ²⁶⁵	57.24 ¹⁰⁶	15.387 ³⁶²	4.32 ¹⁶¹	27.890 ²⁸³	35.30 ⁹
Sept.	5.8 21.901 ²⁷⁸	56.18 ⁶⁵	15.749 ³⁸⁵	2.71 ¹⁰⁴	28.173 ²⁹⁵	35.39 ¹
	15.8 22.179 ²⁸⁵	55.53 ²¹	16.134 ⁴⁰⁰	1.67 ⁴²	28.468 ³⁰³	35.40 ¹⁰
	25.8 22.464 ²⁸⁸	55.32 ²⁴	16.534 ⁴⁰⁶	1.25 ²²	28.771 ³⁰⁷	35.30 ¹⁸
Oct.	5.7 22.752 ²⁸⁷	55.56 ⁷⁰	16.940 ⁴⁰²	1.47 ⁸⁶	29.078 ³⁰⁸	35.12 ²⁸
	15.7 23.039 ²⁸¹	56.26 ¹¹³	17.342 ³⁸⁷	2.33 ¹⁴⁸	29.386 ³⁰⁴	34.84 ³⁶
	25.7 23.320 ²⁷⁰	57.39 ¹⁵³	17.729 ³⁶²	3.81 ²⁰⁵	29.690 ²⁹⁶	34.48 ⁴⁰
Nov.	4.6 23.590 ²⁵²	58.92 ¹⁸⁵	18.091 ³²⁶	5.86 ²⁵⁵	29.986 ²⁸²	34.08 ⁴⁴
	14.6 23.842 ²²⁸	60.77 ²¹²	18.417 ²⁸⁰	8.41 ²⁹⁵	30.268 ²⁶¹	33.64 ⁴²
	24.6 24.070 ¹⁹⁸	62.89 ²³⁰	18.697 ²²⁶	11.36 ³²⁶	30.529 ²³³	33.22 ³⁹
Dec.	4.6 24.268 ¹⁶¹	65.19 ²³⁹	18.923 ¹⁶⁴	14.62 ³⁴⁵	30.762 ²⁰⁰	32.83 ³²
	14.5 24.429 ¹²⁰	67.58 ²⁴⁰	19.087 ⁹⁵	18.07 ³⁵¹	30.962 ¹⁵⁷	32.51 ²⁵
	24.5 24.549 ⁷⁴	69.98 ²³²	19.182 ²⁵	21.58 ³⁴⁶	31.119 ¹¹¹	32.26 ¹⁴
	34.5 24.623	72.30	19.207	25.04	31.230	32.12
Mean Place	21.146	61.39	15.889	13.55	27.045	41.83
Sec δ , Tan δ	1.051	-0.323	1.648	-1.310	1.066	+0.369
L α , L δ	-0.01	0.0	-0.03	0.0	+0.01	0.0
ω α , ω δ	0.00	+1.0	-0.01	+1.0	0.00	+1.0
AUTHORITY	A. E.		A. E.			

APPARENT PLACES OF STARS, 1924. 319

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Geminorum. Mag. 1.9		ν Argus. Mag. 3.2		ϵ Geminorum. Mag. 3.2	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h ^m 6 33	^o ['] 16 27	^h ^m 6 35	^o ['] 43 7	^h ^m 6 39	^o ['] 25 12
Jan. 0.5	20.236 ⁸⁴	45.84 ³⁷	27.931 ²³	52.54 ³²⁶	16.372 ⁹⁶	18.33 ¹⁷
10.5	20.320 ³⁴	45.47 ²⁵	27.954 ³⁹	55.80 ³⁰⁷	16.468 ⁴⁴	18.50 ²⁷
20.4	20.354 ¹⁶	45.22 ¹⁵	27.915 ⁹⁸	58.87 ²⁷⁹	16.512 ¹¹	18.77 ³⁵
30.4	20.338 ⁶⁵	45.07 ⁵	27.817 ¹⁵³	61.66 ²⁴⁴	16.501 ⁶²	19.12 ⁴⁰
Feb. 9.4	20.273 ¹⁰⁷	45.02 ²	27.664 ²⁰¹	64.10 ²⁰³	16.439 ¹⁰⁸	19.52 ⁴¹
19.4	20.166 ¹⁴²	45.04 ⁸	27.463 ²⁴⁰	66.13 ¹⁶⁰	16.331 ¹⁴⁷	19.93 ⁴⁰
29.3	20.024 ¹⁶⁹	45.12 ¹¹	27.223 ²⁶⁹	67.73 ¹¹²	16.184 ¹⁷⁵	20.33 ³⁵
Mar. 10.3	19.855 ¹⁸⁴	45.23 ¹³	26.954 ²⁸⁶	68.85 ⁶³	16.009 ¹⁹⁴	20.68 ²⁸
20.3	19.671 ¹⁸⁹	45.36 ¹⁵	26.668 ²⁹¹	69.48 ¹³	15.815 ¹⁹⁹	20.96 ²⁰
30.2	19.482 ¹⁸²	45.51 ¹⁵	26.377 ²⁸⁶	69.61 ³⁵	15.616 ¹⁹³	21.16 ¹²
Apr. 9.2	19.300 ¹⁶⁷	45.66 ¹⁶	26.091 ²⁶⁹	69.26 ⁸²	15.423 ¹⁷⁸	21.28 ⁴
19.2	19.133 ¹⁴¹	45.82 ¹⁷	25.822 ²⁴⁴	68.44 ¹²⁸	15.245 ¹⁵³	21.32 ⁴
29.2	18.992 ¹¹⁰	45.99 ¹⁹	25.578 ²⁰⁹	67.16 ¹⁷¹	15.092 ¹²⁰	21.28 ¹⁰
May 9.1	18.882 ⁷³	46.18 ²²	25.369 ¹⁷⁰	65.45 ²⁰⁸	14.972 ⁸¹	21.18 ¹⁴
19.1	18.809 ³⁴	46.40 ²⁶	25.199 ¹²⁴	63.37 ²⁴³	14.891 ⁴⁰	21.04 ¹⁶
29.1	18.775 ⁸	46.66 ³⁰	25.075 ⁷⁵	60.94 ²⁷⁰	14.851 ³	20.88 ¹⁷
June 8.1	18.783 ⁴⁹	46.96 ³⁵	25.000 ²⁶	58.24 ²⁹¹	14.854 ⁴⁷	20.71 ¹⁶
18.0	18.832 ⁸⁸	47.31 ³⁸	24.974 ²⁵	55.33 ³⁰⁶	14.901 ⁸⁸	20.55 ¹⁴
28.0	18.920 ¹²⁵	47.69 ⁴¹	24.999 ⁷⁴	52.27 ³¹²	14.989 ¹²⁸	20.41 ¹³
July 8.0	19.045 ¹⁶⁰	48.10 ⁴²	25.073 ¹²¹	49.15 ³⁰⁹	15.117 ¹⁶⁴	20.28 ¹⁰
17.9	19.205 ¹⁸⁹	48.52 ⁴¹	25.194 ¹⁶⁷	46.06 ²⁹⁷	15.281 ¹⁹⁶	20.18 ⁹
27.9	19.394 ²¹⁶	48.93 ³⁹	25.361 ²⁰⁹	43.09 ²⁷⁵	15.477 ²²⁵	20.09 ⁹
Aug. 6.9	19.610 ²³⁹	49.32 ³³	25.570 ²⁴⁵	40.34 ²⁴⁶	15.702 ²⁵⁰	20.00 ⁹
16.9	19.849 ²⁵⁸	49.65 ²⁵	25.815 ²⁷⁹	37.88 ²⁰⁶	15.952 ²⁷⁰	19.91 ¹²
26.8	20.107 ²⁷³	49.90 ¹⁵	26.094 ³⁰⁵	35.82 ¹⁶⁰	16.222 ²⁸⁷	19.79 ¹⁵
Sept. 5.8	20.380 ²⁸⁶	50.05 ²	26.399 ³²⁷	34.22 ¹⁰⁸	16.509 ³⁰²	19.64 ²⁰
15.8	20.666 ²⁹⁵	50.07 ¹¹	26.726 ³⁴¹	33.14 ⁴⁹	16.811 ³¹¹	19.44 ²⁴
25.8	20.961 ³⁰⁰	49.96 ²⁴	27.067 ³⁵⁰	32.65 ¹¹	17.122 ³¹⁸	19.20 ²⁹
Oct. 5.7	21.261 ³⁰²	49.72 ³⁸	27.417 ³⁵⁰	32.76 ⁷³	17.440 ³²²	18.91 ³³
15.7	21.563 ³⁰¹	49.34 ⁴⁹	27.767 ³⁴²	33.49 ¹³²	17.762 ³²⁰	18.58 ³⁶
25.7	21.864 ²⁹³	48.85 ⁵⁸	28.109 ³²⁶	34.81 ¹⁸⁷	18.082 ³¹⁴	18.22 ³⁶
Nov. 4.6	22.157 ²⁸⁰	48.27 ⁶⁴	28.435 ³⁰¹	36.68 ²³⁶	18.396 ³⁰¹	17.86 ³³
14.6	22.437 ²⁶¹	47.63 ⁶⁵	28.736 ²⁶⁸	39.04 ²⁷⁷	18.697 ²⁸²	17.53 ²⁸
24.6	22.698 ²³⁵	46.98 ⁶⁵	29.004 ²²⁶	41.81 ³⁰⁶	18.979 ²⁵⁵	17.25 ²⁰
Dec. 4.6	22.933 ²⁰²	46.33 ⁵⁹	29.230 ¹⁷⁷	44.87 ³²⁶	19.234 ²²⁰	17.05 ¹⁰
14.5	23.135 ¹⁶³	45.74 ⁵¹	29.407 ¹²¹	48.13 ³³⁵	19.454 ¹⁷⁹	16.95 ⁰
24.5	23.298 ¹¹⁷	45.23 ⁴¹	29.528 ⁶³	51.48 ³³¹	19.633 ¹³⁰	16.95 ¹²
34.5	23.415	44.82	29.591	54.79	19.763	17.07
Mean Place	19.332	55.52	26.240	43.25	15.438	28.04
Sec δ , Tan δ	1.043	+0.296	1.370	-0.937	1.105	+0.471
L α , L δ	+0.01	-0.1	-0.02	-0.1	+0.01	-0.1
ω α , ω δ	0.00	+1.0	-0.01	+1.0	+0.01	+1.0
AUTHORITY	A. E.		A. E.		A. E.	

320 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ξ Geminorum. Mag. 3·4		α Canis Majoris. Mag. —1·6		α Pictoris. Mag. 3·3	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 6 ^m 41	^o 12 ^{5'} 58	^h 6 ^m 41	^o 16 ^{36'}	^h 6 ^m 47	^o 61 ^{5'}
Jan. 0·5	2·369 ^s 89	34·11 ^s 61	48·884 ^s 60	50·16 ^s 231	27·81 ^s 1	42·80 ^s 360
10·5	2·458 40	33·50 48	48·944 12	52·47 213	27·80 11	46·40 343
20·4	2·498 11	33·02 35	48·956 37	54·60 190	27·69 19	49·83 318
30·4	2·487 58	32·67 23	48·919 83	56·50 164	27·50 27	53·01 283
Feb. 9·4	2·429 101	32·44 13	48·836 124	58·14 134	27·23 35	55·84 242
19·4	2·328 137	32·31 4	48·712 158	59·48 101	26·88 40	58·26 195
29·3	2·191 163	32·27 4	48·554 182	60·49 69	26·48 44	60·21 146
Mar. 10·3	2·028 180	32·31 9	48·372 197	61·18 36	26·04 48	61·67 93
20·3	1·848 186	32·40 14	48·175 202	61·54 4	25·56 48	62·60 39
30·2	1·662 181	32·54 19	47·973 197	61·58 29	25·08 48	62·99 15
Apr. 9·2	1·481 167	32·73 23	47·776 183	61·29 60	24·60 47	62·84 66
19·2	1·314 143	32·96 27	47·593 160	60·69 90	24·13 43	62·18 118
29·2	1·171 113	33·23 31	47·433 131	59·79 117	23·70 39	61·00 167
May 9·1	1·058 79	33·54 37	47·302 97	58·62 143	23·31 33	59·33 210
19·1	0·979 40	33·91 42	47·205 60	57·19 165	22·98 27	57·23 250
29·1	0·939 0	34·33 47	47·145 21	55·54 184	22·71 21	54·73 283
June 8·1	0·939 40	34·80 52	47·124 20	53·70 198	22·50 14	51·90 309
18·0	0·979 78	35·32 56	47·144 58	51·72 209	22·36 5	48·81 327
28·0	1·057 115	35·88 59	47·202 95	49·63 212	22·31 2	45·54 337
July 8·0	1·172 149	36·47 59	47·297 130	47·51 210	22·33 9	42·17 338
17·9	1·321 178	37·06 57	47·427 162	45·41 201	22·42 17	38·79 328
27·9	1·499 206	37·63 53	47·589 191	43·40 186	22·59 25	35·51 308
Aug. 6·9	1·705 228	38·16 44	47·780 215	41·54 163	22·84 31	32·43 278
16·9	1·933 248	38·60 34	47·995 237	39·91 135	23·15 36	29·65 240
26·8	2·181 265	38·94 22	48·232 255	38·56 101	23·51 42	27·25 192
Sept. 5·8	2·446 277	39·16 5	48·487 270	37·55 61	23·93 45	25·33 136
15·8	2·723 288	39·21 11	48·757 280	36·94 19	24·38 49	23·97 75
25·8	3·011 294	39·10 29	49·037 286	36·75 25	24·87 50	23·22 10
Oct. 5·7	3·305 298	38·81 45	49·323 288	37·00 70	25·37 51	23·12 55
15·7	3·603 296	38·36 61	49·611 286	37·70 113	25·88 49	23·67 120
25·7	3·899 292	37·75 72	49·897 277	38·83 151	26·37 47	24·87 183
Nov. 4·6	4·191 279	37·03 81	50·174 262	40·34 186	26·84 42	26·70 238
14·6	4·470 261	36·22 86	50·436 241	42·20 212	27·26 37	29·08 285
24·6	4·731 237	35·36 87	50·677 213	44·32 231	27·63 30	31·93 322
Dec. 4·6	4·968 204	34·49 83	50·890 179	46·63 241	27·93 22	35·15 347
14·5	5·172 166	33·66 76	51·069 137	49·04 243	28·15 14	38·62 362
24·5	5·338 121	32·90 66	51·206 93	51·47 236	28·29 4	42·24 363
34·5	5·459	32·24	51·299	53·83	28·33	45·87
Mean Place	1·474	43·82	47·937	39·19	24·80	35·04
Sec δ, Tan δ	1·026	+0·230	1·044	—0·298	2·120	—1·870
L α, L δ	+0·01	—0·1	—0·01	—0·1	—0·05	—0·1
ω α, ω δ	0·00	+1·0	0·00	+1·0	—0·03	+1·0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 321

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	τ Argûs. Mag. 2·8		θ Canis Majoris. Mag. 4·3		ϵ Canis Majoris. Mag. 1·6	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h^m 6 48	$^{\circ}$ 50 $31'$	h^m 6 50	$^{\circ}$ 11 $56'$	h^m 6 55	$^{\circ}$ 28 $51'$
Jan. 0·5	5·077 ²⁵	33·48 ³⁴⁷	40·582 ⁷⁹	41·05 ²⁰⁷	39·612 ⁶⁸	71·96 ²⁸⁷
10·5	5·102 ⁴⁶	36·95 ³³⁰	40·661 ³⁰	43·12 ¹⁹²	39·680 ¹⁵	74·83 ²⁷¹
20·5	5·056 ¹¹⁴	40·25 ³⁰⁴	40·691 ¹⁹	45·04 ¹⁷¹	39·695 ³⁸	77·54 ²⁴⁷
30·4	4·942 ¹⁷⁶	43·29 ²⁷⁰	40·672 ⁶⁵	46·75 ¹⁴⁶	39·657 ⁸⁹	80·01 ²¹⁸
Feb. 9·4	4·766 ²³²	45·99 ²³⁰	40·607 ¹⁰⁷	48·21 ¹²⁰	39·568 ¹³³	82·19 ¹⁸³
19·4	4·534 ²⁷⁷	48·29 ¹⁸⁴	40·500 ¹⁴²	49·41 ⁹¹	39·435 ¹⁷¹	84·02 ¹⁴⁶
29·3	4·257 ³¹¹	50·13 ¹³⁷	40·358 ¹⁷⁰	50·32 ⁶³	39·264 ²⁰⁰	85·48 ¹⁰⁷
Mar. 10·3	3·946 ³³³	51·50 ⁸⁶	40·188 ¹⁸⁶	50·95 ³⁴	39·064 ²¹⁸	86·55 ⁶⁶
20·3	3·613 ³⁴²	52·36 ³⁴	40·002 ¹⁹²	51·29 ⁵	38·846 ²²⁷	87·21 ²⁴
30·3	3·271 ³⁴⁰	52·70 ¹⁸	39·810 ¹⁹⁰	51·34 ²⁴	38·619 ²²⁵	87·45 ¹⁷
Apr. 9·2	2·931 ³²⁴	52·52 ⁶⁷	39·620 ¹⁷⁸	51·10 ⁵¹	38·394 ²¹³	87·28 ⁵⁷
19·2	2·607 ²⁹⁹	51·85 ¹¹⁶	39·442 ¹⁵⁷	50·59 ⁷⁷	38·181 ¹⁹³	86·71 ⁹⁶
29·2	2·308 ²⁶⁴	50·69 ¹⁶²	39·285 ¹³¹	49·82 ¹⁰²	37·988 ¹⁶⁶	85·75 ¹³²
May 9·2	2·044 ²²³	49·07 ²⁰⁴	39·154 ⁹⁸	48·80 ¹²⁵	37·822 ¹³³	84·43 ¹⁶⁶
19·1	1·821 ¹⁷⁴	47·03 ²⁴¹	39·056 ⁶³	47·55 ¹⁴⁶	37·689 ⁹⁵	82·77 ¹⁹⁶
29·1	1·647 ¹²²	44·62 ²⁷³	38·993 ²⁵	46·09 ¹⁶³	37·594 ⁵⁶	80·81 ²²¹
June 8·1	1·525 ⁶⁷	41·89 ²⁹⁸	38·968 ¹³	44·46 ¹⁷⁷	37·538 ¹⁵	78·60 ²⁴²
18·0	1·458 ¹⁰	38·91 ³¹⁵	38·981 ⁵¹	42·69 ¹⁸⁷	37·523 ²⁷	76·18 ²⁵⁵
28·0	1·448 ⁴⁷	35·76 ³²³	39·032 ⁸⁷	40·82 ¹⁹³	37·550 ⁶⁷	73·63 ²⁶³
July 8·0	1·495 ¹⁰²	32·53 ³²³	39·119 ¹²¹	38·89 ¹⁹⁰	37·617 ¹⁰⁶	71·00 ²⁶³
18·0	1·597 ¹⁵⁶	29·30 ³¹⁴	39·240 ¹⁵¹	36·99 ¹⁸³	37·723 ¹⁴²	68·37 ²⁵⁴
27·9	1·753 ²⁰⁶	26·16 ²⁹⁴	39·391 ¹⁸¹	35·16 ¹⁷²	37·865 ¹⁷⁶	65·83 ²³⁹
Aug. 6·9	1·959 ²⁵²	23·22 ²⁶⁵	39·572 ²⁰⁶	33·44 ¹⁵²	38·041 ²⁰⁷	63·44 ²¹⁵
16·9	2·211 ²⁹³	20·57 ²²⁶	39·778 ²²⁷	31·92 ¹²⁶	38·248 ²³⁵	61·29 ¹⁸²
26·8	2·504 ³²⁸	18·31 ¹⁸⁰	40·005 ²⁴⁷	30·66 ⁹⁷	38·483 ²⁵⁸	59·47 ¹⁴⁴
Sept. 5·8	2·832 ³⁵⁶	16·51 ¹²⁶	40·252 ²⁶²	29·69 ⁶⁰	38·741 ²⁷⁷	58·03 ⁹⁸
15·8	3·188 ³⁷⁸	15·25 ⁶⁷	40·514 ²⁷⁵	29·09 ²⁴	39·018 ²⁹²	57·05 ⁴⁹
25·8	3·566 ³⁸⁹	14·58 ⁴	40·789 ²⁸³	28·85 ¹⁹	39·310 ³⁰⁴	56·56 ⁵
Oct. 5·7	3·955 ³⁹³	14·54 ⁶⁰	41·072 ²⁸⁷	29·04 ⁵⁹	39·614 ³⁰⁸	56·61 ⁵⁸
15·7	4·348 ³⁸⁶	15·14 ¹²³	41·359 ²⁸⁷	29·63 ⁹⁸	39·922 ³⁰⁷	57·19 ¹¹⁰
25·7	4·734 ³⁶⁹	16·37 ¹⁸²	41·646 ²⁸²	30·61 ¹³⁵	40·229 ³⁰¹	58·29 ¹⁵⁹
Nov. 4·7	5·103 ³⁴²	18·19 ²³⁵	41·928 ²⁶⁹	31·96 ¹⁶⁵	40·530 ²⁸⁵	59·88 ²⁰³
14·6	5·445 ³⁰⁴	20·54 ²⁸⁰	42·197 ²⁵¹	33·61 ¹⁹⁰	40·815 ²⁶³	61·91 ²³⁹
24·6	5·749 ²⁵⁶	23·34 ³¹⁴	42·448 ²²⁶	35·51 ²⁰⁷	41·078 ²³³	64·30 ²⁶⁷
Dec. 4·6	6·005 ²⁰⁰	26·48 ³³⁸	42·674 ¹⁹³	37·58 ²¹⁶	41·311 ¹⁹⁶	66·97 ²⁸⁴
14·5	6·205 ¹³⁷	29·86 ³⁵⁰	42·867 ¹⁵⁵	39·74 ²¹⁹	41·507 ¹⁵¹	69·81 ²⁹³
24·5	6·342 ⁶⁸	33·36 ³⁵¹	43·022 ¹¹⁰	41·93 ²¹²	41·658 ¹⁰²	72·74 ²⁹⁰
34·5	6·410	36·87	43·132	44·05	41·760	75·64
Mean Place	3·001	25·42	39·563	31·96	38·319	63·73
Sec δ , Tan δ	1·573	-1·214	1·022	-0·212	1·142	-0·551
L α , L δ	-0·03	-0·1	-0·01	-0·1	-0·01	-0·1
ω α , ω δ	-0·02	+1·0	0·00	+1·0	-0·01	+1·0
AUTHORITY	A. N.		A. E.		A. E.	

322 APPARENT PLACES OF STARS, 1924

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	22 Canis Majoris. Mag. 3.7		ζ Geminorum. Mag. 3.7-4.3		σ ² Canis Majoris. Mag. 3.1			
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.		
	^h 6	^m 58	[°] 27	['] 49	^h 6	^m 59	[°] 23	['] 43
Jan.	0.5	42.754 ⁷³	38.12 ²⁸³	37.055 ¹¹⁴	49.09 ¹⁶	52.241 ⁷⁹	25.05 ²⁶⁷	
	10.5	42.827 ¹⁹	40.95 ²⁶⁸	37.169 ⁶³	48.93 ⁴	52.320 ²⁶	27.72 ²⁵⁰	
	20.5	42.846 ³³	43.63 ²⁴⁵	37.232 ⁹	48.89 ⁹	52.346 ²⁵	30.22 ²²⁸	
	30.4	42.813 ⁸³	46.08 ²¹⁵	37.241 ⁴²	48.98 ¹⁸	52.321 ⁷⁴	32.50 ²⁰¹	
Feb.	9.4	42.730 ¹²⁹	48.23 ¹⁸²	37.199 ⁸⁹	49.16 ²⁴	52.247 ¹¹⁹	34.51 ¹⁶⁹	
	19.4	42.601 ¹⁶⁶	50.05 ¹⁴⁶	37.110 ¹²⁹	49.40 ²⁹	52.128 ¹⁵⁶	36.20 ¹³⁴	
	29.4	42.435 ¹⁹⁶	51.51 ¹⁰⁶	36.981 ¹⁶⁰	49.69 ³¹	51.972 ¹⁸⁴	37.54 ⁹⁸	
Mar.	10.3	42.239 ²¹⁵	52.57 ⁶⁷	36.821 ¹⁸⁰	50.00 ²⁹	51.788 ²⁰³	38.52 ⁶⁰	
	20.3	42.024 ²²³	53.24 ²⁵	36.641 ¹⁹⁰	50.29 ²⁶	51.585 ²¹³	39.12 ²²	
	30.3	41.801 ²²²	53.49 ¹⁴	36.451 ¹⁸⁸	50.55 ²³	51.372 ²¹¹	39.34 ¹⁵	
Apr.	9.2	41.579 ²¹⁰	53.35 ⁵⁴	36.263 ¹⁷⁶	50.78 ¹⁸	51.161 ²⁰⁰	39.19 ⁵²	
	19.2	41.369 ¹⁹²	52.81 ⁹²	36.087 ¹⁵⁵	50.96 ¹⁵	50.961 ¹⁸⁰	38.67 ⁸⁷	
	29.2	41.177 ¹⁶⁴	51.89 ¹²⁸	35.932 ¹²⁶	51.11 ¹¹	50.781 ¹⁵⁵	37.80 ¹²⁰	
May	9.2	41.013 ¹³¹	50.61 ¹⁶¹	35.806 ⁹³	51.22 ⁸	50.626 ¹²³	36.60 ¹⁵²	
	19.1	40.882 ⁹⁵	49.00 ¹⁹¹	35.713 ⁵⁴	51.30 ⁸	50.503 ⁸⁷	35.08 ¹⁷⁹	
	29.1	40.787 ⁵⁷	47.09 ²¹⁶	35.659 ¹⁴	51.38 ⁷	50.416 ⁴⁹	33.29 ²⁰³	
June	8.1	40.730 ¹⁵	44.93 ²³⁷	35.645 ²⁶	51.45 ⁸	50.367 ¹⁰	31.26 ²²¹	
	18.0	40.715 ²⁵	42.56 ²⁵⁰	35.671 ⁶⁶	51.53 ⁸	50.357 ³⁰	29.05 ²³⁵	
	28.0	40.740 ⁶⁵	40.06 ²⁵⁹	35.737 ¹⁰⁴	51.61 ⁸	50.387 ⁶⁸	26.70 ²⁴²	
July	8.0	40.805 ¹⁰³	37.47 ²⁵⁸	35.841 ¹³⁹	51.69 ⁹	50.455 ¹⁰⁵	24.28 ²⁴²	
	18.0	40.908 ¹⁴⁰	34.89 ²⁵¹	35.980 ¹⁷¹	51.78 ⁷	50.560 ¹³⁹	21.86 ²³⁵	
	27.9	41.048 ¹⁷³	32.38 ²³⁶	36.151 ¹⁹⁹	51.85 ⁵	50.699 ¹⁷²	19.51 ²²⁰	
Aug.	6.9	41.221 ²⁰³	30.02 ²¹²	36.350 ²²⁶	51.90 ⁰	50.871 ²⁰⁰	17.31 ¹⁹⁸	
	16.9	41.424 ²³¹	27.90 ¹⁸⁰	36.576 ²⁴⁷	51.90 ⁷	51.071 ²²⁶	15.33 ¹⁶⁸	
	26.9	41.655 ²⁵⁴	26.10 ¹⁴²	36.823 ²⁶⁷	51.83 ¹³	51.297 ²⁴⁸	13.65 ¹³²	
Sept.	5.8	41.909 ²⁷⁴	24.68 ⁹⁸	37.090 ²⁸²	51.70 ²⁴	51.545 ²⁶⁸	12.33 ⁸⁹	
	15.8	42.183 ²⁸⁹	23.70 ⁴⁹	37.372 ²⁹⁶	51.46 ³²	51.813 ²⁸²	11.44 ⁴³	
	25.8	42.472 ³⁰¹	23.21 ⁴	37.668 ³⁰⁶	51.14 ⁴³	52.095 ²⁹⁴	11.01 ⁷	
Oct.	5.8	42.773 ³⁰⁷	23.25 ⁵⁶	37.974 ³¹²	50.71 ⁵¹	52.389 ²⁹⁹	11.08 ⁵⁶	
	15.7	43.080 ³⁰⁶	23.81 ¹⁰⁹	38.286 ³¹⁴	50.20 ⁵⁸	52.688 ³⁰⁰	11.64 ¹⁰⁶	
	25.7	43.386 ²⁹⁹	24.90 ¹⁵⁷	38.600 ³¹²	49.62 ⁶²	52.988 ²⁹⁴	12.70 ¹⁵¹	
Nov.	4.7	43.685 ²⁸⁶	26.47 ²⁰⁰	38.912 ³⁰²	49.00 ⁶⁵	53.282 ²⁸²	14.21 ¹⁹²	
	14.6	43.971 ²⁶⁵	28.47 ²³⁵	39.214 ²⁸⁷	48.35 ⁶²	53.564 ²⁶²	16.13 ²²⁵	
	24.6	44.236 ²³⁶	30.82 ²⁶⁴	39.501 ²⁶³	47.73 ⁵⁶	53.826 ²³⁴	18.38 ²⁵⁰	
Dec.	4.6	44.472 ¹⁹⁸	33.46 ²⁸⁰	39.764 ²³²	47.17 ⁴⁷	54.060 ¹⁹⁹	20.88 ²⁶⁶	
	14.6	44.670 ¹⁵⁵	36.26 ²⁸⁹	39.996 ¹⁹²	46.70 ³⁶	54.259 ¹⁵⁸	23.54 ²⁷³	
	24.5	44.825 ¹⁰⁷	39.15 ²⁸⁷	40.188 ¹⁴⁸	46.34 ²⁴	54.417 ¹¹¹	26.27 ²⁷⁰	
	34.5	44.932	42.02	40.336	46.10	54.528	28.97	
Mean Place	41.481	30.03	36.170	59.04	51.051	16.84		
Sec δ, Tan δ	1.131	-0.528	1.069	+0.378	1.092	-0.439		
L α, L δ	-0.01	-0.1	+0.01	-0.1	-0.01	-0.1		
ω α, ω δ	-0.01	+1.0	+0.01	+1.0	-0.01	+1.0		
AUTHORITY					A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 323

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Canis Majoris. Mag. 4.1		δ Canis Majoris. Mag. 2.0		51 Geminorum. Mag. 5.3	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 7 0	° 31'	h m 7 5	26 16'	h m 7 9	16 17'
Jan. 0.5	20.285 ⁸⁶	20.31 ²²⁹	19.240 ⁸²	25.45 ²⁸⁰	1.415 ¹²¹	11.35 ⁴⁷
10.5	20.371 ³⁶	22.60 ²¹³	19.322 ²⁹	28.25 ²⁶⁴	1.536 ⁷⁰	10.88 ³²
20.5	20.407 ¹³	24.73 ¹⁹¹	19.351 ²⁴	30.89 ²⁴²	1.606 ¹⁷	10.56 ¹⁹
30.4	20.394 ⁶¹	26.64 ¹⁶⁷	19.327 ⁷⁵	33.31 ²¹⁴	1.623 ³⁴	10.37 ⁶
Feb. 9.4	20.333 ¹⁰⁵	28.31 ¹³⁸	19.252 ¹¹⁹	35.45 ¹⁸¹	1.589 ⁸⁰	10.31 ⁵
19.4	20.228 ¹⁴¹	29.69 ¹⁰⁸	19.133 ¹⁵⁸	37.26 ¹⁴⁶	1.509 ¹²⁰	10.36 ¹⁴
29.4	20.087 ¹⁶⁹	30.77 ⁷⁷	18.975 ¹⁸⁷	38.72 ¹⁰⁸	1.389 ¹⁵¹	10.50 ¹⁹
Mar. 10.3	19.918 ¹⁸⁷	31.54 ⁴⁵	18.788 ²⁰⁸	39.80 ⁶⁹	1.238 ¹⁷³	10.69 ²²
20.3	19.731 ¹⁹⁶	31.99 ¹³	18.580 ²¹⁷	40.49 ²⁹	1.065 ¹⁸⁴	10.91 ²⁵
30.3	19.535 ¹⁹⁵	32.12 ¹⁸	18.363 ²¹⁷	40.78 ¹⁰	0.881 ¹⁸³	11.16 ²⁶
Apr. 9.3	19.340 ¹⁸⁴	31.94 ⁴⁸	18.146 ²⁰⁷	40.68 ⁴⁸	0.698 ¹⁷³	11.42 ²⁵
19.2	19.156 ¹⁶⁵	31.46 ⁷⁷	17.939 ¹⁸⁸	40.20 ⁸⁶	0.525 ¹⁵⁵	11.67 ²⁵
29.2	18.991 ¹³⁹	30.69 ¹⁰⁶	17.751 ¹⁶⁴	39.34 ¹²¹	0.370 ¹²⁷	11.92 ²⁵
May 9.2	18.852 ¹⁰⁹	29.63 ¹³⁰	17.587 ¹³¹	38.13 ¹⁵³	0.243 ⁹⁵	12.17 ²⁶
19.1	18.743 ⁷⁴	28.33 ¹⁵⁴	17.456 ⁹⁷	36.60 ¹⁸³	0.148 ⁶⁰	12.43 ²⁸
29.1	18.669 ³⁶	26.79 ¹⁷³	17.359 ⁵⁸	34.77 ²⁰⁷	0.088 ²²	12.71 ²⁹
June 8.1	18.633 ¹	25.06 ¹⁸⁹	17.301 ¹⁹	32.70 ²²⁸	0.066 ¹⁷	13.00 ³¹
18.1	18.634 ³⁸	23.17 ²⁰⁰	17.282 ²¹	30.42 ²⁴²	0.083 ⁵⁵	13.31 ³¹
28.0	18.672 ⁷⁵	21.17 ²⁰⁶	17.303 ⁶⁰	28.00 ²⁵⁰	0.138 ⁹²	13.62 ³³
July 8.0	18.747 ¹¹⁰	19.11 ²⁰⁶	17.363 ⁹⁷	25.50 ²⁵¹	0.230 ¹²⁵	13.95 ³¹
18.0	18.857 ¹⁴²	17.05 ¹⁹⁹	17.460 ¹³⁴	22.99 ²⁴⁵	0.355 ¹⁵⁸	14.26 ²⁹
28.0	18.999 ¹⁷²	15.06 ¹⁸⁶	17.594 ¹⁶⁶	20.54 ²²⁹	0.513 ¹⁸⁵	14.55 ²⁴
Aug. 6.9	19.171 ¹⁹⁸	13.20 ¹⁶⁶	17.760 ¹⁹⁶	18.25 ²⁰⁸	0.698 ²¹¹	14.79 ¹⁷
16.9	19.369 ²²³	11.54 ¹⁴¹	17.956 ²²⁴	16.17 ¹⁷⁷	0.909 ²³⁴	14.96 ⁷
26.9	19.592 ²⁴²	10.13 ¹⁰⁸	18.180 ²⁴⁸	14.40 ¹⁴¹	1.143 ²⁵³	15.03 ³
Sept. 5.8	19.834 ²⁶⁰	9.05 ⁷⁰	18.428 ²⁶⁹	12.99 ⁹⁷	1.396 ²⁷⁰	15.00 ¹⁶
15.8	20.094 ²⁷⁵	8.35 ³⁰	18.607 ²⁸⁵	12.02 ⁵⁰	1.666 ²⁸⁵	14.84 ³¹
25.8	20.369 ²⁸⁴	8.05 ¹⁴	18.982 ²⁹⁷	11.52 ²	1.951 ²⁹⁶	14.53 ⁴⁵
Oct. 5.8	20.653 ²⁹⁰	8.19 ⁵⁷	19.279 ³⁰⁴	11.54 ⁵³	2.247 ³⁰⁴	14.08 ⁵⁹
15.7	20.943 ²⁹²	8.76 ¹⁰⁰	19.583 ³⁰⁵	12.07 ¹⁰⁴	2.551 ³⁰⁷	13.49 ⁷⁰
25.7	21.235 ²⁸⁷	9.76 ¹³⁹	19.888 ³⁰⁰	13.11 ¹⁵²	2.858 ³⁰⁷	12.79 ⁷⁹
Nov. 4.7	21.522 ²⁷⁶	11.15 ¹⁷⁴	20.188 ²⁸⁷	14.63 ¹⁹⁴	3.165 ²⁹⁹	12.00 ⁸⁵
14.7	21.798 ²⁵⁹	12.89 ²⁰¹	20.475 ²⁶⁸	16.57 ²³⁰	3.464 ²⁸⁵	11.15 ⁸⁶
24.6	22.057 ²³³	14.90 ²²²	20.743 ²⁴⁰	18.87 ²⁵⁸	3.749 ²⁶³	10.29 ⁸³
Dec. 4.6	22.290 ²⁰¹	17.12 ²³³	20.983 ²⁰⁵	21.45 ²⁷⁵	4.012 ²³⁴	9.46 ⁷⁷
14.6	22.491 ¹⁶²	19.45 ²³⁷	21.188 ¹⁶²	24.20 ²⁸³	4.246 ¹⁹⁷	8.69 ⁶⁷
24.5	22.653 ¹¹⁶	21.82 ²³⁴	21.350 ¹¹⁵	27.03 ²⁸³	4.443 ¹⁵³	8.02 ⁵³
34.5	22.769	24.16	21.465	29.86	4.596	7.49
Mean Place	19.223	11.76	17.998	17.71	0.552	21.19
Sec δ , Tan δ	1.038	-0.278	1.115	-0.494	1.042	+0.292
L α , L δ	-0.01	-0.1	-0.01	-0.1	+0.01	-0.1
ω α , ω δ	0.00	+1.0	-0.01	+1.0	+0.01	+1.0
AUTHORITY	A. E.		A. E.			

324 APPARENT PLACES OF STARS, 1924.

· AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	π Argüs. Mag. 2.7		δ Geminorum. Mag. 3.5		δ Volantis. Mag. 4.0	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m 7 14 s	36° 57'	h m 7 15 s	22° 7'	h m 7 16 s	67° 48'
Jan. 0.5	29.034 81	44.21 321	36.048 133	14.78 12	56.85 2	70.08 371
10.5	29.115 24	47.42 308	36.181 79	14.66 2	56.87 8	73.79 363
20.5	29.139 35	50.50 286	36.260 26	14.68 16	56.79 20	77.42 343
30.4	29.104 90	53.36 258	36.286 28	14.84 26	56.59 30	80.85 315
Feb. 9.4	29.014 139	55.94 222	36.258 76	15.10 35	56.29 40	84.00 280
19.4	28.875 183	58.16 184	36.182 118	15.45 39	55.89 47	86.80 238
29.4	28.692 215	60.00 141	36.064 153	15.84 40	55.42 53	89.18 190
Mar. 10.3	28.477 239	61.41 97	35.911 175	16.24 38	54.89 58	91.08 141
20.3	28.238 251	62.38 51	35.736 188	16.62 35	54.31 60	92.49 88
30.3	27.987 253	62.89 6	35.548 189	16.97 29	53.71 60	93.37 35
Apr. 9.3	27.734 244	62.95 39	35.359 180	17.26 24	53.11 61	93.72 20
19.2	27.490 227	62.56 83	35.179 161	17.50 17	52.50 57	93.52 72
29.2	27.263 202	61.73 125	35.018 136	17.67 11	51.93 54	92.80 123
May 9.2	27.061 170	60.48 164	34.882 103	17.78 7	51.39 48	91.57 171
19.1	26.891 133	58.84 199	34.779 66	17.85 3	50.91 42	89.86 215
29.1	26.758 93	56.85 228	34.713 28	17.88 1	50.49 34	87.71 253
June 8.1	26.665 50	54.57 253	34.685 12	17.89 1	50.15 25	85.18 286
18.1	26.615 7	52.04 273	34.697 52	17.88 3	49.90 17	82.32 310
28.0	26.608 36	49.31 283	34.749 89	17.85 3	49.73 7	79.22 328
July 8.0	26.644 80	46.48 287	34.838 125	17.82 5	49.66 2	75.94 334
18.0	26.724 121	43.61 281	34.963 157	17.77 8	49.68 12	72.60 333
28.0	26.845 159	40.80 267	35.120 188	17.69 11	49.80 21	69.27 320
Aug. 6.9	27.004 197	38.13 243	35.308 214	17.58 15	50.01 30	66.07 298
16.9	27.201 229	35.70 213	35.522 238	17.43 22	50.31 38	63.09 264
26.9	27.430 259	33.57 172	35.760 259	17.21 29	50.69 46	60.45 222
Sept. 5.8	27.689 285	31.85 125	36.019 278	16.92 37	51.15 52	58.23 171
15.8	27.974 305	30.60 73	36.297 293	16.55 46	51.67 57	56.52 113
25.8	28.279 321	29.87 17	36.590 305	16.09 55	52.24 61	55.39 50
Oct. 5.8	28.600 330	29.70 42	36.895 315	15.54 62	52.85 61	54.89 16
15.7	28.930 332	30.12 100	37.210 319	14.92 68	53.46 62	55.05 83
25.7	29.262 327	31.12 155	37.529 320	14.24 70	54.08 59	55.88 147
Nov. 4.7	29.589 313	32.67 205	37.849 313	13.54 71	54.67 55	57.35 207
14.7	29.902 289	34.72 248	38.162 299	12.83 66	55.22 49	59.42 261
24.6	30.191 259	37.20 281	38.461 278	12.17 58	55.71 41	62.03 304
Dec. 4.6	30.450 218	40.01 306	38.739 248	11.59 48	56.12 32	65.07 337
14.6	30.668 172	43.07 320	38.987 211	11.11 35	56.44 21	68.44 360
24.5	30.840 119	46.27 322	39.198 165	10.76 20	56.65 10	72.04 369
34.5	30.959	49.49	39.363	10.56	56.75	75.73
Mean Place	27.513	37.73	35.188	24.93	52.81	65.57
Sec δ , Tan δ	1.251	-0.752	1.079	+0.407	2.649	-2.452
L α , L δ	-0.02	-0.1	+0.01	-0.1	-0.06	-0.1
ω α , ω δ	-0.02	+0.9	+0.01	+0.9	-0.05	+0.9
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 325

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date,	η Canis Majoris. Mag. 2.4		β Canis Minoris. Mag. 3.1		σ Argus. Mag. 3.3	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m 7 21	° ' 29 9	h m 7 23	° ' 8 26	h m 7 26	° ' 43 8
Jan. 0.5	6.627 ^s ₉₆	20.46 ^s ₂₉₃	2.689 ^s ₁₂₇	27.68 ^s ₁₀₀	50.868 ^s ₉₁	53.71 ^s ₃₄₁
10.5	6.723 ₄₃	23.39 ₂₈₂	2.816 ₇₈	26.68 ₈₅	50.959 ₂₈	57.12 ₃₃₀
20.5	6.766 ₁₂	26.21 ₂₆₁	2.894 ₂₇	25.83 ₆₈	50.987 ₃₄	60.42 ₃₁₂
30.4	6.754 ₆₄	28.82 ₂₃₃	2.921 ₂₂	25.15 ₅₁	50.953 ₉₆	63.54 ₂₈₂
Feb. 9.4	6.690 ₁₁₂	31.15 ₂₀₂	2.899 ₆₉	24.64 ₃₄	50.857 ₁₅₀	66.36 ₂₅₀
19.4	6.578 ₁₅₃	33.17 ₁₆₆	2.830 ₁₀₉	24.30 ₂₀	50.707 ₁₉₇	68.86 ₂₁₀
29.4	6.425 ₁₈₅	34.83 ₁₂₇	2.721 ₁₄₀	24.10 ₆	50.510 ₂₃₄	70.96 ₁₆₆
Mar. 10.3	6.240 ₂₀₈	36.10 ₈₈	2.581 ₁₆₄	24.04 ₆	50.276 ₂₆₂	72.62 ₁₂₁
20.3	6.032 ₂₂₁	36.98 ₄₆	2.417 ₁₇₅	24.10 ₁₅	50.014 ₂₇₇	73.83 ₇₄
30.3	5.811 ₂₂₄	37.44 ₆	2.242 ₁₇₈	24.25 ₂₅	49.737 ₂₈₂	74.57 ₂₄
Apr. 9.2	5.587 ₂₁₆	37.50 ₃₅	2.064 ₁₇₀	24.50 ₃₃	49.455 ₂₇₆	74.81 ₂₃
19.2	5.371 ₂₀₀	37.15 ₇₄	1.894 ₁₅₅	24.83 ₄₀	49.179 ₂₆₀	74.58 ₇₀
29.2	5.171 ₁₇₇	36.41 ₁₁₂	1.739 ₁₃₁	25.23 ₄₇	48.919 ₂₃₆	73.88 ₁₁₆
May 9.2	4.994 ₁₄₇	35.29 ₁₄₆	1.608 ₁₀₂	25.70 ₅₃	48.683 ₂₀₅	72.72 ₁₅₈
19.1	4.847 ₁₁₄	33.83 ₁₇₈	1.506 ₆₉	26.23 ₆₀	48.478 ₁₆₇	71.14 ₁₉₇
29.1	4.733 ₇₇	32.05 ₂₀₆	1.437 ₃₄	26.83 ₆₅	48.311 ₁₂₇	69.17 ₂₃₁
June 8.1	4.656 ₃₈	29.99 ₂₂₈	1.403 ₂	27.48 ₆₉	48.184 ₈₂	66.86 ₂₆₀
18.1	4.618 ₁	27.71 ₂₄₅	1.405 ₃₈	28.17 ₇₃	48.102 ₃₆	64.26 ₂₈₀
28.0	4.619 ₄₁	25.26 ₂₅₆	1.443 ₇₂	28.90 ₇₄	48.066 ₁₁	61.46 ₂₉₆
July 8.0	4.660 ₇₉	22.70 ₂₅₉	1.515 ₁₀₆	29.64 ₇₃	48.077 ₅₈	58.50 ₃₀₁
18.0	4.739 ₁₁₇	20.11 ₂₅₄	1.621 ₁₃₇	30.37 ₆₉	48.135 ₁₀₄	55.49 ₂₉₉
28.0	4.856 ₁₅₁	17.57 ₂₄₁	1.758 ₁₆₅	31.06 ₆₁	48.239 ₁₄₈	52.50 ₂₈₇
Aug. 6.9	5.007 ₁₈₃	15.16 ₂₂₀	1.923 ₁₉₁	31.67 ₅₁	48.387 ₁₉₀	49.63 ₂₆₄
16.9	5.190 ₂₁₄	12.96 ₁₉₁	2.114 ₂₁₅	32.18 ₃₇	48.577 ₂₂₉	46.99 ₂₃₄
26.9	5.404 ₂₄₀	11.05 ₁₅₅	2.329 ₂₃₅	32.55 ₂₁	48.806 ₂₆₄	44.65 ₁₉₄
Sept. 5.8	5.644 ₂₆₄	9.50 ₁₁₁	2.564 ₂₅₄	32.76 ₁	49.070 ₂₉₄	42.71 ₁₄₇
15.8	5.908 ₂₈₁	8.39 ₆₃	2.818 ₂₆₉	32.77 ₂₀	49.364 ₃₂₁	41.24 ₉₃
25.8	6.189 ₃₀₂	7.76 ₁₁	3.087 ₂₈₃	32.57 ₄₂	49.685 ₃₄₁	40.31 ₃₅
Oct. 5.8	6.491 ₃₀₉	7.65 ₄₃	3.370 ₂₉₃	32.15 ₆₄	50.026 ₃₅₃	39.96 ₂₆
15.7	6.800 ₃₁₃	8.08 ₉₆	3.663 ₂₉₈	31.51 ₈₄	50.379 ₃₅₈	40.22 ₈₈
25.7	7.113 ₃₁₁	9.04 ₁₄₇	3.961 ₂₉₉	30.67 ₁₀₂	50.737 ₃₅₃	41.10 ₁₄₇
Nov. 4.7	7.424 ₃₀₀	10.51 ₁₉₂	4.260 ₂₉₅	29.65 ₁₁₅	51.090 ₃₄₀	42.57 ₂₀₁
14.7	7.724 ₂₈₂	12.43 ₂₃₂	4.555 ₂₈₂	28.50 ₁₂₃	51.430 ₃₁₆	44.58 ₂₄₈
24.6	8.006 ₂₅₆	14.75 ₂₆₂	4.837 ₂₆₂	27.27 ₁₂₆	51.746 ₂₈₂	47.06 ₂₈₇
Dec. 4.6	8.262 ₂₂₀	17.37 ₂₈₃	5.099 ₂₃₆	26.01 ₁₂₅	52.028 ₂₄₀	49.93 ₃₁₅
14.6	8.482 ₁₇₉	20.20 ₂₉₄	5.335 ₂₀₀	24.76 ₁₁₈	52.268 ₁₈₇	53.08 ₃₃₄
24.5	8.661 ₁₃₁	23.14 ₂₉₇	5.535 ₁₅₈	23.58 ₁₀₇	52.455 ₁₃₁	56.42 ₃₄₁
34.5	8.792	26.11	5.693	22.51	52.586	59.83
Mean Place	5.321	13.89	1.836	36.98	49.113	48.65
Sec δ , Tan δ	1.145	-0.558	1.011	+0.148	1.371	-0.937
L α , L δ	-0.01	-0.1	0.00	-0.1	-0.02	-0.1
$\omega \alpha$, $\omega \delta$	-0.01	+0.9	0.00	+0.9	-0.02	+0.9
AUTHORITY	A. N.		A. E.			

326 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Geminorum. Mag. 2.0		β Carinæ. Mag. 4.9		α Canis Minoris. Mag. 0.5	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 7 29	° ′ 32 3	h m 7 33	° ′ 52 21	h m 7 35	° ′ 5 24
Jan. 0.5	46.103 ¹⁵⁸	14.16 ⁴⁵	48.854 ⁹³	54.32 ³⁶²	20.309 ¹³²	66.31 ¹²⁵
10.5	46.261 ¹⁰²	14.61 ⁶¹	48.947 ¹⁹	57.94 ³⁵⁴	20.441 ⁸³	65.06 ¹⁰⁸
20.5	46.363 ⁴³	15.22 ⁷⁴	48.966 ⁵⁴	61.48 ³³⁷	20.524 ³³	63.98 ⁹⁰
30.5	46.406 ¹⁵	15.96 ⁸³	48.912 ¹²⁵	64.85 ³¹¹	20.557 ¹⁷	63.08 ⁷¹
Feb. 9.4	46.391 ⁷⁰	16.79 ⁸⁷	48.787 ¹⁸⁹	67.96 ²⁷⁷	20.540 ⁶³	62.37 ⁵³
19.4	46.321 ¹¹⁹	17.66 ⁸⁵	48.598 ²⁴³	70.73 ²³⁷	20.477 ¹⁰⁴	61.84 ³⁴
29.4	46.202 ¹⁵⁷	18.51 ⁸⁰	48.355 ²⁸⁷	73.10 ¹⁹⁴	20.373 ¹³⁷	61.50 ¹⁸
Mar. 10.3	46.045 ¹⁸⁶	19.31 ⁶⁹	48.068 ³²¹	75.04 ¹⁴⁵	20.236 ¹⁵⁹	61.32 ⁴
20.3	45.859 ²⁰¹	20.00 ⁵⁷	47.747 ³⁴⁰	76.49 ⁹⁶	20.077 ¹⁷⁴	61.28 ¹⁰
30.3	45.658 ²⁰⁸	20.57 ⁴¹	47.407 ³⁴⁸	77.45 ⁴⁴	19.903 ¹⁷¹	61.38 ²²
Apr. 9.3	45.450 ¹⁹⁹	20.98 ²⁴	47.059 ³⁴⁴	77.89 ⁸	19.726 ¹⁷⁷	61.60 ³³
19.2	45.251 ¹⁸²	21.22 ⁸	46.715 ³²⁹	77.81 ⁵⁷	19.555 ¹⁵⁷	61.93 ⁴²
29.2	45.069 ¹⁵⁸	21.30 ⁸	46.386 ³⁰³	77.24 ¹⁰⁸	19.398 ¹³⁴	62.35 ⁵¹
May 9.2	44.911 ¹²³	21.22 ²³	46.083 ²⁷¹	76.16 ¹⁵³	19.264 ¹⁰⁷	62.86 ⁶⁰
19.2	44.788 ⁸⁶	20.99 ³⁴	45.812 ²²⁹	74.63 ¹⁹⁶	19.157 ⁷⁶	63.46 ⁶⁸
29.1	44.702 ⁴⁵	20.65 ⁴⁵	45.583 ¹⁸³	72.67 ²³⁴	19.081 ⁴²	64.14 ⁷⁵
June 8.1	44.657 ³	20.20 ⁵⁴	45.400 ¹³²	70.33 ²⁶⁶	19.039 ⁷	64.89 ⁸⁰
18.1	44.654 ⁴⁰	19.66 ⁶⁰	45.268 ⁷⁹	67.67 ²⁹²	19.032 ²⁸	65.69 ⁸³
28.0	44.694 ⁸⁰	19.06 ⁶⁵	45.189 ²³	64.75 ³⁰⁹	19.060 ⁶³	66.52 ⁸⁴
July 8.0	44.774 ¹²⁰	18.41 ⁶⁷	45.166 ³³	61.66 ³¹⁸	19.123 ⁹⁵	67.36 ⁸⁴
18.0	44.894 ¹⁵⁶	17.74 ⁷¹	45.199 ⁹⁰	58.48 ³¹⁸	19.218 ¹²⁶	68.20 ⁷⁷
28.0	45.050 ¹⁸⁹	17.03 ⁷³	45.289 ¹⁴⁴	55.30 ³⁰⁷	19.344 ¹⁵⁴	68.97 ⁷¹
Aug. 6.9	45.239 ²²⁰	16.30 ⁷⁴	45.433 ¹⁹⁸	52.23 ²⁸⁷	19.498 ¹⁸¹	69.68 ⁵⁸
16.9	45.459 ²⁴⁷	15.56 ⁷⁶	45.631 ²⁴⁶	49.36 ²⁵⁶	19.679 ²⁰⁴	70.26 ⁴⁴
26.9	45.706 ²⁷²	14.80 ⁷⁶	45.877 ²⁹³	46.80 ²¹⁶	19.883 ²²⁶	70.70 ²⁴
Sept. 5.9	45.978 ²⁹⁴	14.04 ⁷⁸	46.170 ³³²	44.64 ¹⁶⁹	20.109 ²⁴⁶	70.94 ³
15.8	46.272 ³¹³	13.26 ⁷⁸	46.502 ³⁶⁵	42.95 ¹¹⁴	20.355 ²⁶³	70.97 ²¹
25.8	46.585 ³²⁸	12.48 ⁷⁸	46.867 ³⁹⁰	41.81 ⁵³	20.618 ²⁷⁶	70.76 ⁴⁶
Oct. 5.8	46.913 ³⁴¹	11.70 ⁷⁵	47.257 ⁴⁰⁷	41.28 ¹¹	20.894 ²⁸⁸	70.30 ⁷⁰
15.7	47.254 ³⁴⁹	10.95 ⁷⁰	47.664 ⁴¹⁴	41.39 ⁷⁶	21.182 ²⁹⁶	69.60 ⁹⁴
25.7	47.603 ³⁵⁰	10.25 ⁶²	48.078 ⁴⁰⁷	42.15 ¹³⁹	21.478 ²⁹⁷	68.66 ¹¹⁴
Nov. 4.7	47.953 ³⁴⁶	9.63 ⁵²	48.485 ³⁹⁰	43.54 ¹⁹⁷	21.775 ²⁹³	67.52 ¹³⁰
14.7	48.299 ³³³	9.11 ³⁸	48.875 ³⁶²	45.51 ²⁴⁹	22.068 ²⁸³	66.22 ¹⁴¹
24.6	48.632 ³¹²	8.73 ²²	49.237 ³²⁰	48.00 ²⁹³	22.351 ²⁶⁴	64.81 ¹⁴⁷
Dec. 4.6	48.944 ²⁸²	8.51 ³	49.557 ²⁶⁸	50.93 ³²⁶	22.615 ²³⁸	63.34 ¹⁴⁸
14.6	49.226 ²⁴²	8.48 ¹⁵	49.825 ²⁰⁶	54.19 ³⁴⁹	22.853 ²⁰³	61.86 ¹⁴¹
24.6	49.468 ¹⁹⁴	8.63 ³⁶	50.031 ¹³⁹	57.68 ³⁵⁹	23.056 ¹⁶³	60.45 ¹³¹
34.5	49.662	8.99	50.170	61.27	23.219	59.14
Mean Place	45.229	25.06	46.600	50.58	19.468	74.52
Sec δ, Tan δ	1.180	+0.626	1.638	-1.297	1.004	+0.095
L α, L δ	+0.02	-0.2	-0.03	-0.2	0.00	-0.2
ω α, ω δ	+0.02	+0.9	-0.03	+0.9	0.00	+0.9
AUTHORITY	A. E.				A. E.	

APPARENT PLACES OF STARS, 1924. 327

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	26 Monocerotis. Mag. 4·1		β Geminorum. Mag. 1·2		ξ Argūs. Mag. 3·5	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m	° ′	h m	28 ′	h m	24 ′
	7 37	9 22	7 40	12	7 46	40
Jan. 0·6	37·920 ¹²⁷	29·64 ²⁰⁷	40·912 ¹⁶⁵	28·89 ¹⁷	7·066 ¹²⁷	10·47 ²⁸¹
10·5	38·047 ⁷⁹	31·71 ¹⁹²	41·077 ¹¹⁰	29·06 ³⁴	7·193 ⁷⁵	13·28 ²⁷¹
20·5	38·126 ²⁹	33·63 ¹⁷³	41·187 ⁵³	29·40 ⁵⁰	7·268 ²²	15·99 ²⁵³
30·5	38·155 ²¹	35·36 ¹⁵²	41·240 ⁴	29·90 ⁶²	7·290 ³¹	18·52 ²²⁸
Feb. 9·4	38·134 ⁶⁷	36·88 ¹²⁶	41·236 ⁵⁸	30·52 ⁷⁰	7·259 ⁷⁹	20·80 ²⁰⁰
19·4	38·067 ¹⁰⁷	38·14 ¹⁰⁰	41·178 ¹⁰⁵	31·22 ⁷²	7·180 ¹²³	22·80 ¹⁶⁶
29·4	37·960 ¹⁴⁰	39·14 ⁷³	41·073 ¹⁴⁴	31·94 ⁷¹	7·057 ¹⁵⁷	24·46 ¹³²
Mar. 10·4	37·820 ¹⁶⁴	39·87 ⁴⁷	40·929 ¹⁷³	32·65 ⁶⁵	6·900 ¹⁸³	25·78 ⁹⁵
20·3	37·656 ¹⁷⁸	40·34 ²⁰	40·756 ¹⁹¹	33·30 ⁵⁷	6·717 ²⁰⁰	26·73 ⁵⁸
30·3	37·478 ¹⁸³	40·54 ⁶	40·565 ¹⁹⁷	33·87 ⁴⁵	6·517 ²⁰⁶	27·31 ²⁰
Apr. 9·3	37·295 ¹⁷⁸	40·48 ³⁰	40·368 ¹⁹²	34·32 ³³	6·311 ²⁰²	27·51 ¹⁷
19·3	37·117 ¹⁶⁴	40·18 ⁵⁴	40·176 ¹⁷⁸	34·65 ¹⁹	6·109 ¹⁹¹	27·34 ⁵³
29·2	36·953 ¹⁴⁴	39·64 ⁷⁷	39·998 ¹⁵⁴	34·84 ⁷	5·918 ¹⁷²	26·81 ⁸⁸
May 9·2	36·809 ¹¹⁹	38·87 ⁹⁸	39·844 ¹²⁵	34·91 ⁵	5·746 ¹⁴⁷	25·93 ¹²⁰
19·2	36·690 ⁸⁹	37·89 ¹¹⁷	39·719 ⁸⁹	34·86 ¹⁶	5·599 ¹¹⁸	24·73 ¹⁵²
29·1	36·601 ⁵⁶	36·72 ¹³⁵	39·630 ⁵²	34·70 ²⁶	5·481 ⁸⁵	23·21 ¹⁷⁷
June 8·1	36·545 ²²	35·37 ¹⁴⁸	39·578 ¹³	34·44 ³¹	5·396 ⁵⁰	21·44 ²⁰¹
18·1	36·523 ¹³	33·89 ¹⁵⁹	39·565 ²⁸	34·13 ³⁸	5·346 ¹⁴	19·43 ²¹⁷
28·1	36·536 ⁴⁶	32·30 ¹⁶⁵	39·593 ⁶⁶	33·75 ⁴⁴	5·332 ²²	17·26 ²²⁹
July 8·0	36·582 ⁸⁰	30·65 ¹⁶⁶	39·659 ¹⁰³	33·31 ⁴⁹	5·354 ⁵⁹	14·97 ²³⁴
18·0	36·662 ¹¹⁰	28·99 ¹⁶³	39·762 ¹³⁹	32·82 ⁵²	5·413 ⁹³	12·63 ²³²
28·0	36·772 ¹⁴¹	27·36 ¹⁵²	39·901 ¹⁷¹	32·30 ⁵⁶	5·506 ¹²⁶	10·31 ²²²
Aug. 7·0	36·913 ¹⁶⁷	25·84 ¹³⁷	40·072 ²⁰⁰	31·74 ⁶⁰	5·632 ¹⁵⁹	8·09 ²⁰⁶
16·9	37·080 ¹⁹⁴	24·47 ¹¹⁶	40·272 ²²⁸	31·14 ⁶⁵	5·791 ¹⁸⁹	6·03 ¹⁸⁰
26·9	37·274 ²¹⁷	23·31 ⁸⁹	40·500 ²⁵³	30·49 ⁷⁰	5·980 ²¹⁶	4·23 ¹⁴⁷
Sept. 5·9	37·491 ²³⁷	22·42 ⁵⁷	40·753 ²⁷⁵	29·79 ⁷⁴	6·196 ²⁴²	2·76 ¹⁰⁹
15·8	37·728 ²⁵⁷	21·85 ²³	41·028 ²⁹⁴	29·05 ⁷⁸	6·438 ²⁶⁵	1·67 ⁶⁵
25·8	37·985 ²⁷³	21·62 ¹⁶	41·322 ³¹²	28·27 ⁸¹	6·703 ²⁸³	1·02 ¹⁶
Oct. 5·8	38·258 ²⁸⁵	21·78 ⁵⁴	41·634 ³²⁶	27·46 ⁸⁴	6·986 ²⁹⁹	0·86 ³³
15·8	38·543 ²⁹³	22·32 ⁹¹	41·960 ³³⁵	26·62 ⁸²	7·285 ³⁰⁷	1·19 ⁸⁵
25·7	38·836 ²⁹⁶	23·23 ¹²⁷	42·295 ³³⁹	25·80 ⁷⁹	7·592 ³¹⁰	2·04 ¹³²
Nov. 4·7	39·132 ²⁹¹	24·50 ¹⁵⁷	42·634 ³³⁷	25·01 ⁷²	7·902 ³⁰⁵	3·36 ¹⁷⁶
14·7	39·423 ²⁸⁰	26·07 ¹⁸²	42·971 ³²⁶	24·29 ⁶²	8·207 ²⁹⁴	5·12 ²¹⁵
24·7	39·703 ²⁶¹	27·89 ²⁰¹	43·297 ³⁰⁸	23·67 ⁴⁸	8·501 ²⁷¹	7·27 ²⁴⁵
Dec. 4·6	39·964 ²³⁵	29·00 ²¹⁵	43·605 ²⁸⁰	23·19 ³¹	8·772 ²⁴²	9·72 ²⁶⁶
14·6	40·199 ¹⁹⁹	32·01 ²¹⁵	43·885 ²⁴⁴	22·88 ¹³	9·014 ²⁰³	12·38 ²⁸⁰
24·6	40·398 ¹⁵⁸	34·16 ²¹¹	44·129 ¹⁹⁹	22·75 ⁶	9·217 ¹⁶⁰	15·18 ²⁸²
34·5	40·556	36·27	44·328	22·81	9·377	18·00
Mean Place	36·958	22·26	40·094	39·70	5·875	5·15
Sec δ, Tan δ	1·014	-0·165	1·135	+0·536	1·100	-0·459
L α, L δ	0·00	-0·2	+0·01	-0·2	-0·01	-0·2
ω α, ω δ	0·00	+0·9	+0·02	+0·9	-0·01	+0·9
AUTHORITY	A. N.		A. E.			

328 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	χ Geminorum. Mag. 5.0		ζ Argûs. Mag. 2.3		ρ Argûs. Mag. 2.9	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 7 58	28 0	h m 8 0	39 47	h m 8 4	24 4
Jan. 0.6	52.025 ¹⁸⁴	19.83 ⁷	56.319 ¹³⁸	21.28 ³³⁶	19.573 ¹⁴⁶	67.40 ²⁸²
10.5	52.209 ¹³¹	19.90 ²⁹	56.457 ⁷⁸	24.64 ³³¹	19.719 ⁹⁶	70.22 ²⁷²
20.5	52.340 ⁷⁴	20.19 ⁴⁶	56.535 ¹⁷	27.95 ³¹⁷	19.815 ⁴¹	72.94 ²⁵⁷
30.5	52.414 ¹⁷	20.65 ⁶¹	56.552 ⁴²	31.12 ²⁹⁵	19.856 ¹¹	75.51 ²³⁴
Feb. 9.4	52.431 ³⁸	21.26 ⁷¹	56.510 ⁹⁹	34.07 ²⁶⁵	19.845 ⁶⁰	77.85 ²⁰⁶
19.4	52.393 ⁸⁸	21.97 ⁷⁶	56.411 ¹⁴⁸	36.72 ²³⁰	19.785 ¹⁰⁵	79.91 ¹⁷⁵
29.4	52.305 ¹²⁹	22.73 ⁷⁷	56.263 ¹⁸⁹	39.02 ¹⁹¹	19.680 ¹⁴²	81.66 ¹⁴¹
Mar. 10.4	52.176 ¹⁶⁰	23.50 ⁷⁴	56.074 ²²⁰	40.93 ¹⁴⁹	19.538 ¹⁷¹	83.07 ¹⁰⁵
20.3	52.016 ¹⁸¹	24.24 ⁶⁶	55.854 ²⁴²	42.42 ¹⁰⁴	19.367 ¹⁸⁹	84.12 ⁶⁹
30.3	51.835 ¹⁹¹	24.90 ⁵⁵	55.612 ²⁵³	43.46 ⁵⁸	19.178 ¹⁹⁹	84.81 ³³
Apr. 9.3	51.644 ¹⁹⁰	25.45 ⁴³	55.359 ²⁵³	44.04 ¹¹	18.979 ¹⁹⁸	85.14 ⁵
19.3	51.454 ¹⁷⁸	25.88 ³⁰	55.106 ²⁴⁴	44.15 ³³	18.781 ¹⁹⁰	85.09 ⁴⁰
29.2	51.276 ¹⁵⁹	26.18 ¹⁷	54.862 ²²⁷	43.82 ⁷⁸	18.591 ¹⁷⁵	84.69 ⁷⁵
May 9.2	51.117 ¹³¹	26.35 ³	54.635 ²⁰⁴	43.04 ¹²¹	18.416 ¹⁵²	83.94 ¹⁰⁸
19.2	50.986 ¹⁰⁰	26.38 ⁹	54.431 ¹⁷³	41.83 ¹⁶⁰	18.264 ¹²⁶	82.86 ¹³⁷
29.1	50.886 ⁶⁵	26.29 ¹⁹	54.258 ¹³⁹	40.23 ¹⁹⁶	18.138 ⁹⁶	81.49 ¹⁶⁵
June 8.1	50.821 ²⁶	26.10 ²⁹	54.119 ¹⁰²	38.27 ²²⁷	18.042 ⁶²	79.84 ¹⁸⁷
18.1	50.795 ¹¹	25.81 ³⁸	54.017 ⁶¹	36.00 ²⁵²	17.980 ²⁹	77.97 ²⁰⁶
28.1	50.806 ⁴⁸	25.43 ⁴⁴	53.956 ²¹	33.48 ²⁷⁰	17.951 ⁶	75.91 ²¹⁹
July 8.0	50.854 ⁸⁵	24.99 ⁵¹	53.935 ²³	30.78 ²⁸⁰	17.957 ⁴¹	73.72 ²²⁶
18.0	50.939 ¹²¹	24.48 ⁵⁷	53.958 ⁶⁵	27.98 ²⁸⁴	17.998 ⁷⁵	71.46 ²²⁵
28.0	51.060 ¹⁵²	23.91 ⁶³	54.023 ¹⁰⁷	25.14 ²⁷⁶	18.073 ¹⁰⁸	69.21 ²¹⁸
Aug. 7.0	51.212 ¹⁸⁴	23.28 ⁶⁹	54.130 ¹⁴⁸	22.38 ²⁶¹	18.181 ¹⁴¹	67.03 ²⁰²
16.9	51.396 ²¹²	22.59 ⁷⁴	54.278 ¹⁸⁷	19.77 ²³⁸	18.322 ¹⁷³	65.01 ¹⁸¹
26.9	51.608 ²³⁸	21.85 ⁸⁰	54.465 ²²⁴	17.39 ²⁰¹	18.495 ²⁰¹	63.20 ¹⁴⁹
Sept. 5.9	51.846 ²⁶³	21.05 ⁸⁷	54.689 ²⁵⁸	15.38 ¹⁶⁰	18.696 ²²⁹	61.71 ¹¹³
15.8	52.109 ²⁸⁵	20.18 ⁹²	54.947 ²⁸⁸	13.78 ¹¹⁰	18.925 ²⁵⁴	60.58 ⁷¹
25.8	52.394 ³⁰⁵	19.26 ⁹⁶	55.235 ³¹⁴	12.68 ⁵⁷	19.179 ²⁷⁵	59.87 ²³
Oct. 5.8	52.699 ³²²	18.30 ⁹⁸	55.549 ³³⁴	12.11 ¹	19.454 ²⁹⁴	59.64 ²⁵
15.8	53.021 ³³⁴	17.32 ⁹⁸	55.883 ³⁴⁶	12.12 ⁶¹	19.748 ³⁰⁵	59.89 ⁷⁵
25.7	53.355 ³⁴²	16.34 ⁹⁵	56.229 ³⁵⁰	12.73 ¹²⁰	20.053 ³¹²	60.64 ¹²⁴
Nov. 4.7	53.697 ³⁴²	15.39 ⁸⁸	56.579 ³⁴⁵	13.93 ¹⁷⁵	20.365 ³¹¹	61.88 ¹⁶⁸
14.7	54.039 ³³⁶	14.51 ⁷⁷	56.924 ³³¹	15.68 ²²⁴	20.676 ³⁰²	63.56 ²⁰⁷
24.7	54.375 ³²⁰	13.74 ⁶³	57.255 ³⁰⁵	17.92 ²⁶⁶	20.978 ²⁸³	65.63 ²³⁸
Dec. 4.6	54.695 ²⁹⁵	13.11 ⁴⁵	57.560 ²⁷¹	20.58 ²⁹⁹	21.261 ²⁵⁶	68.01 ²⁶²
14.6	54.990 ²⁶¹	12.66 ²⁵	57.831 ²²⁶	23.57 ³²⁰	21.517 ²²¹	70.63 ²⁷⁶
24.6	55.251 ²¹⁸	12.41 ⁴	58.057 ¹⁷⁴	26.77 ³³⁴	21.738 ¹⁷⁸	73.39 ²⁸²
34.5	55.469	12.37	58.231	30.11	21.916	76.21
Mean Place	51.265	30.81	54.720	18.78	18.419	63.18
Sec δ , Tan δ	1.133	+0.532	1.301	-0.833	1.095	-0.447
L α , L δ	+0.01	-0.2	-0.02	-0.2	-0.01	-0.2
ω α , ω δ	+0.02	+0.9	-0.03	+0.9	-0.02	+0.9
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 329

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Argûs. Mag. 2.2		20 Puppis. Mag. 5.1		β Cancri. Mag. 3.8	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 8 7	° ' 47 6	h m 8 9	° ' 15 33	h m 8 12	° ' 9 24
Jan. 0.6	13.410 ¹⁴⁷	44.84 ³⁵⁴	51.368 ¹⁵⁶	34.89 ²⁴⁵	24.444 ¹⁷⁵	66.40 ¹¹¹
10.5	13.557 ⁸⁰	48.38 ³⁵³	51.524 ¹⁰⁷	37.34 ²³³	24.619 ¹²⁷	65.29 ⁹²
20.5	13.637 ¹²	51.91 ³⁴⁰	51.631 ⁵⁶	39.67 ²¹⁷	24.746 ⁷⁶	64.37 ⁷³
30.5	13.649 ⁵⁴	55.31 ³²⁰	51.687 ⁵	41.84 ¹⁹⁵	24.822 ²⁵	63.64 ⁵³
Feb. 9.5	13.595 ¹¹⁶	58.51 ²⁹¹	51.692 ⁴⁴	43.79 ¹⁶⁸	24.847 ²⁵	63.11 ³⁴
19.4	13.479 ¹⁷⁰	61.42 ²⁵⁷	51.648 ⁸⁸	45.47 ¹⁴¹	24.822 ⁶⁹	62.77 ¹⁶
29.4	13.309 ²¹⁷	63.99 ²¹⁶	51.560 ¹²⁴	46.88 ¹¹⁰	24.753 ¹⁰⁸	62.61 ¹
Mar. 10.4	13.092 ²⁵³	66.15 ¹⁷³	51.436 ¹⁵²	47.98 ⁸⁰	24.645 ¹³⁶	62.60 ¹²
20.3	12.839 ²⁷⁷	67.88 ¹²⁶	51.284 ¹⁷¹	48.78 ⁴⁹	24.509 ¹⁵⁷	62.72 ²²
30.3	12.562 ²⁹⁰	69.14 ⁷⁸	51.113 ¹⁸¹	49.27 ¹⁹	24.352 ¹⁶⁷	62.94 ³²
Apr. 9.3	12.272 ²⁹⁴	69.92 ²⁹	50.932 ¹⁸¹	49.46 ¹²	24.185 ¹⁶⁸	63.26 ³⁸
19.3	11.978 ²⁸⁷	70.21 ²¹	50.751 ¹⁷⁴	49.34 ⁴⁰	24.017 ¹⁶⁰	63.64 ⁴³
29.2	11.691 ²⁷⁰	70.00 ⁶⁸	50.577 ¹⁵⁹	48.94 ⁶⁸	23.857 ¹⁴³	64.07 ⁴⁸
May 9.2	11.421 ²⁴⁶	69.32 ¹¹⁵	50.418 ¹³⁷	48.26 ⁹⁵	23.714 ¹²²	64.55 ⁵²
19.2	11.175 ²¹⁵	68.17 ¹⁵⁸	50.281 ¹¹³	47.31 ¹¹⁸	23.592 ⁹⁶	65.07 ⁵⁵
29.2	10.960 ¹⁷⁹	66.59 ¹⁹⁸	50.168 ⁸⁴	46.13 ¹⁴⁰	23.496 ⁶⁷	65.62 ⁵⁷
June 8.1	10.781 ¹³⁸	64.61 ²³²	50.084 ⁵²	44.73 ¹⁵⁷	23.429 ³⁵	66.19 ⁵⁸
18.1	10.643 ⁹⁴	62.29 ²⁶¹	50.032 ²¹	43.16 ¹⁷³	23.394 ³	66.77 ⁵⁹
28.1	10.549 ⁴⁷	59.68 ²⁸²	50.011 ¹²	41.43 ¹⁸²	23.391 ²⁹	67.36 ⁵⁸
July 8.0	10.502 ⁰	56.86 ²⁹⁶	50.023 ⁴⁵	39.61 ¹⁸⁶	23.420 ⁶¹	67.94 ⁵⁵
18.0	10.502 ⁴⁸	53.90 ³⁰¹	50.068 ⁷⁶	37.75 ¹⁸⁵	23.481 ⁹²	68.49 ⁴⁹
28.0	10.550 ⁹⁸	50.89 ²⁹⁶	50.144 ¹⁰⁸	35.90 ¹⁷⁷	23.573 ¹²⁰	68.98 ⁴¹
Aug. 7.0	10.648 ¹⁴⁵	47.93 ²⁸³	50.252 ¹³⁷	34.13 ¹⁶⁴	23.693 ¹⁴⁹	69.39 ³⁰
16.9	10.793 ¹⁹¹	45.10 ²⁵⁸	50.389 ¹⁶⁷	32.49 ¹⁴²	23.842 ¹⁷⁵	69.69 ¹⁶
26.9	10.984 ²³⁵	42.52 ²²⁶	50.556 ¹⁹³	31.07 ¹¹⁶	24.017 ²⁰⁰	69.85 ¹
Sept. 5.9	11.219 ²⁷⁵	40.26 ¹⁸³	50.749 ²¹⁹	29.91 ⁸³	24.217 ²²⁴	69.84 ¹⁹
15.9	11.494 ³¹²	38.43 ¹³¹	50.968 ²⁴⁴	29.08 ⁴⁶	24.441 ²⁴⁶	69.65 ⁴⁰
25.8	11.806 ³⁴²	37.12 ⁷⁷	51.212 ²⁶⁴	28.62 ⁴	24.687 ²⁶⁶	69.25 ⁶²
Oct. 5.8	12.148 ³⁶⁵	36.35 ¹⁶	51.476 ²⁸²	28.58 ³⁹	24.953 ²⁸⁴	68.63 ⁸³
15.8	12.513 ³⁷⁹	36.19 ⁴⁷	51.758 ²⁹⁵	28.97 ⁸¹	25.237 ²⁹⁸	67.80 ¹⁰²
25.7	12.892 ³⁸⁵	36.66 ¹⁰⁹	52.053 ³⁰³	29.78 ¹²⁴	25.535 ³⁰⁷	66.78 ¹¹⁹
Nov. 4.7	13.277 ³⁸⁰	37.75 ¹⁶⁸	52.356 ³⁰⁴	31.02 ¹⁶⁰	25.842 ³¹⁰	65.59 ¹³²
14.7	13.657 ³⁶²	39.43 ²²¹	52.660 ²⁹⁸	32.62 ¹⁹³	26.152 ³⁰⁶	64.27 ¹⁴⁰
24.7	14.019 ³³³	41.64 ²⁶⁹	52.958 ²⁸²	34.55 ²¹⁸	26.458 ²⁹³	62.87 ¹⁴³
Dec. 4.6	14.352 ²⁹⁵	44.33 ³⁰⁵	53.240 ²⁵⁸	36.73 ²³⁶	26.751 ²⁷²	61.44 ¹⁴⁰
14.6	14.647 ²⁴⁴	47.38 ³³³	53.498 ²²⁵	39.09 ²⁴⁵	27.023 ²⁴³	60.04 ¹³¹
24.6	14.891 ¹⁸⁶	50.71 ³⁴⁸	53.723 ¹⁸⁶	41.54 ²⁴⁷	27.266 ²⁰³	58.73 ¹²⁰
34.6	15.077	54.19	53.909	44.01	27.469	57.53
Mean Place	11.495	43.73	50.377	29.80	23.702	75.04
Sec δ , Tan δ	1.469	-1.077	1.038	-0.278	1.014	+0.166
L α , L δ	-0.02	-0.2	-0.01	-0.2	0.00	-0.2
ω α , ω δ	-0.04	+0.9	-0.01	+0.8	+0.01	+0.8
AUTHORITY	A. E.		A. E.		A. E.	

330 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	<i>d</i> ¹ Cancri. Mag. 5.9		ε Argūs. Mag. 1.7		30 Monocerotis. Mag. 4.0	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h ^m 8 19	[°] ['] 18 34	^h ^m 8 20	[°] ['] 59 15	^h ^m 8 21	[°] ['] 3 39
Jan. 0.6	1.575 ^s ₁₉₁	28.34 ^s ₅₈	60.132 ^s ₁₇₈	50.91 ^s ₃₇₀	52.679 ^s ₁₇₃	33.26 ^s ₁₈₇
10.5	1.766 ^s ₁₄₂	27.76 ^s ₃₈	60.310 ^s ₉₂	54.61 ^s ₃₇₄	52.852 ^s ₁₂₇	35.13 ^s ₁₇₃
20.5	1.908 ^s ₈₉	27.38 ^s ₁₇	60.402 ^s ₅	58.35 ^s ₃₆₈	52.979 ^s ₇₇	36.86 ^s ₁₅₄
30.5	1.997 ^s ₃₅	27.21 ^s ₃	60.407 ^s ₈₀	62.03 ^s ₃₅₃	53.056 ^s ₂₆	38.40 ^s ₁₃₃
Feb. 9.5	2.032 ^s ₁₇	27.24 ^s ₁₉	60.327 ^s ₁₅₈	65.56 ^s ₃₂₇	53.082 ^s ₂₂	39.73 ^s ₁₁₀
19.4	2.015 ^s ₆₄	27.43 ^s ₃₂	60.169 ^s ₂₃₁	68.83 ^s ₂₉₆	53.060 ^s ₆₆	40.83 ^s ₈₅
29.4	1.951 ^s ₁₀₅	27.75 ^s ₄₂	59.938 ^s ₂₉₁	71.70 ^s ₂₅₇	52.994 ^s ₁₀₄	41.68 ^s ₆₃
Mar. 10.4	1.846 ^s ₁₃₇	28.17 ^s ₄₈	59.647 ^s ₃₄₀	74.36 ^s ₂₁₃	52.890 ^s ₁₃₄	42.31 ^s ₃₉
20.4	1.709 ^s ₁₅₉	28.65 ^s ₅₀	59.307 ^s ₃₇₆	76.49 ^s ₁₆₆	52.756 ^s ₁₅₃	42.70 ^s ₁₇
30.3	1.550 ^s ₁₇₁	29.15 ^s ₅₀	58.931 ^s ₃₉₈	78.15 ^s ₁₁₆	52.603 ^s ₁₆₅	42.87 ^s ₃
Apr. 9.3	1.379 ^s ₁₇₂	29.65 ^s ₄₈	58.533 ^s ₄₀₈	79.31 ^s ₆₄	52.438 ^s ₁₆₇	42.84 ^s ₂₂
19.3	1.207 ^s ₁₆₇	30.13 ^s ₄₃	58.125 ^s ₄₀₅	79.95 ^s ₁₂	52.271 ^s ₁₆₁	42.62 ^s ₄₂
29.2	1.040 ^s ₁₅₀	30.56 ^s ₃₉	57.720 ^s ₃₉₁	80.07 ^s ₄₀	52.110 ^s ₁₄₈	42.20 ^s ₅₈
May 9.2	0.890 ^s ₁₂₉	30.95 ^s ₃₃	57.329 ^s ₃₆₆	79.67 ^s ₉₂	51.962 ^s ₁₂₈	41.62 ^s ₇₃
19.2	0.761 ^s ₁₀₁	31.28 ^s ₂₈	56.963 ^s ₃₃₃	78.75 ^s ₁₄₀	51.834 ^s ₁₀₄	40.89 ^s ₈₈
29.2	0.660 ^s ₇₂	31.56 ^s ₂₃	56.630 ^s ₂₉₀	77.35 ^s ₁₈₆	51.730 ^s ₇₈	40.01 ^s ₁₀₁
June 8.1	0.588 ^s ₃₉	31.79 ^s ₁₈	56.340 ^s ₂₄₂	75.49 ^s ₂₂₆	51.652 ^s ₄₈	39.00 ^s ₁₁₀
18.1	0.549 ^s ₆	31.97 ^s ₁₂	56.098 ^s ₁₈₇	73.23 ^s ₂₆₀	51.604 ^s ₁₈	37.90 ^s ₁₁₉
28.1	0.543 ^s ₂₇	32.09 ^s ₈	55.911 ^s ₁₂₇	70.63 ^s ₂₈₈	51.586 ^s ₁₃	36.71 ^s ₁₂₃
July 8.1	0.570 ^s ₅₉	32.17 ^s ₀	55.784 ^s ₆₄	67.75 ^s ₃₀₇	51.599 ^s ₄₄	35.48 ^s ₁₂₄
18.0	0.629 ^s ₉₂	32.17 ^s ₆	55.720 ^s ₂	64.68 ^s ₃₁₈	51.643 ^s ₇₄	34.24 ^s ₁₂₀
28.0	0.721 ^s ₁₂₂	32.11 ^s ₁₄	55.722 ^s ₇₀	61.50 ^s ₃₁₉	51.717 ^s ₁₀₃	33.04 ^s ₁₁₃
Aug. 7.0	0.843 ^s ₁₅₀	31.97 ^s ₂₄	55.792 ^s ₁₃₆	58.31 ^s ₃₀₈	51.820 ^s ₁₃₁	31.91 ^s ₁₀₀
16.9	0.993 ^s ₁₇₉	31.73 ^s ₃₆	55.928 ^s ₂₀₃	55.23 ^s ₂₈₉	51.951 ^s ₁₅₈	30.91 ^s ₈₃
26.9	1.172 ^s ₂₀₄	31.37 ^s ₄₇	56.131 ^s ₂₆₇	52.34 ^s ₂₅₉	52.109 ^s ₁₈₅	30.08 ^s ₆₁
Sept. 5.9	1.376 ^s ₂₃₀	30.90 ^s ₆₁	56.398 ^s ₃₂₅	49.75 ^s ₂₁₈	52.294 ^s ₂₁₀	29.47 ^s ₃₄
15.9	1.606 ^s ₂₅₂	30.29 ^s ₇₅	56.723 ^s ₃₇₈	47.57 ^s ₁₆₉	52.504 ^s ₂₃₃	29.13 ^s ₅
25.8	1.858 ^s ₂₇₅	29.54 ^s ₈₈	57.101 ^s ₄₂₂	45.88 ^s ₁₁₃	52.737 ^s ₂₅₆	29.08 ^s ₂₇
Oct. 5.8	2.133 ^s ₂₉₄	28.66 ^s ₁₀₀	57.523 ^s ₄₅₇	44.75 ^s ₅₁	52.993 ^s ₂₇₄	29.35 ^s ₆₁
15.8	2.427 ^s ₃₀₉	27.66 ^s ₁₁₂	57.980 ^s ₄₇₉	44.24 ^s ₁₅	53.267 ^s ₂₈₉	29.96 ^s ₉₃
25.8	2.736 ^s ₃₂₀	26.54 ^s ₁₁₈	58.459 ^s ₄₈₇	44.39 ^s ₈₁	53.556 ^s ₃₀₀	30.89 ^s ₁₂₃
Nov. 4.7	3.056 ^s ₃₂₄	25.36 ^s ₁₂₁	58.946 ^s ₄₈₀	45.20 ^s ₁₄₅	53.856 ^s ₃₀₃	32.12 ^s ₁₅₀
14.7	3.380 ^s ₃₂₂	24.15 ^s ₁₁₉	59.426 ^s ₄₅₉	46.65 ^s ₂₀₅	54.159 ^s ₃₀₀	33.62 ^s ₁₇₁
24.7	3.702 ^s ₃₁₀	22.96 ^s ₁₁₄	59.885 ^s ₄₂₀	48.70 ^s ₂₅₈	54.459 ^s ₂₈₉	35.33 ^s ₁₈₇
Dec. 4.6	4.012 ^s ₂₉₀	21.82 ^s ₁₀₃	60.305 ^s ₃₆₈	51.28 ^s ₃₀₂	54.748 ^s ₂₆₈	37.20 ^s ₁₉₅
14.6	4.302 ^s ₂₆₀	20.79 ^s ₈₇	60.673 ^s ₃₀₄	54.30 ^s ₃₃₆	55.016 ^s ₂₃₉	39.15 ^s ₁₉₇
24.6	4.562 ^s ₂₂₂	19.92 ^s ₆₉	60.977 ^s ₂₂₈	57.66 ^s ₃₆₀	55.255 ^s ₂₀₂	41.12 ^s ₁₉₂
34.6	4.784	19.23	61.205	61.26	55.457	43.04
Mean Place	0.885	38.20	57.347	52.43	51.864	26.89
Sec δ, Tan δ	1.055	+0.336	1.957	-1.682	1.002	-0.064
L α, L δ	+0.01	-0.2	-0.04	-0.2	0.00	-0.2
ω α, ω δ	+0.01	+0.8	-0.06	+0.8	0.00	+0.8
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 331

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	o Ursæ Majoris. Mag. 3.5		η Cancri. Mag. 5.5		γ Cancri. Mag. 4.7	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 8 23	° ′ 60 57	h m 8 28	° ′ 20 41	h m 8 38	° ′ 21 44
Jan. 0.6	59.14 ³⁴	71.26 ¹⁷⁸	19.677 ²⁰³	51.13 ⁵⁰	54.099 ²¹⁴	24.07 ⁴⁸
10.6	59.48 ²⁴	73.04 ²⁰⁷	19.880 ¹⁵³	50.63 ²⁷	54.313 ¹⁶⁵	23.59 ²⁵
20.5	59.72 ¹⁵	75.11 ²²⁶	20.033 ¹⁰¹	50.36 ⁶	54.478 ¹¹²	23.34 ²
30.5	59.87 ⁴	77.37 ²³⁷	20.134 ⁴⁵	50.30 ¹⁴	54.590 ⁵⁸	23.32 ¹⁹
Feb. 9.5	59.91 ⁵	79.74 ²³⁷	20.179 ⁷	50.44 ³¹	54.648 ³	23.51 ³⁷
19.4	59.86 ¹⁴	82.11 ²²⁹	20.172 ⁵⁶	50.75 ⁴⁴	54.651 ⁴⁷	23.88 ⁵¹
29.4	59.72 ²²	84.40 ²⁰⁹	20.116 ⁹⁸	51.19 ⁵³	54.604 ⁹⁰	24.39 ⁶⁰
Mar. 10.4	59.50 ²⁸	86.49 ¹⁸³	20.018 ¹³²	51.72 ⁵⁸	54.514 ¹²⁵	24.99 ⁶⁶
20.4	59.22 ³³	88.32 ¹⁴⁸	19.886 ¹⁵⁶	52.30 ⁶⁰	54.389 ¹⁵¹	25.65 ⁶⁶
30.3	58.89 ³⁷	89.80 ¹⁰⁹	19.730 ¹⁶⁹	52.90 ⁵⁸	54.238 ¹⁶⁷	26.31 ⁶⁴
Apr. 9.3	58.52 ³⁷	90.89 ⁶⁶	19.561 ¹⁷³	53.48 ⁵³	54.071 ¹⁷²	26.95 ⁵⁹
19.3	58.15 ³⁶	91.55 ²³	19.388 ¹⁶⁸	54.01 ⁴⁷	53.899 ¹⁶⁸	27.54 ⁵²
29.3	57.79 ³⁵	91.78 ²²	19.220 ¹⁵⁴	54.48 ⁴⁰	53.731 ¹⁵⁷	28.06 ⁴²
May 9.2	57.44 ³⁰	91.56 ⁶³	19.066 ¹³³	54.88 ³²	53.574 ¹³⁷	28.48 ³⁴
19.2	57.14 ²⁶	90.93 ¹⁰⁴	18.933 ¹⁰⁸	55.20 ²⁴	53.437 ¹¹³	28.82 ²⁴
29.2	56.88 ²⁰	89.89 ¹³⁶	18.825 ⁷⁹	55.44 ¹⁷	53.324 ⁸⁵	29.06 ¹⁶
June 8.1	56.68 ¹⁴	88.53 ¹⁶⁸	18.746 ⁴⁷	55.61 ⁹	53.239 ⁵⁵	29.22 ⁶
18.1	56.54 ⁷	86.85 ¹⁹⁴	18.699 ¹⁴	55.70 ¹	53.184 ²³	29.28 ³
28.1	56.47 ¹	84.91 ²¹⁴	18.685 ¹⁹	55.71 ⁵	53.161 ⁹	29.25 ¹²
July 8.1	56.46 ⁷	82.77 ²²⁹	18.704 ⁵²	55.66 ¹³	53.170 ⁴²	29.13 ²⁰
18.0	56.53 ¹³	80.48 ²³⁹	18.756 ⁸⁴	55.53 ²¹	53.212 ⁷⁴	28.93 ²⁹
28.0	56.66 ¹⁹	78.09 ²⁴⁴	18.840 ¹¹⁴	55.32 ³⁰	53.286 ¹⁰⁴	28.64 ³⁹
Aug. 7.0	56.85 ²⁶	75.65 ²⁴⁴	18.954 ¹⁴⁴	55.02 ⁴⁰	53.390 ¹³⁴	28.25 ⁴⁹
17.0	57.11 ³¹	73.21 ²³⁸	19.098 ¹⁷²	54.62 ⁵¹	53.524 ¹⁶³	27.76 ⁶⁰
26.9	57.42 ³⁷	70.83 ²³⁰	19.270 ²⁰⁰	54.11 ⁶²	53.687 ¹⁹¹	27.16 ⁷³
Sept. 5.9	57.79 ⁴²	68.53 ²¹⁶	19.470 ²²⁶	53.49 ⁷⁴	53.878 ²¹⁸	26.43 ⁸⁴
15.9	58.21 ⁴⁶	66.37 ¹⁹⁸	19.696 ²⁵⁰	52.75 ⁸⁸	54.096 ²⁴⁴	25.59 ⁹⁷
25.8	58.67 ⁵¹	64.39 ¹⁷⁶	19.946 ²⁷⁴	51.87 ⁹⁹	54.340 ²⁶⁹	24.62 ¹⁰⁸
Oct. 5.8	59.18 ⁵³	62.63 ¹⁴⁹	20.220 ²⁹⁴	50.88 ¹¹⁰	54.609 ²⁹¹	23.54 ¹¹⁹
15.8	59.71 ⁵⁷	61.14 ¹¹⁹	20.514 ³¹¹	49.78 ¹¹⁷	54.900 ³¹¹	22.35 ¹²⁶
25.8	60.28 ⁵⁸	59.95 ⁸⁴	20.825 ³²³	48.61 ¹²³	55.211 ³²³	21.09 ¹³⁰
Nov. 4.7	60.86 ⁵⁸	59.11 ⁴⁵	21.148 ³³⁰	47.38 ¹²⁴	55.534 ³³³	19.79 ¹³⁰
14.7	61.44 ⁵⁸	58.66 ⁵	21.478 ³²⁸	46.14 ¹²⁰	55.867 ³³⁴	18.49 ¹²⁴
24.7	62.02 ⁵⁵	58.61 ³⁸	21.806 ³¹⁹	44.94 ¹¹²	56.201 ³²⁵	17.25 ¹¹⁶
Dec. 4.7	62.57 ⁵¹	58.99 ⁸⁰	22.125 ²⁹⁹	43.82 ⁹⁹	56.526 ³⁰⁸	16.09 ¹⁰¹
14.6	63.08 ⁴⁶	59.79 ¹²²	22.424 ²⁷⁰	42.83 ⁸²	56.834 ²⁸⁰	15.08 ⁸³
24.6	63.54 ³⁹	61.01 ¹⁵⁹	22.694 ²³³	42.01 ⁶²	57.114 ²⁴⁴	14.25 ⁶¹
34.6	63.93	62.60	22.927	41.39	57.358	13.64
Mean Place	57.99	85.68	19.024	61.24	53.487	34.29
Sec δ, Tan δ	2.061	+1.802	1.069	+0.378	1.077	+0.399
L α, L δ	+0.04	-0.2	+0.01	-0.2	+0.01	-0.3
ω α, ω δ	+0.07	+0.8	+0.02	+0.8	+0.02	+0.8
AUTHORITY	A. E.		A. E.			

332 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Mali. Mag. 3.7		δ Argūs. Mag. 2.0		ϵ Hydræ. Mag. 3.5	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 8 40	° ' 32 54	h m 8 42	° ' 54 25	h m 8 42	° ' 6 41
Jan. 0.6	33.552 ¹⁸⁵	42.32 ³¹⁵	38.357 ²⁰⁸	43.44 ³⁶¹	45.855 ²⁰⁰	47.43 ¹³⁶
10.6	33.737 ¹³²	45.47 ³¹⁴	38.565 ¹³³	47.05 ³⁶⁹	46.055 ¹⁵⁴	46.07 ¹¹⁸
20.5	33.869 ⁷⁶	48.61 ³⁰⁴	38.698 ⁵⁷	50.74 ³⁶⁶	46.209 ¹⁰⁴	44.89 ⁹⁷
30.5	33.945 ¹⁸	51.65 ²⁸⁶	38.755 ²⁰	54.40 ³⁵⁴	46.313 ⁵³	43.92 ⁷⁵
Feb. 9.5	33.963 ³⁵	54.51 ²⁶¹	38.735 ⁹³	57.94 ³³¹	46.366 ³	43.17 ⁵⁵
19.4	33.928 ⁸⁶	57.12 ²³²	38.642 ¹⁵⁹	61.25 ³⁰³	46.369 ⁴³	42.62 ³³
29.4	33.842 ¹²⁹	59.44 ¹⁹⁷	38.483 ²¹⁶	64.28 ²⁶⁸	46.326 ⁸⁴	42.29 ¹⁴
Mar. 10.4	33.713 ¹⁶³	61.41 ¹⁶¹	38.267 ²⁶⁴	66.96 ²²⁷	46.242 ¹¹⁶	42.15 ²
20.4	33.550 ¹⁸⁹	63.02 ¹²¹	38.003 ³⁰⁰	69.23 ¹⁸²	46.126 ¹⁴⁰	42.17 ¹⁶
30.3	33.361 ²⁰⁶	64.23 ⁸¹	37.703 ³²⁶	71.05 ¹³⁵	45.986 ¹⁵⁵	42.33 ²⁸
Apr. 9.3	33.155 ²¹²	65.04 ³⁹	37.377 ³³⁷	72.40 ⁸⁴	45.831 ¹⁶⁰	42.61 ³⁷
19.3	32.943 ²¹⁰	65.43 ³	37.040 ³³⁹	73.24 ³⁴	45.671 ¹⁵⁷	42.98 ⁴⁵
29.3	32.733 ²⁰²	65.40 ⁴²	36.701 ³³²	73.58 ¹⁷	45.514 ¹⁴⁶	43.43 ⁵²
May 9.2	32.531 ¹⁸⁴	64.98 ⁸²	36.369 ³¹⁴	73.41 ⁶⁷	45.368 ¹³⁰	43.95 ⁵⁷
19.2	32.347 ¹⁶⁴	64.16 ¹¹⁹	36.055 ²⁸⁸	72.74 ¹¹⁶	45.238 ¹⁰⁸	44.52 ⁶²
29.2	32.183 ¹³⁷	62.97 ¹⁵³	35.767 ²⁵⁷	71.58 ¹⁶²	45.130 ⁸³	45.14 ⁶⁵
June 8.1	32.046 ¹⁰⁸	61.44 ¹⁸³	35.510 ²¹⁸	69.96 ²⁰²	45.047 ⁵⁶	45.79 ⁶⁷
18.1	31.938 ⁷⁶	59.61 ²¹⁰	35.292 ¹⁷³	67.94 ²³⁸	44.991 ²⁷	46.46 ⁶⁸
28.1	31.862 ⁴³	57.51 ²²⁹	35.119 ¹²⁴	65.56 ²⁶⁸	44.964 ²	47.14 ⁶⁷
July 8.1	31.819 ⁷	55.22 ²⁴³	34.995 ⁷²	62.88 ²⁹⁰	44.966 ³²	47.81 ⁶³
18.0	31.812 ²⁹	52.79 ²⁴⁹	34.923 ¹⁷	59.98 ³⁰³	44.998 ⁶¹	48.44 ⁵⁸
28.0	31.841 ⁶⁶	50.30 ²⁴⁸	34.906 ⁴⁰	56.95 ³⁰⁸	45.059 ⁸⁹	49.02 ⁴⁹
Aug. 7.0	31.907 ¹⁰³	47.82 ²³⁷	34.946 ⁹⁷	53.87 ³⁰²	45.148 ¹¹⁸	49.51 ³⁸
17.0	32.010 ¹³⁹	45.45 ²¹⁹	35.043 ¹⁵⁶	50.85 ²⁸⁶	45.266 ¹⁴⁴	49.89 ²²
26.9	32.149 ¹⁷⁵	43.26 ¹⁹²	35.199 ²¹³	47.99 ²⁵⁹	45.410 ¹⁷²	50.11 ⁵
Sept. 5.9	32.324 ²¹¹	41.34 ¹⁵⁷	35.412 ²⁶⁷	45.40 ²²³	45.582 ¹⁹⁹	50.16 ¹⁷
15.9	32.535 ²⁴³	39.77 ¹¹⁴	35.679 ³¹⁷	43.17 ¹⁷⁷	45.781 ²²⁴	49.99 ³⁹
25.8	32.778 ²⁷²	38.63 ⁶⁷	35.996 ³⁶²	41.40 ¹²⁴	46.005 ²⁴⁸	49.60 ⁶³
Oct. 5.8	33.050 ²⁹⁹	37.96 ¹³	36.358 ³⁹⁷	40.16 ⁶⁴	46.253 ²⁷⁰	48.97 ⁸⁷
15.8	33.349 ³¹⁸	37.83 ⁴¹	36.755 ⁴²⁴	39.52 ²	46.523 ²⁸⁸	48.10 ¹⁰⁹
25.8	33.667 ³³²	38.24 ⁹⁶	37.179 ⁴⁴⁰	39.50 ⁶⁴	46.811 ³⁰³	47.01 ¹²⁹
Nov. 4.7	33.999 ³³⁷	39.20 ¹⁴⁸	37.619 ⁴⁴²	40.14 ¹²⁷	47.114 ³¹¹	45.72 ¹⁴⁶
14.7	34.336 ³³³	40.68 ¹⁹⁶	38.061 ⁴³¹	41.41 ¹⁸⁷	47.425 ³¹²	44.26 ¹⁵⁸
24.7	34.669 ³¹⁹	42.64 ²³⁸	38.492 ⁴⁰⁵	43.28 ²⁴²	47.737 ³⁰⁵	42.68 ¹⁶²
Dec. 4.7	34.988 ²⁹⁴	45.02 ²⁷¹	38.897 ³⁶⁴	45.70 ²⁸⁷	48.042 ²⁸⁷	41.06 ¹⁶³
14.6	35.282 ²⁶⁰	47.73 ²⁹⁶	39.261 ³¹⁴	48.57 ³²⁴	48.329 ²⁶²	39.43 ¹⁵⁶
24.6	35.542 ²¹⁶	50.69 ³⁰⁹	39.575 ²⁵⁰	51.81 ³⁴⁹	48.591 ²²⁸	37.87 ¹⁴⁴
34.6	35.758	53.78	39.825	55.30	48.819	36.43
Mean Place	32.262	41.99	36.063	46.53	45.190	54.96
Sec δ , Tan δ	1.191	-0.647	1.719	-1.398	1.007	+0.117
$L \alpha, L \delta$	-0.01	-0.3	-0.03	-0.3	0.00	-0.3
$\omega \alpha, \omega \delta$	-0.03	+0.8	-0.06	+0.8	+0.01	+0.8
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 333

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ζ Hydræ. Mag. 3.3		ι Ursæ Majoris. Mag. 3.1		α Cancri. Mag. 4.3	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h 8 ^m 51	^o 6 ['] 13	^h 8 ^m 53	^o 48 ['] 20	^h 8 ^m 54	^o 12 ['] 8
Jan. 0.6	23.360 ²⁰⁷	61.32 ¹⁴²	61.433 ²⁹⁸	13.87 ⁹²	20.570 ²¹⁶	61.70 ¹¹⁰
10.6	23.567 ¹⁶²	59.90 ¹²³	61.731 ²³⁵	14.79 ¹²⁵	20.786 ¹⁷⁰	60.60 ⁸⁹
20.5	23.729 ¹¹²	58.67 ¹⁰²	61.966 ¹⁶⁵	16.04 ¹⁵²	20.956 ¹²⁰	59.71 ⁶⁷
30.5	23.841 ⁶²	57.65 ⁸⁰	62.131 ⁹¹	17.56 ¹⁷²	21.076 ⁶⁸	59.04 ⁴⁴
Feb. 9.5	23.903 ¹²	56.85 ⁵⁸	62.222 ¹⁷	19.28 ¹⁸⁵	21.144 ¹⁸	58.60 ²²
19.5	23.915 ³⁶	56.27 ³⁷	62.239 ⁵³	21.13 ¹⁸⁹	21.162 ³¹	58.38 ⁴
29.4	23.879 ⁷⁶	55.90 ¹⁷	62.186 ¹¹⁵	23.02 ¹⁸⁵	21.131 ⁷³	58.34 ¹⁴
Mar. 10.4	23.803 ¹⁰⁹	55.73 ⁰	62.071 ¹⁶⁸	24.87 ¹⁷¹	21.058 ¹⁰⁸	58.48 ²⁷
20.4	23.694 ¹³⁵	55.73 ¹⁴	61.903 ²⁰⁹	26.58 ¹⁵¹	20.950 ¹³⁴	58.75 ³⁷
30.3	23.559 ¹⁵⁰	55.87 ²⁸	61.694 ²³⁶	28.09 ¹²⁶	20.816 ¹⁵¹	59.12 ⁴⁴
Apr. 9.3	23.409 ¹⁵⁷	56.15 ³⁷	61.458 ²⁵⁰	29.35 ⁹⁵	20.665 ¹⁵⁷	59.56 ⁴⁹
19.3	23.252 ¹⁵⁶	56.52 ⁴⁶	61.208 ²⁵¹	30.30 ⁶³	20.508 ¹⁵⁷	60.05 ⁵¹
29.3	23.096 ¹⁴⁶	56.98 ⁵²	60.957 ²⁴⁰	30.93 ²⁸	20.351 ¹⁴⁹	60.56 ⁵³
May 9.2	22.950 ¹³¹	57.50 ⁵⁸	60.717 ²¹⁹	31.21 ⁶	20.202 ¹³²	61.09 ⁵²
19.2	22.819 ¹¹¹	58.08 ⁶³	60.498 ¹⁹⁰	31.15 ⁴⁰	20.070 ¹¹³	61.61 ⁵⁰
29.2	22.708 ⁸⁸	58.71 ⁶⁶	60.308 ¹⁵⁴	30.75 ⁷²	19.957 ⁸⁹	62.11 ⁴⁹
June 8.2	22.620 ⁶¹	59.37 ⁶⁹	60.154 ¹¹⁴	30.03 ¹⁰⁰	19.868 ⁶²	62.60 ⁴⁶
18.1	22.559 ³³	60.06 ⁶⁸	60.040 ⁷⁰	29.03 ¹²⁵	19.806 ³⁴	63.06 ⁴²
28.1	22.526 ⁵	60.74 ⁶⁸	59.970 ²⁵	27.78 ¹⁴⁸	19.772 ⁵	63.48 ³⁸
July 8.1	22.521 ²⁴	61.42 ⁶⁵	59.945 ²¹	26.30 ¹⁶⁶	19.767 ²⁵	63.86 ³²
18.0	22.545 ⁵³	62.07 ⁵⁸	59.966 ⁶⁷	24.64 ¹⁸¹	19.792 ⁵³	64.18 ²⁴
28.0	22.598 ⁸¹	62.65 ⁵⁰	60.033 ¹¹²	22.83 ¹⁹³	19.845 ⁸³	64.42 ¹⁴
Aug. 7.0	22.679 ¹⁰⁹	63.15 ³⁸	60.145 ¹⁵⁵	20.90 ²⁰¹	19.928 ¹¹⁰	64.56 ²
17.0	22.788 ¹³⁷	63.53 ²³	60.300 ¹⁹⁸	18.89 ²⁰⁶	20.038 ¹³⁹	64.58 ¹²
26.9	22.925 ¹⁶⁵	63.76 ⁴	60.498 ²³⁸	16.83 ²⁰⁸	20.177 ¹⁶⁷	64.46 ²⁸
Sept. 5.9	23.090 ¹⁹²	63.80 ¹⁶	60.736 ²⁷⁹	14.75 ²⁰⁵	20.344 ¹⁹⁴	64.18 ⁴⁶
15.9	23.282 ²¹⁸	63.64 ³⁹	61.015 ³¹⁶	12.70 ²⁰¹	20.538 ²²¹	63.72 ⁶⁵
25.9	23.500 ²⁴³	63.25 ⁶³	61.331 ³⁵⁰	10.69 ¹⁹⁰	20.759 ²⁴⁷	63.07 ⁸⁵
Oct. 5.8	23.743 ²⁶⁶	62.62 ⁸⁸	61.681 ³⁸²	8.79 ¹⁷⁶	21.006 ²⁷⁰	62.22 ¹⁰⁴
15.8	24.009 ²⁸⁶	61.74 ¹¹¹	62.063 ⁴⁰⁹	7.03 ¹⁵⁹	21.276 ²⁹⁰	61.18 ¹²²
25.8	24.295 ³⁰¹	60.63 ¹³¹	62.472 ⁴³⁰	5.44 ¹³⁶	21.566 ³⁰⁷	59.96 ¹³⁶
Nov. 4.7	24.596 ³¹¹	59.32 ¹⁴⁹	62.902 ⁴⁴⁴	4.08 ¹⁰⁹	21.873 ³¹⁷	58.60 ¹⁴⁷
14.7	24.907 ³¹⁴	57.83 ¹⁶⁰	63.346 ⁴⁴⁶	2.99 ⁷⁸	22.190 ³²¹	57.13 ¹⁵³
24.7	25.221 ³⁰⁷	56.23 ¹⁶⁷	63.792 ⁴³⁷	2.21 ⁴³	22.511 ³¹⁵	55.60 ¹⁵²
Dec. 4.7	25.528 ²⁹²	54.56 ¹⁶⁷	64.229 ⁴¹⁷	1.78 ⁵	22.826 ³⁰⁰	54.08 ¹⁴⁷
14.6	25.820 ²⁶⁷	52.89 ¹⁶¹	64.646 ³⁸⁴	1.73 ³³	23.126 ²⁷⁶	52.61 ¹³⁷
24.6	26.087 ²³⁴	51.28 ¹⁵¹	65.030 ³³⁷	2.06 ⁷⁰	23.402 ²⁴³	51.24 ¹²⁰
34.6	26.321	49.77	65.367	2.76	23.645	50.04
Mean Place	22.721	68.52	60.800	28.01	19.981	69.99
Sec δ, Tan δ	1.006	+0.109	1.504	+1.124	1.023	+0.215
L α, L δ	0.00	-0.3	+0.02	-0.3	0.00	-0.3
ω α, ω δ	0.00	+0.7	+0.05	+0.7	+0.01	+0.7
AUTHORITY	A. E.		A. E.		A. F.	

334 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	κ Cancrī. Mag. 5·1		ξ Cancrī. Mag. 5·2		λ Argūs. Mag. 2·2	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. S.
	h m 9 3	° ′ 10 58	h m 9 4	° ′ 22 20	h m 9 5	° ′ 43 7
Jan. 0·6	38·551 ²²²	21·84 ¹²⁰	60·133 ²³⁸	63·65 ⁵⁸	13·563 ²²²	27·81 ³³⁷
10·6	38·773 ¹⁷⁸	20·64 ⁹⁹	60·371 ¹⁹²	63·07 ³¹	13·785 ¹⁶³	31·18 ³⁴⁵
20·6	38·951 ¹²⁸	19·65 ⁷⁷	60·563 ¹³⁹	62·76 ⁶	13·948 ¹⁰¹	34·63 ³⁴²
30·5	39·079 ⁷⁷	18·88 ⁵²	60·702 ⁸⁶	62·70 ¹⁹	14·049 ³⁸	38·05 ³³⁰
Feb. 9·5	39·156 ²⁶	18·36 ³¹	60·788 ³¹	62·89 ³⁸	14·087 ²³	41·35 ³¹¹
19·5	39·182 ²³	18·05 ¹⁰	60·819 ²⁰	63·27 ⁵⁶	14·064 ⁸⁰	44·46 ²⁸⁴
29·4	39·159 ⁶⁵	17·95 ⁷	60·799 ⁶⁷	63·83 ⁶⁸	13·984 ¹³⁰	47·30 ²⁵¹
Mar. 10·4	39·094 ¹⁰¹	18·02 ²³	60·732 ¹⁰⁵	64·51 ⁷⁵	13·854 ¹⁷³	49·81 ²¹⁵
20·4	38·993 ¹²⁸	18·25 ³³	60·627 ¹³⁴	65·26 ⁷⁸	13·681 ²⁰⁵	51·96 ¹⁷⁴
30·4	38·865 ¹⁴⁵	18·58 ⁴³	60·493 ¹⁵⁴	66·04 ⁷⁶	13·476 ²²⁷	53·70 ¹³¹
Apr. 9·3	38·720 ¹⁵⁴	19·01 ⁴⁸	60·339 ¹⁶⁴	66·80 ⁷²	13·249 ²⁴²	55·01 ⁸⁵
19·3	38·566 ¹⁵⁵	19·49 ⁵²	60·175 ¹⁶⁵	67·52 ⁶³	13·007 ²⁴⁶	55·86 ⁴⁰
29·3	38·411 ¹⁴⁷	20·01 ⁵³	60·010 ¹⁵⁸	68·15 ⁵⁴	12·761 ²⁴²	56·26 ⁵
May 9·3	38·264 ¹³⁴	20·54 ⁵⁵	59·852 ¹⁴³	68·69 ⁴³	12·519 ²³¹	56·21 ⁵²
19·2	38·130 ¹¹⁴	21·09 ⁵⁴	59·709 ¹²³	69·12 ³²	12·288 ²¹³	55·69 ⁹⁶
29·2	38·016 ⁹³	21·63 ⁵³	59·586 ⁹⁹	69·44 ²⁰	12·075 ¹⁹⁰	54·73 ¹³⁷
June 8·2	37·923 ⁶⁷	22·16 ⁵¹	59·487 ⁷²	69·64 ⁹	11·885 ¹⁶²	53·36 ¹⁷⁴
18·1	37·856 ⁴¹	22·67 ⁴⁷	59·415 ⁴³	69·73 ³	11·723 ¹³⁰	51·62 ²⁰⁸
28·1	37·815 ¹²	23·14 ⁴³	59·372 ¹⁴	69·70 ¹⁴	11·593 ⁹⁵	49·54 ²³⁶
July 8·1	37·803 ¹⁵	23·57 ³⁷	59·358 ¹⁷	69·56 ²⁵	11·498 ⁵⁶	47·18 ²⁵⁷
18·1	37·818 ⁴⁵	23·94 ²⁹	59·375 ⁴⁸	69·31 ³⁷	11·442 ¹⁶	44·61 ²⁷¹
28·0	37·863 ⁷²	24·23 ¹⁹	59·423 ⁷⁸	68·94 ⁴⁸	11·426 ²⁶	41·90 ²⁷⁵
Aug. 7·0	37·935 ¹⁰⁰	24·42 ⁸	59·501 ¹⁰⁷	68·46 ⁶⁰	11·452 ⁷⁰	39·15 ²⁷²
17·0	38·035 ¹²⁸	24·50 ⁸	59·608 ¹³⁸	67·86 ⁷³	11·522 ¹¹⁵	36·43 ²⁵⁸
26·9	38·163 ¹⁵⁸	24·42 ²⁴	59·746 ¹⁶⁷	67·13 ⁸⁷	11·637 ¹⁵⁹	33·85 ²³⁵
Sept. 5·9	38·321 ¹⁸⁵	24·18 ⁴³	59·913 ¹⁹⁶	66·26 ¹⁰⁰	11·796 ²⁰³	31·50 ²⁰²
15·9	38·506 ²¹²	23·75 ⁶³	60·109 ²²⁵	65·26 ¹¹³	11·999 ²⁴⁵	29·48 ¹⁶²
25·9	38·718 ²³⁹	23·12 ⁸⁴	60·334 ²⁵²	64·13 ¹²⁵	12·244 ²⁸⁴	27·86 ¹¹³
Oct. 5·8	38·957 ²⁶⁴	22·28 ¹⁰⁴	60·586 ²⁸⁰	62·88 ¹³⁵	12·528 ³¹⁹	26·73 ⁵⁸
15·8	39·221 ²⁸⁶	21·24 ¹²⁴	60·866 ³⁰²	61·53 ¹⁴⁴	12·847 ³⁴⁷	26·15 ⁰
25·8	39·507 ³⁰³	20·00 ¹³⁹	61·168 ³²¹	60·09 ¹⁴⁷	13·194 ³⁶⁶	26·15 ⁵⁹
Nov. 4·8	39·810 ³¹⁶	18·61 ¹⁵¹	61·489 ³³³	58·62 ¹⁴⁷	13·560 ³⁷⁶	26·74 ¹¹⁹
14·7	40·126 ³²¹	17·10 ¹⁵⁸	61·822 ³⁴⁰	57·15 ¹⁴²	13·936 ³⁷⁴	27·93 ¹⁷⁵
24·7	40·447 ³¹⁶	15·52 ¹⁶⁰	62·162 ³³⁶	55·73 ¹³¹	14·310 ³⁶²	29·68 ²²⁶
Dec. 4·7	40·763 ³⁰⁴	13·92 ¹⁵⁶	62·498 ³²³	54·42 ¹¹⁶	14·672 ³³⁸	31·94 ²⁶⁸
14·6	41·067 ²⁸¹	12·36 ¹⁴⁵	62·821 ²⁹⁹	53·26 ⁹⁶	15·010 ³⁰¹	34·62 ³⁰²
24·6	41·348 ²⁴⁸	10·91 ¹³¹	63·120 ²⁶⁷	52·30 ⁷³	15·311 ²⁵⁵	37·64 ³²⁸
34·6	41·596	9·60	63·387	51·57	15·566	40·92
Mean Place	37·989	29·70	59·630	73·77	11·995	31·23
Sec δ, Tan δ	1·019	+0·194	1·081	+0·411	1·370	-0·937
L α, L δ	0·00	-0·3	+0·01	-0·3	-0·02	-0·3
ω α, ω δ	+0·01	+0·7	+0·02	+0·7	-0·04	+0·7

A. E.

APPARENT PLACES OF STARS, 1924. 335

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Argüs. Mag. 1.8		83 Cancr. Mag. 6.6		ι Argüs. Mag. 2.3	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. S.
	h m 9 12	$69^{\circ} 24'$	h m 9 14	$18^{\circ} 1'$	h m 9 15	$58^{\circ} 57'$
Jan. 0.6	26.41 ³⁵	6.78 ³⁵³	45.078 ²³⁹	32.94 ⁸⁶	5.846 ²⁷⁷	14.52 ³⁵²
10.6	26.76 ²³	10.31 ³⁷⁴	45.317 ¹⁹⁶	32.08 ⁶²	6.123 ¹⁹⁹	18.04 ³⁷⁰
20.6	26.99 ¹¹	14.05 ³⁸²	45.513 ¹⁴⁵	31.46 ³⁷	6.322 ¹¹⁵	21.74 ³⁷⁵
30.5	27.10 ¹	17.87 ³⁸¹	45.658 ⁹³	31.09 ¹²	6.437 ³⁰	25.49 ³⁷⁰
Feb. 9.5	27.09 ¹²	21.68 ³⁶⁹	45.751 ³⁹	30.97 ¹¹	6.467 ⁵¹	29.19 ³⁵⁶
19.5	26.97 ²³	25.37 ³⁴⁹	45.790 ¹¹	31.08 ³⁰	6.416 ¹²⁸	32.75 ³³⁴
29.5	26.74 ³²	28.86 ³²¹	45.779 ⁵⁵	31.38 ⁴⁶	6.288 ¹⁹⁵	36.09 ³⁰⁴
Mar. 10.4	26.42 ⁴¹	32.07 ²⁸⁷	45.724 ⁹⁴	31.84 ⁵⁶	6.093 ²⁵⁴	39.13 ²⁶⁹
20.4	26.01 ⁴⁷	34.94 ²⁴⁵	45.630 ¹²⁴	32.40 ⁶⁴	5.839 ³⁰¹	41.82 ²²⁷
30.4	25.54 ⁵³	37.39 ²⁰¹	45.506 ¹⁴³	33.04 ⁶⁷	5.538 ³³⁷	44.09 ¹⁸³
Apr. 9.3	25.01 ⁵⁶	39.40 ¹⁵²	45.363 ¹⁵⁶	33.71 ⁶⁶	5.201 ³⁶⁰	45.92 ¹³⁴
19.3	24.45 ⁵⁹	40.92 ¹⁰⁰	45.207 ¹⁵⁷	34.37 ⁶³	4.841 ³⁷³	47.26 ⁸⁴
29.3	23.86 ⁵⁸	41.92 ⁴⁷	45.050 ¹⁵²	35.00 ⁵⁷	4.468 ³⁷⁴	48.10 ³²
May 9.3	23.28 ⁵⁸	42.39 ⁸	44.898 ¹⁴⁰	35.57 ⁵¹	4.094 ³⁶⁶	48.42 ²⁰
19.2	22.70 ⁵⁶	42.31 ⁶⁰	44.758 ¹²²	36.08 ⁴³	3.728 ³⁴⁸	48.22 ⁷⁰
29.2	22.14 ⁵²	41.71 ¹¹²	44.636 ¹⁰⁰	36.51 ³⁵	3.380 ³²²	47.52 ¹²⁰
June 8.2	21.62 ⁴⁸	40.59 ¹⁶²	44.536 ⁷⁶	36.86 ²⁷	3.058 ²⁸⁷	46.32 ¹⁶⁶
18.2	21.14 ⁴¹	38.97 ²⁰⁵	44.460 ⁵⁰	37.13 ¹⁷	2.771 ²⁴⁶	44.66 ²⁰⁸
28.1	20.73 ³⁴	36.92 ²⁴⁵	44.410 ²¹	37.30 ⁷	2.525 ¹⁹⁹	42.58 ²⁴³
July 8.1	20.39 ²⁶	34.47 ²⁷⁷	44.389 ⁸	37.37 ²	2.326 ¹⁴⁶	40.15 ²⁷³
18.1	20.13 ¹⁷	31.70 ³⁰⁰	44.397 ³⁶	37.35 ¹³	2.180 ⁸⁷	37.42 ²⁹⁴
28.0	19.96 ⁷	28.70 ³¹⁶	44.433 ⁶⁵	37.22 ²⁶	2.093 ²⁴	34.48 ³⁰⁶
Aug. 7.0	19.89 ²	25.54 ³²¹	44.498 ⁹⁴	36.96 ³⁸	2.069 ⁴¹	31.42 ³⁰⁸
17.0	19.91 ¹³	22.33 ³¹⁵	44.592 ¹²³	36.58 ⁵²	2.110 ¹⁰⁸	28.34 ³⁰¹
27.0	20.04 ²⁴	19.18 ²⁹⁷	44.715 ¹⁵³	36.06 ⁶⁶	2.218 ¹⁷⁶	25.33 ²⁸¹
Sept. 5.9	20.28 ³³	16.21 ²⁷⁰	44.868 ¹⁸²	35.40 ⁸³	2.394 ²⁴³	22.52 ²⁵²
15.9	20.61 ⁴³	13.51 ²³¹	45.050 ²¹¹	34.57 ⁹⁹	2.637 ³⁰⁷	20.00 ²¹³
25.9	21.04 ⁵¹	11.20 ¹⁸³	45.261 ²³⁹	33.58 ¹¹⁵	2.944 ³⁶⁴	17.87 ¹⁶⁴
Oct. 5.9	21.55 ⁵⁸	9.37 ¹²⁷	45.500 ²⁶⁶	32.43 ¹²⁹	3.308 ⁴¹⁵	16.23 ¹⁰⁸
15.8	22.13 ⁶⁴	8.10 ⁶⁵	45.766 ²⁹⁰	31.14 ¹⁴²	3.723 ⁴⁵⁵	15.15 ⁴⁶
25.8	22.77 ⁶⁷	7.45 ¹	46.056 ³¹⁰	29.72 ¹⁵⁰	4.178 ⁴⁸¹	14.69 ¹⁵
Nov. 4.8	23.44 ⁶⁸	7.46 ⁶⁸	46.366 ³²⁵	28.22 ¹⁵⁵	4.659 ⁴⁹⁴	14.88 ⁸⁴
14.7	24.12 ⁶⁷	8.14 ¹³³	46.691 ³³¹	26.67 ¹⁵⁵	5.153 ⁴⁹²	15.72 ¹⁴
24.7	24.79 ⁶⁴	9.47 ¹⁹⁶	47.022 ³³⁰	25.12 ¹⁴⁹	5.645 ⁴⁷¹	17.19 ²⁰
Dec. 4.7	25.43 ⁵⁸	11.43 ²⁵⁰	47.352 ³¹⁸	23.63 ¹³⁷	6.116 ⁴³⁶	19.26 ²⁵
14.7	26.01 ⁵⁰	13.93 ²⁹⁸	47.670 ²⁹⁷	22.26 ¹²²	6.552 ³⁸⁵	21.84 ³⁰
24.6	26.51 ⁴⁰	16.91 ³³⁵	47.967 ²⁶⁷	21.04 ¹⁰⁰	6.937 ³²⁵	24.87 ³⁴
34.6	26.91	20.26	48.234	20.04	7.262	28.27
Mean Place	22.34	14.59	44.601	42.06	3.311	21.32
Sec δ , Tan δ	2.842	-2.661	1.052	+0.325	1.939	-1.661
L α , L δ	-0.05	-0.3	+0.01	-0.3	-0.03	-0.3
ω α , ω δ	-0.13	+0.7	+0.02	+0.7	-0.08	+0.7
AUTHORITY	A. E.		A. E.		A. N.	

336 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	40 Lyncis. Mag. 3.3		h Mali. Mag. 4.9		κ Argus. Mag. 2.6	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m 9 16	[°] ['] 34 42	^h ^m 9 18	[°] ['] 25 38	^h ^m 9 19	[°] ['] 54 41
Jan. 0.6	26.268 ²⁷⁴	41.14 ³	8.429 ²²¹	29.39 ²⁸⁸	47.654 ²⁶⁸	2.72 ³⁴⁸
10.6	26.542 ²²⁴	41.17 ³⁶	8.650 ¹⁷⁴	32.27 ²⁸⁷	47.922 ¹⁹⁸	6.20 ³⁶⁴
20.6	26.766 ¹⁶⁸	41.53 ⁶⁶	8.824 ¹²³	35.14 ²⁷⁹	48.120 ¹²³	9.84 ³⁶⁹
30.5	26.934 ¹⁰⁷	42.19 ⁹¹	8.947 ⁷⁰	37.93 ²⁶⁴	48.243 ⁴⁷	13.53 ³⁶⁴
Feb. 9.5	27.041 ⁴⁷	43.10 ¹¹²	9.017 ¹⁷	40.57 ²⁴³	48.290 ²⁸	17.17 ³⁵⁰
19.5	27.088 ¹¹	44.22 ¹²⁵	9.034 ³³	43.00 ²¹⁶	48.262 ⁹⁷	20.67 ³²⁷
29.5	27.077 ⁶⁵	45.47 ¹³³	9.001 ⁷⁷	45.16 ¹⁸⁷	48.165 ¹⁵⁹	23.94 ²⁹⁷
Mar. 10.4	27.012 ¹⁰⁹	46.80 ¹³³	8.924 ¹¹²	47.03 ¹⁵⁵	48.006 ²¹³	26.91 ²⁶²
20.4	26.903 ¹⁴⁴	48.13 ¹²⁷	8.812 ¹⁴³	48.58 ¹²⁰	47.793 ²⁵⁶	29.53 ²²¹
30.4	26.759 ¹⁷⁰	49.40 ¹¹⁶	8.669 ¹⁶²	49.78 ⁸⁶	47.537 ²⁸⁹	31.74 ¹⁷⁹
Apr. 9.3	26.589 ¹⁸⁴	50.56 ⁹⁹	8.507 ¹⁷⁵	50.64 ⁵⁰	47.248 ³¹⁰	33.53 ¹²⁹
19.3	26.405 ¹⁸⁸	51.55 ⁸⁰	8.332 ¹⁷⁸	51.14 ¹⁵	46.938 ³²²	34.82 ⁸¹
29.3	26.217 ¹⁸³	52.35 ⁵⁷	8.154 ¹⁷⁶	51.29 ¹⁹	46.616 ³²⁴	35.63 ³⁰
May 9.3	26.034 ¹⁷⁰	52.92 ³⁵	7.978 ¹⁶⁵	51.10 ⁵⁵	46.292 ³¹⁶	35.93 ²⁰
19.2	25.864 ¹⁵⁰	53.27 ¹¹	7.813 ¹⁵²	50.55 ⁸⁶	45.976 ²⁹⁹	35.73 ⁷⁰
29.2	25.714 ¹²⁵	53.38 ¹²	7.661 ¹³²	49.69 ¹¹⁶	45.677 ²⁷⁷	35.03 ¹¹⁷
June 8.2	25.589 ⁹⁶	53.26 ³⁴	7.529 ¹¹⁰	48.53 ¹⁴⁴	45.400 ²⁴⁸	33.86 ¹⁶³
18.2	25.493 ⁶⁴	52.92 ⁵⁵	7.419 ⁸⁵	47.09 ¹⁶⁷	45.152 ²¹¹	32.23 ²⁰²
28.1	25.429 ³¹	52.37 ⁷⁴	7.334 ⁵⁸	45.42 ¹⁸⁷	44.941 ¹⁶⁹	30.21 ²³⁸
July 8.1	25.398 ⁴	51.63 ⁹²	7.276 ²⁹	43.55 ¹⁹⁹	44.772 ¹²³	27.83 ²⁶⁵
18.1	25.402 ³⁷	50.71 ¹⁰⁷	7.247 ¹	41.56 ²⁰⁸	44.649 ⁷²	25.18 ²⁸⁶
28.0	25.439 ⁷²	49.64 ¹²²	7.248 ³²	39.48 ²⁰⁹	44.577 ¹⁸	22.32 ²⁹⁸
Aug. 7.0	25.511 ¹⁰⁶	48.42 ¹³⁶	7.280 ⁶⁶	37.39 ²⁰²	44.559 ³⁹	19.34 ²⁹⁹
17.0	25.617 ¹⁴⁰	47.06 ¹⁴⁶	7.346 ⁹⁹	35.37 ¹⁸⁸	44.598 ⁹⁸	16.35 ²⁹²
27.0	25.757 ¹⁷³	45.60 ¹⁵⁶	7.445 ¹³⁴	33.49 ¹⁶⁶	44.696 ¹⁵⁹	13.43 ²⁷³
Sept. 5.9	25.930 ²⁰⁷	44.04 ¹⁶⁵	7.579 ¹⁶⁸	31.83 ¹³⁷	44.855 ²¹⁷	10.70 ²⁴⁴
15.9	26.137 ²³⁹	42.39 ¹⁷⁰	7.747 ²⁰²	30.46 ¹⁰¹	45.072 ²⁷⁴	8.26 ²⁰⁴
25.9	26.376 ²⁷²	40.69 ¹⁷³	7.949 ²³⁵	29.45 ⁶⁰	45.346 ³²⁷	6.22 ¹⁵⁶
Oct. 5.9	26.648 ³⁰¹	38.96 ¹⁷³	8.184 ²⁶⁵	28.85 ¹³	45.673 ³⁷³	4.66 ¹⁰³
15.8	26.949 ³²⁹	37.23 ¹⁷⁰	8.449 ²⁹¹	28.72 ³⁵	46.046 ⁴¹⁰	3.63 ⁴¹
25.8	27.278 ³⁵¹	35.53 ¹⁶¹	8.740 ³¹²	29.07 ⁸⁵	46.456 ⁴³⁷	3.22 ²¹
Nov. 4.8	27.629 ³⁶⁸	33.92 ¹⁴⁸	9.052 ³²⁴	29.92 ¹³²	46.893 ⁴⁵¹	3.43 ⁸⁶
14.7	27.997 ³⁷⁵	32.44 ¹³¹	9.376 ³²⁹	31.24 ¹⁷⁶	47.344 ⁴⁵²	4.29 ¹⁴⁹
24.7	28.372 ³⁷⁴	31.13 ¹⁰⁷	9.705 ³²⁵	33.00 ²¹⁴	47.796 ⁴³⁶	5.78 ²⁰⁵
Dec. 4.7	28.746 ³⁶²	30.06 ⁷⁹	10.030 ³⁰⁸	35.14 ²⁴⁶	48.232 ⁴⁰⁷	7.83 ²⁵⁷
14.7	29.108 ³³⁸	29.27 ⁴⁹	10.338 ²⁸⁴	37.60 ²⁶⁹	48.639 ³⁶³	10.40 ³⁰⁰
24.6	29.446 ³⁰⁸	28.78 ¹⁷	10.622 ²⁴⁸	40.29 ²⁸²	49.002 ³⁰⁷	13.40 ³³³
34.6	29.754	28.61	10.870	43.11	49.309	16.73
Mean Place	25.839	53.50	7.444	30.32	45.504	9.36
Sec δ, Tan δ	1.217	+0.693	1.109	-0.480	1.730	-1.412
L α, L δ	+0.01	-0.3	-0.01	-0.3	-0.02	-0.3
ω α, ω δ	+0.03	+0.7	-0.02	+0.7	-0.07	+0.7
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 337

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Hydræ. Mag. 2.2		ψ Argūs. Mag. 3.6		θ Ursæ Majoris. Mag. 3.3	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	^h ^m 9 23	⁸ ¹⁹	^h ^m 9 27	⁴⁰ ⁷	^h ^m 9 27	⁵² ⁰
Jan. . 0.6	51.859 ²²⁶	44.90 ²²⁰	43.556 ²⁴⁴	56.91 ³²⁴	47.533 ³⁵⁵	73.75 ⁸²
10.6	52.085 ¹⁸³	47.10 ²¹⁰	43.800 ¹⁹⁰	60.15 ³³⁴	47.888 ²⁹⁴	74.57 ¹²²
20.6	52.268 ¹³⁵	49.20 ¹⁹⁴	43.990 ¹³²	63.49 ³³³	48.182 ²²²	75.79 ¹⁵⁶
30.5	52.403 ⁸⁶	51.14 ¹⁷⁵	44.122 ⁷²	66.82 ³²⁵	48.404 ¹⁴⁵	77.35 ¹⁸³
Feb. 9.5	52.489 ³⁶	52.89 ¹⁵¹	44.194 ¹³	70.07 ³⁰⁷	48.549 ⁶⁷	79.18 ²⁰³
19.5	52.525 ¹¹	54.40 ¹²⁶	44.207 ⁴⁴	73.14 ²⁸⁵	48.616 ¹¹	81.21 ²¹¹
29.5	52.514 ⁵²	55.66 ¹⁰⁰	44.163 ⁹³	75.99 ²⁵⁴	48.605 ⁸¹	83.32 ²¹³
Mar. 10.4	52.462 ⁸⁹	56.66 ⁷⁵	44.070 ¹³⁶	78.53 ²²⁰	48.524 ¹⁴⁴	85.45 ²⁰³
20.4	52.373 ¹¹⁶	57.41 ⁴⁹	43.934 ¹⁷¹	80.73 ¹⁸²	48.380 ¹⁹⁴	87.48 ¹⁸⁵
30.4	52.257 ¹³⁶	57.90 ²⁵	43.763 ¹⁹⁶	82.55 ¹⁴²	48.186 ²³²	89.33 ¹⁶¹
Apr. 9.3	52.121 ¹⁴⁸	58.15 ¹	43.567 ²¹³	83.97 ⁹⁹	47.954 ²⁵⁶	90.94 ¹³⁰
19.3	51.973 ¹⁵¹	58.16 ²⁰	43.354 ²²¹	84.96 ⁵⁶	47.698 ²⁶⁸	92.24 ⁹⁶
29.3	51.822 ¹⁴⁸	57.96 ⁴⁰	43.133 ²²¹	85.52 ¹²	47.430 ²⁶⁵	93.20 ⁵⁷
May 9.3	51.674 ¹³⁹	57.56 ⁵⁹	42.912 ²¹⁵	85.64 ³²	47.165 ²⁵³	93.77 ²⁰
19.2	51.535 ¹²⁵	56.97 ⁷⁷	42.697 ²⁰¹	85.32 ⁷³	46.912 ²³⁰	93.97 ²⁰
29.2	51.410 ¹⁰⁷	56.20 ⁹²	42.496 ¹⁸⁴	84.59 ¹¹⁴	46.682 ²⁰¹	93.77 ⁵⁷
June 8.2	51.303 ⁸⁶	55.28 ¹⁰⁶	42.312 ¹⁶⁰	83.45 ¹⁵²	46.481 ¹⁶³	93.20 ⁹¹
18.2	51.217 ⁶²	54.22 ¹¹⁷	42.152 ¹³⁴	81.93 ¹⁸⁵	46.318 ¹²³	92.29 ¹²⁴
28.1	51.155 ³⁹	53.05 ¹²⁴	42.018 ¹⁰⁴	80.08 ²¹⁴	46.195 ⁸⁰	91.05 ¹⁵³
July 8.1	51.116 ¹²	51.81 ¹²⁹	41.914 ⁷⁰	77.94 ²³⁶	46.115 ³³	89.52 ¹⁷⁷
18.1	51.104 ¹⁴	50.52 ¹²⁸	41.844 ³⁶	75.58 ²⁵²	46.082 ¹⁴	87.75 ¹⁹⁹
28.0	51.118 ⁴²	49.24 ¹²⁴	41.808 ⁴	73.06 ²⁵⁹	46.096 ⁶⁰	85.76 ²¹⁷
Aug. 7.0	51.160 ⁷⁰	48.00 ¹¹³	41.812 ⁴⁴	70.47 ²⁵⁸	46.156 ¹⁰⁸	83.59 ²²⁹
17.0	51.230 ¹⁰⁰	46.87 ⁹⁹	41.856 ⁸⁷	67.89 ²⁴⁹	46.264 ¹⁵⁵	81.30 ²³⁹
27.0	51.330 ¹²⁹	45.88 ⁷⁹	41.943 ¹²⁹	65.40 ²²⁸	46.419 ²⁰²	78.91 ²⁴⁴
Sept. 5.9	51.459 ¹⁵⁹	45.09 ⁵³	42.072 ¹⁷²	63.12 ¹⁹⁹	46.621 ²⁴⁸	76.47 ²⁴⁵
15.9	51.618 ¹⁹⁰	44.56 ²⁴	42.244 ²¹⁵	61.13 ¹⁶³	46.869 ²⁹²	74.02 ²⁴¹
25.9	51.808 ²¹⁹	44.32 ¹⁰	42.459 ²⁵⁶	59.50 ¹¹⁹	47.161 ³³⁵	71.61 ²³²
Oct. 5.9	52.027 ²⁴⁶	44.42 ⁴⁵	42.715 ²⁹²	58.31 ⁶⁷	47.496 ³⁷⁵	69.29 ²²¹
15.8	52.273 ²⁷²	44.87 ⁸⁰	43.007 ³²⁴	57.64 ¹¹	47.871 ⁴¹¹	67.08 ²⁰¹
25.8	52.545 ²⁹²	45.67 ¹¹⁵	43.331 ³⁴⁸	57.53 ⁴⁶	48.282 ⁴⁴¹	65.07 ¹⁷⁷
Nov. 4.8	52.837 ³⁰⁷	46.82 ¹⁴⁸	43.679 ³⁶³	57.99 ¹⁰³	48.723 ⁴⁶⁴	63.30 ¹⁴⁸
14.7	53.144 ³¹⁴	48.30 ¹⁷⁶	44.042 ³⁶⁹	59.02 ¹⁵⁹	49.187 ⁴⁷⁵	61.82 ¹¹²
24.7	53.458 ³¹²	50.06 ¹⁹⁹	44.411 ³⁶²	60.61 ²⁰⁹	49.662 ⁴⁷⁶	60.70 ⁷⁵
Dec. 4.7	53.770 ³⁰²	52.05 ²¹³	44.773 ³⁴⁴	62.70 ²⁵²	50.138 ⁴⁶²	59.95 ³²
14.7	54.072 ²⁸⁰	54.18 ²²³	45.117 ³¹⁴	65.22 ²⁸⁷	50.600 ⁴³⁴	59.63 ¹²
24.6	54.352 ²⁵⁰	56.41 ²²³	45.431 ²⁷⁴	68.09 ³¹⁴	51.034 ³⁹²	59.75 ⁵⁵
34.6.	54.602	58.64	45.705	71.23	51.426	60.30
Mean Place	51.191	42.13	42.200	61.62	47.106	88.90
Sec δ , Tan δ	1.011	-0.146	1.308	-0.843	1.625	+1.281
L α , L δ	0.00	-0.3	-0.01	-0.3	+0.02	-0.3
ω α , ω δ	-0.01	+0.6	-0.04	+0.6	+0.07	+0.6
AUTHORITY	A. E.		A. E.		A. E.	

338 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ξ Leonis. Mag. 5.1		N Velorum. Mag. 3.0		κ Hydræ. Mag. 5.0	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.
	h m 9 27 s	° ′ 11 37	h m 9 28 s	° ′ 56 41	h m 9 36 s	° ′ 13 59
Jan. 0.6	51.560 ²⁴²	66.44 ¹²⁶	57.012 ²⁹¹	47.00 ³⁴⁵	40.464 ²³⁵	12.89 ²⁴⁴
10.6	51.802 ²⁰⁰	65.18 ¹⁰⁴	57.303 ²¹⁸	50.45 ³⁶⁴	40.699 ¹⁹³	15.33 ²³⁸
20.6	52.002 ¹⁵²	64.14 ⁸⁰	57.521 ¹⁴¹	54.09 ³⁷¹	40.892 ¹⁴⁶	17.71 ²²⁶
30.5	52.154 ¹⁰²	63.34 ⁵⁴	57.662 ⁶¹	57.80 ³⁶⁸	41.038 ⁹⁶	19.97 ²⁰⁸
Feb. 9.5	52.256 ⁵⁰	62.80 ³⁰	57.723 ¹⁶	61.48 ³⁵⁷	41.134 ⁴⁶	22.05 ¹⁸⁶
19.5	52.306 ¹	62.50 ⁹	57.707 ⁹⁰	65.05 ³³⁶	41.180 ¹	23.91 ¹⁶¹
29.5	52.307 ⁴³	62.41 ¹¹	57.617 ¹⁵⁵	68.41 ³⁰⁹	41.179 ⁴⁵	25.52 ¹³⁴
Mar. 10.4	52.264 ⁸⁰	62.52 ²⁷	57.462 ²¹²	71.50 ²⁷⁴	41.134 ⁸¹	26.86 ¹⁰⁷
20.4	52.184 ¹¹¹	62.79 ³⁹	57.250 ²⁵⁹	74.24 ²³⁶	41.053 ¹¹¹	27.93 ⁷⁸
30.4	52.073 ¹³²	63.18 ⁴⁸	56.991 ²⁹⁶	76.60 ¹⁹²	40.942 ¹³³	28.71 ⁵¹
Apr. 9.3	51.941 ¹⁴⁴	63.66 ⁵⁵	56.695 ³²¹	78.52 ¹⁴⁶	40.809 ¹⁴⁶	29.22 ²⁴
19.3	51.797 ¹⁴⁹	64.21 ⁵⁷	56.374 ³³⁵	79.98 ⁹⁶	40.663 ¹⁵¹	29.46 ³
29.3	51.648 ¹⁴⁵	64.78 ⁵⁸	56.039 ³⁴⁰	80.94 ⁴⁶	40.512 ¹⁵¹	29.43 ²⁷
May 9.3	51.503 ¹³⁵	65.36 ⁵⁸	55.699 ³³⁵	81.40 ⁵	40.361 ¹⁴⁴	29.16 ⁵²
19.2	51.368 ¹²²	65.94 ⁵⁶	55.364 ³²²	81.35 ⁵⁶	40.217 ¹³²	28.64 ⁷⁴
29.2	51.246 ¹⁰¹	66.50 ⁵³	55.042 ³⁰⁰	80.79 ¹⁰⁵	40.085 ¹¹⁷	27.90 ⁹⁴
June 8.2	51.145 ⁸¹	67.03 ⁴⁹	54.742 ²⁷²	79.74 ¹⁵¹	39.968 ⁹⁷	26.96 ¹¹³
18.2	51.064 ⁵⁶	67.52 ⁴⁴	54.470 ²³⁶	78.23 ¹⁹²	39.871 ⁷⁶	25.83 ¹²⁸
28.1	51.008 ³¹	67.96 ³⁹	54.234 ¹⁹⁵	76.31 ²³⁰	39.795 ⁵⁴	24.55 ¹⁴⁰
July 8.1	50.977 ⁵	68.35 ³⁰	54.039 ¹⁴⁸	74.01 ²⁶¹	39.741 ²⁸	23.15 ¹⁴⁸
18.1	50.972 ²²	68.65 ²²	53.891 ⁹⁶	71.40 ²⁸³	39.713 ²	21.67 ¹⁵¹
28.0	50.994 ⁴⁹	68.87 ¹¹	53.795 ³⁹	68.57 ²⁹⁸	39.711 ²⁵	20.16 ¹⁴⁹
Aug. 7.0	51.043 ⁷⁶	68.98 ³	53.756 ²¹	65.59 ³⁰²	39.736 ⁵⁵	18.67 ¹⁴²
17.0	51.119 ¹⁰⁵	68.95 ¹⁸	53.777 ⁸⁴	62.57 ²⁹⁶	39.791 ⁸⁴	17.25 ¹²⁷
27.0	51.224 ¹³⁵	68.77 ³⁴	53.861 ¹⁴⁸	59.61 ²⁸⁰	39.875 ¹¹⁵	15.98 ¹⁰⁸
Sept. 5.9	51.359 ¹⁶⁴	68.43 ⁵⁴	54.009 ²¹¹	56.81 ²⁵³	39.990 ¹⁴⁸	14.90 ⁸³
15.9	51.523 ¹⁹²	67.89 ⁷⁴	54.220 ²⁷³	54.28 ²¹⁶	40.138 ¹⁷⁹	14.07 ⁵²
25.9	51.715 ²²³	67.15 ⁹⁴	54.493 ³³⁰	52.12 ¹⁷⁰	40.317 ²¹²	13.55 ¹⁶
Oct. 5.9	51.938 ²⁵⁰	66.21 ¹¹⁵	54.823 ³⁸⁰	50.42 ¹¹⁶	40.529 ²⁴¹	13.39 ²²
15.8	52.188 ²⁷⁷	65.06 ¹³⁴	55.203 ⁴²³	49.26 ⁵⁶	40.770 ²⁶⁹	13.61 ⁶²
25.8	52.465 ²⁹⁷	63.72 ¹⁴⁹	55.626 ⁴⁵³	48.70 ⁷	41.039 ²⁹³	14.23 ¹⁰²
Nov. 4.8	52.762 ³¹⁴	62.23 ¹⁶⁰	56.079 ⁴⁷¹	48.77 ⁷²	41.332 ³⁰⁸	15.25 ¹³⁹
14.7	53.076 ³²³	60.63 ¹⁶⁸	56.550 ⁴⁷³	49.49 ¹³⁶	41.640 ³¹⁸	16.64 ¹⁷⁴
24.7	53.399 ³²⁴	58.95 ¹⁶⁹	57.023 ⁴⁵⁹	50.85 ¹⁹⁴	41.958 ³¹⁹	18.38 ²⁰²
Dec. 4.7	53.723 ³¹⁵	57.26 ¹⁶⁵	57.482 ⁴³¹	52.79 ²⁴⁸	42.277 ³⁰⁸	20.40 ²²³
14.7	54.038 ²⁹⁵	55.61 ¹⁵³	57.913 ³⁸⁸	55.27 ²⁹²	42.585 ²⁸⁸	22.63 ²³⁷
24.6	54.333 ²⁶⁷	54.08 ¹³⁸	58.301 ³³⁰	58.19 ³²⁸	42.873 ²⁶⁰	25.00 ²⁴⁴
34.6	54.600	52.70	58.631	61.47	43.133	27.44
Mean Place	51.102	73.86	54.757	54.77	39.766	12.16
Sec δ, Tan δ	1.021	+0.206	1.821	-1.522	1.031	-0.249
L α, L δ	0.00	-0.3	-0.02	-0.3	0.00	-0.3
ω α, ω δ	+0.01	+0.6	-0.08	+0.6	-0.01	+0.6
AUTHORITY			A. N.		A. N.	

APPARENT PLACES OF STARS, 1924. 339

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	o Leonis. Mag. 3·8		ε Leonis. Mag. 3·1		μ Leonis. Mag. 4·1	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	h m 9 37	° ' " 10 13	h m 9 41	° ' " 24 7	h m 9 48	° ' " 26 21
Jan. 0·6	6·230 ²⁴⁸	72·93 ¹³⁷	32·785 ²⁷⁰	19·41 ⁶⁸	26·994 ²⁸⁰	45·85 ⁶²
10·6	6·478 ²⁰⁶	71·56 ¹¹⁴	33·055 ²²⁹	18·73 ³⁹	27·274 ²³⁸	45·23 ³⁰
20·6	6·684 ¹⁶⁰	70·42 ⁹¹	33·284 ¹⁷⁸	18·34 ⁸	27·512 ¹⁸⁸	44·93 ²
30·6	6·844 ¹¹⁰	69·51 ⁶⁵	33·462 ¹²⁶	18·26 ¹⁹	27·700 ¹³⁵	44·95 ³²
Feb. 9·5	6·954 ⁵⁹	68·86 ⁴¹	33·588 ⁷¹	18·45 ⁴⁵	27·835 ⁷⁹	45·27 ⁵⁷
19·5	7·013 ¹⁰	68·45 ¹⁸	33·659 ¹⁸	18·90 ⁶⁶	27·914 ²⁵	45·84 ⁷⁹
29·5	7·023 ³⁴	68·27 ³	33·677 ³¹	19·56 ⁸²	27·939 ²⁵	46·63 ⁹⁵
Mar. 10·4	6·989 ⁷³	68·30 ²⁰	33·646 ⁷³	20·38 ⁹²	27·914 ⁶⁹	47·58 ¹⁰⁴
20·4	6·916 ¹⁰³	68·50 ³⁴	33·573 ¹⁰⁸	21·30 ⁹⁷	27·845 ¹⁰⁴	48·62 ¹⁰⁹
30·4	6·813 ¹²⁵	68·84 ⁴⁵	33·465 ¹³²	22·27 ⁹⁶	27·741 ¹³²	49·71 ¹⁰⁷
Apr. 9·4	6·688 ¹³⁹	69·29 ⁵²	33·333 ¹⁵¹	23·23 ⁹²	27·609 ¹⁴⁹	50·78 ¹⁰⁰
19·3	6·549 ¹⁴⁵	69·81 ⁵⁷	33·182 ¹⁵⁶	24·15 ⁸³	27·460 ¹⁵⁹	51·78 ⁹⁰
29·3	6·404 ¹⁴²	70·38 ⁵⁹	33·026 ¹⁵⁷	24·98 ⁷¹	27·301 ¹⁵⁹	52·68 ⁷⁶
May 9·3	6·262 ¹³⁵	70·97 ⁶⁰	32·869 ¹⁴⁸	25·69 ⁵⁹	27·142 ¹⁵²	53·44 ⁶¹
19·3	6·127 ¹²²	71·57 ⁵⁹	32·721 ¹³⁵	26·28 ⁴⁴	26·990 ¹³⁹	54·05 ⁴⁴
29·2	6·005 ¹⁰⁵	72·16 ⁵⁷	32·586 ¹¹⁷	26·72 ²⁸	26·851 ¹²³	54·49 ²⁶
June 8·2	5·900 ⁸⁴	72·73 ⁵⁴	32·469 ⁹⁴	27·00 ¹³	26·728 ¹⁰¹	54·75 ⁸
18·2	5·816 ⁶²	73·27 ⁵⁰	32·375 ⁷¹	27·13 ³	26·627 ⁷⁷	54·83 ⁹
28·1	5·754 ³⁹	73·77 ⁴⁴	32·304 ⁴⁵	27·10 ¹⁸	26·550 ⁵⁷	54·74 ²⁷
July 8·1	5·715 ¹³	74·21 ³⁷	32·259 ¹⁶	26·92 ³⁴	26·499 ²⁴	54·47 ⁴⁴
18·1	5·702 ¹³	74·58 ²⁸	32·243 ¹¹	26·58 ⁴⁹	26·475 ⁴	54·03 ⁶¹
28·1	5·715 ⁴⁰	74·86 ¹⁷	32·254 ⁴⁰	26·09 ⁶⁴	26·479 ³³	53·42 ⁷⁸
Aug. 7·0	5·755 ⁶⁷	75·03 ⁵	32·294 ⁷⁰	25·45 ⁷⁹	26·512 ⁶³	52·64 ⁹³
17·0	5·822 ⁹⁵	75·08 ¹¹	32·364 ¹⁰⁰	24·66 ⁹⁴	26·575 ⁹³	51·71 ¹⁰⁹
27·0	5·917 ¹²⁴	74·97 ²⁹	32·464 ¹³²	23·72 ¹¹⁰	26·668 ¹²⁶	50·62 ¹²⁴
Sept. 6·0	6·041 ¹⁵⁴	74·68 ⁴⁹	32·596 ¹⁶³	22·62 ¹²⁴	26·794 ¹⁵⁷	49·38 ¹³⁸
15·9	6·195 ¹⁸⁴	74·19 ⁶⁹	32·759 ¹⁹⁵	21·38 ¹³⁸	26·951 ¹⁹¹	48·00 ¹⁵²
25·9	6·379 ²¹⁴	73·50 ⁹¹	32·954 ²²⁷	20·00 ¹⁵¹	27·142 ²²⁴	46·48 ¹⁶⁴
Oct. 5·9	6·593 ²⁴³	72·59 ¹¹³	33·181 ²⁵⁸	18·49 ¹⁶²	27·366 ²⁵⁶	44·84 ¹⁷³
15·8	6·836 ²⁷¹	71·46 ¹³²	33·439 ²⁸⁷	16·87 ¹⁶⁹	27·622 ²⁸⁷	43·11 ¹⁷⁸
25·8	7·107 ²⁹³	70·14 ¹⁵⁰	33·726 ³¹¹	15·18 ¹⁷³	27·909 ³¹³	41·33 ¹⁸¹
Nov. 4·8	7·400 ³¹¹	68·64 ¹⁶⁴	34·037 ³²⁸	13·45 ¹⁷¹	28·222 ³³⁴	39·52 ¹⁷⁷
14·8	7·711 ³²¹	67·00 ¹⁷²	34·365 ³⁴⁷	11·74 ¹⁶⁵	28·556 ³⁴⁸	37·75 ¹⁶⁸
24·7	8·032 ³²⁴	65·28 ¹⁷⁵	34·712 ³⁴⁷	10·09 ¹⁵³	28·904 ³⁵⁴	36·07 ¹⁵⁴
Dec. 4·7	8·356 ³¹⁶	63·53 ¹⁷²	35·059 ³⁴¹	8·56 ¹³⁵	29·258 ³⁴⁸	34·53 ¹³⁴
14·7	8·672 ²⁹⁹	61·81 ¹⁶²	35·400 ³²³	7·21 ¹¹³	29·606 ³³²	33·19 ¹⁰⁹
24·7	8·971 ²⁷¹	60·19 ¹⁴⁸	35·723 ²⁹⁶	6·08 ⁸⁸	29·938 ³⁰⁴	32·10 ⁸¹
34·6	9·242	58·71	36·019	5·20	30·242	31·29
Mean Place	5·803	79·77	32·463	29·46	26·718	56·32
Sec δ, Tan δ	1·016	+0·181	1·096	+0·448	1·116	+0·496
L α, L δ	0·00	-0·3	+0·01	-0·3	+0·01	-0·3
ω α, ω δ	+0·01	+0·6	+0·02	+0·6	+0·03	+0·5

AUTHORITY

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340 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	π Leonis. Mag. 4.9		α Leonis. Mag. 1.3		γ Velorum. Mag. 4.1	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. S.
	h m 9 56	8 24	h m 10 4	12 19	h m 10 11	41 44
Jan. 0.6	12.276 ²⁶⁰	28.43 ¹⁵²	19.887 ²⁶⁹	74.60 ¹³⁷	33.665 ²⁹⁴	33.45 ³⁰⁸
10.6	12.536 ²²¹	26.91 ¹³¹	20.156 ²³¹	73.23 ¹¹³	33.959 ²⁴⁶	36.53 ³²⁵
20.6	12.757 ¹⁷⁶	25.60 ¹⁰⁷	20.387 ¹⁸⁷	72.10 ⁸⁷	34.205 ¹⁹¹	39.78 ³³³
30.6	12.933 ¹²⁸	24.53 ⁸¹	20.574 ¹³⁸	71.23 ⁵⁹	34.396 ¹³²	43.11 ³³¹
Feb. 9.5	13.061 ⁷⁸	23.72 ⁵⁶	20.712 ⁸⁷	70.64 ³³	34.528 ⁷³	46.42 ³²²
19.5	13.139 ²⁹	23.16 ³²	20.799 ³⁹	70.31 ⁸	34.601 ¹⁵	49.64 ³⁰⁴
29.5	13.168 ¹⁶	22.84 ⁸	20.838 ⁸	70.23 ¹⁴	34.616 ³⁸	52.68 ²⁸⁰
Mar. 10.4	13.152 ⁵⁵	22.76 ¹⁰	20.830 ⁴⁷	70.37 ³³	34.578 ⁸⁶	55.48 ²⁵²
20.4	13.097 ⁸⁷	22.86 ²⁷	20.783 ⁸²	70.70 ⁴⁷	34.492 ¹²⁵	58.00 ²¹⁸
30.4	13.010 ¹¹¹	23.13 ⁴⁰	20.701 ¹⁰⁷	71.17 ⁵⁷	34.367 ¹⁵⁸	60.18 ¹⁸²
Apr. 9.4	12.899 ¹²⁷	23.53 ⁴⁹	20.594 ¹²⁵	71.74 ⁶⁵	34.209 ¹⁸³	62.00 ¹⁴²
19.3	12.772 ¹³⁷	24.02 ⁵⁶	20.469 ¹³⁵	72.39 ⁶⁷	34.026 ¹⁹⁹	63.42 ¹⁰¹
29.3	12.635 ¹³⁷	24.58 ⁶⁰	20.334 ¹³⁸	73.06 ⁶⁸	33.827 ²⁰⁸	64.43 ⁵⁸
May 9.3	12.498 ¹³³	25.18 ⁶³	20.196 ¹³⁵	73.74 ⁶⁶	33.619 ²¹⁰	65.01 ¹⁵
19.3	12.365 ¹²⁴	25.81 ⁶³	20.061 ¹²⁵	74.40 ⁶²	33.409 ²⁰⁶	65.16 ²⁷
29.2	12.241 ¹⁰⁹	26.44 ⁶²	19.936 ¹¹³	75.02 ⁵⁸	33.203 ¹⁹⁸	64.89 ⁷⁰
June 8.2	12.132 ⁹²	27.06 ⁶⁰	19.823 ⁹⁶	75.60 ⁵¹	33.005 ¹⁸³	64.19 ¹⁰⁹
18.2	12.040 ⁷³	27.66 ⁵⁶	19.727 ⁷⁸	76.11 ⁴⁴	32.822 ¹⁶⁵	63.10 ¹⁴⁷
28.1	11.967 ⁵¹	28.22 ⁵¹	19.649 ⁵⁷	76.55 ³⁵	32.657 ¹⁴²	61.63 ¹⁸¹
July 8.1	11.916 ²⁹	28.73 ⁴⁴	19.592 ³⁵	76.90 ²⁵	32.515 ¹¹⁴	59.82 ²⁰⁷
18.1	11.887 ⁴	29.17 ³⁵	19.557 ¹⁰	77.15 ¹⁴	32.401 ⁸⁴	57.75 ²³⁰
28.1	11.883 ²²	29.52 ²⁵	19.547 ¹⁴	77.29 ²	32.317 ⁴⁸	55.45 ²⁴⁵
Aug. 7.0	11.905 ⁴⁷	29.77 ¹²	19.561 ⁴¹	77.31 ¹³	32.269 ¹⁰	53.00 ²⁵¹
17.0	11.952 ⁷⁵	29.89 ⁴	19.602 ⁶⁹	77.18 ²⁹	32.259 ³¹	50.49 ²⁴⁹
27.0	12.027 ¹⁰⁵	29.85 ²³	19.671 ⁹⁹	76.89 ⁴⁷	32.290 ⁷⁶	48.00 ²³⁶
Sept. 6.0	12.132 ¹³⁵	29.62 ⁴²	19.770 ¹²⁹	76.42 ⁶⁶	32.366 ¹²³	45.64 ²¹⁷
15.9	12.267 ¹⁶⁷	29.20 ⁶⁵	19.899 ¹⁶¹	75.76 ⁸⁷	32.489 ¹⁷¹	43.47 ¹⁸⁷
25.9	12.434 ¹⁹⁸	28.55 ⁸⁷	20.060 ¹⁹⁴	74.89 ¹⁰⁸	32.660 ²¹⁸	41.60 ¹⁴⁹
Oct. 5.9	12.632 ²²⁹	27.68 ¹¹¹	20.254 ²²⁵	73.81 ¹²⁹	32.878 ²⁶²	40.11 ¹⁰³
15.8	12.861 ²⁵⁹	26.57 ¹³²	20.479 ²⁵⁷	72.52 ¹⁴⁷	33.140 ³⁰⁴	39.08 ⁵¹
25.8	13.120 ²⁸⁴	25.25 ¹⁵²	20.736 ²⁸³	71.05 ¹⁶³	33.444 ³³⁷	38.57 ⁵
Nov. 4.8	13.404 ³⁰⁶	23.73 ¹⁶⁸	21.019 ³⁰⁶	69.42 ¹⁷⁵	33.781 ³⁶⁴	38.62 ⁶²
14.8	13.710 ³¹⁹	22.05 ¹⁷⁹	21.325 ³²²	67.67 ¹⁸²	34.145 ³⁷⁹	39.24 ¹¹⁸
24.7	14.029 ³²⁴	20.26 ¹⁸⁴	21.647 ³²⁸	65.85 ¹⁸³	34.524 ³⁸³	40.42 ¹⁷¹
Dec. 4.7	14.353 ³²⁰	18.42 ¹⁸³	21.975 ³²⁷	64.02 ¹⁷⁸	34.907 ³⁷⁵	42.13 ²¹⁹
14.7	14.673 ³⁰⁶	16.59 ¹⁷⁶	22.302 ³¹³	62.24 ¹⁶⁷	35.282 ³⁵⁴	44.32 ²⁶¹
24.7	14.979 ²⁸²	14.83 ¹⁶³	22.615 ²⁹¹	60.57 ¹⁵⁰	35.636 ³²⁰	46.93 ²⁹²
34.6	15.261	13.20	22.906	59.07	35.956	49.85
Mean Place	11.922	34.23	19.604	81.22	32.481	41.91
Sec δ , Tan δ	1.011	+0.148	1.024	+0.219	1.340	-0.892
L α , L δ	0.00	-0.3	0.00	-0.3	-0.01	-0.4
ω α , ω δ	+0.01	+0.5	+0.01	+0.5	-0.05	+0.5
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 341

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	22 Sextantis. Mag. 5.4		γ Carinæ. Mag. 3.4		γ Leonis (1st star). Mag. 2.6	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	^h ^m 10 13	[°] ['] 7 41	^h ^m 10 14	[°] ['] 60 56	^h ^m 10 15	[°] ['] 20 13
Jan. 0.6	51.679 ²⁶³	20.48 ²²²	34.82 ³⁹	55.17 ³¹⁸	47.280 ²⁸⁹	27.18 ¹⁰⁷
10.6	51.942 ²²⁶	22.70 ²¹³	35.21 ³²	58.35 ³⁴⁶	47.569 ²⁵¹	26.11 ⁷⁷
20.6	52.168 ¹⁸⁴	24.83 ¹⁹⁸	35.53 ²⁴	61.81 ³⁶⁵	47.820 ²⁰⁷	25.34 ⁴⁷
30.6	52.352 ¹³⁶	26.81 ¹⁷⁹	35.77 ¹⁶	65.46 ³⁷⁴	48.027 ¹⁵⁷	24.87 ¹⁵
Feb. 9.5	52.488 ⁸⁸	28.60 ¹⁵⁶	35.93 ⁷	69.20 ³⁷³	48.184 ¹⁰⁶	24.72 ¹⁴
19.5	52.576 ⁴⁰	30.16 ¹³²	36.00 ¹	72.93 ³⁶²	48.290 ⁵³	24.86 ⁴⁰
29.5	52.616 ⁴	31.48 ¹⁰⁷	35.99 ⁹	76.55 ³⁴⁴	48.343 ⁶	25.26 ⁶⁰
Mar. 10.5	52.612 ⁴²	32.55 ⁸¹	35.90 ¹⁶	79.99 ³¹⁹	48.349 ³⁸	25.86 ⁷⁷
20.4	52.570 ⁷⁵	33.36 ⁵⁶	35.74 ²¹	83.18 ²⁸⁶	48.311 ⁷⁴	26.63 ⁸⁷
30.4	52.495 ¹⁰⁰	33.92 ³³	35.53 ²⁷	86.04 ²⁴⁹	48.237 ¹⁰³	27.50 ⁹³
Apr. 9.4	52.395 ¹¹⁹	34.25 ¹¹	35.26 ³¹	88.53 ²⁰⁷	48.134 ¹²³	28.43 ⁹⁴
19.3	52.276 ¹³⁰	34.36 ¹⁰	34.95 ³⁴	90.60 ¹⁶⁰	48.011 ¹³⁶	29.37 ⁹⁰
29.3	52.146 ¹³³	34.26 ²⁸	34.61 ³⁶	92.20 ¹¹³	47.875 ¹⁴¹	30.27 ⁸³
May 9.3	52.013 ¹³²	33.98 ⁴⁵	34.25 ³⁶	93.33 ⁶¹	47.734 ¹³⁹	31.10 ⁷³
19.3	51.881 ¹²⁷	33.53 ⁶²	33.89 ³⁸	93.94 ¹⁰	47.595 ¹³²	31.83 ⁶²
29.2	51.754 ¹¹⁶	32.91 ⁷⁶	33.51 ³⁵	94.04 ⁴²	47.463 ¹²⁰	32.45 ⁴⁹
June 8.2	51.638 ¹⁰⁴	32.15 ⁸⁹	33.16 ³⁴	93.62 ⁹²	47.343 ¹⁰⁵	32.94 ³⁴
18.2	51.534 ⁸⁸	31.26 ⁹⁸	32.82 ³³	92.70 ¹³⁹	47.238 ⁸⁷	33.28 ²⁰
28.2	51.446 ⁶⁹	30.28 ¹⁰⁵	32.49 ²⁸	91.31 ¹⁸⁴	47.151 ⁶⁵	33.48 ⁵
July 8.1	51.377 ⁵⁰	29.23 ¹¹¹	32.21 ²⁴	89.47 ²²²	47.086 ⁴⁴	33.53 ¹²
18.1	51.327 ²⁷	28.12 ¹¹¹	31.97 ¹⁹	87.25 ²⁵⁵	47.042 ¹⁹	33.41 ²⁷
28.1	51.300 ⁴	27.01 ¹⁰⁷	31.78 ¹³	84.70 ²⁷⁸	47.023 ⁵	33.14 ⁴⁴
Aug. 7.0	51.296 ²³	25.94 ¹⁰⁰	31.65 ⁸	81.92 ²⁹⁴	47.028 ³⁴	32.70 ⁵⁹
17.0	51.319 ⁵⁰	24.94 ⁸⁷	31.57 ⁰	78.98 ³⁰⁰	47.062 ⁶¹	32.11 ⁷⁸
27.0	51.369 ⁸¹	24.07 ⁷⁰	31.57 ⁷	75.98 ²⁹⁵	47.123 ⁹¹	31.33 ⁹⁷
Sept. 6.0	51.450 ¹¹²	23.37 ⁴⁷	31.64 ¹⁵	73.03 ²⁸⁰	47.214 ¹²⁴	30.36 ¹¹³
15.9	51.562 ¹⁴⁶	22.90 ²¹	31.79 ²³	70.23 ²⁵³	47.338 ¹⁵⁷	29.23 ¹³³
25.9	51.708 ¹⁸⁰	22.69 ¹⁰	32.02 ³⁰	67.70 ²¹⁵	47.495 ¹⁹¹	27.90 ¹⁴⁹
Oct. 5.9	51.888 ²¹³	22.79 ⁴²	32.32 ³⁶	65.55 ¹⁶⁹	47.686 ²²⁶	26.41 ¹⁶⁴
15.9	52.101 ²⁴⁶	23.21 ⁷⁷	32.68 ⁴³	63.86 ¹¹⁵	47.912 ²⁵⁹	24.77 ¹⁷⁷
25.8	52.347 ²⁷⁴	23.98 ¹¹¹	33.11 ⁴⁸	62.71 ⁵⁵	48.171 ²⁸⁸	23.00 ¹⁸⁶
Nov. 4.8	52.621 ²⁹⁸	25.09 ¹⁴⁴	33.59 ⁵¹	62.16 ¹⁰	48.459 ³¹³	21.14 ¹⁹¹
14.8	52.919 ³¹³	26.53 ¹⁷⁰	34.10 ⁵³	62.26 ⁷⁴	48.772 ³³²	19.23 ¹⁸⁸
24.7	53.232 ³²¹	28.23 ¹⁹⁴	34.63 ⁵³	63.00 ¹³⁷	49.104 ³⁴²	17.35 ¹⁸²
Dec. 4.7	53.553 ³¹⁹	30.17 ²¹¹	35.16 ⁵²	64.37 ¹⁹⁶	49.446 ³⁴¹	15.53 ¹⁶⁸
14.7	53.872 ³⁰⁶	32.28 ²²¹	35.68 ⁴⁸	66.33 ²⁴⁹	49.787 ³³¹	13.85 ¹⁵⁰
24.7	54.178 ²⁸⁴	34.49 ²²³	36.16 ⁴³	68.82 ²⁹⁴	50.118 ³⁰⁹	12.35 ¹²⁴
34.6	54.462	36.72	36.59	71.76	50.427	11.11
Mean Place	51.236	19.92	32.53	67.70	47.114	35.64
Sec δ, Tan δ	1.009	-0.135	2.059	-1.800	1.066	+0.368
L α, L δ	0.00	-0.4	-0.02	-0.4	0.00	-0.4
ω α, ω δ	-0.01	+0.5	-0.11	+0.4	+0.02	+0.4
AUTHORITY						

342 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	μ Ursæ Majoris. Mag. 3.2		μ Hydræ. Mag. 4.1		α Antliæ. Mag. 4.4		
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.	
	h m 10 17	° ′ 41 52	h m 10 22	° ′ 16 26	h m 10 23	° ′ 30 40	
Jan.	0.7 10.6 20.6 30.6	48.574 ³⁵⁰ 48.924 ³⁰⁶ 49.230 ²⁵² 49.482 ¹⁹²	42.81 ¹⁰ 42.71 ³³ 43.04 ⁷⁴ 43.78 ¹¹¹	25.367 ²⁷⁰ 25.637 ²³⁴ 25.871 ¹⁹⁰ 26.061 ¹⁴³	49.52 ²⁵⁰ 52.02 ²⁴⁸ 54.50 ²⁴¹ 56.91 ²²⁶	41.107 ²⁸⁴ 41.391 ²⁴³ 41.634 ¹⁹⁶ 41.830 ¹⁴⁵	44.23 ²⁸⁴ 47.07 ²⁹⁵ 50.02 ²⁹⁷ 52.99 ²⁹⁰
Feb.	9.5 19.5 29.5	49.674 ¹²⁹ 49.803 ⁶⁴ 49.867 ³	44.89 ¹⁴¹ 46.30 ¹⁶⁵ 47.95 ¹⁸⁰	26.204 ⁹³ 26.297 ⁴⁶ 26.343 ¹	59.17 ²⁰⁷ 61.24 ¹⁸⁵ 63.09 ¹⁵⁹	41.975 ⁹² 42.067 ⁴⁰ 42.107 ⁸	55.89 ²⁷⁸ 58.67 ²⁵⁹ 61.26 ²³⁵
Mar.	10.5 20.4 30.4	49.870 ⁵² 49.818 ¹⁰¹ 49.717 ¹³⁸	49.75 ¹⁸⁶ 51.61 ¹⁸⁴ 53.45 ¹⁷³	26.344 ³⁸ 26.306 ⁷³ 26.233 ⁹⁹	64.68 ¹³² 66.00 ¹⁰⁴ 67.04 ⁷⁷	42.099 ⁵¹ 42.048 ⁸⁷ 41.961 ¹¹⁷	63.61 ²⁰⁷ 65.68 ¹⁷⁶ 67.44 ¹⁴²
Apr.	9.4 19.4 29.3	49.579 ¹⁶⁸ 49.411 ¹⁸⁶ 49.225 ¹⁹⁴	55.18 ¹⁵⁷ 56.75 ¹³⁵ 58.10 ¹⁰⁸	26.134 ¹¹⁹ 26.015 ¹³¹ 25.884 ¹³⁸	67.81 ⁴⁹ 68.30 ²³ 68.53 ³	41.844 ¹³⁹ 41.705 ¹⁵⁵ 41.550 ¹⁶³	68.86 ¹⁰⁹ 69.95 ⁷⁴ 70.69 ³⁷
May	9.3 19.3 29.2	49.031 ¹⁹⁴ 48.837 ¹⁸⁶ 48.651 ¹⁷²	59.18 ⁷⁷ 59.95 ⁴⁵ 60.40 ¹³	25.746 ¹³⁹ 25.607 ¹³⁵ 25.472 ¹²⁶	68.50 ²⁹ 68.21 ⁵¹ 67.70 ⁷⁵	41.387 ¹⁶⁵ 41.222 ¹⁶³ 41.059 ¹⁵⁶	71.06 ¹ 71.07 ³³ 70.74 ⁶⁸
June	8.2 18.2 28.2	48.479 ¹⁵² 48.327 ¹²⁷ 48.200 ¹⁰¹	60.53 ²⁰ 60.33 ⁵² 59.81 ⁸²	25.346 ¹¹⁶ 25.230 ¹⁰¹ 25.129 ⁸³	66.95 ⁹⁴ 66.01 ¹¹² 64.89 ¹²⁶	40.903 ¹⁴⁵ 40.758 ¹³⁰ 40.628 ¹¹²	70.06 ¹⁰⁰ 69.06 ¹²⁸ 67.78 ¹⁵⁵
July	8.1 18.1 28.1	48.099 ⁷⁰ 48.029 ³⁸ 47.991 ⁴	58.99 ¹¹⁰ 57.89 ¹³⁷ 56.52 ¹⁶⁰	25.046 ⁶⁴ 24.982 ⁴³ 24.939 ¹⁸	63.63 ¹³⁸ 62.25 ¹⁴⁴ 60.81 ¹⁴⁶	40.516 ⁹⁰ 40.426 ⁶⁶ 40.360 ³⁷	66.23 ¹⁷⁷ 64.46 ¹⁹³ 62.53 ²⁰⁴
Aug.	7.1 17.0 27.0	47.987 ³¹ 48.018 ⁶⁸ 48.086 ¹⁰⁷	54.92 ¹⁸¹ 53.11 ²⁰⁰ 51.11 ²¹⁴	24.921 ⁹ 24.930 ³⁸ 24.968 ⁷⁰	59.35 ¹⁴³ 57.92 ¹³³ 56.59 ¹¹⁷	40.323 ⁷ 40.316 ²⁷ 40.343 ⁶⁵	60.49 ²⁰⁶ 58.43 ²⁰² 56.41 ¹⁹⁰
Sept.	6.0 15.9 25.9	48.193 ¹⁴⁷ 48.340 ¹⁸⁸ 48.528 ²²⁹	48.97 ²²⁸ 46.69 ²³⁵ 44.34 ²⁴⁰	25.038 ¹⁰⁴ 25.142 ¹³⁹ 25.281 ¹⁷⁵	55.42 ⁹⁶ 54.46 ⁶⁸ 53.78 ³⁶	40.408 ¹⁰⁴ 40.512 ¹⁴⁴ 40.656 ¹⁸⁷	54.51 ¹⁶⁹ 52.82 ¹⁴¹ 51.41 ¹⁰⁶
Oct.	5.9 15.9 25.8	48.757 ²⁷⁰ 49.027 ³⁰⁹ 49.336 ³⁴⁶	41.94 ²⁴⁰ 39.54 ²³⁵ 37.19 ²²⁴	25.456 ²¹¹ 25.667 ²⁴⁶ 25.913 ²⁷⁶	53.42 ¹ 53.43 ⁴¹ 53.84 ⁸¹	40.843 ²²⁶ 41.069 ²⁶⁵ 41.334 ²⁹⁸	50.35 ⁶³ 49.72 ¹⁸ 49.54 ³²
Nov.	4.8 14.8 24.8	49.682 ³⁷⁵ 50.057 ³⁹⁷ 50.454 ⁴⁰⁹	34.95 ²⁰⁶ 32.89 ¹⁸³ 31.06 ¹⁵⁴	26.189 ³⁰⁰ 26.489 ³¹⁹ 26.808 ³²⁶	54.65 ¹²¹ 55.86 ¹⁵⁷ 57.43 ¹⁸⁹	41.632 ³²⁴ 41.956 ³⁴² 42.298 ³⁵⁰	49.86 ⁸² 50.68 ¹³⁰ 51.98 ¹⁷⁶
Dec.	4.7 14.7 24.7 34.6	50.863 ⁴¹¹ 51.274 ⁴⁰⁰ 51.674 ³⁷⁴ 52.048	29.52 ¹¹⁹ 28.33 ⁷⁹ 27.54 ³⁷ 27.17	27.134 ³²⁵ 27.459 ³¹³ 27.772 ²⁹¹ 28.063	59.32 ²¹⁶ 61.48 ²³⁵ 63.83 ²⁴⁶ 66.29	42.648 ³⁴⁷ 42.995 ³³² 43.327 ³⁰⁶ 43.633	53.74 ²¹⁶ 55.90 ²⁴⁸ 58.38 ²⁷³ 61.11
Mean Place	48.534	56.39	24.842	51.96	40.315	50.77	
Sec δ , Tan δ	1.343	+0.897	1.043	-0.295	1.163	-0.593	
L α , L δ	+0.01	-0.4	0.00	-0.4	-0.01	-0.4	
ω α , ω δ	+0.05	+0.4	-0.02	+0.4	-0.04	+0.4	
AUTHORITY	A. E.		A. E.		A. E.		

APPARENT PLACES OF STARS, 1924. 343

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ρ Leonis. Mag. 3.9		34 Sextantis. Mag. 6.6		θ Argus. Mag. 3.0	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. S.
	h m 10 28	° 41'	h m 10 38	° 58'	h m 10 40	° 59'
Jan. 0.7	48.850 ²⁸²	48.26 ¹⁵⁸	42.276 ²⁸³	47.62 ¹⁸³	16.75 ⁴⁷	32.65 ²⁹⁴
10.6	49.132 ²⁴⁸	46.68 ¹³⁵	42.559 ²⁵⁰	45.79 ¹⁶⁵	17.22 ³⁹	35.59 ³²⁹
20.6	49.380 ²⁰⁶	45.33 ¹⁰⁹	42.809 ²¹¹	44.14 ¹⁴²	17.61 ³¹	38.88 ³⁵⁵
30.6	49.586 ¹⁵⁹	44.24 ⁸²	43.020 ¹⁶⁵	42.72 ¹¹⁷	17.92 ²³	42.43 ³⁷¹
Feb. 9.6	49.745 ¹¹²	43.42 ⁵⁴	43.185 ¹¹⁸	41.55 ⁹¹	18.15 ¹³	46.14 ³⁷⁶
19.5	49.857 ⁶³	42.88 ²⁷	43.303 ⁷⁰	40.64 ⁶⁴	18.28 ⁵	49.90 ³⁷²
29.5	49.920 ¹⁷	42.61 ³	43.373 ²⁶	40.00 ³⁹	18.33 ⁴	53.62 ³⁶¹
Mar. 10.5	49.937 ²⁴	42.58 ¹⁸	43.399 ¹⁵	39.61 ¹⁵	18.29 ¹²	57.23 ³³⁹
20.4	49.913 ⁵⁹	42.76 ³⁵	43.384 ⁵⁰	39.46 ⁴	18.17 ¹⁹	60.62 ³¹²
30.4	49.854 ⁸⁷	43.11 ⁴⁹	43.334 ⁷⁸	39.50 ²³	17.98 ²⁵	63.74 ²⁸⁰
Apr. 9.4	49.767 ¹⁰⁷	43.60 ⁵⁹	43.256 ⁹⁹	39.73 ³⁶	17.73 ³⁰	66.54 ²⁴⁰
19.4	49.660 ¹²¹	44.19 ⁶⁵	43.157 ¹¹³	40.09 ⁴⁷	17.43 ³⁴	68.94 ¹⁹⁷
29.3	49.539 ¹²⁷	44.84 ⁶⁸	43.044 ¹²²	40.56 ⁵⁶	17.09 ³⁸	70.91 ¹⁵⁰
May 9.3	49.412 ¹²⁸	45.52 ⁶⁹	42.922 ¹²³	41.12 ⁶²	16.71 ³⁹	72.41 ¹⁰¹
19.3	49.284 ¹²³	46.21 ⁶⁷	42.799 ¹²¹	41.74 ⁶⁶	16.32 ⁴¹	73.42 ⁴⁹
29.3	49.161 ¹¹⁵	46.88 ⁶⁴	42.678 ¹¹⁴	42.40 ⁶⁸	15.91 ⁴⁰	73.91 ³
June 8.2	49.046 ¹⁰²	47.52 ⁶⁰	42.564 ¹⁰⁴	43.08 ⁶⁹	15.51 ⁴⁰	73.88 ⁵⁵
18.2	48.944 ⁸⁸	48.12 ⁵³	42.460 ⁹²	43.77 ⁶⁸	15.11 ³⁷	73.33 ¹⁰⁴
28.2	48.856 ⁷⁰	48.65 ⁴⁶	42.368 ⁷⁶	44.45 ⁶⁵	14.74 ³⁵	72.29 ¹⁵³
July 8.1	48.786 ⁵²	49.11 ³⁷	42.292 ⁵⁹	45.10 ⁵⁹	14.39 ³²	70.76 ¹⁹⁵
18.1	48.734 ³¹	49.48 ²⁷	42.233 ⁴⁰	45.69 ⁵³	14.07 ²⁶	68.81 ²³³
28.1	48.703 ⁸	49.75 ¹⁴	42.193 ¹⁹	46.22 ⁴³	13.81 ²⁰	66.48 ²⁶³
Aug. 7.1	48.695 ¹⁶	49.89 ⁰	42.174 ⁶	46.65 ³¹	13.61 ¹⁴	63.85 ²⁸⁵
17.0	48.711 ⁴⁴	49.89 ¹⁷	42.180 ³¹	46.96 ¹⁶	13.47 ⁶	61.00 ²⁹⁷
27.0	48.755 ⁷²	49.72 ³⁵	42.211 ⁶⁰	47.12 ²	13.41 ²	58.03 ³⁰⁰
Sept. 6.0	48.827 ¹⁰⁴	49.37 ⁵⁶	42.271 ⁹¹	47.10 ²³	13.43 ¹¹	55.03 ²⁹¹
16.0	48.931 ¹³⁶	48.81 ⁷⁸	42.362 ¹²⁵	46.87 ⁴⁷	13.54 ¹⁹	52.12 ²⁷¹
25.9	49.067 ¹⁷¹	48.03 ¹⁰⁰	42.487 ¹⁵⁹	46.40 ⁷¹	13.73 ²⁸	49.41 ²³⁹
Oct. 5.9	49.238 ²⁰⁵	47.03 ¹²³	42.646 ¹⁹⁵	45.69 ⁹⁸	14.01 ³⁶	47.02 ¹⁹⁹
15.9	49.443 ²³⁸	45.80 ¹⁴⁵	42.841 ²²⁹	44.71 ¹²⁴	14.37 ⁴³	45.03 ¹⁴⁸
25.8	49.681 ²⁷⁰	44.35 ¹⁶³	43.070 ²⁶¹	43.47 ¹⁴⁷	14.80 ⁵⁰	43.55 ⁹²
Nov. 4.8	49.951 ²⁹⁵	42.72 ¹⁷⁹	43.331 ²⁸⁸	42.00 ¹⁶⁹	15.30 ⁵⁴	42.63 ²⁹
14.8	50.246 ³¹⁵	40.93 ¹⁸⁹	43.619 ³¹⁰	40.31 ¹⁸⁵	15.84 ⁵⁸	42.34 ³⁵
24.8	50.561 ³²⁷	39.04 ¹⁹⁴	43.929 ³²²	38.46 ¹⁹⁶	16.42 ⁵⁹	42.69 ¹⁰⁰
Dec. 4.7	50.888 ³²⁸	37.10 ¹⁹²	44.251 ³²⁵	36.50 ²⁰²	17.01 ⁵⁷	43.69 ¹⁶¹
14.7	51.216 ³²⁰	35.18 ¹⁸⁵	44.576 ³¹⁸	34.48 ¹⁹⁹	17.58 ⁵⁵	45.30 ²¹⁸
24.7	51.536 ³⁰¹	33.33 ¹⁶⁹	44.894 ³⁰¹	32.49 ¹⁹²	18.13 ⁵⁰	47.48 ²⁶⁸
34.7	51.837	31.64	45.195	30.57	18.63	50.16
Mean Place	48.668	53.39	42.090	50.66	14.42	47.77
Sec δ , Tan δ	1.014	+0.171	1.002	+0.070	2.281	-2.050
L α , L δ	0.00	-0.4	0.00	-0.4	-0.02	-0.4
ω α , ω δ	+0.01	+0.4	+0.01	+0.3	-0.13	+0.3
AUTHORITY	A. N.				A. E.	

344 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Argús. Mag. > 1-7.4		μ Argús. Mag. 2-8		l Leonis. Mag. 5-3	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	^h ^m 10 42	^o ['] 59 16	^h ^m 10 43	^o ['] 49 0	^h ^m 10 45	^o ['] 10 56
Jan. 0.7	8.367 ⁴¹⁹	50.44 ²⁹⁴	31.036 ³⁵⁴	54.55 ²⁹⁴	15.962 ²⁹³	46.60 ¹⁵⁹
10.6	8.786 ³⁵⁷	53.38 ³²⁷	31.390 ³⁰⁴	57.49 ³²¹	16.255 ²⁶⁰	45.01 ¹³⁵
20.6	9.143 ²⁸⁶	56.65 ³⁵³	31.694 ²⁴⁹	60.70 ³³⁸	16.515 ²²¹	43.66 ¹⁰⁸
30.6	9.429 ²⁰⁹	60.18 ³⁶⁴	31.943 ¹⁸⁶	64.08 ³⁴⁶	16.736 ¹⁷⁷	42.58 ⁸⁰
Feb. 9.6	9.638 ¹³⁰	63.82 ³⁶⁸	32.129 ¹²³	67.54 ³⁴⁴	16.913 ¹²⁸	41.78 ⁵⁰
19.5	9.768 ⁵³	67.50 ³⁶³	32.252 ⁶⁰	70.98 ³³⁵	17.041 ⁸¹	41.28 ²²
29.5	9.821 ²²	71.13 ³⁴⁹	32.312 ¹	74.33 ³¹⁸	17.122 ³⁴	41.06 ⁴
Mar. 10.5	9.799 ⁹⁰	74.62 ³²⁷	32.311 ⁵⁵	77.51 ²⁹⁵	17.156 ⁸	41.10 ²⁵
20.4	9.709 ¹⁵²	77.89 ³⁰¹	32.256 ¹⁰⁴	80.46 ²⁶⁵	17.148 ⁴⁴	41.35 ⁴³
30.4	9.557 ²⁰⁴	80.90 ²⁶⁶	32.152 ¹⁴⁴	83.11 ²³²	17.104 ⁷³	41.78 ⁵⁷
Apr. 9.4	9.353 ²⁴⁷	83.56 ²²⁸	32.008 ¹⁷⁶	85.43 ¹⁹⁵	17.031 ⁹⁶	42.35 ⁶⁷
19.4	9.106 ²⁸²	85.84 ¹⁸⁵	31.832 ²⁰⁴	87.38 ¹⁵⁴	16.935 ¹¹²	43.02 ⁷²
29.3	8.824 ³⁰⁸	87.69 ¹⁴⁰	31.628 ²²¹	88.92 ¹¹⁰	16.823 ¹²¹	43.74 ⁷⁴
May 9.3	8.516 ³²⁴	89.09 ⁹¹	31.407 ²³³	90.02 ⁶⁵	16.702 ¹²⁵	44.48 ⁷⁴
19.3	8.192 ³³³	90.00 ⁴¹	31.174 ²³⁸	90.67 ¹⁹	16.577 ¹²²	45.22 ⁷¹
29.3	7.859 ³³³	90.41 ¹⁰	30.936 ²³⁷	90.86 ²⁶	16.455 ¹¹⁷	45.93 ⁶⁷
June 8.2	7.526 ³²⁶	90.31 ⁶⁰	30.699 ²²⁹	90.60 ⁷¹	16.338 ¹⁰⁷	46.60 ⁶⁰
18.2	7.200 ³⁰⁹	89.71 ¹⁰⁷	30.470 ²¹⁶	89.89 ¹¹⁴	16.231 ⁹⁴	47.20 ⁵¹
28.2	6.891 ²⁸⁶	88.64 ¹⁵⁴	30.254 ¹⁹⁸	88.75 ¹⁵⁴	16.137 ⁸⁰	47.71 ⁴³
July 8.1	6.605 ²⁵²	87.10 ¹⁹⁴	30.056 ¹⁷³	87.21 ¹⁸⁹	16.057 ⁶³	48.14 ³²
18.1	6.353 ²¹³	85.16 ²²⁹	29.883 ¹⁴³	85.32 ²¹⁹	15.994 ⁴⁴	48.46 ²⁰
28.1	6.140 ¹⁶⁴	82.87 ²⁵⁹	29.740 ¹⁰⁷	83.13 ²⁴²	15.950 ²²	48.66 ⁶
Aug. 7.1	5.976 ¹⁰⁸	80.28 ²⁷⁸	29.633 ⁶⁶	80.71 ²⁵⁷	15.928 ²	48.72 ⁹
17.0	5.868 ⁴⁶	77.50 ²⁸⁹	29.567 ²⁰	78.14 ²⁶⁴	15.930 ²⁷	48.63 ²⁶
27.0	5.822 ²²	74.61 ²⁹⁰	29.547 ³²	75.50 ²⁶⁰	15.957 ⁵⁷	48.37 ⁴⁵
Sept. 6.0	5.844 ⁹⁵	71.71 ²⁸⁰	29.579 ⁸⁶	72.90 ²⁴⁸	16.014 ⁸⁸	47.92 ⁶⁶
16.0	5.939 ¹⁶⁹	68.91 ²⁵⁸	29.665 ¹⁴³	70.42 ²²⁵	16.102 ¹²¹	47.26 ⁸⁸
25.9	6.108 ²⁴⁴	66.33 ²²⁸	29.808 ²⁰⁰	68.17 ¹⁹²	16.223 ¹⁵⁶	46.38 ¹¹⁰
Oct. 5.9	6.352 ³¹⁵	64.05 ¹⁸⁵	30.008 ²⁵⁷	66.25 ¹⁵¹	16.379 ¹⁹²	45.28 ¹³²
15.9	6.667 ³⁸⁰	62.20 ¹³⁶	30.265 ³⁰⁸	64.74 ¹⁰²	16.571 ²²⁸	43.96 ¹⁵³
25.8	7.047 ⁴³⁵	60.84 ⁸⁰	30.573 ³⁵⁴	63.72 ⁴⁷	16.799 ²⁶⁰	42.43 ¹⁷¹
Nov. 4.8	7.482 ⁴⁷⁹	60.04 ¹⁸	30.927 ³⁹⁰	63.25 ¹¹	17.059 ²⁸⁹	40.72 ¹⁸⁶
14.8	7.961 ⁵⁰⁷	59.86 ⁴⁵	31.317 ⁴¹⁶	63.36 ⁷¹	17.348 ³¹¹	38.86 ¹⁹⁵
24.8	8.468 ⁵¹⁸	60.31 ¹⁰⁸	31.733 ⁴²⁷	64.07 ¹²⁹	17.659 ³²⁶	36.91 ²⁰⁰
Dec. 4.7	8.986 ⁵¹³	61.39 ¹⁶⁷	32.160 ⁴²⁵	65.36 ¹⁸³	17.985 ³³¹	34.91 ¹⁹⁶
14.7	9.499 ⁴⁸⁹	63.06 ²²³	32.585 ⁴⁰⁹	67.19 ²³²	18.316 ³²⁶	32.95 ¹⁸⁸
24.7	9.988 ⁴⁵⁰	65.29 ²⁷⁰	32.994 ³⁷⁸	69.51 ²⁷³	18.642 ³¹⁰	31.07 ¹⁷²
34.7	10.438	67.99	33.372	72.24	18.952	29.35
Mean Place	6.489	64.90	29.781	67.04	15.878	51.55
Sec δ , Tan δ	1.958	-1.683	1.525	-1.151	1.019	+0.193
$L \alpha$, $L \delta$	-0.01	-0.4	-0.01	-0.4	0.00	-0.4
$\omega \alpha$, $\omega \delta$	-0.11	+0.3	-0.07	+0.3	+0.01	+0.3
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 345

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ν Hydræ. Mag. 3·3		ι Antliæ. Mag. 4·7		δ Leonis. Mag. 5·1	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	^h ^m 10 45	^o ['] 15 47	^h ^m 10 53	^o ['] 36 43	^h ^m 10 56	^o ['] 4 1
Jan. 0·7	52·828 ²⁸⁵	40·79 ²⁴³	11·126 ³²⁰	34·14 ²⁷⁹	38·264 ²⁹²	30·60 ¹⁸⁷
10·6	53·113 ²⁵³	43·22 ²⁴³	11·446 ²⁸¹	36·93 ²⁹⁸	38·556 ²⁶³	28·73 ¹⁶⁹
20·6	53·366 ²¹²	45·65 ²³⁵	11·727 ²³⁴	39·91 ³⁰⁷	38·819 ²²⁵	27·04 ¹⁴⁶
30·6	53·578 ¹⁶⁶	48·00 ²²³	11·961 ¹⁸³	42·98 ³⁰⁸	39·044 ¹⁸¹	25·58 ¹²¹
Feb. 9·6	53·744 ¹²⁰	50·23 ²⁰⁵	12·144 ¹³⁰	46·06 ³⁰²	39·225 ¹³⁶	24·37 ⁹⁴
19·5	53·864 ⁷¹	52·28 ¹⁸²	12·274 ⁷⁶	49·08 ²⁸⁹	39·361 ⁸⁹	23·43 ⁶⁶
29·5	53·935 ²⁷	54·10 ¹⁵⁹	12·350 ²⁵	51·97 ²⁷⁰	39·450 ⁴⁴	22·77 ⁴¹
Mar. 10·5	53·962 ¹³	55·69 ¹³²	12·375 ²¹	54·67 ²⁴⁵	39·494 ²	22·36 ¹⁶
20·5	53·949 ⁴⁹	57·01 ¹⁰⁶	12·354 ⁶²	57·12 ²¹⁷	39·496 ⁶²	22·20 ⁵
30·4	53·900 ⁷⁷	58·07 ⁷⁹	12·292 ⁹⁷	59·29 ¹⁸⁵	39·464 ³²	22·25 ²³
Apr. 9·4	53·823 ¹⁰⁰	58·86 ⁵³	12·195 ¹²⁴	61·14 ¹⁵²	39·402 ⁸⁵	22·48 ³⁷
19·4	53·723 ¹¹⁶	59·39 ²⁸	12·071 ¹⁴⁵	62·66 ¹¹⁵	39·317 ¹⁰²	22·85 ⁴⁸
29·3	53·607 ¹²⁴	59·67 ³	11·926 ¹⁶¹	63·81 ⁷⁹	39·215 ¹¹³	23·33 ⁵⁸
May 9·3	53·483 ¹²⁹	59·70 ²¹	11·765 ¹⁶⁹	64·60 ⁴⁰	39·102 ¹¹⁷	23·91 ⁶³
19·3	53·354 ¹³⁰	59·49 ⁴³	11·596 ¹⁷³	65·00 ²	38·985 ¹¹⁸	24·54 ⁶⁷
29·3	53·224 ¹²⁵	59·06 ⁶⁴	11·423 ¹⁷³	65·02 ³⁶	38·867 ¹¹³	25·21 ⁶⁹
June 8·2	53·099 ¹¹⁷	58·42 ⁸⁴	11·250 ¹⁶⁷	64·66 ⁷²	38·754 ¹⁰⁸	25·90 ⁶⁸
18·2	52·982 ¹⁰⁷	57·58 ¹⁰⁰	11·083 ¹⁵⁷	63·94 ¹⁰⁷	38·646 ⁹⁷	26·58 ⁶⁷
28·2	52·875 ⁹⁴	56·58 ¹¹⁵	10·926 ¹⁴⁴	62·87 ¹³⁹	38·549 ⁸⁵	27·25 ⁶³
July 8·2	52·781 ⁷⁷	55·43 ¹²⁶	10·782 ¹²⁶	61·48 ¹⁶⁷	38·464 ⁷⁰	27·88 ⁵⁹
18·1	52·704 ⁵⁹	54·17 ¹³³	10·656 ¹⁰⁴	59·81 ¹⁹⁰	38·394 ⁵²	28·47 ⁵¹
28·1	52·645 ³⁷	52·84 ¹³⁶	10·552 ⁷⁸	57·91 ²⁰⁶	38·342 ³⁴	28·98 ⁴⁰
Aug. 7·1	52·608 ¹²	51·48 ¹³⁴	10·474 ⁴⁶	55·85 ²¹⁷	38·308 ¹¹	29·38 ²⁹
17·0	52·596 ¹⁵	50·14 ¹²⁶	10·428 ¹²	53·68 ²¹⁹	38·297 ¹⁵	29·67 ¹³
27·0	52·611 ⁴⁶	48·88 ¹¹²	10·416 ²⁸	51·49 ²¹³	38·312 ⁴²	29·80 ⁵
Sept. 6·0	52·657 ⁸¹	47·76 ⁹²	10·444 ⁷²	49·36 ¹⁹⁸	38·354 ⁷⁴	29·75 ²⁵
16·0	52·738 ¹¹⁶	46·84 ⁶⁷	10·516 ¹¹⁷	47·38 ¹⁷⁵	38·428 ¹⁰⁷	29·50 ⁴⁹
25·9	52·854 ¹⁵⁵	46·17 ³⁶	10·633 ¹⁶⁴	45·63 ¹⁴⁴	38·535 ¹⁴³	29·01 ⁷⁴
Oct. 5·9	53·009 ¹⁹²	45·81 ²	10·797 ²¹²	44·19 ¹⁰⁴	38·678 ¹⁷⁹	28·27 ¹⁰⁰
15·9	53·201 ²³⁰	45·79 ³⁶	11·009 ²⁵⁶	43·15 ⁵⁹	38·857 ²¹⁷	27·27 ¹²⁵
25·9	53·431 ²⁶³	46·15 ⁷⁵	11·265 ²⁹⁶	42·56 ¹⁰	39·074 ²⁵⁰	26·02 ¹⁴⁹
Nov. 4·8	53·694 ²⁹²	46·90 ¹¹⁴	11·561 ³³⁰	42·46 ⁴²	39·324 ²⁸⁰	24·53 ¹⁷¹
14·8	53·986 ³¹⁴	48·04 ¹⁴⁹	11·891 ³⁵⁶	42·88 ⁹⁵	39·604 ³⁰⁴	22·82 ¹⁸⁸
24·8	54·300 ³²⁷	49·53 ¹⁸²	12·247 ³⁶⁹	43·83 ¹⁴⁵	39·908 ³²¹	20·94 ¹⁹⁹
Dec. 4·7	54·627 ³³⁰	51·35 ²⁰⁸	12·616 ³⁷²	45·28 ¹⁹¹	40·229 ³²⁶	18·95 ²⁰⁵
14·7	54·957 ³²²	53·43 ²²⁸	12·988 ³⁶¹	47·19 ²³¹	40·555 ³²⁴	16·90 ²⁰³
24·7	55·279 ³⁰³	55·71 ²⁴⁰	13·349 ³⁴⁰	49·50 ²⁶³	40·879 ³⁰⁸	14·87 ¹⁹⁶
34·7	55·582	58·11	13·689	52·13	41·187	12·91
Mean Place	52·436	44·26	10·363	44·21	38·173	32·97
Sec δ, Tan δ	1·039	-0·283	1·248	-0·746	1·002	+0·070
L α, L δ	0·00	-0·4	-0·01	-0·4	0·00	-0·4
ω α, ω δ	-0·02	+0·3	-0·05	+0·3	0·00	+0·3
AUTHORITY	A. N.		A. N.			

346 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Ursæ Majoris. Mag. 2.4		α Ursæ Majoris. Mag. 2.0		χ Leonis. Mag. 4.7	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m 10 57	^o ['] 56 46	^h ^m 10 59	^o ['] 62 9	^h ^m 11 1	^o ['] 7 44
Jan. 0.7	15.696 ^s 479	68.48 11	2.77 54	25.10 27	5.905 ^s 296	47.01 175
10.7	16.175 434	68.59 64	3.31 50	25.37 84	6.201 268	45.26 155
20.6	16.609 375	69.23 116	3.81 43	26.21 136	6.469 230	43.71 129
30.6	16.984 303	70.39 161	4.24 34	27.57 183	6.699 187	42.42 102
Feb. 9.6	17.287 225	72.00 200	4.58 26	29.40 220	6.886 142	41.40 72
19.5	17.512 143	74.00 228	4.84 17	31.60 250	7.028 94	40.68 45
29.5	17.655 60	76.28 248	5.01 6	34.10 266	7.122 49	40.23 18
Mar. 10.5	17.715 18	78.76 255	5.07 3	36.76 273	7.171 8	40.05 6
20.5	17.697 89	81.31 252	5.04 11	39.49 268	7.179 29	40.11 26
30.4	17.608 151	83.83 240	4.93 18	42.17 252	7.150 60	40.37 43
Apr. 9.4	17.457 201	86.23 217	4.75 24	44.69 226	7.090 83	40.80 54
19.4	17.256 239	88.40 188	4.51 29	46.95 194	7.007 101	41.34 64
29.4	17.017 265	90.28 152	4.22 33	48.89 155	6.906 112	41.98 69
May 9.3	16.752 279	91.80 111	3.89 34	50.44 109	6.794 118	42.67 71
19.3	16.473 282	92.91 68	3.55 34	51.53 64	6.676 118	43.38 72
29.3	16.191 276	93.59 23	3.21 34	52.17 15	6.558 116	44.10 69
June 8.2	15.915 260	93.82 22	2.87 32	52.32 33	6.442 109	44.79 66
18.2	15.655 237	93.60 66	2.55 30	51.99 80	6.333 100	45.45 60
28.2	15.418 208	92.94 109	2.25 27	51.19 125	6.233 87	46.05 53
July 8.2	15.210 174	91.85 149	1.98 22	49.94 167	6.146 73	46.58 45
18.1	15.036 135	90.36 184	1.76 17	48.27 204	6.073 56	47.03 34
28.1	14.901 92	88.52 217	1.59 12	46.23 238	6.017 37	47.37 22
Aug. 7.1	14.809 46	86.35 246	1.47 7	43.85 267	5.980 14	47.59 7
17.1	14.763 3	83.89 269	1.40 1	41.18 291	5.966 11	47.66 9
27.0	14.766 56	81.20 288	1.39 5	38.27 308	5.977 38	47.57 28
Sept. 6.0	14.822 111	78.32 302	1.44 12	35.19 321	6.015 70	47.29 48
16.0	14.933 168	75.30 309	1.56 18	31.98 327	6.085 104	46.81 71
25.9	15.101 227	72.21 312	1.74 26	28.71 326	6.189 139	46.10 95
Oct. 5.9	15.328 286	69.09 307	2.00 32	25.45 320	6.328 176	45.15 119
15.9	15.614 343	66.02 296	2.32 39	22.25 304	6.504 213	43.96 143
25.9	15.957 397	63.06 276	2.71 44	19.21 283	6.717 248	42.53 163
Nov. 4.8	16.354 445	60.30 251	3.15 51	16.38 252	6.965 278	40.90 182
14.8	16.799 484	57.79 217	3.66 55	13.86 215	7.243 304	39.08 194
24.8	17.283 512	55.62 177	4.21 58	11.71 171	7.547 320	37.14 203
Dec. 4.8	17.795 525	53.85 130	4.79 60	10.00 121	7.867 328	35.11 204
14.7	18.320 523	52.55 79	5.39 60	8.79 66	8.195 326	33.07 199
24.7	18.843 505	51.76 25	5.99 57	8.13 9	8.521 312	31.08 186
34.7	19.348	51.51	6.56	8.04	8.833	29.22
Mean Place	16.056	84.48	3.20	41.86	5.876	50.42
Sec δ , Tan δ	1.826	+1.528	2.141	+1.894	1.009	+0.136
$L \alpha$, $L \delta$	+0.01	-0.4	+0.01	-0.4	0.00	-0.4
$\omega \alpha$, $\omega \delta$	+0.10	+0.3	+0.12	+0.3	+0.01	+0.3
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 347

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ψ Ursæ Majoris. Mag. 3.2		β Crateris. Mag. 4.5		δ Leonis. Mag. 2.6	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. N.
	^h ^m II 5	[°] ['] 44 54	^h ^m II 7	[°] ['] 22 24	^h ^m II 10	[°] ['] 20 55
Jan. 0.7	23.598 ³⁹³	26.59 ⁴³	55.433 ³⁰⁴	32.11 ²⁵²	4.041 ³¹⁸	77.81 ¹³⁶
10.7	23.991 ³⁵⁹	26.16 ⁶	55.737 ²⁷³	34.63 ²⁵⁹	4.359 ²⁹⁰	76.45 ¹⁰²
20.6	24.350 ³¹²	26.22 ⁵⁵	56.010 ²³⁴	37.22 ²⁵⁹	4.649 ²⁵³	75.43 ⁶⁷
30.6	24.662 ²⁵⁶	26.77 ⁹⁹	56.244 ¹⁹⁰	39.81 ²⁵³	4.902 ²⁰⁸	74.76 ³²
Feb. 9.6	24.918 ¹⁹⁵	27.76 ¹³⁹	56.434 ¹⁴²	42.34 ²³⁹	5.110 ¹⁶¹	74.44 ³
19.5	25.113 ¹³¹	29.15 ¹⁷⁰	56.576 ⁹⁵	44.73 ²²⁰	5.271 ¹¹²	74.47 ³⁵
29.5	25.244 ⁶⁶	30.85 ¹⁹⁵	56.671 ⁵⁰	46.93 ¹⁹⁹	5.383 ⁶³	74.82 ⁶²
Mar. 10.5	25.310 ⁶	32.80 ²⁰⁹	56.721 ⁷	48.92 ¹⁷⁵	5.446 ¹⁷	75.44 ⁸⁴
20.5	25.316 ⁴⁹	34.89 ²¹³	56.728 ³⁰	50.67 ¹⁴⁸	5.463 ²²	76.28 ¹⁰⁰
30.4	25.267 ⁹⁷	37.02 ²¹⁰	56.698 ⁶¹	52.15 ¹²⁰	5.441 ⁵⁶	77.28 ¹¹⁰
Apr. 9.4	25.170 ¹³⁴	39.12 ¹⁹⁶	56.637 ⁸⁷	53.35 ⁹²	5.385 ⁸⁴	78.38 ¹¹⁵
19.4	25.036 ¹⁶⁴	41.08 ¹⁷⁷	56.550 ¹⁰⁶	54.27 ⁶³	5.301 ¹⁰⁴	79.53 ¹¹⁴
29.4	24.872 ¹⁸⁴	42.85 ¹⁵⁰	56.444 ¹²⁰	54.90 ³⁶	5.197 ¹¹⁸	80.67 ¹⁰⁸
May 9.3	24.688 ¹⁹⁴	44.35 ¹²⁰	56.324 ¹²⁹	55.26 ⁷	5.079 ¹²⁵	81.75 ⁹⁸
19.3	24.494 ¹⁹⁸	45.55 ⁸⁵	56.195 ¹³³	55.33 ²⁰	4.954 ¹²⁸	82.73 ⁸⁶
29.3	24.296 ¹⁹⁴	46.40 ⁵⁰	56.062 ¹³³	55.13 ⁴⁶	4.826 ¹²⁶	83.59 ⁷⁰
June 8.2	24.102 ¹⁸⁴	46.90 ¹¹	55.929 ¹³⁰	54.67 ⁷⁰	4.700 ¹²⁰	84.29 ⁵⁴
18.2	23.918 ¹⁶⁸	47.01 ²⁶	55.799 ¹²³	53.97 ⁹⁴	4.580 ¹¹⁰	84.83 ³⁶
28.2	23.750 ¹⁴⁹	46.75 ⁶²	55.676 ¹¹²	53.03 ¹¹⁴	4.470 ⁹⁸	85.19 ¹⁶
July 8.2	23.601 ¹²⁶	46.13 ⁹⁸	55.564 ¹⁰⁰	51.89 ¹³⁰	4.372 ⁸²	85.35 ³
18.1	23.475 ⁹⁸	45.15 ¹³¹	55.464 ⁸³	50.59 ¹⁴⁴	4.290 ⁶⁵	85.32 ²³
28.1	23.377 ⁶⁹	43.84 ¹⁶¹	55.381 ⁶³	49.15 ¹⁵³	4.225 ⁴⁵	85.09 ⁴⁴
Aug. 7.1	23.308 ³⁵	42.23 ¹⁹⁰	55.318 ³⁸	47.62 ¹⁵⁴	4.180 ²²	84.65 ⁶⁵
17.1	23.273 ²	40.33 ²¹⁴	55.280 ¹¹	46.08 ¹⁵²	4.158 ⁴	84.00 ⁸⁶
27.0	23.275 ⁴⁰	38.19 ²³⁶	55.269 ²¹	44.56 ¹⁴³	4.162 ³³	83.14 ¹⁰⁷
Sept. 6.0	23.315 ⁸²	35.83 ²⁵⁴	55.290 ⁵⁷	43.13 ¹²⁷	4.195 ⁶⁵	82.07 ¹²⁸
16.0	23.397 ¹²⁷	33.29 ²⁶⁷	55.347 ⁹⁶	41.86 ¹⁰⁴	4.260 ¹⁰⁰	80.79 ¹⁴⁹
25.9	23.524 ¹⁷⁴	30.62 ²⁷⁶	55.443 ¹³⁶	40.82 ⁷⁴	4.360 ¹³⁸	79.30 ¹⁶⁸
Oct. 5.9	23.698 ²²²	27.86 ²⁸¹	55.579 ¹⁷⁸	40.08 ⁴⁰	4.498 ¹⁷⁶	77.62 ¹⁸⁶
15.9	23.920 ²⁶⁹	25.05 ²⁷⁸	55.757 ²¹⁹	39.68 ¹	4.674 ²¹⁵	75.76 ²⁰¹
25.9	24.189 ³¹⁴	22.27 ²⁶⁹	55.976 ²⁵⁷	39.67 ⁴⁰	4.889 ²⁵³	73.75 ²¹¹
Nov. 4.8	24.503 ³⁵⁵	19.58 ²⁵³	56.233 ²⁹⁰	40.07 ⁸³	5.142 ²⁸⁶	71.64 ²¹⁸
14.8	24.858 ³⁸⁹	17.05 ²³¹	56.523 ³¹⁶	40.90 ¹²⁴	5.428 ³¹⁴	69.46 ²¹⁹
24.8	25.247 ⁴¹²	14.74 ²⁰⁰	56.839 ³³³	42.14 ¹⁶³	5.742 ³³⁴	67.27 ²¹²
Dec. 4.8	25.659 ⁴²⁶	12.74 ¹⁶⁴	57.172 ³⁴⁰	43.77 ¹⁹⁶	6.076 ³⁴⁴	65.15 ¹⁹⁹
14.7	26.085 ⁴²⁷	11.10 ¹²¹	57.512 ³³⁶	45.73 ²²⁴	6.420 ³⁴⁵	63.16 ¹⁸⁰
24.7	26.512 ⁴¹³	9.89 ⁷⁵	57.848 ³²⁰	47.97 ²⁴³	6.765 ³³⁴	61.36 ¹⁵⁵
34.7	26.925	9.14	58.168	50.40	7.099	59.81
Mean Place	23.920	40.25	55.063	38.83	4.185	85.05
Sec δ , Tan δ	1.412	+0.997	1.082	-0.412	1.071	+0.383
$L \alpha$, $L \delta$	+0.01	-0.4	0.00	-0.4	0.00	-0.4
$\omega \alpha$, $\omega \delta$	+0.06	+0.2	-0.03	+0.2	+0.02	+0.2
AUTHORITY	A. E.		A. E.		A. E.	

348 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Leonis. Mag. 3.4		δ Crateris. Mag. 3.8		τ Leonis. Mag. 5.2	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. N.
	h m II IO	^o 15 50	h m II 15	^o 14 21	h m II 24	^o 3 16
Jan. 0.7	15.111 ^s 309	37.07 ^s 153	32.563 ^s 302	56.99 ^s 234	1.702 ^s 305	28.91 ^s 194
10.7	15.420 ^s 282	35.54 ^s 124	32.865 ^s 272	59.33 ^s 234	2.007 ^s 279	26.97 ^s 177
20.6	15.702 ^s 246	34.30 ^s 93	33.137 ^s 237	61.67 ^s 228	2.286 ^s 245	25.20 ^s 156
30.6	15.948 ^s 203	33.37 ^s 60	33.374 ^s 194	63.95 ^s 216	2.531 ^s 205	23.64 ^s 131
Feb. 9.6	16.151 ^s 156	32.77 ^s 26	33.568 ^s 150	66.11 ^s 198	2.736 ^s 161	22.33 ^s 102
19.5	16.307 ^s 108	32.51 ^s 4	33.718 ^s 104	68.09 ^s 176	2.897 ^s 116	21.31 ^s 75
29.5	16.415 ^s 61	32.55 ^s 31	33.822 ^s 59	69.85 ^s 154	3.013 ^s 72	20.56 ^s 47
Mar. 10.5	16.476 ^s 18	32.86 ^s 54	33.881 ^s 18	71.39 ^s 128	3.085 ^s 31	20.09 ^s 23
20.5	16.494 ^s 21	33.40 ^s 73	33.899 ^s 18	72.67 ^s 103	3.116 ^s 7	19.86 ^s 1
30.4	16.473 ^s 54	34.13 ^s 85	33.881 ^s 49	73.70 ^s 78	3.109 ^s 37	19.87 ^s 20
Apr. 9.4	16.419 ^s 79	34.98 ^s 93	33.832 ^s 73	74.48 ^s 53	3.072 ^s 63	20.07 ^s 35
19.4	16.340 ^s 99	35.91 ^s 96	33.759 ^s 94	75.01 ^s 29	3.009 ^s 83	20.42 ^s 47
29.4	16.241 ^s 113	36.87 ^s 94	33.665 ^s 106	75.30 ^s 7	2.926 ^s 97	20.89 ^s 58
May 9.3	16.128 ^s 120	37.81 ^s 89	33.559 ^s 116	75.37 ^s 15	2.829 ^s 106	21.47 ^s 64
19.3	16.008 ^s 122	38.70 ^s 82	33.443 ^s 120	75.22 ^s 34	2.723 ^s 111	22.11 ^s 68
29.3	15.886 ^s 120	39.52 ^s 72	33.323 ^s 121	74.88 ^s 54	2.612 ^s 111	22.79 ^s 69
June 8.2	15.766 ^s 114	40.24 ^s 60	33.202 ^s 118	74.34 ^s 71	2.501 ^s 109	23.48 ^s 70
18.2	15.652 ^s 106	40.84 ^s 46	33.084 ^s 113	73.63 ^s 86	2.392 ^s 104	24.18 ^s 68
28.2	15.546 ^s 94	41.30 ^s 31	32.971 ^s 104	72.77 ^s 100	2.288 ^s 96	24.86 ^s 65
July 8.2	15.452 ^s 80	41.61 ^s 16	32.867 ^s 91	71.77 ^s 110	2.192 ^s 84	25.51 ^s 58
18.1	15.372 ^s 63	41.77 ^s 1	32.776 ^s 78	70.67 ^s 116	2.108 ^s 71	26.09 ^s 52
28.1	15.309 ^s 44	41.76 ^s 18	32.698 ^s 59	69.51 ^s 120	2.037 ^s 55	26.61 ^s 42
Aug. 7.1	15.265 ^s 22	41.58 ^s 37	32.639 ^s 37	68.31 ^s 118	1.982 ^s 35	27.03 ^s 29
17.1	15.243 ^s 4	41.21 ^s 56	32.602 ^s 12	67.13 ^s 111	1.947 ^s 12	27.32 ^s 15
27.0	15.247 ^s 31	40.65 ^s 77	32.590 ^s 17	66.02 ^s 100	1.935 ^s 15	27.47 ^s 3
Sept. 6.0	15.278 ^s 63	39.88 ^s 99	32.607 ^s 51	65.02 ^s 82	1.950 ^s 46	27.44 ^s 24
16.0	15.341 ^s 98	38.89 ^s 119	32.658 ^s 87	64.20 ^s 59	1.996 ^s 80	27.20 ^s 46
25.9	15.439 ^s 134	37.70 ^s 141	32.745 ^s 125	63.61 ^s 32	2.076 ^s 116	26.74 ^s 71
Oct. 5.9	15.573 ^s 172	36.29 ^s 162	32.870 ^s 166	63.29 ^s 0	2.192 ^s 156	26.03 ^s 98
15.9	15.745 ^s 210	34.67 ^s 179	33.036 ^s 205	63.29 ^s 35	2.348 ^s 194	25.05 ^s 123
25.9	15.955 ^s 246	32.88 ^s 195	33.241 ^s 243	63.64 ^s 72	2.542 ^s 231	23.82 ^s 148
Nov. 4.8	16.201 ^s 280	30.93 ^s 205	33.484 ^s 276	64.36 ^s 109	2.773 ^s 265	22.34 ^s 170
14.8	16.481 ^s 307	28.88 ^s 211	33.760 ^s 303	65.45 ^s 143	3.038 ^s 294	20.64 ^s 189
24.8	16.788 ^s 326	26.77 ^s 210	34.063 ^s 322	66.88 ^s 173	3.332 ^s 314	18.75 ^s 202
Dec. 4.8	17.114 ^s 336	24.67 ^s 203	34.385 ^s 330	68.61 ^s 199	3.646 ^s 326	16.73 ^s 209
14.7	17.450 ^s 337	22.64 ^s 189	34.715 ^s 329	70.60 ^s 219	3.972 ^s 327	14.64 ^s 209
24.7	17.787 ^s 324	20.75 ^s 169	35.044 ^s 316	72.79 ^s 232	4.299 ^s 317	12.55 ^s 203
34.7	18.111 ^s	19.06 ^s	35.360 ^s	75.11 ^s	4.616 ^s	10.52 ^s
Mean Place	15.210	42.73	32.360	61.49	1.755	29.98
Sec δ , Tan δ	1.039	+0.284	1.032	-0.256	1.002	+0.057
L α , L δ	0.00	-0.4	0.00	-0.4	0.00	-0.4
ω α , ω δ	+0.02	+0.2	-0.02	+0.2	0.00	+0.2
AUTHORITY	A. E.		A. E.			

APPARENT PLACES OF STARS, 1924. 349

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	λ Draconis. Mag. 4·1		ξ Hydræ. Mag. 3·7		λ Centauri. Mag. 3·3	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m 11 26	[°] ['] 69 44	^h ^m 11 29	[°] ['] 31 26	^h ^m 11 32	[°] ['] 62 35
Jan.	0·7 53·81 ^s 73	45·28 ^s 17	16·028 ^s 331	2·78 ^s 252	17·46 ^s 52	38·78 ^s 243
	10·7 54·54 68	45·45 78	16·359 301	5·30 270	17·98 47	41·21 286
	20·6 55·22 60	46·23 135	16·660 263	8·00 279	18·45 40	44·07 318
	30·6 55·82 50	47·58 188	16·923 218	10·79 281	18·85 33	47·25 343
Feb.	9·6 56·32 40	49·46 231	17·141 169	13·60 276	19·18 25	50·68 359
	19·6 56·72 27	51·77 264	17·310 122	16·36 264	19·43 17	54·27 364
	29·5 56·99 15	54·41 287	17·432 73	19·00 246	19·60 9	57·91 361
Mar.	10·5 57·14 3	57·28 297	17·505 28	21·46 226	19·69 1	61·52 351
	20·5 57·17 9	60·25 294	17·533 12	23·72 201	19·70 6	65·03 332
	30·4 57·08 20	63·19 281	17·521 47	25·73 173	19·64 12	68·35 308
Apr.	9·4 56·88 29	66·00 257	17·474 77	27·46 144	19·52 19	71·43 276
	19·4 56·59 37	68·57 224	17·397 101	28·90 113	19·33 23	74·19 241
	29·4 56·22 43	70·81 183	17·296 120	30·03 81	19·10 27	76·60 201
May	9·3 55·79 47	72·64 137	17·176 133	30·84 48	18·83 31	78·61 156
	19·3 55·32 48	74·01 88	17·043 143	31·32 16	18·52 34	80·17 108
	29·3 54·84 50	74·89 35	16·900 148	31·48 16	18·18 36	81·25 60
June	8·3 54·34 48	75·24 18	16·752 149	31·32 49	17·82 36	81·85 9
	18·2 53·86 47	75·06 69	16·603 147	30·83 79	17·46 36	81·94 42
	28·2 53·39 43	74·37 119	16·456 140	30·04 107	17·10 36	81·52 91
July	8·2 52·96 38	73·18 166	16·316 130	28·97 133	16·74 33	80·61 138
	18·1 52·58 32	71·52 210	16·186 114	27·64 153	16·41 31	79·23 180
	28·1 52·26 27	69·42 247	16·072 96	26·11 171	16·10 26	77·43 218
Aug.	7·1 51·99 19	66·95 281	15·976 71	24·40 180	15·84 22	75·25 247
	17·1 51·80 11	64·14 309	15·905 43	22·60 186	15·62 15	72·78 271
	27·0 51·69 3	61·05 331	15·862 8	20·74 182	15·47 8	70·07 284
Sept.	6·0 51·66 5	57·74 346	15·854 31	18·92 171	15·39 0	67·23 286
	16·0 51·71 15	54·28 354	15·885 73	17·21 153	15·39 8	64·37 279
	26·0 51·86 24	50·74 355	15·958 120	15·68 126	15·47 17	61·58 259
Oct.	5·9 52·10 34	47·19 349	16·078 167	14·42 94	15·64 26	58·99 229
	15·9 52·44 43	43·70 335	16·245 212	13·48 54	15·90 34	56·70 188
	25·9 52·87 51	40·35 312	16·457 256	12·94 11	16·24 42	54·82 140
Nov.	4·8 53·38 60	37·23 281	16·713 296	12·83 36	16·66 48	53·42 84
	14·8 53·98 67	34·42 241	17·009 326	13·19 83	17·14 53	52·58 25
	24·8 54·65 72	32·01 196	17·335 349	14·02 129	17·67 56	52·33 39
Dec.	4·8 55·37 76	30·05 142	17·684 359	15·31 171	18·23 57	52·72 100
	14·7 56·13 77	28·63 84	18·043 358	17·02 208	18·80 57	53·72 159
	24·7 56·90 76	27·79 23	18·401 346	19·10 238	19·37 55	55·31 214
	34·7 57·66	27·56	18·747	21·48	19·92	57·45
Mean Place	54·76	62·57	15·634	13·44	15·91	57·34
Sec δ, Tan δ	2·889	+2·711	1·172	-0·611	2·173	-1·929
L α, L δ	+0·01	-0·4	0·00	-0·4	-0·01	-0·4
ω α, ω δ	+0·18	+0·1	-0·04	+0·1	-0·13	+0·1
AUTHORITY	A. E.		A. E.		A. E.	

350 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ν Leonis. Mag. 4·5		ν Virginis. Mag. 4·2		β Leonis. Mag. 2·2	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m II 33	^o [′] 0 24	^h ^m II 41	^o [′] 6 56	^h ^m II 45	^o [′] 14 59
Jan.	0·7 3·377 ³⁰⁷	13·86 ²⁰⁴	57·033 ³¹³	77·71 ¹⁹⁰	10·796 ³²⁰	44·85 ¹⁷⁰
	10·7 3·684 ²⁸²	15·90 ¹⁹¹	57·346 ²⁹⁰	75·81 ¹⁶⁹	11·116 ²⁹⁹	43·15 ¹⁴³
	20·7 3·966 ²⁵⁰	17·81 ¹⁷³	57·636 ²⁶⁰	74·12 ¹⁴⁴	11·415 ²⁶⁸	41·72 ¹¹¹
	30·6 4·216 ²¹¹	19·54 ¹⁵⁰	57·896 ²²¹	72·68 ¹¹⁶	11·683 ²²⁹	40·61 ⁷⁶
Feb.	9·6 4·427 ¹⁶⁸	21·04 ¹²⁴	58·117 ¹⁷⁹	71·52 ⁸⁶	11·912 ¹⁸⁷	39·85 ⁴²
	19·6 4·595 ¹²⁴	22·28 ⁹⁸	58·296 ¹³⁵	70·66 ⁵⁵	12·099 ¹⁴²	39·43 ⁹
	29·6 4·719 ⁸¹	23·26 ⁷¹	58·431 ⁹¹	70·11 ²⁷	12·241 ⁹⁶	39·34 ²²
Mar.	10·5 4·800 ³⁹	23·97 ⁴⁵	58·522 ⁵⁰	69·84 ⁰	12·337 ⁵⁴	39·56 ⁴⁸
	20·5 4·839 ³	24·42 ²²	58·572 ¹¹	69·84 ²¹	12·391 ¹³	40·04 ⁷⁰
	30·5 4·842 ²⁸	24·64 ¹	58·583 ²¹	70·05 ⁴¹	12·404 ²¹	40·74 ⁸⁵
Apr.	9·4 4·814 ⁵⁵	24·65 ¹⁷	58·562 ⁴⁹	70·46 ⁵⁵	12·383 ⁵⁰	41·59 ⁹⁷
	19·4 4·759 ⁷⁶	24·48 ³³	58·513 ⁷⁰	71·01 ⁶⁶	12·333 ⁷⁴	42·56 ¹⁰²
	29·4 4·683 ⁹¹	24·15 ⁴⁴	58·443 ⁸⁷	71·67 ⁷³	12·259 ⁹¹	43·58 ¹⁰³
May	9·4 4·592 ¹⁰¹	23·71 ⁵⁴	58·356 ⁹⁹	72·40 ⁷⁶	12·168 ¹⁰⁴	44·61 ¹⁰⁰
	19·3 4·491 ¹⁰⁸	23·17 ⁶¹	58·257 ¹⁰⁶	73·16 ⁷⁶	12·064 ¹¹²	45·61 ⁹³
	29·3 4·383 ¹¹⁰	22·56 ⁶⁷	58·151 ¹⁰⁹	73·92 ⁷⁵	11·952 ¹¹⁶	46·54 ⁸³
June	8·3 4·273 ¹⁰⁹	21·89 ⁷⁰	58·042 ¹¹⁰	74·67 ⁷¹	11·836 ¹¹⁶	47·37 ⁷¹
	18·3 4·164 ¹⁰⁶	21·19 ⁷²	57·932 ¹⁰⁸	75·38 ⁶⁵	11·720 ¹¹³	48·08 ⁵⁸
	28·2 4·058 ⁹⁹	20·47 ⁷¹	57·824 ¹⁰¹	76·03 ⁵⁷	11·607 ¹⁰⁸	48·66 ⁴²
July	8·2 3·959 ⁹⁰	19·76 ⁶⁹	57·723 ⁹⁴	76·60 ⁴⁸	11·499 ⁹⁸	49·08 ²⁵
	18·2 3·869 ⁷⁷	19·07 ⁶⁴	57·629 ⁸¹	77·08 ³⁷	11·401 ⁸⁸	49·33 ⁸
	28·2 3·792 ⁶²	18·43 ⁵⁷	57·548 ⁶⁸	77·45 ²⁴	11·313 ⁷¹	49·41 ¹⁰
Aug.	7·1 3·730 ⁴⁴	17·86 ⁴⁷	57·480 ⁴⁹	77·69 ⁹	11·242 ⁵⁴	49·31 ³¹
	17·1 3·686 ²¹	17·39 ³⁴	57·431 ²⁸	77·78 ⁷	11·188 ³¹	49·00 ⁵¹
	27·1 3·665 ⁶	17·05 ¹⁷	57·403 ¹	77·71 ²⁶	11·157 ⁶	48·49 ⁷³
Sept.	6·0 3·671 ³⁶	16·88 ²	57·402 ²⁸	77·45 ⁴⁸	11·151 ²⁵	47·76 ⁹⁵
	16·0 3·707 ⁷¹	16·90 ²⁴	57·430 ⁶²	76·97 ⁷⁰	11·176 ⁵⁹	46·81 ¹¹⁸
	26·0 3·778 ¹⁰⁷	17·14 ⁵⁰	57·492 ⁹⁹	76·27 ⁹⁴	11·235 ⁹⁷	45·63 ¹⁴¹
Oct.	6·0 3·885 ¹⁴⁷	17·64 ⁷⁷	57·591 ¹³⁸	75·33 ¹¹⁹	11·332 ¹³⁶	44·22 ¹⁶³
	15·9 4·032 ¹⁸⁶	18·41 ¹⁰⁵	57·729 ¹⁷⁹	74·14 ¹⁴²	11·468 ¹⁷⁸	42·59 ¹⁸³
	25·9 4·218 ²²⁵	19·46 ¹³¹	57·908 ²¹⁸	72·72 ¹⁶⁶	11·646 ²¹⁸	40·76 ²⁰⁰
Nov.	4·9 4·443 ²⁵⁹	20·77 ¹⁵⁸	58·126 ²⁵⁵	71·06 ¹⁸⁵	11·864 ²⁵⁵	38·76 ²¹⁴
	14·8 4·702 ²⁹⁰	22·35 ¹⁷⁹	58·381 ²⁸⁵	69·21 ²⁰¹	12·119 ²⁸⁸	36·62 ²²⁰
	24·8 4·992 ³¹¹	24·14 ¹⁹⁶	58·666 ³¹¹	67·20 ²¹⁰	12·407 ³¹³	34·42 ²²³
Dec.	4·8 5·303 ³²⁴	26·10 ²⁰⁸	58·977 ³²⁵	65·10 ²¹⁴	12·720 ³³⁰	32·19 ²¹⁸
	14·8 5·627 ³²⁷	28·18 ²¹²	59·302 ³³⁰	62·96 ²¹⁰	13·050 ³³⁶	30·01 ²⁰⁶
	24·7 5·954 ³¹⁸	30·30 ²¹⁰	59·632 ³²⁴	60·86 ²⁰⁰	13·386 ³³¹	27·95 ¹⁸⁷
	34·7 6·272	32·40	59·956	58·86	13·717	26·08
Mean Place	3·443	14·40	57·225	79·35	11·087	49·08
Sec δ, Tan δ	1·000	−0·007	1·007	+0·122	1·035	+0·268
L α, L δ	0·00	−0·4	0·00	−0·4	0·00	−0·4
ω α, ω δ	0·00	+0·1	+0·01	+0·1	+0·02	+0·1
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 351

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Virginis. Mag. 3.8		B Centauri. Mag. 4.7		γ Ursæ Majoris. Mag. 2.5	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. N.
	^h ^m 11 46	[°] ['] 2 11	^h ^m 11 47	[°] ['] 44 44	^h ^m 11 49	[°] ['] 54 6
Jan. 0.7	44.016 ³¹²	35.34 ²⁰¹	20.793 ³⁸⁵	47.51 ²⁴⁰	49.716 ⁴⁷⁷	47.73 ⁶¹
10.7	44.328 ²⁹²	33.33 ¹⁸⁵	21.178 ³⁵⁴	49.91 ²⁷²	50.193 ⁴⁵⁰	47.12 ⁴
20.7	44.620 ²⁶¹	31.48 ¹⁶⁵	21.532 ³¹³	52.63 ²⁹⁴	50.643 ⁴⁰⁸	47.08 ⁵³
30.6	44.881 ²²⁴	29.83 ¹⁴⁰	21.845 ²⁶⁴	55.57 ³⁰⁹	51.051 ³⁵³	47.61 ¹⁰⁷
Feb. 9.6	45.105 ¹⁸³	28.43 ¹¹³	22.109 ²¹¹	58.66 ³¹⁴	51.404 ²⁸⁸	48.68 ¹⁵⁵
19.6	45.288 ¹⁴⁰	27.30 ⁸⁵	22.320 ¹⁵⁶	61.80 ³¹³	51.692 ²¹⁸	50.23 ¹⁹⁶
29.6	45.428 ⁹⁶	26.45 ⁵⁶	22.476 ¹⁰²	64.93 ³⁰⁵	51.910 ¹⁴⁴	52.19 ²²⁶
Mar. 10.5	45.524 ⁵⁵	25.89 ³¹	22.578 ⁵⁰	67.98 ²⁸⁸	52.054 ⁷¹	54.45 ²⁴⁹
20.5	45.579 ¹⁸	25.58 ⁷	22.628 ²	70.86 ²⁶⁹	52.125 ²	56.94 ²⁵⁸
30.5	45.597 ¹⁴	25.51 ¹³	22.630 ⁴⁰	73.55 ²⁴⁴	52.127 ⁶²	59.52 ²⁵⁸
Apr. 9.4	45.583 ⁴²	25.64 ³⁰	22.590 ⁷⁹	75.99 ²¹⁴	52.065 ¹¹⁶	62.10 ²⁴⁷
19.4	45.541 ⁶⁴	25.94 ⁴⁴	22.511 ¹¹¹	78.13 ¹⁸²	51.949 ¹⁶³	64.57 ²²⁷
29.4	45.477 ⁸¹	26.38 ⁵⁵	22.400 ¹³⁷	79.95 ¹⁴⁷	51.786 ¹⁹⁹	66.84 ²⁰⁰
May 9.4	45.396 ⁹³	26.93 ⁶²	22.263 ¹⁶⁰	81.42 ¹¹⁰	51.587 ²²⁵	68.84 ¹⁶⁵
19.3	45.303 ¹⁰¹	27.55 ⁶⁷	22.103 ¹⁷⁶	82.52 ⁷⁰	51.362 ²⁴²	70.49 ¹²⁶
29.3	45.202 ¹⁰⁶	28.22 ⁶⁹	21.927 ¹⁸⁹	83.22 ²⁹	51.120 ²⁵¹	71.75 ⁸⁴
June 8.3	45.096 ¹⁰⁸	28.91 ⁷⁰	21.738 ¹⁹⁵	83.51 ¹¹	50.869 ²⁵²	72.59 ³⁹
18.3	44.988 ¹⁰⁵	29.61 ⁶⁹	21.543 ¹⁹⁸	83.40 ⁵¹	50.617 ²⁴⁵	72.98 ⁶
28.2	44.883 ¹⁰¹	30.30 ⁶⁵	21.345 ¹⁹⁵	82.89 ⁹⁰	50.372 ²³²	72.92 ⁵⁰
July 8.2	44.782 ⁹¹	30.95 ⁶⁰	21.150 ¹⁸⁷	81.99 ¹²⁶	50.140 ²¹²	72.42 ⁹⁶
18.2	44.688 ⁸⁴	31.55 ⁵³	20.963 ¹⁷²	80.73 ¹⁵⁹	49.928 ¹⁸⁸	71.46 ¹³⁶
28.2	44.604 ⁷⁰	32.08 ⁴⁴	20.791 ¹⁵¹	79.14 ¹⁸⁶	49.740 ¹⁵⁸	70.10 ¹⁷⁶
Aug. 7.1	44.534 ⁵²	32.52 ³²	20.640 ¹²⁴	77.28 ²⁰⁸	49.582 ¹²³	68.34 ²¹¹
17.1	44.482 ³¹	32.84 ¹⁸	20.516 ⁸⁹	75.20 ²²⁴	49.459 ⁸⁴	66.23 ²⁴⁴
27.1	44.451 ⁵	33.02 ¹	20.427 ⁴⁸	72.96 ²²⁹	49.375 ³⁹	63.79 ²⁷¹
Sept. 6.0	44.446 ²⁵	33.03 ¹⁹	20.379 ⁰	70.67 ²²⁸	49.336 ¹¹	61.08 ²⁹⁴
16.0	44.471 ⁵⁸	32.84 ⁴³	20.379 ⁵²	68.39 ²¹⁶	49.347 ⁶⁴	58.14 ³¹²
26.0	44.529 ⁹⁵	32.41 ⁶⁷	20.431 ¹⁰⁹	66.23 ¹⁹⁵	49.411 ¹²¹	55.02 ³²³
Oct. 6.0	44.624 ¹³⁵	31.74 ⁹²	20.540 ¹⁶⁷	64.28 ¹⁶⁵	49.532 ¹⁸¹	51.79 ³²⁹
15.9	44.759 ¹⁷⁶	30.82 ¹¹⁸	20.707 ²²⁵	62.63 ¹²⁷	49.713 ²⁴²	48.50 ³²⁷
25.9	44.935 ²¹⁵	29.64 ¹⁴⁴	20.932 ²⁷⁹	61.36 ⁸²	49.955 ³⁰²	45.23 ³¹⁹
Nov. 4.9	45.150 ²⁵²	28.20 ¹⁶⁸	21.211 ³²⁷	60.54 ³²	50.257 ³⁵⁸	42.04 ³⁰⁰
14.8	45.402 ²⁸⁴	26.52 ¹⁸⁸	21.538 ³⁶⁶	60.22 ²²	50.615 ⁴⁰⁸	39.04 ²⁷⁵
24.8	45.686 ³⁰⁸	24.64 ²⁰²	21.904 ³⁹⁵	60.44 ⁷⁵	51.023 ⁴⁴⁸	36.29 ²⁴¹
Dec. 4.8	45.994 ³²⁴	22.62 ²¹¹	22.299 ⁴¹⁰	61.19 ¹²⁷	51.471 ⁴⁷⁷	33.88 ²⁰⁰
14.8	46.318 ³²⁹	20.51 ²¹³	22.709 ⁴¹¹	62.46 ¹⁷⁶	51.948 ⁴⁹²	31.88 ¹⁵¹
24.7	46.647 ³²⁴	18.38 ²⁰⁸	23.120 ⁴⁰⁰	64.22 ²¹⁸	52.440 ⁴⁹⁰	30.37 ⁹⁷
34.7	46.971	16.30	23.520	66.40	52.930	29.40
Mean Place	44.187	35.16	20.228	62.91	50.527	62.33
Sec δ , Tan δ	1.001	+0.038	1.408	-0.991	1.706	+1.382
L α , L δ	0.00	-0.4	0.00	-0.4	0.00	-0.4
ω α , ω δ	0.00	+0.1	-0.07	+0.1	+0.09	0.0
AUTHORITY	A. E.		A. N.		A. E.	

352 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	π Virginis. Mag. 4.6		σ Virginis. Mag. 4.2		δ Centauri. Mag. 2.9	
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. S.
	^h ^m 11 56	[°] ['] 7 1	^h ^m 12 1	[°] ['] 9 8	^h ^m 12 4	[°] ['] 50 17
Jan.	0.7 58.419 ³¹⁸ 10.7 58.737 ²⁹⁷ 20.7 59.034 ²⁶⁹ 30.6 59.303 ²³³	76.09 ¹⁹³ 74.16 ¹⁷² 72.44 ¹⁴⁷ 70.97 ¹¹⁹	19.979 ³²⁰ 20.299 ³⁰⁰ 20.599 ²⁷³ 20.872 ²³⁷	76.18 ¹⁸⁹ 74.29 ¹⁶⁷ 72.62 ¹⁴⁰ 71.22 ¹¹⁰	25.232 ⁴²⁹ 25.661 ³⁹⁸ 26.059 ³⁵⁶ 26.415 ³⁰⁷	39.99 ²²⁰ 42.19 ²⁵⁸ 44.77 ²⁸⁸ 47.65 ³⁰⁸
Feb.	9.6 59.536 ¹⁹² 19.6 59.728 ¹⁴⁹ 29.6 59.877 ¹⁰⁶	69.78 ⁸⁷ 68.91 ⁵⁷ 68.34 ²⁸	21.109 ¹⁹⁷ 21.306 ¹⁵⁴ 21.460 ¹¹¹	70.12 ⁷⁷ 69.35 ⁴⁶ 68.89 ¹⁵	26.722 ²⁵² 26.974 ¹⁹⁴ 27.168 ¹³⁶	50.73 ³²⁰ 53.93 ³²⁴ 57.17 ³²¹
Mar.	10.5 59.983 ⁶⁵ 20.5 60.048 ²⁷ 30.5 60.075 ⁶	68.06 ⁰ 68.06 ²³ 68.29 ⁴²	21.571 ⁷⁰ 21.641 ³⁰ 21.671 ³	68.74 ¹³ 68.87 ³⁶ 69.23 ⁵⁵	27.304 ⁷⁹ 27.383 ²⁵ 27.408 ²²	60.38 ³¹¹ 63.49 ²⁹⁵ 66.44 ²⁷³
Apr.	9.4 60.069 ³⁶ 19.4 60.033 ⁵⁹ 29.4 59.974 ⁷⁶	68.71 ⁵⁸ 69.29 ⁷⁰ 69.99 ⁷⁵	21.668 ³² 21.636 ⁵⁷ 21.579 ⁷⁵	69.78 ⁷⁰ 70.48 ⁸⁰ 71.28 ⁸⁵	27.386 ⁶⁷ 27.319 ¹⁰⁵ 27.214 ¹³⁹	69.17 ²⁴⁶ 71.63 ²¹⁵ 73.78 ¹⁸¹
May	9.4 59.898 ⁹¹ 19.3 59.807 ¹⁰⁰ 29.3 59.707 ¹⁰⁶	70.74 ⁸¹ 71.55 ⁷⁹ 72.34 ⁷⁸	21.504 ⁹⁰ 21.414 ¹⁰⁰ 21.314 ¹⁰⁷	72.13 ⁸⁸ 73.01 ⁸⁶ 73.87 ⁸²	27.075 ¹⁶⁷ 26.908 ¹⁹¹ 26.717 ²⁰⁹	75.59 ¹⁴³ 77.02 ¹⁰³ 78.05 ⁶²
June	8.3 59.601 ¹⁰⁹ 18.3 59.492 ¹⁰⁸ 28.2 59.384 ¹⁰⁶	73.12 ⁷⁴ 73.86 ⁶⁶ 74.52 ⁵⁹	21.207 ¹¹⁰ 21.097 ¹¹⁰ 20.987 ¹⁰⁸	74.69 ⁷⁶ 75.45 ⁶⁷ 76.12 ⁵⁶	26.508 ²²² 26.286 ²³⁰ 26.056 ²³⁰	78.67 ¹⁸ 78.85 ²⁵ 78.60 ⁶⁸
July	8.2 59.278 ¹⁰⁰ 18.2 59.178 ⁹⁰ 28.2 59.088 ⁷⁸	75.11 ⁴⁹ 75.60 ³⁸ 75.98 ²⁴	20.879 ¹⁰² 20.777 ⁹³ 20.684 ⁸²	76.68 ⁴⁴ 77.12 ³¹ 77.43 ¹⁷	25.826 ²²⁶ 25.600 ²¹² 25.388 ¹⁹³	77.92 ¹⁰⁹ 76.83 ¹⁴⁶ 75.37 ¹⁷⁹
Aug.	7.1 59.010 ⁶¹ 17.1 58.949 ⁴¹ 27.1 58.908 ¹⁷	76.22 ¹⁰ 76.32 ⁸ 76.24 ²⁷	20.602 ⁶⁵ 20.537 ⁴⁵ 20.492 ²⁰	77.60 ¹ 77.59 ¹⁹ 77.40 ³⁹	25.195 ¹⁶⁴ 25.031 ¹²⁸ 24.903 ⁸³	73.58 ²⁰⁶ 71.52 ²²⁸ 69.24 ²⁴⁰
Sept.	6.0 58.891 ¹⁴ 16.0 58.905 ⁴⁶ 26.0 58.951 ⁸⁴	75.97 ⁴⁸ 75.49 ⁷¹ 74.78 ⁹⁵	20.472 ⁸ 20.480 ⁴² 20.522 ⁸⁰	77.01 ⁶⁰ 76.41 ⁸⁴ 75.57 ¹⁰⁷	24.820 ³¹ 24.789 ²⁷ 24.816 ⁹¹	66.84 ²⁴³ 64.41 ²³⁸ 62.03 ²²¹
Oct.	6.0 59.035 ¹²⁴ 15.9 59.159 ¹⁶⁵ 25.9 59.324 ²⁰⁶	73.83 ¹¹⁹ 72.64 ¹⁴⁴ 71.20 ¹⁶⁷	20.602 ¹¹⁹ 20.721 ¹⁶¹ 20.882 ²⁰²	74.50 ¹³² 73.18 ¹⁵⁵ 71.63 ¹⁷⁷	24.907 ¹⁵⁶ 25.063 ²²² 25.285 ²⁸⁴	59.82 ¹⁹⁷ 57.85 ¹⁶¹ 56.24 ¹¹⁹
Nov.	4.9 59.530 ²⁴⁴ 14.8 59.774 ²⁷⁸ 24.8 60.052 ³⁰⁴	69.53 ¹⁸⁶ 67.67 ²⁰² 65.65 ²¹²	21.084 ²⁴² 21.326 ²⁷⁵ 21.601 ³⁰³	69.86 ¹⁹⁵ 67.91 ²⁰⁸ 65.83 ²¹⁷	25.569 ³⁴⁰ 25.909 ³⁸⁷ 26.296 ⁴²²	55.05 ⁶⁹ 54.36 ¹⁶ 54.20 ³⁹
Dec.	4.8 60.356 ³²³ 14.8 60.679 ³²⁹ 24.7 61.008 ³²⁷ 34.7 61.335	63.53 ²¹⁶ 61.37 ²¹³ 59.24 ²⁰³ 57.21	21.904 ³²¹ 22.225 ³³¹ 22.556 ³²⁸ 22.884	63.66 ²¹⁹ 61.47 ²¹³ 59.34 ²⁰² 57.32	26.718 ⁴⁴³ 27.161 ⁴⁴⁹ 27.610 ⁴⁴¹ 28.051	54.59 ⁹⁵ 55.54 ¹⁴⁷ 57.01 ¹⁹⁵ 58.96
Mean Place	58.699	77.20	20.306	77.86	24.668	57.69
Sec δ , Tan δ	1.008	+0.123	1.013	+0.161	1.566	-1.204
L α , L δ	0.00	-0.4	0.00	-0.4	0.00	-0.4
ω α , ω δ	+0.01	0.0	+0.01	0.0	-0.08	0.0
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 353

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ε Corvi. Mag. 3·2		δ Crucis. Mag. 3·1		δ Ursæ Majoris. Mag. 3·4	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	h m 12 6	22 II	h m 12 II	58 19	h m 12 II	57 26
Jan.	0·7 12·773 ³³⁰	40·37 ²²⁷	6·752 ⁵⁰³	15·02 ²⁰⁵	39·402 ⁵¹⁶	62·81 ⁷⁸
	10·7 13·103 ³¹⁰	42·64 ²³⁷	7·255 ⁴⁶⁸	17·07 ²⁴⁷	39·918 ⁴⁹⁴	62·03 ¹⁸
	20·7 13·413 ²⁸⁰	45·01 ²⁴²	7·723 ⁴²²	19·54 ²⁸⁴	40·412 ⁴⁵⁶	61·85 ⁴²
	30·7 13·693 ²⁴²	47·43 ²³⁸	8·145 ³⁶⁴	22·38 ³¹¹	40·868 ⁴⁰⁴	62·27 ¹⁰⁰
Feb.	9·6 13·935 ²⁰³	49·81 ²²⁹	8·509 ³⁰²	25·49 ³³⁰	41·272 ³⁴⁰	63·27 ¹⁵¹
	19·6 14·138 ¹⁵⁹	52·10 ²¹⁵	8·811 ²³⁴	28·79 ³⁴⁰	41·612 ²⁶⁸	64·78 ¹⁹⁷
	29·6 14·297 ¹¹⁶	54·25 ¹⁹⁷	9·045 ¹⁶⁵	32·19 ³⁴³	41·880 ¹⁹⁰	66·75 ²³²
Mar.	10·6 14·413 ⁷³	56·22 ¹⁷⁶	9·210 ⁹⁹	35·62 ³³⁷	42·070 ¹¹²	69·07 ²⁵⁸
	20·5 14·486 ³⁶	57·98 ¹⁵⁴	9·309 ³⁵	38·99 ³²⁵	42·182 ³⁵	71·65 ²⁷⁰
	30·5 14·522 ¹	59·52 ¹²⁹	9·344 ²⁴	42·24 ³⁰⁶	42·217 ³⁵	74·35 ²⁷⁴
Apr.	9·5 14·523 ²⁹	60·81 ¹⁰⁵	9·320 ⁷⁹	45·30 ²⁸¹	42·182 ⁹⁹	77·09 ²⁶⁶
	19·4 14·494 ⁵⁵	61·86 ⁸⁰	9·241 ¹²⁹	48·11 ²⁵²	42·083 ¹⁵⁴	79·75 ²⁴⁸
	29·4 14·439 ⁷⁵	62·66 ⁵⁵	9·112 ¹⁷²	50·63 ²¹⁷	41·929 ¹⁹⁹	82·23 ²²²
May	9·4 14·364 ⁹³	63·21 ³¹	8·940 ²⁰⁹	52·80 ¹⁷⁸	41·730 ²³⁴	84·45 ¹⁸⁸
	19·4 14·271 ¹⁰⁶	63·52 ⁷	8·731 ²⁴³	54·58 ¹³⁶	41·496 ²⁶⁰	86·33 ¹⁴⁸
	29·3 14·165 ¹¹⁵	63·59 ¹⁷	8·488 ²⁶⁸	55·94 ⁹²	41·236 ²⁷⁶	87·81 ¹⁰⁵
June	8·3 14·050 ¹²³	63·42 ⁴⁰	8·220 ²⁸⁷	56·86 ⁴⁵	40·960 ²⁸⁴	88·86 ⁵⁹
	18·3 13·927 ¹²⁶	63·02 ⁶¹	7·933 ²⁹⁹	57·31 ²	40·676 ²⁸³	89·45 ¹¹
	28·2 13·801 ¹²⁶	62·41 ⁸¹	7·634 ³⁰³	57·29 ⁵⁰	40·393 ²⁷⁵	89·56 ³⁷
July	8·2 13·675 ¹²³	61·60 ⁹⁸	7·331 ²⁹⁸	56·79 ⁹⁶	40·118 ²⁵⁹	89·19 ⁸⁴
	18·2 13·552 ¹¹⁵	60·62 ¹¹³	7·033 ²⁸⁵	55·83 ¹³⁸	39·859 ²³⁷	88·35 ¹²⁸
	28·2 13·437 ¹⁰³	59·49 ¹²⁴	6·748 ²⁶⁰	54·45 ¹⁷⁹	39·622 ²¹⁰	87·07 ¹⁷¹
Aug.	7·1 13·334 ⁸⁷	58·25 ¹³⁰	6·488 ²²⁵	52·66 ²¹¹	39·412 ¹⁷⁴	85·36 ²¹¹
	17·1 13·247 ⁶⁴	56·95 ¹³³	6·263 ¹⁸²	50·55 ²³⁹	39·238 ¹³⁵	83·25 ²⁴⁶
	27·1 13·183 ³⁷	55·62 ¹²⁸	6·081 ¹²⁶	48·16 ²⁵⁶	39·103 ⁸⁸	80·79 ²⁷⁶
Sept.	6·1 13·146 ⁴	54·34 ¹¹⁹	5·955 ⁶¹	45·60 ²⁶⁶	39·015 ³⁷	78·03 ³⁰³
	16·0 13·142 ³⁵	53·15 ¹⁰³	5·894 ¹⁰	42·94 ²⁶⁵	38·978 ²²	75·00 ³²³
	26·0 13·177 ⁷⁶	52·12 ⁸⁰	5·904 ⁸⁷	40·29 ²⁵⁴	39·000 ⁸³	71·77 ³³⁸
Oct.	6·0 13·253 ¹²¹	51·32 ⁵²	5·991 ¹⁶⁸	37·75 ²³⁰	39·083 ¹⁵⁰	68·39 ³⁴⁶
	15·9 13·374 ¹⁶⁸	50·80 ²⁰	6·159 ²⁴⁷	35·45 ¹⁹⁹	39·233 ²¹⁶	64·93 ³⁴⁴
	25·9 13·542 ²¹²	50·60 ¹⁸	6·406 ³²⁴	33·46 ¹⁵⁷	39·449 ²⁸⁴	61·49 ³³⁷
Nov.	4·9 13·754 ²⁵⁴	50·78 ⁵⁶	6·730 ³⁹⁰	31·89 ¹⁰⁷	39·733 ³⁵⁰	58·12 ³²²
	14·9 14·008 ²⁹⁰	51·34 ⁹⁴	7·120 ⁴⁴⁷	30·82 ⁵³	40·083 ⁴⁰⁷	54·90 ²⁹⁶
	24·8 14·298 ³¹⁸	52·28 ¹³²	7·567 ⁴⁹⁰	30·29 ⁵	40·490 ⁴⁵⁷	51·94 ²⁶²
Dec.	4·8 14·616 ³³⁷	53·60 ¹⁶⁶	8·057 ⁵¹⁶	30·34 ⁶⁴	40·947 ⁴⁹⁵	49·32 ²²¹
	14·8 14·953 ³⁴⁴	55·26 ¹⁹⁵	8·573 ⁵²⁵	30·98 ¹²²	41·442 ⁵¹⁸	47·11 ¹⁷¹
	24·8 15·297 ³⁴⁰	57·21 ²¹⁷	9·098 ⁵¹⁶	32·20 ¹⁷⁴	41·960 ⁵²⁵	45·40 ¹¹⁶
	34·7 15·637	59·38	9·614	33·94	42·485	44·24
Mean Place	12·780	49·84	5·962	34·82	40·495	77·40
Sec δ, Tan δ	1·080	-0·408	1·904	-1·621	1·859	+1·567
L α, L δ	0·00	-0·4	0·00	-0·4	0·00	-0·4
ω α, ω δ	-0·03	0·0	-0·11	0·0	+0·10	0·0
AUTHORITY	A. E.		A. N.		A. E.	

354 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date	γ Corvi. Mag. 2.8		β Chamæleontis. Mag. 4.4		η Virginis. Mag. 4.0	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	$^{\text{h}}$ $^{\text{m}}$ 12 11	$^{\circ}$ $'$ 17 7	$^{\text{h}}$ $^{\text{m}}$ 12 13	$^{\circ}$ $'$ 78 53	$^{\text{h}}$ $^{\text{m}}$ 12 16	$^{\circ}$ $'$ 0 14
Jan.	0.7 53.587 ³²⁶	4.23 ²²²	54.22 ¹²⁰	1.83 ¹⁶⁴	0.737 ³¹⁸	38.31 ²⁰⁷
	10.7 53.913 ³⁰⁶	6.45 ²²⁷	55.42 ¹¹²	3.47 ²¹⁹	1.055 ³⁰²	40.38 ^{194.}
	20.7 54.219 ²⁷⁸	8.72 ²²⁶	56.54 ¹⁰⁰	5.66 ²⁶⁶	1.357 ²⁷⁶	42.32 ¹⁷⁶
	30.7 54.497 ²⁴⁴	10.98 ^{219*}	57.54 ⁸⁷	8.32 ³⁰⁷	1.633 ²⁴⁴	44.08 ¹⁵⁴
Feb.	9.6 54.741 ²⁰⁴	13.17 ²⁰⁷	58.41 ⁷¹	11.39 ³³⁸	1.877 ²⁰⁵	45.62 ¹²⁸
	19.6 54.945 ¹⁶¹	15.24 ¹⁸⁹	59.12 ⁵⁴	14.77 ³⁶¹	2.082 ¹⁶⁵	46.90 ¹⁰⁰
	29.6 55.106 ¹²⁰	17.13 ¹⁶⁹	59.66 ³⁸	18.38 ³⁷⁴	2.247 ¹²³	47.90 ⁷³
Mar.	10.6 55.226 ⁸⁰	18.82 ¹⁴⁷	60.04 ²⁰	22.12 ³⁷⁹	2.370 ⁸⁴	48.63 ⁴⁶
	20.5 55.306 ⁴¹	20.29 ¹²⁴	60.24 ²	25.91 ³⁷⁵	2.454 ⁴⁶	49.09 ²¹
	30.5 55.347 ⁸	21.53 ¹⁰⁰	60.26 ¹⁴	29.66 ³⁶³	2.500 ¹⁴	49.30 ⁰
Apr.	9.5 55.355 ²¹	22.53 ⁷⁷	60.12 ²⁹	33.29 ³⁴⁴	2.514 ¹⁷	49.30 ²⁰
	19.4 55.334 ⁴⁶	23.30 ⁵⁴	59.83 ⁴⁵	36.73 ³¹⁷	2.497 ⁴⁰	49.10 ³⁴
	29.4 55.288 ⁶⁷	23.84 ³²	59.38 ⁵⁸	39.90 ²⁸⁵	2.457 ⁶¹	48.76 ⁴⁷
May	9.4 55.221 ⁸⁴	24.16 ¹²	58.80 ⁶⁹	42.75 ²⁴⁵	2.396 ⁷⁷	48.29 ⁵⁷
	19.4 55.137 ⁹⁷	24.28 ⁹	58.11 ⁸⁰	45.20 ²⁰²	2.319 ⁸⁹	47.72 ⁶³
	29.3 55.040 ¹⁰⁸	24.19 ²⁷	57.31 ⁸⁹	47.22 ¹⁵²	2.230 ⁹⁹	47.09 ⁶⁷
June	8.3 54.932 ¹¹⁴	23.92 ⁴⁶	56.42 ⁹⁵	48.74 ¹⁰¹	2.131 ¹⁰⁵	46.42 ⁶⁹
	18.3 54.818 ¹¹⁸	23.46 ⁶²	55.47 ⁹⁸	49.75 ⁴⁶	2.026 ¹⁰⁷	45.73 ⁷⁰
	28.2 54.700 ¹¹⁹	22.84 ⁷⁸	54.49 ¹⁰⁰	50.21 ⁹	1.919 ¹⁰⁹	45.03 ⁶⁸
July	8.2 54.581 ¹¹⁷	22.06 ⁹⁰	53.49 ⁹⁸	50.12 ⁶⁴	1.810 ¹⁰⁶	44.35 ⁶⁴
	18.2 54.464 ¹¹⁰	21.16 ¹⁰⁰	52.51 ⁹⁴	49.48 ¹¹⁸	1.704 ¹⁰⁰	43.71 ⁵⁹
	28.2 54.354 ¹⁰⁰	20.16 ¹⁰⁷	51.57 ⁸⁶	48.30 ¹⁶⁷	1.604 ⁹⁰	43.12 ⁵²
Aug.	7.1 54.254 ⁸⁵	19.09 ¹¹⁰	50.71 ⁷⁵	46.63 ²¹²	1.514 ⁷⁶	42.60 ⁴¹
	17.1 54.169 ⁶⁴	17.99 ¹⁰⁹	49.96 ⁶²	44.51 ²⁵¹	1.438 ⁵⁸	42.19 ²⁸
	27.1 54.105 ³⁹	16.90 ¹⁰³	49.34 ⁴⁶	42.00 ²⁷⁹	1.380 ³⁵	41.91 ¹³
Sept.	6.1 54.066 ⁸	15.87 ⁹¹	48.88 ²⁷	39.21 ³⁰⁰	1.345 ⁶	41.78 ⁶
	16.0 54.058 ²⁹	14.96 ⁷³	48.61 ⁸	36.21 ³⁰⁸	1.339 ²⁷	41.84 ²⁷
	26.0 54.087 ⁶⁹	14.23 ⁵²	48.53 ¹⁴	33.13 ³⁰⁶	1.366 ⁶⁴	42.11 ⁵¹
Oct.	6.0 54.156 ¹¹³	13.71 ²³	48.67 ³⁵	30.07 ²⁹⁰	1.430 ¹⁰⁵	42.62 ⁷⁷
	15.9 54.269 ¹⁵⁸	13.48 ⁸	49.02 ⁵⁶	27.17 ²⁶⁴	1.535 ¹⁴⁸	43.39 ¹⁰⁴
	25.9 54.427 ²⁰³	13.56 ⁴²	49.58 ⁷⁶	24.53 ²²⁶	1.683 ¹⁹¹	44.43 ¹³⁰
Nov.	4.9 54.630 ²⁴³	13.98 ⁷⁸	50.34 ⁹²	22.27 ¹⁷⁹	1.874 ²³⁰	45.73 ¹⁵⁵
	14.9 54.873 ²⁸⁰	14.76 ¹¹³	51.26 ¹⁰⁷	20.48 ¹²³	2.104 ²⁶⁶	47.28 ¹⁷⁸
	24.8 55.153 ³⁰⁹	15.89 ¹⁴⁵	52.33 ¹¹⁶	19.25 ⁶³	2.370 ²⁹⁵	49.06 ¹⁹⁵
Dec.	4.8 55.462 ³²⁸	17.34 ¹⁷⁵	53.49 ¹²³	18.62 ²	2.665 ³¹⁶	51.01 ²⁰⁸
	14.8 55.790 ³³⁶	19.09 ¹⁹⁹	54.72 ¹²⁵	18.64 ⁶⁵	2.981 ³²⁶	53.09 ²¹³
	24.8 56.126 ³³⁴	21.08 ²¹⁵	55.97 ¹²³	19.29 ¹²⁸	3.307 ³²⁶	55.22 ²¹²
	34.7 56.460	23.23	57.20	20.57	3.633	57.34
Mean Place	53.695	12.19	51.03	24.88	1.054	40.48
Sec δ , Tan δ	1.046	-0.308	5.190	-5.092	1.000	-0.004
L α , L δ	0.00	-0.4	+0.01	-0.4	0.00	-0.4
ω α , ω δ	-0.02	0.0	-0.34	-0.1	0.00	-0.1
AUTHORITY	A. N.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 355

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Crucis. Mag. 1.6		δ Corvi. Mag. 3.1		γ Crucis. Mag. 1.6		
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.	
	h m	° ' "	h m	° ' "	h m	° ' "	
	12 22	62 40	12 25	16 5	12 26	56 40	
Jan.	0.7 10.7 20.7 30.7	22.24 ^s 57 22.81 54 23.35 48 23.83 43	20.19 ^s 184 22.03 232 24.35 272 27.07 303	55.566 ^s 329 55.895 311 56.206 286 56.492 254	24.78 ^s 217 26.95 222 29.17 220 31.37 213	56.874 ^s 496 57.370 467 57.837 427 58.264 376	56.25 ^s 188 58.13 232 60.45 269 63.14 298
Feb.	9.6 19.6 29.6	24.26 36 24.62 28 24.90 21	30.10 328 33.38 342 36.80 350	56.746 ^s 216 56.962 175 57.137 135	33.50 ^s 200 35.50 183 37.33 163	58.640 ^s 317 58.957 256 59.213 192	66.12 ^s 317 69.29 329 72.58 333
Mar.	10.6 20.5 30.5	25.11 13 25.24 6 25.30 1	40.30 348 43.78 339 47.17 323	57.272 ^s 94 57.366 57 57.423 23	38.96 ^s 141 40.37 118 41.55 95	59.405 ^s 128 59.533 68 59.601 10	75.91 ^s 330 79.21 320 82.41 303
Apr.	9.5 19.4 29.4	25.29 7 25.22 13 25.09 19	50.40 ^s 302 53.42 274 56.16 241	57.446 ^s 7 57.439 32 57.407 55	42.50 ^s 72 43.22 51 43.73 31	59.611 ^s 43 59.568 93 59.475 135	85.44 ^s 281 88.25 253 90.78 222
May	9.4 19.4 29.3	24.90 23 24.67 27 24.40 31	58.57 ^s 203 60.60 162 62.22 116	57.352 ^s 74 57.278 88 57.190 101	44.04 ^s 10 44.14 8 44.06 26	59.340 ^s 175 59.165 209 58.956 237	93.00 ^s 185 94.85 146 96.31 104
June	8.3 18.3 28.2	24.09 34 23.75 35 23.40 36	63.38 69 64.07 20 64.27 29	57.089 ^s 110 56.979 116 56.863 119	43.80 ^s 42 43.38 58 42.80 72	58.719 ^s 260 58.459 275 58.184 284	97.35 ^s 59 97.94 13 98.07 34
July	8.2 18.2 28.2	23.04 36 22.68 34 22.34 32	63.98 78 63.20 124 61.96 167	56.744 ^s 119 56.625 115 56.510 106	42.08 ^s 82 41.26 92 40.34 98	57.900 ^s 284 57.616 276 57.340 258	97.73 ^s 78 96.95 121 95.74 161
Aug.	7.1 17.1 27.1	22.02 29 21.73 23 21.50 17	60.29 204 58.25 235 55.90 259	56.404 ^s 93 56.311 76 56.235 50	39.36 ^s 101 38.35 100 37.35 93	57.082 ^s 229 56.853 190 56.663 141	94.13 ^s 195 92.18 223 89.95 243
Sept.	6.1 16.0 26.0	21.33 10 21.23 2 21.21 7	53.31 272 50.59 276 47.83 268	56.185 ^s 20 56.165 15 56.180 54	36.42 ^s 83 35.59 66 34.93 44	56.522 ^s 82 56.440 15 56.425 60	87.52 ^s 255 84.97 257 82.40 247
Oct.	6.0 15.9 25.9	21.28 16 21.44 26 21.70 34	45.15 250 42.65 221 40.44 182	56.234 ^s 99 56.333 144 56.477 189	34.49 19 34.30 11 34.41 45	56.485 ^s 137 56.622 214 56.836 290	79.93 ^s 229 77.64 199 75.65 161
Nov.	4.9 14.9 24.8	22.04 42 22.46 49 22.95 54	38.62 135 37.27 81 36.46 23	56.666 ^s 232 56.898 270 57.168 301	34.86 78 35.64 112 36.76 143	57.126 ^s 359 57.485 418 57.903 463	74.04 ^s 115 72.89 62 72.27 6
Dec.	4.8 14.8 24.8 34.7	23.49 57 24.06 59 24.65 58 25.23	36.23 37 36.60 97 37.57 152 39.09	57.469 ^s 322 57.791 335 58.126 334 58.460	38.19 172 39.91 194 41.85 212 43.97	58.366 ^s 494 58.860 509 59.369 505 59.874	72.21 ^s 51 72.72 106 73.78 160 75.38
Mean Place	21.39	41.36	55.778	32.95	56.349	76.38	
Sec δ , Tan δ	2.179	-1.936	1.041	-0.288	1.821	-1.522	
L α , L δ	0.00	-0.4	0.00	-0.4	0.00	-0.4	
ω α , ω δ	-0.13	-0.1	-0.02	-0.1	-0.10	-0.1	
AUTHORITY	A. E.		A. E.		A. N.		

356 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Corvi. Mag. 2.8		α Muscæ. Mag. 2.9		γ Centauri. Mag. 2.4	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m 12 30	° 58'	h m 12 32	68 42'	h m 12 37	48 32'
Jan. 0.7	23.268 ³³⁹	25.23 ²¹⁵	38.95 ⁷¹	38.69 ¹⁶⁰	19.210 ⁴³²	15.06 ¹⁸⁹
10.7	23.607 ³²²	27.38 ²²⁷	39.66 ⁶⁶	40.29 ²¹¹	19.642 ⁴¹³	16.95 ²²⁶
20.7	23.929 ²⁹⁷	29.65 ²³³	40.32 ⁶¹	42.40 ²⁵⁷	20.055 ³⁷⁹	19.21 ²⁵⁷
30.7	24.226 ²⁶⁴	31.98 ²³³	40.93 ⁵⁴	44.97 ²⁹⁴	20.434 ³³⁸	21.78 ²⁸¹
Feb. 9.6	24.490 ²²⁵	34.31 ²²⁶	41.47 ⁴⁶	47.91 ³²³	20.772 ²⁹⁰	24.59 ²⁹⁶
19.6	24.715 ¹⁸⁴	36.57 ²¹⁴	41.93 ³⁷	51.14 ³⁴⁴	21.062 ²³⁸	27.55 ³⁰³
29.6	24.899 ¹⁴³	38.71 ¹⁹⁸	42.30 ²⁸	54.58 ³⁵⁶	21.300 ¹⁸⁵	30.58 ³⁰⁵
Mar. 10.6	25.042 ¹⁰¹	40.69 ¹⁷⁹	42.58 ¹⁸	58.14 ³⁵⁹	21.485 ¹³¹	33.63 ²⁹⁸
20.5	25.143 ⁶⁴	42.48 ¹⁵⁸	42.76 ¹⁰	61.73 ³⁵⁴	21.616 ⁸¹	36.61 ²⁸⁷
30.5	25.207 ²⁸	44.06 ¹³⁵	42.86 ¹	65.27 ³⁴⁴	21.697 ³³	39.48 ²⁶⁹
Apr. 9.5	25.235 ⁴	45.41 ¹¹³	42.87 ⁸	68.71 ³²⁵	21.730 ¹²	42.17 ²⁴⁸
19.4	25.231 ³¹	46.54 ⁸⁹	42.79 ¹⁶	71.96 ²⁹⁹	21.718 ⁵²	44.65 ²²²
29.4	25.200 ⁵⁴	47.43 ⁶⁵	42.63 ²²	74.95 ²⁶⁹	21.666 ⁸⁹	46.87 ¹⁹²
May 9.4	25.146 ⁷⁵	48.08 ⁴²	42.41 ³⁰	77.64 ²³²	21.577 ¹²¹	48.79 ¹⁵⁹
19.4	25.071 ⁹²	48.50 ¹⁹	42.11 ³⁴	79.96 ¹⁹¹	21.456 ¹⁵⁰	50.38 ¹²³
29.3	24.979 ¹⁰⁵	48.69 ⁴	41.77 ⁴⁰	81.87 ¹⁴⁶	21.306 ¹⁷⁴	51.61 ⁸⁵
June 8.3	24.874 ¹¹⁶	48.65 ²⁶	41.37 ⁴⁴	83.33 ⁹⁷	21.132 ¹⁹³	52.46 ⁴⁶
18.3	24.758 ¹²⁵	48.39 ⁴⁷	40.93 ⁴⁶	84.30 ⁴⁷	20.939 ²⁰⁹	52.92 ⁵
28.3	24.633 ¹²⁹	47.92 ⁶⁷	40.47 ⁴⁸	84.77 ⁵	20.730 ²¹⁸	52.97 ³⁶
July 8.2	24.504 ¹²⁹	47.25 ⁸⁶	39.99 ⁴⁸	84.72 ⁵⁷	20.512 ²²²	52.61 ⁷⁵
18.2	24.375 ¹²⁶	46.39 ¹⁰¹	39.51 ⁴⁷	84.15 ¹⁰⁷	20.290 ²¹⁶	51.86 ¹¹³
28.2	24.249 ¹¹⁸	45.38 ¹¹³	39.04 ⁴⁴	83.08 ¹⁵³	20.074 ²⁰⁵	50.73 ¹⁴⁷
Aug. 7.1	24.131 ¹⁰⁴	44.25 ¹²³	38.60 ³⁹	81.55 ¹⁹⁶	19.869 ¹⁸⁶	49.26 ¹⁷⁷
17.1	24.027 ⁸⁶	43.02 ¹²⁶	38.21 ³³	79.59 ²³²	19.683 ¹⁵⁶	47.49 ²⁰⁰
27.1	23.941 ⁶⁰	41.76 ¹²⁵	37.88 ²⁶	77.27 ²⁶⁰	19.527 ¹¹⁹	45.49 ²¹⁷
Sept. 6.1	23.881 ²⁸	40.51 ¹¹⁸	37.62 ¹⁷	74.67 ²⁸⁰	19.408 ⁷²	43.32 ²²⁶
16.0	23.853 ⁹	39.33 ¹⁰⁵	37.45 ⁶	71.87 ²⁸⁸	19.336 ¹⁸	41.06 ²²⁶
26.0	23.862 ⁵¹	38.28 ⁸⁵	37.39 ⁵	68.99 ²⁸⁶	19.318 ⁴²	38.80 ²¹⁶
Oct. 6.0	23.913 ⁹⁷	37.43 ⁶⁰	37.44 ¹⁶	66.13 ²⁷¹	19.360 ¹⁰⁶	36.64 ¹⁹⁷
16.0	24.010 ¹⁴⁵	36.83 ³⁰	37.60 ²⁹	63.42 ²⁴⁷	19.466 ¹⁷³	34.67 ¹⁶⁸
25.9	24.155 ¹⁹²	36.53 ⁴	37.89 ³⁹	60.95 ²¹¹	19.639 ²³⁸	32.99 ¹³²
Nov. 4.9	24.347 ²³⁷	36.57 ⁴²	38.28 ⁴⁹	58.84 ¹⁶⁶	19.877 ²⁹⁸	31.67 ⁸⁹
14.9	24.584 ²⁷⁷	36.99 ⁷⁹	38.77 ⁵⁸	57.18 ¹¹⁴	20.175 ³⁵¹	30.78 ³⁹
24.8	24.861 ³⁰⁹	37.78 ¹¹⁶	39.35 ⁶⁵	56.04 ⁵⁵	20.526 ³⁹³	30.39 ¹²
Dec. 4.8	25.170 ³³²	38.94 ¹⁵¹	40.00 ⁷⁰	55.49 ⁵	20.919 ⁴²³	30.51 ⁶⁴
14.8	25.502 ³⁴⁵	40.45 ¹⁸⁰	40.70 ⁷¹	55.54 ⁶⁷	21.342 ⁴³⁸	31.15 ¹¹⁵
24.8	25.847 ³⁴⁵	42.25 ²⁰⁴	41.41 ⁷²	56.21 ¹²⁶	21.780 ⁴⁴⁰	32.30 ¹⁶³
34.7	26.192	44.29	42.13	57.47	22.220	33.93
Mean Place	23.430	35.93	37.90	61.29	19.031	33.70
Sec δ , Tan δ	1.086	-0.424	2.755	-2.567	1.510	-1.132
L α , L δ	0.00	-0.4	+0.01	-0.4	0.00	-0.4
ω α , ω δ	-0.03	-0.1	-0.17	-0.1	-0.07	-0.2
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 357

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Virginis (mean). Mag. 2.9		ρ Virginis. Mag. 5.0		β Muscæ. Mag. 3.3										
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. S.									
	^h 12	^m 37	[°] I	['] I	^h 12	^m 38	^h 12	^m 41	[°] 67	['] 41					
Jan.	0.7	48.054 ^s ₃₂₁	55.03 ^s ₂₀₇	1.754 ^s ₃₂₇	73.87 ^s ₁₉₇	36.95 ^s ₆₈	9.85 ^s ₁₅₀	10.7	48.375 ^s ₃₀₈	57.10 ^s ₁₉₆	2.081 ^s ₃₁₅	71.90 ^s ₁₇₅	37.63 ^s ₆₅	11.35 ^s ₂₀₁	
	10.7	48.683 ^s ₂₈₆	59.06 ^s ₁₈₀	2.396 ^s ₂₉₃	70.15 ^s ₁₄₅	38.28 ^s ₆₀	13.36 ^s ₂₄₇	20.7	48.630 ^s ₁₄₃	64.82 ^s ₇₈	3.368 ^s ₁₄₇	66.33 ^s ₁₁	40.26 ^s ₂₉	25.18 ^s ₃₄₉	
	20.7	48.969 ^s ₂₅₆	60.86 ^s ₁₅₈	2.689 ^s ₂₆₃	68.70 ^s ₁₁₄	38.88 ^s ₅₄	15.83 ^s ₂₈₅	30.7	49.225 ^s ₂₂₂	62.44 ^s ₁₃₂	2.952 ^s ₂₂₇	67.56 ^s ₇₉	39.42 ^s ₄₆	18.68 ^s ₃₁₄	
Feb.	9.6	49.447 ^s ₁₈₃	63.76 ^s ₁₀₆	3.179 ^s ₁₈₉	66.77 ^s ₄₄	39.88 ^s ₃₈	21.82 ^s ₃₃₆	19.6	49.630 ^s ₁₄₃	64.82 ^s ₇₈	3.368 ^s ₁₄₇	66.33 ^s ₁₁	40.26 ^s ₂₉	25.18 ^s ₃₄₉	
	29.6	49.773 ^s ₁₀₄	65.60 ^s ₅₀	3.515 ^s ₁₀₇	66.22 ^s ₁₈	40.55 ^s ₂₁	28.67 ^s ₃₅₄	30.7	49.773 ^s ₁₀₄	65.60 ^s ₅₀	3.515 ^s ₁₀₇	66.22 ^s ₁₈	40.55 ^s ₂₁	28.67 ^s ₃₅₄	
Mar.	20.5	49.877 ^s ₆₈	66.10 ^s ₂₆	3.622 ^s ₆₉	66.40 ^s ₄₆	40.76 ^s ₁₂	32.21 ^s ₃₅₀		49.945 ^s ₃₄	66.36 ^s ₃	3.691 ^s ₃₄	66.86 ^s ₆₆	40.88 ^s ₃	35.71 ^s ₃₄₁	
	30.5	49.979 ^s ₄	66.39 ^s ₁₆	3.725 ^s ₂	67.52 ^s ₈₃	40.91 ^s ₄	39.12 ^s ₃₂₃	Apr.	9.5	49.979 ^s ₄	66.39 ^s ₁₆	3.725 ^s ₂	67.52 ^s ₈₃	40.91 ^s ₄	39.12 ^s ₃₂₃
	19.4	49.983 ^s ₂₂	66.23 ^s ₃₂	3.727 ^s ₂₅	68.35 ^s ₉₃	40.87 ^s ₁₂	42.35 ^s ₃₀₁		29.4	49.961 ^s ₄₄	65.91 ^s ₄₅	3.702 ^s ₄₈	69.28 ^s ₁₀₀	40.75 ^s ₂₀	45.36 ^s ₂₇₀
May	9.4	49.917 ^s ₆₃	65.46 ^s ₅₄	3.654 ^s ₆₇	70.28 ^s ₁₀₂	40.55 ^s ₂₅	48.06 ^s ₂₃₆		19.4	49.854 ^s ₇₈	64.92 ^s ₆₂	3.587 ^s ₈₂	71.30 ^s ₉₉	40.30 ^s ₃₁	50.42 ^s ₁₉₆
	19.4	49.776 ^s ₉₁	64.30 ^s ₆₆	3.505 ^s ₉₅	72.29 ^s ₉₄	39.99 ^s ₃₇	52.38 ^s ₁₅₃		29.3	49.776 ^s ₉₁	64.30 ^s ₆₆	3.505 ^s ₉₅	72.29 ^s ₉₄	39.99 ^s ₃₇	52.38 ^s ₁₅₃
June	8.3	49.685 ^s ₁₀₀	63.64 ^s ₆₉	3.410 ^s ₁₀₄	73.23 ^s ₈₅	39.62 ^s ₄₀	53.91 ^s ₁₀₅		18.3	49.585 ^s ₁₀₇	62.95 ^s ₆₈	3.306 ^s ₁₁₀	74.08 ^s ₇₅	39.22 ^s ₄₃	54.96 ^s ₅₅
	18.3	49.585 ^s ₁₀₇	62.95 ^s ₆₈	3.306 ^s ₁₁₀	74.08 ^s ₇₅	39.22 ^s ₄₃	54.96 ^s ₅₅		28.3	49.478 ^s ₁₁₁	62.27 ^s ₆₈	3.196 ^s ₁₁₄	74.83 ^s ₆₁	38.79 ^s ₄₅	55.51 ^s ₅
July	8.2	49.367 ^s ₁₁₂	61.59 ^s ₆₅	3.082 ^s ₁₁₃	75.44 ^s ₄₈	38.34 ^s ₄₆	55.56 ^s ₄₇		18.2	49.255 ^s ₁₁₀	60.94 ^s ₅₉	2.969 ^s ₁₁₁	75.92 ^s ₃₂	37.88 ^s ₄₅	55.09 ^s ₉₇
	18.2	49.255 ^s ₁₁₀	60.94 ^s ₅₉	2.969 ^s ₁₁₁	75.92 ^s ₃₂	37.88 ^s ₄₅	55.09 ^s ₉₇		28.2	49.145 ^s ₁₀₃	60.35 ^s ₅₂	2.858 ^s ₁₀₃	76.24 ^s ₁₄	37.43 ^s ₄₂	54.12 ^s ₁₄₄
Aug.	7.1	49.042 ^s ₉₃	59.83 ^s ₄₃	2.755 ^s ₉₂	76.38 ^s ₄	37.01 ^s ₃₉	52.68 ^s ₁₈₆		7.1	49.042 ^s ₉₃	59.83 ^s ₄₃	2.755 ^s ₉₂	76.38 ^s ₄	37.01 ^s ₃₉	52.68 ^s ₁₈₆
	17.1	48.949 ^s ₇₇	59.40 ^s ₃₁	2.663 ^s ₇₆	76.34 ^s ₂₅	36.62 ^s ₃₃	50.82 ^s ₂₂₃		17.1	48.949 ^s ₇₇	59.40 ^s ₃₁	2.663 ^s ₇₆	76.34 ^s ₂₅	36.62 ^s ₃₃	50.82 ^s ₂₂₃
	27.1	48.872 ^s ₅₅	59.09 ^s ₁₆	2.587 ^s ₅₅	76.09 ^s ₄₅	36.29 ^s ₂₆	48.59 ^s ₂₅₃	Sept.	6.1	48.817 ^s ₂₈	58.93 ^s ₂	2.532 ^s ₂₈	75.64 ^s ₆₉	36.03 ^s ₁₈	46.06 ^s ₂₇₃
	6.1	48.817 ^s ₂₈	58.93 ^s ₂	2.532 ^s ₂₈	75.64 ^s ₆₉	36.03 ^s ₁₈	46.06 ^s ₂₇₃		16.0	48.789 ^s ₄	58.95 ^s ₂₃	2.504 ^s ₄	74.95 ^s ₉₂	35.85 ^s ₈	43.33 ^s ₂₈₄
	16.0	48.789 ^s ₄	58.95 ^s ₂₃	2.504 ^s ₄	74.95 ^s ₉₂	35.85 ^s ₈	43.33 ^s ₂₈₄		26.0	48.793 ^s ₄₁	59.18 ^s ₄₆	2.508 ^s ₄₂	74.03 ^s ₁₁₇	35.77 ^s ₃	40.49 ^s ₂₈₃
Oct.	6.0	48.834 ^s ₈₂	59.64 ^s ₇₁	2.550 ^s ₈₂	72.86 ^s ₁₄₁	35.80 ^s ₁₄	37.66 ^s ₂₇₁		6.0	48.834 ^s ₈₂	59.64 ^s ₇₁	2.550 ^s ₈₂	72.86 ^s ₁₄₁	35.80 ^s ₁₄	37.66 ^s ₂₇₁
	16.0	48.916 ^s ₁₂₇	60.35 ^s ₉₇	2.632 ^s ₁₂₆	71.45 ^s ₁₆₅	35.94 ^s ₂₅	34.95 ^s ₂₄₇		16.0	48.916 ^s ₁₂₇	60.35 ^s ₉₇	2.632 ^s ₁₂₆	71.45 ^s ₁₆₅	35.94 ^s ₂₅	34.95 ^s ₂₄₇
	25.9	49.043 ^s ₁₇₀	61.32 ^s ₁₂₅	2.758 ^s ₁₇₀	69.80 ^s ₁₈₆	36.19 ^s ₃₆	32.48 ^s ₂₁₄	Nov.	25.9	49.043 ^s ₁₇₀	61.32 ^s ₁₂₅	2.758 ^s ₁₇₀	69.80 ^s ₁₈₆	36.19 ^s ₃₆	32.48 ^s ₂₁₄
	4.9	49.213 ^s ₂₁₃	62.57 ^s ₁₅₀	2.928 ^s ₂₁₃	67.94 ^s ₂₀₄	36.55 ^s ₄₆	30.34 ^s ₁₇₀		4.9	49.213 ^s ₂₁₃	62.57 ^s ₁₅₀	2.928 ^s ₂₁₃	67.94 ^s ₂₀₄	36.55 ^s ₄₆	30.34 ^s ₁₇₀
	14.9	49.426 ^s ₂₅₁	64.07 ^s ₁₇₂	3.141 ^s ₂₅₃	65.90 ^s ₂₁₉	37.01 ^s ₅₅	28.64 ^s ₁₂₀		14.9	49.426 ^s ₂₅₁	64.07 ^s ₁₇₂	3.141 ^s ₂₅₃	65.90 ^s ₂₁₉	37.01 ^s ₅₅	28.64 ^s ₁₂₀
	24.8	49.677 ^s ₂₈₄	65.79 ^s ₁₉₂	3.394 ^s ₂₈₅	63.71 ^s ₂₂₇	37.56 ^s ₆₂	27.44 ^s ₆₃	Dec.	24.8	49.677 ^s ₂₈₄	65.79 ^s ₁₉₂	3.394 ^s ₂₈₅	63.71 ^s ₂₂₇	37.56 ^s ₆₂	27.44 ^s ₆₃
	4.8	49.961 ^s ₃₀₈	67.71 ^s ₂₀₄	3.679 ^s ₃₁₁	61.44 ^s ₂₂₈	38.18 ^s ₆₆	26.81 ^s ₂		4.8	49.961 ^s ₃₀₈	67.71 ^s ₂₀₄	3.679 ^s ₃₁₁	61.44 ^s ₂₂₈	38.18 ^s ₆₆	26.81 ^s ₂
	14.8	50.269 ^s ₃₂₂	69.75 ^s ₂₁₂	3.990 ^s ₃₂₇	59.16 ^s ₂₂₄	38.84 ^s ₆₉	26.79 ^s ₅₇		14.8	50.269 ^s ₃₂₂	69.75 ^s ₂₁₂	3.990 ^s ₃₂₇	59.16 ^s ₂₂₄	38.84 ^s ₆₉	26.79 ^s ₅₇
	24.8	50.591 ^s ₃₂₇	71.87 ^s ₂₁₂	4.317 ^s ₃₃₁	56.92 ^s ₂₁₁	39.53 ^s ₆₉	27.36 ^s ₁₁₇		24.8	50.591 ^s ₃₂₇	71.87 ^s ₂₁₂	4.317 ^s ₃₃₁	56.92 ^s ₂₁₁	39.53 ^s ₆₉	27.36 ^s ₁₁₇
	34.7	50.918 ^s	73.99 ^s	4.648 ^s	54.81 ^s	40.22 ^s	28.53 ^s		34.7	50.918 ^s	73.99 ^s	4.648 ^s	54.81 ^s	40.22 ^s	28.53 ^s
Mean Place	48.491	58.28	2.309	74.73	36.13	32.58			48.491	58.28	2.309	74.73	36.13	32.58	
Sec δ , Tan δ	1.000	-0.018	1.018	+0.188	2.635	-2.437			1.000	-0.018	1.018	+0.188	2.635	-2.437	
L α , L δ	0.00	-0.4	0.00	-0.4	+0.01	-0.4			0.00	-0.4	0.00	-0.4	+0.01	-0.4	
ω α , ω δ	0.00	-0.2	+0.01	-0.2	-0.16	-0.2			0.00	-0.2	+0.01	-0.2	-0.16	-0.2	
AUTHORITY	A. N.						A. N.								

358 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Crucis. Mag. 1.5		35 Virginis. Mag. 6.7		31 Comæ. Mag. 5.1	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m 12 43	^o ['] 59 16	^h ^m 12 43	^o ['] 3 58	^h ^m 12 47	^o ['] 27 56
Jan. 0.8	16.446 ⁸ 534	3.91 ¹⁶⁴	58.690 ³²⁴	76.59 ²⁰⁵	59.064 ³⁵³	67.92 ¹⁷⁸
10.7	16.980 ⁵¹¹	5.55 ²¹⁰	59.014 ³¹²	74.54 ¹⁸⁸	59.417 ³⁴³	66.14 ¹⁴⁰
20.7	17.491 ⁴⁷²	7.65 ²⁵¹	59.326 ²⁹¹	72.66 ¹⁶⁶	59.760 ³²²	64.74 ⁹⁵
30.7	17.963 ⁴²²	10.16 ²⁸³	59.617 ²⁶²	71.00 ¹⁴¹	60.082 ²⁹³	63.79 ⁴⁹
Feb. 9.6	18.385 ³⁶⁵	12.99 ³⁰⁸	59.879 ²²⁹	69.59 ¹¹⁰	60.375 ²⁵⁷	63.30 ³
19.6	18.750 ³⁰¹	16.07 ³²³	60.108 ¹⁹⁰	68.49 ⁸⁰	60.632 ²¹⁴	63.27 ⁴³
29.6	19.051 ²³⁵	19.30 ³³²	60.298 ¹⁵¹	67.69 ⁵⁰	60.846 ¹⁷⁰	63.70 ⁸¹
Mar. 10.6	19.286 ¹⁶⁹	22.62 ³³³	60.449 ¹¹²	67.19 ²⁰	61.016 ¹²⁴	64.51 ¹¹⁶
20.5	19.455 ¹⁰⁴	25.95 ³²⁶	60.561 ⁷⁴	66.99 ⁵	61.140 ⁸¹	65.67 ¹⁴³
30.5	19.559 ⁴²	29.21 ³¹⁴	60.635 ⁴⁰	67.04 ²⁷	61.221 ⁴⁰	67.10 ¹⁶³
Apr. 9.5	19.601 ¹⁷	32.35 ²⁹⁴	60.675 ¹⁰	67.31 ⁴⁶	61.261 ³	68.73 ¹⁷⁴
19.5	19.584 ⁷³	35.29 ²⁷⁰	60.685 ¹⁶	67.77 ⁶⁰	61.264 ³¹	70.47 ¹⁷⁸
29.4	19.511 ¹²²	37.99 ²⁴¹	60.669 ⁴⁰	68.37 ⁷⁰	61.233 ⁵⁷	72.25 ¹⁷⁵
May 9.4	19.389 ¹⁶⁸	40.40 ²⁰⁶	60.629 ⁵⁹	69.07 ⁷⁷	61.176 ⁸²	74.00 ¹⁶⁵
19.4	19.221 ²⁰⁸	42.46 ¹⁶⁹	60.570 ⁷⁵	69.84 ⁷⁹	61.094 ¹⁰¹	75.65 ¹⁴⁹
29.3	19.013 ²⁴⁵	44.15 ¹²⁷	60.495 ⁸⁸	70.63 ⁸⁰	60.993 ¹¹⁴	77.14 ¹³⁰
June 8.3	18.768 ²⁷³	45.42 ⁸²	60.407 ⁹⁹	71.43 ⁷⁷	60.879 ¹²⁷	78.44 ¹⁰⁵
18.3	18.495 ²⁹⁵	46.24 ³⁶	60.308 ¹⁰⁶	72.20 ⁷³	60.752 ¹³⁵	79.49 ⁸⁰
28.3	18.200 ³¹⁰	46.60 ¹⁰	60.202 ¹¹¹	72.93 ⁶⁷	60.617 ¹³⁹	80.29 ⁵⁰
July 8.2	17.890 ³¹⁵	46.50 ⁵⁷	60.091 ¹¹³	73.60 ⁵⁸	60.478 ¹³⁸	80.79 ²¹
18.2	17.575 ³¹¹	45.93 ¹⁰³	59.978 ¹¹¹	74.18 ⁴⁸	60.340 ¹³⁶	81.00 ¹⁰
28.2	17.264 ²⁹⁵	44.90 ¹⁴⁴	59.867 ¹⁰⁵	74.66 ³⁷	60.204 ¹²⁸	80.90 ⁴¹
Aug. 7.2	16.969 ²⁶⁹	43.46 ¹⁸²	59.762 ⁹⁵	75.03 ²³	60.076 ¹¹⁵	80.49 ⁷²
17.1	16.700 ²³¹	41.64 ²¹⁴	59.667 ⁸⁰	75.26 ⁷	59.961 ⁹⁸	79.77 ¹⁰²
27.1	16.469 ¹⁸⁰	39.50 ²³⁹	59.587 ⁵⁹	75.33 ¹⁰	59.863 ⁷⁵	78.75 ¹³²
Sept. 6.1	16.289 ¹²⁰	37.11 ²⁵⁴	59.528 ³³	75.23 ³¹	59.788 ⁴⁷	77.43 ¹⁶¹
16.0	16.169 ⁴⁸	34.57 ²⁶¹	59.495 ¹	74.92 ⁵²	59.741 ¹²	75.82 ¹⁸⁸
26.0	16.121 ³⁰	31.96 ²⁵⁸	59.494 ³⁵	74.40 ⁷⁶	59.729 ²⁷	73.94 ²¹³
Oct. 6.0	16.151 ¹¹³	29.38 ²⁴³	59.529 ⁷⁷	73.64 ¹⁰²	59.756 ⁷¹	71.81 ²³⁵
16.0	16.264 ¹⁹⁹	26.95 ²¹⁷	59.606 ¹²⁰	72.62 ¹²⁶	59.827 ¹¹⁷	69.46 ²⁵⁴
25.9	16.463 ²⁸¹	24.78 ¹⁸²	59.726 ¹⁶⁵	71.36 ¹⁵¹	59.944 ¹⁶⁶	66.92 ²⁶⁸
Nov. 4.9	16.744 ³⁵⁸	22.96 ¹⁴⁰	59.891 ²⁰⁸	69.85 ¹⁷⁴	60.110 ²¹³	64.24 ²⁷⁵
14.9	17.102 ⁴²⁵	21.56 ⁹⁰	60.099 ²⁴⁷	68.11 ¹⁹²	60.323 ²⁵⁷	61.49 ²⁷⁷
24.9	17.527 ⁴⁷⁹	20.66 ³⁵	60.346 ²⁸¹	66.19 ²⁰⁸	60.580 ²⁹⁶	58.72 ²⁷⁰
Dec. 4.8	18.006 ⁵¹⁸	20.31 ²²	60.627 ³⁰⁶	64.11 ²¹⁶	60.876 ³²⁶	56.02 ²⁵⁷
14.8	18.524 ⁵³⁸	20.53 ⁷⁹	60.933 ³²²	61.95 ²¹⁷	61.202 ³⁴⁶	53.45 ²³⁴
24.8	19.062 ⁵⁴¹	21.32 ¹³⁴	61.255 ³²⁷	59.78 ²¹³	61.548 ³⁵⁵	51.11 ²⁰³
34.8	19.603	22.66	61.582	57.65	61.903	49.08
Mean Place	16.048	25.21	59.213	74.89	59.871	74.08
Sec δ , Tan δ	1.957	-1.682	1.002	+0.070	1.132	+0.531
L α , L δ	+0.01	-0.4	0.00	-0.4	0.00	-0.4
ω α , ω δ	-0.11	-0.2	+0.01	-0.2	+0.03	-0.2
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 359

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ψ Virginis. Mag. 4.9		ϵ Ursæ Majoris. Mag. 1.7		δ Virginis. Mag. 3.7	
	R.A.	Dec. S.	R.A.	Dec. N.	R.A.	Dec. N.
	^h ^m 12 50	^o ['] 9 7	^h ^m 12 50	^o ['] 56 21	^h ^m 12 51	^o ['] 3 48
Jan. 0.8	23.451 ^s 327	29.00 208	40.051 ^s 502	66.45 128	45.888 ^s 323	38.64 205
10.7	23.778 315	31.08 207	40.553 495	65.17 69	46.211 313	36.59 190
20.7	24.093 294	33.15 199	41.048 470	64.48 6	46.524 294	34.69 168
30.7	24.387 267	35.14 185	41.518 430	64.42 55	46.818 266	33.01 142
Feb. 9.6	24.654 232	36.99 167	41.948 379	64.97 113	47.084 233	31.59 113
19.6	24.886 195	38.66 145	42.327 316	66.10 164	47.317 197	30.46 82
29.6	25.081 157	40.11 123	42.643 247	67.74 209	47.514 157	29.64 51
Mar. 10.6	25.238 119	41.34 98	42.890 175	69.83 242	47.671 118	29.13 23
20.5	25.357 82	42.32 75	43.065 102	72.25 265	47.789 82	28.90 4
30.5	25.439 49	43.07 52	43.167 33	74.90 278	47.871 48	28.94 27
Apr. 9.5	25.488 18	43.59 31	43.200 33	77.68 279	47.919 16	29.21 45
19.5	25.506 8	43.90 13	43.167 92	80.47 269	47.935 10	29.66 60
29.4	25.498 32	44.03 5	43.075 143	83.16 250	47.925 34	30.26 70
May 9.4	25.466 52	43.98 19	42.932 185	85.66 222	47.891 55	30.96 77
19.4	25.414 70	43.79 31	42.747 221	87.88 188	47.836 71	31.73 81
29.3	25.344 84	43.48 42	42.526 248	89.76 148	47.765 86	32.54 80
June 8.3	25.260 97	43.06 51	42.278 266	91.24 104	47.679 97	33.34 78
18.3	25.163 106	42.55 60	42.012 277	92.28 57	47.582 106	34.12 74
28.3	25.057 113	41.95 65	41.735 280	92.85 9	47.476 112	34.86 67
July 8.2	24.944 117	41.30 70	41.455 277	92.94 39	47.364 115	35.53 59
18.2	24.827 116	40.60 73	41.178 266	92.55 86	47.249 114	36.12 49
28.2	24.711 112	39.87 73	40.912 248	91.69 133	47.135 110	36.61 37
Aug. 7.2	24.599 103	39.14 70	40.664 223	90.36 176	47.025 100	36.98 24
17.1	24.496 88	38.44 64	40.441 192	88.60 216	46.925 87	37.22 8
27.1	24.408 68	37.80 54	40.249 153	86.44 253	46.838 67	37.30 10
Sept. 6.1	24.340 41	37.26 43	40.096 107	83.91 284	46.771 40	37.20 29
16.0	24.299 8	36.83 24	39.989 53	81.07 312	46.731 10	36.91 52
26.0	24.291 30	36.59 4	39.936 5	77.95 333	46.721 27	36.39 75
Oct. 6.0	24.321 73	36.55 21	39.941 70	74.62 348	46.748 68	35.64 100
16.0	24.394 117	36.76 48	40.011 139	71.14 356	46.816 112	34.64 125
25.9	24.511 163	37.24 78	40.150 208	67.58 355	46.928 157	33.39 150
Nov. 4.9	24.674 207	38.02 106	40.358 278	64.03 347	47.085 200	31.89 173
14.9	24.881 248	39.08 135	40.636 342	60.56 328	47.285 241	30.16 191
24.9	25.129 282	40.43 160	40.978 401	57.28 300	47.526 275	28.25 207
Dec. 4.8	25.411 309	42.03 181	41.379 448	54.28 264	47.801 302	26.18 216
14.8	25.720 324	43.84 199	41.827 483	51.64 219	48.103 319	24.02 218
24.8	26.044 330	45.83 207	42.310 502	49.45 165	48.422 326	21.84 213
34.8	26.374	47.90	42.812	47.80	48.748	19.71
Mean Place	23.888	35.59	41.463	79.46	46.455	36.60
Sec δ , Tan δ	1.013	-0.161	1.806	+1.503	1.002	+0.067
L α , L δ	0.00	-0.4	-0.01	-0.4	0.00	-0.4
ω α , ω δ	-0.01	-0.2	+0.10	-0.2	0.00	-0.2
AUTHORITY	A. E.				A. E.	

APPARENT PLACES OF STARS, 1924. 361

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Hydræ. Mag. 3.3		ι Centauri. Mag. 2.9		ζ^1 Ursæ Majoris. Mag. 2.4	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	h m 13 14	° 46'	h m 13 16	36 18'	h m 13 20	55 18'
Jan. 0.8	46.660 ³⁴⁴	3.45 ¹⁸⁹	18.644 ³⁸¹	26.34 ¹⁶⁸	50.577 ⁴⁸³	67.26 ¹⁶⁶
10.7	47.004 ³³⁷	5.34 ²⁰⁴	19.025 ³⁷²	28.02 ¹⁹⁷	51.060 ⁴⁸⁵	65.60 ¹⁰⁷
20.7	47.341 ³¹⁹	7.38 ²¹¹	19.397 ³⁵²	29.99 ²¹⁹	51.545 ⁴⁷⁰	64.53 ⁴⁵
30.7	47.660 ²⁹⁴	9.49 ²¹³	19.749 ³²⁴	32.18 ²³⁴	52.015 ⁴⁴²	64.08 ¹⁸
Feb. 9.7	47.954 ²⁶²	11.62 ²⁰⁹	20.073 ²⁸⁹	34.52 ²⁴³	52.457 ³⁹⁹	64.26 ⁷⁹
19.6	48.216 ²²⁶	13.71 ¹⁹⁹	20.362 ²⁵¹	36.95 ²⁴⁶	52.856 ³⁴⁶	65.05 ¹³⁶
29.6	48.442 ¹⁸⁹	15.70 ¹⁸⁶	20.613 ²⁰⁸	39.41 ²⁴³	53.202 ²⁸⁴	66.41 ¹⁸⁵
Mar. 10.6	48.631 ¹⁵⁰	17.56 ¹⁷⁰	20.821 ¹⁶⁷	41.84 ²³⁴	53.486 ²¹⁹	68.26 ²²⁵
20.6	48.781 ¹¹⁴	19.26 ¹⁵¹	20.988 ¹²⁶	44.18 ²²³	53.705 ¹⁵⁰	70.51 ²⁵⁶
30.5	48.895 ⁷⁹	20.77 ¹³³	21.114 ⁸⁶	46.41 ²⁰⁷	53.855 ⁸²	73.07 ²⁷⁴
Apr. 9.5	48.974 ⁴⁵	22.10 ¹¹²	21.200 ⁴⁹	48.48 ¹⁸⁹	53.937 ¹⁹	75.81 ²⁸³
19.5	49.019 ¹⁷	23.22 ⁹¹	21.249 ¹⁴	50.37 ¹⁶⁹	53.956 ⁴²	78.64 ²⁸⁰
29.4	49.036 ¹²	24.13 ⁷²	21.263 ¹⁸	52.06 ¹⁴⁵	53.914 ⁹⁶	81.44 ²⁶⁷
May 9.4	49.024 ³⁶	24.85 ⁵¹	21.245 ⁴⁸	53.51 ¹²¹	53.818 ¹⁴⁴	84.11 ²⁴⁵
19.4	48.988 ⁵⁸	25.36 ³¹	21.197 ⁷⁵	54.72 ⁹⁵	53.674 ¹⁸⁴	86.56 ²¹⁶
29.4	48.930 ⁷⁹	25.67 ¹²	21.122 ⁹⁹	55.67 ⁶⁶	53.490 ²¹⁸	88.72 ¹⁷⁹
June 8.3	48.851 ⁹⁷	25.79 ⁸	21.023 ¹²¹	56.33 ³⁸	53.272 ²⁴⁴	90.51 ¹³⁷
18.3	48.754 ¹¹²	25.71 ²⁶	20.902 ¹⁴¹	56.71 ⁹	53.028 ²⁶³	91.88 ⁹³
28.3	48.642 ¹²⁴	25.45 ⁴⁵	20.761 ¹⁵⁵	56.80 ²¹	52.765 ²⁷⁴	92.81 ⁴⁶
July 8.3	48.518 ¹³³	25.00 ⁶¹	20.606 ¹⁶⁶	56.59 ⁵⁰	52.491 ²⁸⁰	93.27 ³
18.2	48.385 ¹³⁷	24.39 ⁷⁷	20.440 ¹⁷¹	56.09 ⁷⁸	52.211 ²⁷⁸	93.24 ⁵¹
28.2	48.248 ¹³⁷	23.62 ⁹⁰	20.269 ¹⁷⁰	55.31 ¹⁰⁴	51.933 ²⁶⁹	92.73 ⁹⁹
Aug. 7.2	48.111 ¹³⁰	22.72 ¹⁰⁰	20.099 ¹⁶²	54.27 ¹²⁶	51.664 ²⁵¹	91.74 ¹⁴⁴
17.1	47.981 ¹¹⁸	21.72 ¹⁰⁷	19.937 ¹⁴⁷	53.01 ¹⁴⁴	51.413 ²²⁸	90.30 ¹⁸⁸
27.1	47.863 ⁹⁷	20.65 ¹⁰⁸	19.790 ¹²³	51.57 ¹⁵⁷	51.185 ¹⁹⁵	88.42 ²²⁹
Sept. 6.1	47.766 ⁷⁰	19.57 ¹⁰⁶	19.667 ⁹¹	50.00 ¹⁶³	50.990 ¹⁵⁴	86.13 ²⁶⁴
16.1	47.696 ³⁶	18.51 ⁹⁷	19.576 ⁵⁰	48.37 ¹⁶³	50.836 ¹⁰⁶	83.49 ²⁹⁷
26.0	47.660 ⁴	17.54 ⁸³	19.526 ³	46.74 ¹⁵⁵	50.730 ⁵¹	80.52 ³²²
Oct. 6.0	47.664 ⁵⁰	16.71 ⁶³	19.523 ⁴⁹	45.19 ¹⁴⁰	50.679 ¹³	77.30 ³⁴⁴
16.0	47.714 ⁹⁹	16.08 ³⁸	19.572 ¹⁰⁶	43.79 ¹¹⁷	50.692 ⁷⁹	73.86 ³⁵⁶
26.0	47.813 ¹⁵⁰	15.70 ⁹	19.678 ¹⁶³	42.62 ⁸⁷	50.771 ¹⁴⁹	70.30 ³⁶²
Nov. 4.9	47.963 ²⁰⁰	15.61 ²⁵	19.841 ²¹⁹	41.75 ⁵¹	50.920 ²²¹	66.68 ³⁵⁹
14.9	48.163 ²⁴⁴	15.86 ⁵⁸	20.060 ²⁷⁰	41.24 ¹²	51.141 ²⁸⁹	63.09 ³⁴⁷
24.9	48.407 ²⁸⁴	16.44 ⁹³	20.330 ³¹⁴	41.12 ³⁰	51.430 ³⁵²	59.62 ³²⁵
Dec. 4.8	48.691 ³¹⁵	17.37 ¹²⁶	20.644 ³⁴⁸	41.42 ⁷²	51.782 ⁴⁰⁶	56.37 ²⁹³
14.8	49.006 ³³⁶	18.63 ¹⁵⁴	20.992 ³⁷⁰	42.14 ¹¹²	52.188 ⁴⁴⁹	53.44 ²⁵²
24.8	49.342 ³⁴⁵	20.17 ¹⁷⁹	21.362 ³⁸²	43.26 ¹⁵⁰	52.637 ⁴⁷⁶	50.92 ²⁰²
34.8	49.687	21.96	21.744	44.76	53.113	48.90
Mean Place	47.134	15.52	19.009	42.72	52.197	78.77
Sec δ , Tan δ	1.085	-0.420	1.241	-0.735	1.758	+1.445
L α , L δ	0.00	-0.4	+0.01	-0.4	-0.01	-0.4
ω α , ω δ	-0.03	-0.3	-0.05	-0.3	+0.09	-0.3
AUTHORITY	A. E.		A. E.		A. E.	

362 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Virginis. Mag. 1.2		ι Virginis. Mag. 5.6		ζ Virginis. Mag. 3.4	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. S.
	h m I3 21	° ' 10 45	h m I3 22	° ' 12 18	h m I3 30	° ' 0 12
Jan. 0.8	10.579 ³²⁹	45.92 ¹⁹⁹	41.457 ³³⁰	36.42 ¹⁹⁶	48.362 ³²¹	23.21 ²⁰⁵
10.8	10.908 ³²²	47.91 ²⁰⁰	41.787 ³²⁴	38.38 ²⁰¹	48.683 ³¹⁹	25.26 ¹⁹⁵
20.7	11.230 ³⁰⁸	49.91 ¹⁹⁵	42.111 ³⁰⁹	40.39 ¹⁹⁶	49.002 ³⁰⁶	27.21 ¹⁷⁹
30.7	11.538 ²⁸⁴	51.86 ¹⁸⁴	42.420 ²⁸⁵	42.35 ¹⁸⁷	49.308 ²⁸⁵	29.00 ¹⁵⁶
Feb. 9.7	11.822 ²⁵⁵	53.70 ¹⁶⁸	42.705 ²⁵⁷	44.22 ¹⁷³	49.593 ²⁵⁷	30.56 ¹³¹
19.7	12.077 ²²¹	55.38 ¹⁴⁹	42.962 ²²³	45.95 ¹⁵⁵	49.850 ²²⁶	31.87 ¹⁰³
29.6	12.298 ¹⁸⁶	56.87 ¹²⁷	43.185 ¹⁸⁷	47.50 ¹³⁵	50.076 ¹⁹²	32.90 ⁷⁴
Mar. 10.6	12.484 ¹⁵⁰	58.14 ¹⁰⁵	43.372 ¹⁵²	48.85 ¹¹²	50.268 ¹⁵⁶	33.64 ⁴⁵
20.6	12.634 ¹¹⁵	59.19 ⁸¹	43.524 ¹¹⁶	49.97 ⁹⁰	50.424 ¹²¹	34.09 ¹⁸
30.5	12.749 ⁸¹	60.00 ⁶⁰	43.640 ⁸³	50.87 ⁶⁹	50.545 ⁸⁸	34.27 ⁵
Apr. 9.5	12.830 ⁵⁰	60.60 ³⁹	43.723 ⁵³	51.56 ⁴⁸	50.633 ⁵⁷	34.22 ²⁵
19.5	12.880 ²²	60.99 ²¹	43.776 ²³	52.04 ³⁰	50.690 ²⁸	33.97 ⁴³
29.5	12.902 ⁴	61.20 ⁴	43.799 ³	52.34 ¹³	50.718 ²	33.54 ⁵⁵
May 9.4	12.898 ²⁸	61.24 ⁹	43.796 ²⁶	52.47 ²	50.720 ²²	32.99 ⁶⁴
19.4	12.870 ⁴⁸	61.15 ²³	43.770 ⁴⁸	52.45 ¹⁵	50.698 ⁴⁴	32.35 ⁷¹
29.4	12.822 ⁶⁸	60.92 ³⁴	43.722 ⁶⁷	52.30 ²⁸	50.654 ⁶³	31.64 ⁷³
June 8.4	12.754 ⁸⁵	60.58 ⁴³	43.655 ⁸⁵	52.02 ³⁸	50.591 ⁸⁰	30.91 ⁷⁴
18.3	12.669 ⁹⁹	60.15 ⁵²	43.570 ⁹⁹	51.64 ⁴⁸	50.511 ⁹⁵	30.17 ⁷²
28.3	12.570 ¹¹¹	59.63 ⁵⁸	43.471 ¹¹²	51.16 ⁵⁶	50.416 ¹⁰⁸	29.45 ⁶⁹
July 8.3	12.459 ¹²⁰	59.05 ⁶³	43.359 ¹²¹	50.60 ⁶²	50.308 ¹¹⁷	28.76 ⁶⁴
18.2	12.339 ¹²⁵	58.42 ⁶⁷	43.238 ¹²⁶	49.98 ⁶⁷	50.191 ¹²⁴	28.12 ⁵⁶
28.2	12.214 ¹²⁵	57.75 ⁶⁸	43.112 ¹²⁸	49.31 ⁷¹	50.067 ¹²⁴	27.56 ⁴⁸
Aug. 7.2	12.089 ¹²⁰	57.07 ⁶⁷	42.984 ¹²²	48.60 ⁷¹	49.943 ¹²²	27.08 ³⁷
17.2	11.969 ¹¹⁰	56.40 ⁶⁴	42.862 ¹¹³	47.89 ⁶⁹	49.821 ¹¹²	26.71 ²⁴
27.1	11.859 ⁹²	55.76 ⁵⁷	42.749 ⁹⁵	47.20 ⁶³	49.709 ⁹⁷	26.47 ¹⁰
Sept. 6.1	11.767 ⁶⁹	55.19 ⁴⁶	42.654 ⁷⁰	46.57 ⁵⁴	49.612 ⁷⁵	26.37 ⁸
16.1	11.698 ³⁷	54.73 ³¹	42.584 ⁴⁰	46.03 ⁴⁰	49.537 ⁴⁶	26.45 ²⁷
26.1	11.661 ¹	54.42 ¹⁴	42.544 ³	45.63 ²²	49.491 ¹¹	26.72 ⁴⁹
Oct. 6.0	11.660 ⁴¹	54.28 ⁹	42.541 ⁴⁰	45.41 ¹	49.480 ²⁹	27.21 ⁷²
16.0	11.701 ⁸⁸	54.37 ³⁴	42.581 ⁸⁶	45.40 ²⁴	49.509 ⁷⁴	27.93 ⁹⁸
26.0	11.789 ¹³⁵	54.71 ⁶²	42.667 ¹³⁴	45.64 ⁵²	49.583 ¹²¹	28.91 ¹²³
Nov. 4.9	11.924 ¹⁸²	55.33 ⁹⁰	42.801 ¹⁸²	46.16 ⁸¹	49.704 ¹⁶⁷	30.14 ¹⁴⁷
14.9	12.106 ²²⁶	56.23 ¹¹⁹	42.983 ²²⁶	46.97 ¹¹⁰	49.871 ²¹¹	31.61 ¹⁶⁹
24.9	12.332 ²⁶⁴	57.42 ¹⁴⁴	43.209 ²⁶⁵	48.07 ¹³⁷	50.082 ²⁵¹	33.30 ¹⁸⁸
Dec. 4.9	12.596 ²⁹⁶	58.86 ¹⁶⁶	43.474 ²⁹⁶	49.44 ¹⁶¹	50.333 ²⁸⁴	35.18 ²⁰²
14.8	12.892 ³¹⁷	60.52 ¹⁸⁵	43.770 ³¹⁹	51.05 ¹⁷⁹	50.617 ³⁰⁶	37.20 ²⁰⁹
24.8	13.209 ³²⁸	62.37 ¹⁹⁶	44.089 ³²⁹	52.84 ¹⁹⁴	50.923 ³²⁰	39.29 ²¹⁰
34.8	13.537	64.33	44.418	54.78	51.243	41.39
Mean Place	11.194	54.06	42.068	45.14	49.119	27.97
Sec δ , Tan δ	1.018	-0.190	1.024	-0.218	1.000	-0.004
L α , L δ	0.00	-0.4	0.00	-0.4	0.00	-0.4
ω α , ω δ	-0.01	-0.3	-0.01	-0.4	0.00	-0.4
AUTHORITY	A. E.				A. E.	

APPARENT PLACES OF STARS, 1924. 363

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ε Centauri. Mag. 2.6		m Virginis. Mag. 5.2		τ Boötis. Mag. 4.5	
	R.A.	Dec. S.	R.A.	Dec. S.	R.A.	Dec. N.
	h m 13 35	° ′ 53 4	h m 13 37	° ′ 8 19	h m 13 43	° ′ 17 49
Jan. 0.8	3.222 ³ 481	29.51 ¹¹³	36.488 ³²⁵	4.41 ¹⁹⁶	38.029 ³²⁷	64.87 ²¹⁵
10.8	3.703 475	30.64 ¹⁵⁷	36.813 ³²²	6.37 ¹⁹⁵	38.356 ³²⁸	62.72 ¹⁸⁶
20.7	4.178 457	32.21 ¹⁹⁵	37.135 ³¹¹	8.32 ¹⁸⁸	38.684 ³¹⁸	60.86 ¹⁵²
30.7	4.635 426	34.16 ²²⁸	37.446 ²⁹⁰	10.20 ¹⁷⁵	39.002 ³⁰¹	59.34 ¹¹²
Feb. 9.7	5.061 ³⁸⁷	36.44 ²⁵³	37.736 ²⁶³	11.95 ¹⁵⁷	39.303 ²⁷⁴	58.22 ⁷⁰
19.7	5.448 ³⁴¹	38.97 ²⁷²	37.999 ²³³	13.52 ¹³⁵	39.577 ²⁴⁴	57.52 ²⁸
29.6	5.789 ²⁹²	41.69 ²⁸⁴	38.232 ¹⁹⁹	14.87 ¹¹³	39.821 ²⁰⁸	57.24 ¹³
Mar. 10.6	6.081 ²³⁹	44.53 ²⁸⁹	38.431 ¹⁶⁴	16.00 ⁸⁹	40.029 ¹⁷²	57.37 ⁵⁰
20.6	6.320 ¹⁸⁸	47.42 ²⁸⁸	38.595 ¹³⁰	16.89 ⁶⁵	40.201 ¹³⁵	57.87 ⁸³
30.5	6.508 ¹³⁶	50.30 ²⁸²	38.725 ⁹⁷	17.54 ⁴³	40.336 ⁹⁸	58.70 ¹¹¹
Apr. 9.5	6.644 ⁸⁵	53.12 ²⁷¹	38.822 ⁶⁶	17.97 ²²	40.434 ⁶⁴	59.81 ¹³⁰
19.5	6.729 ³⁶	55.83 ²⁵⁴	38.888 ³⁷	18.19 ⁵	40.498 ³³	61.11 ¹⁴⁴
29.5	6.765 ¹¹	58.37 ²³³	38.925 ¹¹	18.24 ¹¹	40.531 ³	62.55 ¹⁵¹
May 9.4	6.754 ⁵⁵	60.70 ²⁰⁹	38.936 ¹⁴	18.13 ²³	40.534 ²⁴	64.06 ¹⁵²
19.4	6.699 ⁹⁸	62.79 ¹⁷⁹	38.922 ³⁶	17.90 ³⁴	40.510 ⁴⁹	65.58 ¹⁴⁷
29.4	6.601 ¹³⁷	64.58 ¹⁴⁶	38.886 ⁵⁶	17.56 ⁴²	40.461 ⁷⁰	67.05 ¹³⁷
June 8.4	6.464 ¹⁷²	66.04 ¹¹¹	38.830 ⁷⁷	17.14 ⁵⁰	40.391 ⁸⁹	68.42 ¹²³
18.3	6.292 ²⁰⁴	67.15 ⁷³	38.753 ⁹²	16.64 ⁵⁵	40.302 ¹⁰⁶	69.65 ¹⁰⁶
28.3	6.088 ²³⁰	67.88 ³²	38.661 ¹⁰⁷	16.09 ⁵⁸	40.196 ¹²⁰	70.71 ⁸⁶
July 8.3	5.858 ²⁴⁸	68.20 ⁹	38.554 ¹¹⁸	15.51 ⁶¹	40.076 ¹³⁰	71.57 ⁶³
18.2	5.610 ²⁶⁰	68.11 ⁴⁹	38.436 ¹²⁶	14.90 ⁶²	39.946 ¹³⁷	72.20 ³⁹
28.2	5.350 ²⁶²	67.62 ⁸⁹	38.310 ¹²⁹	14.28 ⁶¹	39.809 ¹⁴⁰	72.59 ¹⁴
Aug. 7.2	5.088 ²⁵⁴	66.73 ¹²⁶	38.181 ¹²⁶	13.67 ⁵⁷	39.669 ¹³⁷	72.73 ¹²
17.2	4.834 ²³⁵	65.47 ¹⁶⁰	38.055 ¹¹⁹	13.10 ⁵³	39.532 ¹³⁰	72.61 ⁴⁰
27.1	4.599 ²⁰⁴	63.87 ¹⁸⁷	37.936 ¹⁰⁴	12.57 ⁴³	39.402 ¹¹⁴	72.21 ⁶⁷
Sept. 6.1	4.395 ¹⁶²	62.00 ²⁰⁹	37.832 ⁸¹	12.14 ³³	39.288 ⁹⁴	71.54 ⁹⁵
16.1	4.233 ¹¹⁰	59.91 ²²¹	37.751 ⁵³	11.81 ¹⁷	39.194 ⁶⁵	70.59 ¹²³
26.1	4.123 ⁴⁷	57.70 ²²⁶	37.698 ¹⁷	11.64 ¹	39.129 ³¹	69.36 ¹⁵⁰
Oct. 6.0	4.076 ²²	55.44 ²²¹	37.681 ²⁴	11.65 ²³	39.098 ¹⁰	67.86 ¹⁷⁶
16.0	4.098 ⁹⁹	53.23 ²⁰⁵	37.705 ⁷¹	11.88 ⁴⁷	39.108 ⁵⁴	66.10 ²⁰¹
26.0	4.197 ¹⁷⁵	51.18 ¹⁸¹	37.776 ¹¹⁷	12.35 ⁷³	39.162 ¹⁰³	64.09 ²²²
Nov. 4.9	4.372 ²⁴⁹	49.37 ¹⁴⁸	37.893 ¹⁶⁵	13.08 ¹⁰⁰	39.265 ¹⁵¹	61.87 ²⁴¹
14.9	4.621 ³¹⁸	47.89 ¹⁰⁹	38.058 ²¹¹	14.08 ¹²⁷	39.416 ¹⁹⁹	59.46 ²⁵²
24.9	4.939 ³⁷⁷	46.80 ⁶²	38.269 ²⁵²	15.35 ¹⁴⁹	39.615 ²⁴¹	56.94 ²⁵⁹
Dec. 4.9	5.316 ⁴²⁵	46.18 ¹⁴	38.521 ²⁸⁴	16.84 ¹⁷²	39.856 ²⁷⁷	54.35 ²⁵⁸
14.8	5.741 ⁴⁵⁹	46.04 ³⁶	38.805 ³⁰⁹	18.56 ¹⁸⁶	40.133 ³⁰⁵	51.77 ²⁴⁹
24.8	6.200 ⁴⁷⁸	46.40 ⁸⁶	39.114 ³²³	20.42 ¹⁹⁵	40.438 ³²³	49.28 ²³²
34.8	6.678	47.26	39.437	22.37	40.761	46.96
Mean Place	3.613	50.65	37.221	12.16	39.027	65.72
Sec δ, Tan δ	1.665	-1.331	1.011	-0.146	1.050	+0.322
L α, L δ	+0.01	-0.4	0.00	-0.4	0.00	-0.4
ω α, ω δ	-0.08	-0.4	-0.01	-0.4	+0.02	-0.4
AUTHORITY	A. E.				A. E.	

364 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Ursæ Majoris. Mag. 1·9		μ Centauri. Mag. 3·3		ζ Centauri. Mag. 3·1	
	R.A.	Dec. N.	R.A.	Dec. S.	R.A.	Dec. S.
	^h ^m 13 44	[°] ['] 49 41	^h ^m 13 45	[°] ['] 42 5	^h ^m 13 50	[°] ['] 46 54
Jan. 0·8	31·322 ₈ 426	22·12 ₂₀₀	1·214 ₄₀₆	25·64 ₁₂₈	46·715 ₄₃₄	34·31 ₁₁₀
10·8	31·748 ₄₃₅	20·12 ₁₄₆	1·620 ₄₀₃	26·92 ₁₆₂	47·149 ₄₃₂	35·41 ₁₄₉
20·7	32·183 ₄₂₇	18·66 ₈₅	2·023 ₃₉₀	28·54 ₁₉₂	47·581 ₄₁₉	36·90 ₁₈₂
30·7	32·610 ₄₀₈	17·81 ₂₄	2·413 ₃₆₆	30·46 ₂₁₅	48·000 ₃₉₅	38·72 ₂₁₁
Feb. 9·7	33·018 ₃₇₅	17·57 ₃₇	2·779 ₃₃₄	32·61 ₂₃₀	48·395 ₃₆₃	40·83 ₂₃₁
19·7	33·393 ₃₃₂	17·94 ₉₅	3·113 ₂₉₇	34·91 ₂₄₁	48·758 ₃₂₅	43·14 ₂₄₇
29·6	33·725 ₂₈₃	18·89 ₁₄₈	3·410 ₂₅₈	37·32 ₂₄₆	49·083 ₂₈₃	45·61 ₂₅₆
Mar. 10·6	34·008 ₂₂₉	20·37 ₁₉₃	3·668 ₂₁₅	39·78 ₂₄₅	49·366 ₂₃₈	48·17 ₂₅₉
20·6	34·237 ₁₇₁	22·30 ₂₂₉	3·883 ₁₇₃	42·23 ₂₃₉	49·604 ₁₉₃	50·76 ₂₅₈
30·5	34·408 ₁₁₃	24·59 ₂₅₄	4·056 ₁₃₂	44·62 ₂₂₉	49·797 ₁₄₉	53·34 ₂₅₀
Apr. 9·5	34·521 ₅₈	27·13 ₂₆₉	4·188 ₉₁	46·91 ₂₁₆	49·946 ₁₀₄	55·84 ₂₃₉
19·5	34·579 ₄	29·82 ₂₇₃	4·279 ₅₂	49·07 ₂₀₀	50·050 ₆₂	58·23 ₂₂₅
29·5	34·583 ₄₄	32·55 ₂₆₈	4·331 ₁₆	51·07 ₁₈₀	50·112 ₂₁	60·48 ₂₀₆
May 9·4	34·539 ₈₈	35·23 ₂₅₃	4·347 ₂₀	52·87 ₁₅₉	50·133 ₂₀	62·54 ₁₈₄
19·4	34·451 ₁₂₈	37·76 ₂₂₉	4·327 ₅₄	54·46 ₁₃₃	50·113 ₅₈	64·38 ₁₅₉
29·4	34·323 ₁₆₁	40·05 ₁₉₉	4·273 ₈₆	55·79 ₁₀₆	50·055 ₉₃	65·97 ₁₃₀
June 8·4	34·162 ₁₉₀	42·04 ₁₆₂	4·187 ₁₁₅	56·85 ₇₇	49·962 ₁₂₇	67·27 ₉₉
18·3	33·972 ₂₁₂	43·66 ₁₂₃	4·072 ₁₄₂	57·62 ₄₇	49·835 ₁₅₈	68·26 ₆₇
28·3	33·760 ₂₂₉	44·89 ₇₉	3·930 ₁₆₄	58·09 ₁₄	49·677 ₁₈₃	68·93 ₃₁
July 8·3	33·531 ₂₄₀	45·68 ₃₄	3·766 ₁₈₃	58·23 ₁₈	49·494 ₂₀₄	69·24 ₄
18·2	33·291 ₂₄₆	46·02 ₁₃	3·583 ₁₉₄	58·05 ₅₁	49·290 ₂₁₈	69·20 ₄₀
28·2	33·045 ₂₄₃	45·89 ₆₀	3·389 ₂₀₀	57·54 ₈₁	49·072 ₂₂₄	68·80 ₇₆
Aug. 7·2	32·802 ₂₃₅	45·29 ₁₀₅	3·189 ₁₉₆	56·73 ₁₁₀	48·848 ₂₂₂	68·04 ₁₀₇
17·2	32·567 ₂₂₀	44·24 ₁₄₉	2·993 ₁₈₅	55·63 ₁₃₅	48·626 ₂₁₀	66·97 ₁₃₇
27·1	32·347 ₁₉₅	42·75 ₁₉₀	2·808 ₁₆₃	54·28 ₁₅₅	48·416 ₁₀₇	65·60 ₁₆₂
Sept. 6·1	32·152 ₁₆₄	40·85 ₂₃₀	2·645 ₁₃₂	52·73 ₁₇₀	48·229 ₁₅₄	63·98 ₁₈₁
16·1	31·988 ₁₂₄	38·55 ₂₆₄	2·513 ₉₂	51·03 ₁₇₈	48·075 ₁₁₀	62·17 ₁₉₃
26·1	31·864 ₇₆	35·91 ₂₉₅	2·421 ₄₂	49·25 ₁₇₇	47·965 ₅₆	60·24 ₁₉₆
Oct. 6·0	31·788 ₂₂	32·96 ₃₂₁	2·379 ₁₄	47·48 ₁₆₉	47·909 ₄	58·28 ₁₉₂
16·0	31·766 ₃₉	29·75 ₃₄₀	2·393 ₇₆	45·79 ₁₅₃	47·913 ₇₀	56·36 ₁₇₈
26·0	31·805 ₁₀₂	26·35 ₃₅₁	2·469 ₁₃₉	44·26 ₁₂₉	47·983 ₁₃₉	54·58 ₁₅₆
Nov. 4·9	31·907 ₁₆₈	22·84 ₃₅₆	2·608 ₂₀₂	42·97 ₉₇	48·122 ₂₀₇	53·02 ₁₂₅
14·9	32·075 ₂₃₂	19·28 ₃₅₀	2·810 ₂₆₁	42·00 ₆₁	48·329 ₂₇₁	51·77 ₉₀
24·9	32·307 ₂₉₂	15·78 ₃₃₆	3·071 ₃₁₂	41·39 ₁₉	48·600 ₃₂₆	50·87 ₄₈
Dec. 4·9	32·599 ₃₄₅	12·42 ₃₁₁	3·383 ₃₅₄	41·20 ₂₃	48·926 ₃₇₄	50·39 ₃
14·8	32·944 ₃₈₇	9·31 ₂₇₇	3·737 ₃₈₅	41·43 ₆₅	49·300 ₄₀₇	50·36 ₄₂
24·8	33·331 ₄₁₈	6·54 ₂₃₄	4·122 ₄₀₃	42·08 ₁₀₇	49·707 ₄₂₉	50·78 ₈₆
34·8	33·749	4·20	4·525	43·15	50·136	51·64
Mean Place	32·913	31·41	1·785	44·15	47·321	54·14
Sec δ, Tan δ	1·546	+1·179	1·348	-0·903	1·464	-1·069
L α, L δ	-0·01	-0·4	+0·01	-0·4	+0·01	-0·4
ω α, ω δ	+0·07	-0·4	-0·05	-0·4	-0·06	-0·5
AUTHORITY	A. E.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 365

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Boötis. Mag. 2.8		τ Virginis. Mag. 4.3		β Centauri. Mag. 0.9	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 13 ^m 51	¹⁸ ⁴⁶	^h 13 ^m 57	¹ ⁵⁴	^h 13 ^m 58	⁶⁰ ⁰
Jan. 0.8	2.917 ^s 327	40.36 ^s 219	45.703 ^s 317	46.95 ^s 205	26.04 ^s 56	3.10 ^s 65
10.8	3.244 ^s 329	38.17 ^s 190	46.020 ^s 320	44.90 ^s 195	26.60 ^s 56	3.75 ^s 114
20.8	3.573 ^s 322	36.27 ^s 154	46.340 ^s 311	42.95 ^s 176	27.16 ^s 55	4.89 ^s 159
30.7	3.895 ^s 304	34.73 ^s 114	46.651 ^s 295	41.19 ^s 152	27.71 ^s 52	6.48 ^s 198
Feb. 9.7	4.199 ^s 281	33.59 ^s 72	46.946 ^s 273	39.67 ^s 125	28.23 ^s 48	8.46 ^s 231
19.7	4.480 ^s 250	32.87 ^s 27	47.219 ^s 244	38.42 ^s 95	28.71 ^s 44	10.77 ^s 259
29.7	4.730 ^s 216	32.60 ^s 14	47.463 ^s 214	37.47 ^s 64	29.15 ^s 38	13.36 ^s 278
Mar. 10.6	4.946 ^s 180	32.74 ^s 52	47.677 ^s 180	36.83 ^s 33	29.53 ^s 32	16.14 ^s 292
20.6	5.126 ^s 143	33.26 ^s 87	47.857 ^s 147	36.50 ^s 6	29.85 ^s 27	19.06 ^s 298
30.6	5.269 ^s 107	34.13 ^s 114	48.004 ^s 115	36.44 ^s 20	30.12 ^s 20	22.04 ^s 300
Apr. 9.5	5.376 ^s 72	35.27 ^s 135	48.119 ^s 84	36.64 ^s 41	30.32 ^s 14	25.04 ^s 295
19.5	5.448 ^s 40	36.62 ^s 149	48.203 ^s 54	37.05 ^s 58	30.46 ^s 8	27.99 ^s 284
29.5	5.488 ^s 10	38.11 ^s 156	48.257 ^s 26	37.63 ^s 71	30.54 ^s 3	30.83 ^s 268
May 9.5	5.498 ^s 18	39.67 ^s 158	48.283 ^s 1	38.34 ^s 80	30.57 ^s 4	33.51 ^s 247
19.4	5.480 ^s 43	41.25 ^s 152	48.284 ^s 24	39.14 ^s 84	30.53 ^s 9	35.98 ^s 220
29.4	5.437 ^s 65	42.77 ^s 142	48.260 ^s 46	39.98 ^s 85	30.44 ^s 14	38.18 ^s 190
June 8.4	5.372 ^s 86	44.19 ^s 128	48.214 ^s 67	40.83 ^s 84	30.30 ^s 20	40.08 ^s 155
18.4	5.286 ^s 104	45.47 ^s 110	48.147 ^s 85	41.67 ^s 80	30.10 ^s 24	41.63 ^s 116
28.3	5.182 ^s 119	46.57 ^s 89	48.062 ^s 102	42.47 ^s 74	29.86 ^s 27	42.79 ^s 75
July 8.3	5.063 ^s 131	47.46 ^s 65	47.960 ^s 116	43.21 ^s 66	29.59 ^s 31	43.54 ^s 31
18.3	4.932 ^s 139	48.11 ^s 40	47.844 ^s 126	43.87 ^s 56	29.28 ^s 33	43.85 ^s 14
28.2	4.793 ^s 143	48.51 ^s 14	47.718 ^s 132	44.43 ^s 45	28.95 ^s 33	43.71 ^s 58
Aug. 7.2	4.650 ^s 141	48.65 ^s 13	47.586 ^s 132	44.88 ^s 32	28.62 ^s 34	43.13 ^s 102
17.2	4.509 ^s 134	48.52 ^s 41	47.454 ^s 127	45.20 ^s 17	28.28 ^s 31	42.11 ^s 141
27.2	4.375 ^s 121	48.11 ^s 69	47.327 ^s 115	45.37 ^s 1	27.97 ^s 29	40.70 ^s 177
Sept. 6.1	4.254 ^s 100	47.42 ^s 98	47.212 ^s 97	45.38 ^s 17	27.68 ^s 23	38.93 ^s 207
16.1	4.154 ^s 72	46.44 ^s 127	47.115 ^s 70	45.21 ^s 38	27.45 ^s 18	36.86 ^s 229
26.1	4.082 ^s 39	45.17 ^s 155	47.045 ^s 37	44.83 ^s 59	27.27 ^s 11	34.57 ^s 242
Oct. 6.1	4.043 ^s 3	43.62 ^s 181	47.008 ^s 3	44.24 ^s 83	27.16 ^s 2	32.15 ^s 244
16.0	4.046 ^s 47	41.81 ^s 206	47.011 ^s 46	43.41 ^s 108	27.14 ^s 6	29.71 ^s 238
26.0	4.093 ^s 95	39.75 ^s 228	47.057 ^s 94	42.33 ^s 132	27.20 ^s 16	27.33 ^s 221
Nov. 5.0	4.188 ^s 144	37.47 ^s 246	47.151 ^s 142	41.01 ^s 155	27.36 ^s 24	25.12 ^s 193
14.9	4.332 ^s 192	35.01 ^s 258	47.293 ^s 188	39.46 ^s 176	27.60 ^s 34	23.19 ^s 158
24.9	4.524 ^s 236	32.43 ^s 265	47.481 ^s 231	37.70 ^s 194	27.94 ^s 40	21.61 ^s 115
Dec. 4.9	4.760 ^s 274	29.78 ^s 263	47.712 ^s 266	35.76 ^s 206	28.34 ^s 48	20.46 ^s 67
14.9	5.034 ^s 303	27.15 ^s 254	47.978 ^s 295	33.70 ^s 213	28.82 ^s 51	19.79 ^s 17
24.8	5.337 ^s 322	24.61 ^s 236	48.273 ^s 313	31.57 ^s 212	29.33 ^s 55	19.62 ^s 36
34.8	5.659 ^s	22.25 ^s	48.586 ^s	29.45 ^s	29.88 ^s	19.98 ^s
Mean Place	3.965	41.22	46.629	42.11	26.71	25.82
Sec δ , Tan δ	1.056	+0.340	1.001	+0.033	2.000	-1.732
$L \alpha$, $L \delta$	0.00	-0.4	0.00	-0.3	+0.02	-0.3
$\omega \alpha$, $\omega \delta$	+0.02	-0.5	0.00	-0.5	-0.10	-0.5
AUTHORITY	A. E.		A. E.		A. E.	

366 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	π Hydræ. Mag. 3.5		θ Centauri. Mag. 2.3		94 Virginis. Mag. 6.6	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 14 2	° ' " 18	h m 14 2	° ' " 35 59	h m 14 2	° ' " 8 31
Jan. 0.8	1.510 ³⁴⁹	47.15 ¹⁵²	11.417 ³⁷⁷	31.39 ¹²⁸	15.234 ³²¹	38.36 ¹⁸⁹
10.8	1.859 ³⁵⁰	48.67 ¹⁷⁰	11.794 ³⁷⁸	32.67 ¹⁵⁷	15.555 ³²³	40.25 ¹⁸⁸
20.8	2.209 ³⁴¹	50.37 ¹⁸⁴	12.172 ³⁶⁹	34.24 ¹⁸⁰	15.878 ³¹⁵	42.13 ¹⁸²
30.7	2.550 ³²³	52.21 ¹⁹¹	12.541 ³⁵⁰	36.04 ¹⁹⁸	16.193 ³⁰⁰	43.95 ¹⁷¹
Feb. 9.7	2.873 ²⁹⁹	54.12 ¹⁹²	12.891 ³²⁴	38.02 ²¹⁰	16.493 ²⁷⁷	45.66 ¹⁵²
19.7	3.172 ²⁷⁰	56.04 ¹⁸⁹	13.215 ²⁹²	40.12 ²¹⁵	16.770 ²⁴⁹	47.18 ¹³³
29.7	3.442 ²³⁷	57.93 ¹⁸²	13.507 ²⁵⁷	42.27 ²¹⁷	17.019 ²¹⁹	48.51 ¹⁰⁹
Mar. 10.6	3.679 ²⁰²	59.75 ¹⁷¹	13.764 ²²⁰	44.44 ²¹³	17.238 ¹⁸⁷	49.60 ⁸⁶
20.6	3.881 ¹⁶⁸	61.46 ¹⁵⁷	13.984 ¹⁸¹	46.57 ²⁰⁵	17.425 ¹⁵⁴	50.46 ⁶³
30.6	4.049 ¹³⁴	63.03 ¹⁴³	14.165 ¹⁴⁵	48.62 ¹⁹⁵	17.579 ¹²²	51.09 ⁴⁰
Apr. 9.5	4.183 ¹⁰¹	64.46 ¹²⁷	14.310 ¹⁰⁸	50.57 ¹⁸³	17.701 ⁹¹	51.49 ²¹
19.5	4.284 ⁶⁹	65.73 ¹¹⁰	14.418 ⁷¹	52.40 ¹⁶⁷	17.792 ⁶³	51.70 ³
29.5	4.353 ³⁹	66.83 ⁹⁴	14.489 ³⁸	54.07 ¹⁴⁹	17.855 ³⁴	51.73 ¹²
May 9.5	4.392 ⁹	67.77 ⁷⁶	14.527 ⁵	55.56 ¹³¹	17.889 ⁹	51.61 ²⁴
19.4	4.401 ¹⁹	68.53 ⁵⁸	14.532 ²⁸	56.87 ¹¹⁰	17.898 ¹⁶	51.37 ³⁴
29.4	4.382 ⁴⁶	69.11 ⁴¹	14.504 ⁵⁸	57.97 ⁸⁷	17.882 ⁴⁰	51.03 ⁴²
June 8.4	4.336 ⁷¹	69.52 ²³	14.446 ⁸⁸	58.84 ⁶⁴	17.842 ⁶²	50.61 ⁴⁸
18.4	4.265 ⁹⁵	69.75 ⁴	14.358 ¹¹⁴	59.48 ³⁸	17.780 ⁸²	50.13 ⁵²
28.3	4.170 ¹¹⁶	69.79 ¹⁴	14.244 ¹³⁷	59.86 ¹²	17.698 ¹⁰¹	49.61 ⁵⁵
July 8.3	4.054 ¹³³	69.65 ³²	14.107 ¹⁵⁸	59.98 ¹⁴	17.597 ¹¹⁶	49.06 ⁵⁷
18.3	3.921 ¹⁴⁷	69.33 ⁵⁰	13.949 ¹⁷²	59.84 ⁴¹	17.481 ¹²⁷	48.49 ⁵⁸
28.2	3.774 ¹⁵⁵	68.83 ⁶⁷	13.777 ¹⁸⁰	59.43 ⁶⁶	17.354 ¹³⁴	47.91 ⁵⁶
Aug. 7.2	3.619 ¹⁵⁶	68.16 ⁸⁰	13.597 ¹⁸²	58.77 ⁸⁹	17.220 ¹³⁶	47.35 ⁵⁴
17.2	3.463 ¹⁵¹	67.36 ⁹³	13.415 ¹⁷⁴	57.88 ¹¹⁰	17.084 ¹³²	46.81 ⁴⁸
27.2	3.312 ¹³⁷	66.43 ¹⁰⁰	13.241 ¹⁵⁹	56.78 ¹²⁷	16.952 ¹¹⁹	46.33 ⁴¹
Sept. 6.1	3.175 ¹¹⁵	65.43 ¹⁰⁴	13.082 ¹³³	55.51 ¹³⁸	16.833 ¹⁰²	45.92 ³⁰
16.1	3.060 ⁸⁴	64.39 ¹⁰³	12.949 ⁹⁹	54.13 ¹⁴⁴	16.731 ⁷⁴	45.62 ¹⁷
26.1	2.976 ⁴⁶	63.36 ⁹⁶	12.850 ⁵⁵	52.69 ¹⁴³	16.657 ⁴⁰	45.45 ¹
Oct. 6.1	2.930 ⁰	62.40 ⁸³	12.795 ⁵	51.26 ¹³⁴	16.617 ⁰	45.46 ²⁰
16.0	2.930 ⁵⁰	61.57 ⁶⁵	12.790 ⁵¹	49.92 ¹²⁰	16.617 ⁴⁶	45.66 ⁴²
26.0	2.980 ¹⁰⁴	60.92 ⁴²	12.841 ¹¹⁰	48.72 ⁹⁸	16.663 ⁹³	46.08 ⁶⁸
Nov. 5.0	3.084 ¹⁵⁸	60.50 ¹³	12.951 ¹⁷⁰	47.74 ⁶⁹	16.756 ¹⁴³	46.76 ⁹⁴
14.9	3.242 ²¹⁰	60.37 ¹⁸	13.121 ²²⁶	47.05 ³⁶	16.899 ¹⁹⁰	47.70 ¹¹⁸
24.9	3.452 ²⁵⁶	60.55 ⁵⁰	13.347 ²⁷⁶	46.69 ¹	17.089 ²³⁴	48.88 ¹⁴²
Dec. 4.9	3.708 ²⁹⁶	61.05 ⁸²	13.623 ³¹⁸	46.68 ³⁸	17.323 ²⁶⁹	50.30 ¹⁶³
14.9	4.004 ³²⁵	61.87 ¹¹³	13.941 ³⁵¹	47.06 ⁷⁵	17.592 ²⁹⁸	51.93 ¹⁷⁸
24.8	4.329 ³⁴⁴	63.00 ¹³⁹	14.292 ³⁷¹	47.81 ¹⁰⁹	17.890 ³¹⁷	53.71 ¹⁸⁸
34.8	4.673	64.39	14.663	48.90	18.207	55.59
Mean Place	2.294	61.29	12.168	48.41	16.112	46.79
Sec δ , Tan δ	1.116	-0.495	1.236	-0.727	1.011	-0.150
L α , L δ	+0.01	-0.3	+0.01	-0.3	0.00	-0.3
ω α , ω δ	-0.03	-0.5	-0.04	-0.5	-0.01	-0.5
AUTHORITY	A. N.		A. E.			

APPARENT PLACES OF STARS, 1924. 367

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Draconis. Mag. 3.6		κ Virginis. Mag. 4.3		α Boötis. Mag. 0.2	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h ^m 14 2	^o ['] 64 43	^h ^m 14 8	^o ['] 9 55	^h ^m 14 12	^o ['] 19 34
Jan. 0.8	17.43 ^s 58	68.49 ["] 199	49.428 ^s 321	5.41 ["] 184	10.485 ^s 318	38.40 ["] 232
10.8	18.01 60	66.50 ["] 138	49.749 324	7.25 185	10.803 326	36.08 203
20.8	18.61 60	65.12 74	50.073 317	9.10 180	11.129 322	34.05 167
30.7	19.21 58	64.38 6	50.390 303	10.90 170	11.451 310	32.38 126
Feb. 9.7	19.79 55	64.32 60	50.693 282	12.60 155	11.761 289	31.12 82
19.7	20.34 50	64.92 122	50.975 254	14.15 135	12.050 261	30.30 38
29.7	20.84 43	66.14 179	51.229 225	15.50 114	12.311 231	29.92 7
Mar. 10.6	21.27 35	67.93 226	51.454 193	16.64 91	12.542 196	29.99 46
20.6	21.62 27	70.19 263	51.647 161	17.55 69	12.738 161	30.45 83
30.6	21.89 18	72.82 290	51.808 130	18.24 47	12.899 126	31.28 113
Apr. 9.5	22.07 9	75.72 305	51.938 98	18.71 27	13.025 92	32.41 136
19.5	22.16 0	78.77 308	52.036 70	18.98 11	13.117 59	33.77 152
29.5	22.16 8	81.85 300	52.106 42	19.09 5	13.176 28	35.29 161
May 9.5	22.08 15	84.85 282	52.148 14	19.04 17	13.204 1	36.90 164
19.4	21.93 22	87.67 255	52.162 11	18.87 28	13.203 29	38.54 159
29.4	21.71 28	90.22 219	52.151 35	18.59 36	13.174 55	40.13 150
June 8.4	21.43 32	92.41 178	52.116 58	18.23 43	13.119 78	41.63 136
18.4	21.11 37	94.19 133	52.058 80	17.80 48	13.041 99	42.99 117
28.3	20.74 40	95.52 83	51.978 98	17.32 52	12.942 117	44.16 96
July 8.3	20.34 42	96.35 31	51.880 115	16.80 55	12.825 133	45.12 72
18.3	19.92 43	96.66 20	51.765 128	16.25 57	12.692 144	45.84 46
28.2	19.49 42	96.46 73	51.637 136	15.68 57	12.548 152	46.30 18
Aug. 7.2	19.07 42	95.73 124	51.501 138	15.11 54	12.396 153	46.48 10
17.2	18.65 39	94.49 172	51.363 135	14.57 51	12.243 150	46.38 39
27.2	18.26 36	92.77 217	51.228 125	14.06 45	12.093 138	45.99 69
Sept. 6.1	17.90 31	90.60 259	51.103 105	13.61 36	11.955 121	45.30 99
16.1	17.59 25	88.01 297	50.998 80	13.25 23	11.834 95	44.31 129
26.1	17.34 19	85.04 327	50.918 46	13.02 8	11.739 62	43.02 158
Oct. 6.1	17.15 11	81.77 353	50.872 7	12.94 12	11.677 22	41.44 185
16.0	17.04 2	78.24 372	50.865 40	13.06 34	11.655 20	39.59 211
26.0	17.02 6	74.52 381	50.905 87	13.40 57	11.675 70	37.48 235
Nov. 5.0	17.08 16	70.71 382	50.992 138	13.97 84	11.745 120	35.13 253
14.9	17.24 26	66.89 373	51.130 185	14.81 108	11.865 170	32.60 267
24.9	17.50 35	63.16 355	51.315 229	15.89 133	12.035 215	29.93 274
Dec. 4.9	17.85 43	59.61 324	51.544 266	17.22 153	12.250 256	27.19 274
14.9	18.28 50	56.37 285	51.810 297	18.75 171	12.506 288	24.45 266
24.8	18.78 55	53.52 238	52.107 315	20.46 182	12.794 312	21.79 249
34.8	19.33	51.14	52.422	22.28	13.106	19.30
Mean Place	19.93	79.27	50.338	14.44	11.650	38.70
Sec δ , Tan δ	2.343	+2.119	1.015	-0.175	1.061	+0.356
$L \alpha$, $L \delta$	-0.03	-0.3	0.00	-0.3	-0.01	-0.3
$\omega \alpha$, $\omega \delta$	+0.12	-0.5	-0.01	-0.5	+0.02	-0.5
AUTHORITY	A. E.		A. E.		A. E.	

368 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	2 Libræ. Mag. 6.3		f Boötis. Mag. 5.4		ρ Boötis. Mag. 3.8		
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.	
	h m 14 19	° ' " 11 21	h m 14 22	° ' " 19 33	h m 14 28	° ' " 30 41	
Jan. 0.8	19.086 ³²⁰	53.91 ¹⁷⁷	54.016 ³¹⁷	64.36 ²³⁰	31.916 ³³¹	72.89 ²⁴²	
10.8	19.406 ³²⁴	55.68 ¹⁸¹	54.333 ³²⁶	62.06 ²⁰²	32.247 ³⁴³	70.47 ²⁰⁴	
20.8	19.730 ³²⁰	57.49 ¹⁷⁷	54.659 ³²⁴	60.04 ¹⁶⁶	32.590 ³⁴⁵	68.43 ¹⁵⁸	
30.7	20.050 ³⁰⁷	59.26 ¹⁶⁹	54.983 ³¹³	58.38 ¹²⁶	32.935 ³³⁵	66.85 ¹⁰⁸	
Feb. 9.7	20.357 ²⁸⁷	60.95 ¹⁵⁵	55.296 ²⁹⁴	57.12 ⁸¹	33.270 ³¹⁷	65.77 ⁵⁶	
19.7	20.644 ²⁶¹	62.50 ¹³⁷	55.590 ²⁷⁰	56.31 ³⁷	33.587 ²⁹²	65.21 ³	
29.7	20.905 ²³³	63.87 ¹¹⁸	55.860 ²⁴⁰	55.94 ⁸	33.879 ²⁶¹	65.18 ⁴⁹	
Mar. 10.6	21.138 ²⁰³	65.05 ⁹⁶	56.100 ²⁰⁷	56.02 ⁵⁰	34.140 ²²⁵	65.67 ⁹⁶	
20.6	21.341 ¹⁷¹	66.01 ⁷⁵	56.307 ¹⁷²	56.52 ⁸⁶	34.365 ¹⁸⁸	66.63 ¹³⁷	
30.6	21.512 ¹⁴¹	66.76 ⁵⁴	56.479 ¹³⁹	57.38 ¹¹⁸	34.553 ¹⁵⁰	68.00 ¹⁷⁰	
Apr. 9.6	21.653 ¹¹¹	67.30 ³⁴	56.618 ¹⁰⁴	58.56 ¹⁴²	34.703 ¹¹¹	69.70 ¹⁹⁶	
19.5	21.764 ⁷⁹	67.64 ¹⁸	56.722 ⁷²	59.98 ¹⁵⁹	34.814 ⁷³	71.66 ²¹³	
29.5	21.843 ⁵³	67.82 ³	56.794 ⁴⁰	61.57 ¹⁷⁰	34.887 ³⁸	73.79 ²²⁰	
May 9.5	21.896 ²⁵	67.85 ⁹	56.834 ¹¹	63.27 ¹⁷²	34.925 ³	75.99 ²²¹	
19.4	21.921 ²	67.76 ²⁰	56.845 ¹⁸	64.99 ¹⁶⁹	34.928 ²⁹	78.20 ²¹²	
29.4	21.919 ²⁶	67.56 ²⁹	56.827 ⁴⁴	66.68 ¹⁶⁰	34.899 ⁵⁹	80.32 ¹⁹⁸	
June 8.4	21.893 ⁵²	67.27 ³⁶	56.783 ⁷⁰	68.28 ¹⁴⁶	34.840 ⁸⁸	82.30 ¹⁷⁸	
18.4	21.841 ⁷⁴	66.91 ⁴²	56.713 ⁹²	69.74 ¹²⁹	34.752 ¹¹²	84.08 ¹⁵²	
28.3	21.767 ⁹⁶	66.49 ⁴⁷	56.621 ¹¹¹	71.03 ¹⁰⁶	34.640 ¹³⁴	85.60 ¹²²	
July 8.3	21.671 ¹¹³	66.02 ⁵¹	56.510 ¹³⁰	72.09 ⁸⁴	34.506 ¹⁵³	86.82 ⁹⁰	
18.3	21.558 ¹²⁸	65.51 ⁵³	56.380 ¹⁴²	72.93 ⁵⁶	34.353 ¹⁶⁷	87.72 ⁵⁵	
28.3	21.430 ¹³⁸	64.98 ⁵⁴	56.238 ¹⁵²	73.49 ³⁰	34.186 ¹⁷⁷	88.27 ¹⁸	
Aug. 7.2	21.292 ¹⁴³	64.44 ⁵⁴	56.086 ¹⁵⁶	73.79 ⁰	34.009 ¹⁸⁰	88.45 ¹⁸	
17.2	21.149 ¹⁴¹	63.90 ⁵²	55.930 ¹⁵³	73.79 ²⁸	33.829 ¹⁷⁸	88.27 ⁵⁶	
27.2	21.008 ¹³²	63.38 ⁴⁸	55.777 ¹⁴⁴	73.51 ⁵⁹	33.651 ¹⁶⁸	87.71 ⁹³	
Sept. 6.1	20.876 ¹¹⁴	62.90 ³⁹	55.633 ¹²⁷	72.92 ⁸⁹	33.483 ¹⁵⁰	86.78 ¹³⁰	
16.1	20.762 ⁸⁹	62.51 ²⁹	55.506 ¹⁰³	72.03 ¹¹⁹	33.333 ¹²⁵	85.48 ¹⁶⁵	
26.1	20.673 ⁵⁷	62.22 ¹⁴	55.403 ⁷¹	70.84 ¹⁴⁹	33.208 ⁹¹	83.83 ¹⁹⁸	
Oct. 6.1	20.616 ¹⁵	62.08 ³	55.332 ³³	69.35 ¹⁷⁶	33.117 ⁵¹	81.85 ²²⁹	
16.0	20.601 ²⁹	62.11 ²⁴	55.299 ¹²	67.59 ²⁰⁴	33.066 ⁴	79.56 ²⁵⁷	
26.0	20.630 ⁷⁸	62.35 ⁴⁸	55.311 ⁶⁰	65.55 ²²⁷	33.062 ⁴⁷	76.99 ²⁷⁹	
Nov. 5.0	20.708 ¹²⁸	62.83 ⁷²	55.371 ¹¹⁰	63.28 ²⁴⁷	33.109 ¹⁰¹	74.20 ²⁹⁷	
15.0	20.836 ¹⁷⁷	63.55 ⁹⁸	55.481 ¹⁶¹	60.81 ²⁶¹	33.210 ¹⁵⁵	71.23 ³⁰⁷	
24.9	21.013 ²²²	64.53 ¹²²	55.642 ²⁰⁸	58.20 ²⁷⁰	33.365 ²⁰⁶	68.16 ³¹⁰	
Dec. 4.9	21.235 ²⁶¹	65.75 ¹⁴⁴	55.850 ²⁵⁰	55.50 ²⁷⁰	33.571 ²⁵²	65.06 ³⁰⁴	
14.9	21.496 ²⁹²	67.19 ¹⁶²	56.100 ²⁸³	52.80 ²⁶³	33.823 ²⁹¹	62.02 ²⁸⁹	
24.8	21.788 ³¹³	68.81 ¹⁷⁵	56.383 ³⁰⁸	50.17 ²⁴⁷	34.114 ³²⁰	59.13 ²⁶⁴	
34.8	22.101	70.56	56.691	47.70	34.434	56.49	
Mean Place	20.049	63.60	55.234	64.25	33.313	75.61	
Sec δ, Tan δ	1.020	-0.201	1.061	+0.355	1.163	+0.594	
L α, L δ	0.00	-0.3	-0.01	-0.3	-0.01	-0.3	
ω α, ω δ	-0.01	-0.6	+0.02	-0.6	+0.03	-0.6	
AUTHORITY						A. E.	

APPARENT PLACES OF STARS, 1924. 369

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Boötis. Mag. 3.0		η Centauri. Mag. 2.7		α Centauri. Mag. 0.3	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 14 28	38 38	h m 14 30	41 49	h m 14 34	60 30
Jan. 0.8	59.570 ³⁵¹	19.54 ²⁴⁵	39.425 ³⁹⁶	10.69 ⁸¹	24.89 ⁵⁵	54.90 ²⁵
10.8	59.921 ³⁶⁶	17.09 ²⁰¹	39.821 ⁴⁰⁴	11.50 ¹¹⁶	25.44 ⁵⁶	55.15 ⁷³
20.8	60.287 ³⁶⁹	15.08 ¹⁴⁹	40.225 ⁴⁰²	12.66 ¹⁴⁵	26.00 ⁵⁶	55.88 ¹¹⁸
30.8	60.656 ³⁶⁰	13.59 ⁹³	40.627 ³⁸⁸	14.11 ¹⁶⁹	26.56 ⁵⁴	57.06 ¹⁵⁸
Feb. 9.7	61.016 ³⁴²	12.66 ³⁶	41.015 ³⁶⁶	15.80 ¹⁸⁸	27.10 ⁵¹	58.64 ¹⁹⁴
19.7	61.358 ³¹⁵	12.30 ²²	41.381 ³³⁸	17.68 ²⁰²	27.61 ⁴⁷	60.58 ²²⁴
29.7	61.673 ²⁸¹	12.52 ⁷⁷	41.719 ³⁰⁵	19.70 ²¹⁰	28.08 ⁴²	62.82 ²⁴⁷
Mar. 10.6	61.954 ²⁴²	13.29 ¹²⁶	42.024 ²⁶⁹	21.80 ²¹⁴	28.50 ³⁶	65.29 ²⁶⁵
20.6	62.196 ²⁰¹	14.55 ¹⁷⁰	42.293 ²³²	23.94 ²¹⁴	28.86 ³¹	67.94 ²⁷⁶
30.6	62.397 ¹⁵⁷	16.25 ²⁰⁴	42.525 ¹⁹³	26.08 ²¹⁰	29.17 ²⁶	70.70 ²⁸²
Apr. 9.6	62.554 ¹¹⁴	18.29 ²²⁹	42.718 ¹⁵⁴	28.18 ²⁰²	29.43 ¹⁹	73.52 ²⁸²
19.5	62.668 ⁷¹	20.58 ²⁴⁵	42.872 ¹¹⁶	30.20 ¹⁹²	29.62 ¹³	76.34 ²⁷⁶
29.5	62.739 ³¹	23.03 ²⁵¹	42.988 ⁷⁷	32.12 ¹⁷⁹	29.75 ⁶	79.10 ²⁶⁶
May 9.5	62.770 ⁹	25.54 ²⁴⁸	43.065 ³⁹	33.91 ¹⁶³	29.81 ¹	81.76 ²⁵⁰
19.5	62.761 ⁴⁵	28.02 ²³⁷	43.104 ¹	35.54 ¹⁴⁵	29.82 ⁵	84.26 ²³⁰
29.4	62.716 ⁷⁸	30.39 ²¹⁷	43.105 ³⁷	36.99 ¹²⁴	29.77 ¹²	86.56 ²⁰³
June 8.4	62.638 ¹⁰⁹	32.56 ¹⁹²	43.068 ⁷²	38.23 ¹⁰¹	29.65 ¹⁷	88.59 ¹⁷⁴
18.4	62.529 ¹³⁷	34.48 ¹⁶²	42.996 ¹⁰⁷	39.24 ⁷⁵	29.48 ²²	90.33 ¹³⁹
28.3	62.392 ¹⁶¹	36.10 ¹²⁸	42.889 ¹³⁸	39.99 ⁴⁸	29.26 ²⁷	91.72 ¹⁰⁰
July 8.3	62.231 ¹⁷⁹	37.38 ⁸⁹	42.751 ¹⁶⁵	40.47 ¹⁸	28.99 ³¹	92.72 ⁶¹
18.3	62.052 ¹⁹⁵	38.27 ⁴⁹	42.586 ¹⁸⁷	40.65 ¹¹	28.68 ³³	93.33 ¹⁸
28.3	61.857 ²⁰⁴	38.76 ⁸	42.399 ²⁰²	40.54 ⁴⁰	28.35 ³⁶	93.51 ²⁶
Aug. 7.2	61.653 ²⁰⁶	38.84 ³⁵	42.197 ²⁰⁹	40.14 ⁷⁰	27.99 ³⁶	93.25 ⁶⁹
17.2	61.447 ²⁰⁴	38.49 ⁷⁷	41.988 ²⁰⁸	39.44 ⁹⁶	27.63 ³⁶	92.56 ¹¹¹
27.2	61.243 ¹⁹¹	37.72 ¹¹⁷	41.780 ¹⁹⁵	38.48 ¹²⁰	27.27 ³³	91.45 ¹⁴⁹
Sept. 6.2	61.052 ¹⁷²	36.55 ¹⁵⁸	41.585 ¹⁷²	37.28 ¹⁴⁰	26.94 ²⁹	89.96 ¹⁸³
16.1	60.880 ¹⁴⁵	34.97 ¹⁹⁶	41.413 ¹³⁸	35.88 ¹⁵³	26.65 ²⁴	88.13 ²⁰⁹
26.1	60.735 ¹⁰⁸	33.01 ²³¹	41.275 ⁹⁵	34.35 ¹⁶⁰	26.41 ¹⁷	86.04 ²²⁸
Oct. 6.1	60.627 ⁶⁵	30.70 ²⁶³	41.180 ⁴²	32.75 ¹⁶⁰	26.24 ⁹	83.76 ²³⁸
16.0	60.562 ¹⁴	28.07 ²⁹⁰	41.138 ¹⁷	31.15 ¹⁵²	26.15 ⁰	81.38 ²³⁸
26.0	60.548 ⁴⁰	25.17 ³¹²	41.155 ⁸¹	29.63 ¹³⁷	26.15 ⁹	79.00 ²²⁸
Nov. 5.0	60.588 ⁹⁹	22.05 ³²⁶	41.236 ¹⁴⁷	28.26 ¹¹⁴	26.24 ¹⁹	76.72 ²⁰⁸
15.0	60.687 ¹⁵⁶	18.79 ³³⁵	41.383 ²¹⁰	27.12 ⁸⁶	26.43 ²⁸	74.64 ¹⁸⁰
24.9	60.843 ²¹²	15.44 ³³²	41.593 ²⁶⁷	26.26 ⁵¹	26.71 ³⁷	72.84 ¹⁴²
Dec. 4.9	61.055 ²⁶³	12.12 ³²³	41.860 ³¹⁸	25.75 ¹⁵	27.08 ⁴³	71.42 ¹⁰⁰
14.9	61.318 ³⁰⁵	8.89 ³⁰¹	42.178 ³⁵⁸	25.60 ²⁴	27.51 ⁴⁹	70.42 ⁵²
24.9	61.623 ³³⁸	5.88 ²⁷⁰	42.536 ³⁸⁶	25.84 ⁶²	28.00 ⁵³	69.90 ³
34.8	61.961	3.18	42.922	26.46	28.53	69.87 ³
Mean Place	61.119	24.18	40.417	29.29	25.46	81.39
Sec δ , Tan δ	1.280	+0.799	1.342	-0.895	2.032	-1.769
L α , L δ	-0.01	-0.3	+0.01	-0.3	+0.03	-0.3
ω α , ω δ	+0.04	-0.6	-0.05	-0.6	-0.09	-0.6
AUTHORITY	A. E.		A. E.		A. E.	

370 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Circini. Mag. 3.4		α Lupi. Mag. 2.9		ϵ Boötis. Mag. 2.7	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h ^m 14 36	[°] ['] 64 38	^h ^m 14 36	[°] ['] 47 3	^h ^m 14 41	[°] ['] 27 23
Jan. 0.8	19.27 ⁶²	19.88 ²	50.872 ⁴²³	27.25 ⁵⁸	38.670 ³¹⁸	36.46 ²⁴⁶
10.8	19.89 ⁶⁴	19.90 ⁵¹	51.295 ⁴³⁴	27.83 ⁹⁶	38.988 ³³²	34.00 ²¹¹
20.8	20.53 ⁶⁴	20.41 ⁹⁹	51.729 ⁴³²	28.79 ¹³⁰	39.320 ³³⁶	31.89 ¹⁷¹
30.8	21.17 ⁶³	21.40 ¹⁴⁴	52.161 ⁴²¹	30.09 ¹⁵⁹	39.656 ³²⁸	30.18 ¹²³
Feb. 9.7	21.80 ⁵⁹	22.84 ¹⁸⁴	52.582 ³⁹⁸	31.68 ¹⁸⁴	39.984 ³¹⁵	28.95 ⁷³
19.7	22.39 ⁵⁵	24.68 ²¹⁷	52.980 ³⁶⁹	33.52 ²⁰²	40.299 ²⁹¹	28.22 ²⁰
29.7	22.94 ⁵¹	26.85 ²⁴⁵	53.349 ³³⁶	35.54 ²¹⁷	40.590 ²⁶³	28.02 ²⁹
Mar. 10.6	23.45 ⁴⁵	29.30 ²⁶⁷	53.685 ²⁹⁸	37.71 ²²⁵	40.853 ²³⁰	28.31 ⁷⁶
20.6	23.90 ³⁸	31.97 ²⁸³	53.983 ²⁵⁷	39.96 ²²⁹	41.083 ¹⁹⁶	29.07 ¹¹⁸
30.6	24.28 ³²	34.80 ²⁹³	54.240 ²¹⁷	42.25 ²²⁹	41.279 ¹⁶¹	30.25 ¹⁵³
Apr. 9.6	24.60 ²⁵	37.73 ²⁹⁶	54.457 ¹⁷⁵	44.54 ²²⁴	41.440 ¹²⁴	31.78 ¹⁷⁹
19.5	24.85 ¹⁸	40.69 ²⁹⁵	54.632 ¹³²	46.78 ²¹⁷	41.564 ⁸⁸	33.57 ¹⁹⁹
29.5	25.03 ¹¹	43.64 ²⁸⁸	54.764 ⁹⁰	48.95 ²⁰⁶	41.652 ⁵⁴	35.56 ²¹⁰
May 9.5	25.14 ³	46.52 ²⁷³	54.854 ⁴⁶	51.01 ¹⁹¹	41.706 ²⁰	37.66 ²¹²
19.5	25.17 ³	49.25 ²⁵⁵	54.900 ⁵	52.92 ¹⁷³	41.726 ¹¹	39.78 ²⁰⁷
29.4	25.14 ¹¹	51.80 ²³¹	54.905 ³⁸	54.65 ¹⁵²	41.715 ⁴²	41.85 ¹⁹⁵
June 8.4	25.03 ¹⁸	54.11 ²⁰¹	54.867 ⁷⁹	56.17 ¹²⁷	41.673 ⁷¹	43.80 ¹⁷⁷
18.4	24.85 ²⁴	56.12 ¹⁶⁶	54.788 ¹¹⁸	57.44 ¹⁰⁰	41.602 ⁹⁷	45.57 ¹⁵⁵
28.3	24.61 ²⁹	57.78 ¹²⁷	54.670 ¹⁵³	58.44 ⁷⁰	41.505 ¹²⁰	47.12 ¹²⁸
July 8.3	24.32 ³⁴	59.05 ⁸⁵	54.517 ¹⁸⁴	59.14 ³⁸	41.385 ¹⁴²	48.40 ⁹⁸
18.3	23.98 ³⁸	59.90 ⁴⁰	54.333 ²¹⁰	59.52 ⁴	41.243 ¹⁵⁸	49.38 ⁶⁶
28.3	23.60 ⁴¹	60.30 ⁷	54.123 ²²⁷	59.56 ³⁰	41.085 ¹⁷⁰	50.04 ³²
Aug. 7.2	23.19 ⁴¹	60.23 ⁵⁴	53.896 ²³⁷	59.26 ⁶³	40.915 ¹⁷⁶	50.36 ²
17.2	22.78 ⁴¹	59.69 ⁹⁹	53.659 ²³⁵	58.63 ⁹⁵	40.739 ¹⁷⁶	50.34 ³⁹
27.2	22.37 ³⁹	58.70 ¹⁴²	53.424 ²²²	57.68 ¹²⁴	40.563 ¹⁷⁰	49.95 ⁷⁴
Sept. 6.2	21.98 ³⁴	57.28 ¹⁷⁹	53.202 ¹⁹⁸	56.44 ¹⁴⁷	40.393 ¹⁵⁴	49.21 ¹¹⁰
16.1	21.64 ²⁸	55.49 ²¹⁰	53.004 ¹⁶²	54.97 ¹⁶⁷	40.239 ¹³¹	48.11 ¹⁴⁴
26.1	21.36 ²¹	53.39 ²³⁵	52.842 ¹¹⁵	53.30 ¹⁷⁸	40.108 ⁹⁹	46.67 ¹⁷⁸
Oct. 6.1	21.15 ¹²	51.04 ²⁴⁸	52.727 ⁵⁷	51.52 ¹⁸³	40.009 ⁶¹	44.89 ²⁰⁹
16.0	21.03 ¹	48.56 ²⁵²	52.670 ⁶	49.69 ¹⁷⁸	39.948 ¹⁶	42.80 ²³⁷
26.0	21.02 ⁹	46.04 ²⁴⁷	52.676 ⁷⁷	47.91 ¹⁶⁶	39.932 ³⁴	40.43 ²⁶²
Nov. 5.0	21.11 ²⁰	43.57 ²²⁹	52.753 ¹⁴⁷	46.25 ¹⁴⁵	39.966 ⁸⁷	37.81 ²⁸²
15.0	21.31 ³⁰	41.28 ²⁰²	52.900 ²¹⁷	44.80 ¹¹⁷	40.053 ¹⁴⁰	34.99 ²⁹⁵
24.9	21.61 ⁴⁰	39.26 ¹⁶⁷	53.117 ²⁸⁰	43.63 ⁸³	40.193 ¹⁹¹	32.04 ³⁰⁰
Dec. 4.9	22.01 ⁴⁹	37.59 ¹²⁶	53.397 ³³⁵	42.80 ⁴⁵	40.384 ²³⁷	29.04 ²⁹⁸
14.9	22.50 ⁵⁵	36.33 ⁷⁷	53.732 ³⁸⁰	42.35 ⁵	40.621 ²⁷⁶	26.06 ²⁸⁷
24.9	23.05 ⁶⁰	35.56 ²⁸	54.112 ⁴¹¹	42.30 ³⁵	40.897 ³⁰⁷	23.19 ²⁶⁷
34.8	23.65	35.28	54.523	42.65	41.204	20.52
Mean Place	20.57	43.04	51.941	47.04	40.076	37.75
Sec δ , Tan δ	2.335	-2.110	1.468	-1.075	1.126	+0.518
L α , L δ	+0.03	-0.3	+0.02	-0.3	-0.01	-0.3
ω α , ω δ	-0.11	-0.6	-0.06	-0.6	+0.03	-0.6
AUTHORITY	A. N.		A. N.			

APPARENT PLACES OF STARS, 1924. 371

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Libræ. Mag. 2.9		β Ursæ Minoris. Mag. 2.2		ξ^2 Libræ. Mag. 5.6	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m 14 46	° ' " 15 43	h m 14 50	° ' " 74 27	h m 14 52	° ' " 11 6
Jan. 0.8	39.104 ³¹⁴	25.27 ¹⁵³	50.29 ⁷⁶	49.18 ²⁴⁰	37.287 ³⁰⁷	3.89 ¹⁶⁴
10.8	39.418 ³²⁶	26.80 ¹⁶¹	51.05 ⁸⁴	46.78 ¹⁸²	37.594 ³¹⁸	5.53 ¹⁶⁸
20.8	39.744 ³²⁵	28.41 ¹⁶³	51.89 ⁸⁸	44.96 ¹¹⁹	37.912 ³²⁰	7.21 ¹⁶⁶
30.8	40.069 ³¹⁸	30.04 ¹⁶¹	52.77 ⁸⁹	43.77 ⁵¹	38.232 ³¹³	8.87 ¹⁵⁷
Feb. 9.7	40.387 ³⁰²	31.65 ¹⁵²	53.66 ⁸⁸	43.26 ¹⁸	38.545 ²⁹⁸	10.44 ¹⁴⁴
19.7	40.689 ²⁸⁰	33.17 ¹³⁹	54.54 ⁸³	43.44 ⁸³	38.843 ²⁷⁹	11.88 ¹²⁶
29.7	40.969 ²⁵⁶	34.56 ¹²⁴	55.37 ⁷⁵	44.27 ¹⁴⁶	39.122 ²⁵⁴	13.14 ¹⁰⁷
Mar. 10.6	41.225 ²²⁸	35.80 ¹⁰⁷	56.12 ⁶⁶	45.73 ²⁰¹	39.376 ²²⁹	14.21 ⁸⁶
20.6	41.453 ¹⁹⁹	36.87 ⁸⁹	56.78 ⁵⁴	47.74 ²⁴⁶	39.605 ²⁰⁰	15.07 ⁶⁴
30.6	41.652 ¹⁷⁰	37.76 ⁷¹	57.32 ⁴⁰	50.20 ²⁸²	39.805 ¹⁷²	15.71 ⁴⁴
Apr. 9.6	41.822 ¹⁴¹	38.47 ⁵⁴	57.72 ²⁷	53.02 ³⁰⁶	39.977 ¹⁴³	16.15 ²⁶
19.5	41.963 ¹¹⁰	39.01 ³⁹	57.99 ¹³	56.08 ³¹⁸	40.120 ¹¹⁴	16.41 ¹⁰
29.5	42.073 ⁸²	39.40 ²⁵	58.12 ²	59.26 ³¹⁸	40.234 ⁸⁶	16.51 ⁴
May 9.5	42.155 ⁵²	39.65 ¹³	58.10 ¹⁵	62.44 ³⁰⁸	40.320 ⁵⁶	16.47 ¹⁶
19.5	42.207 ²⁴	39.78 ²	57.95 ²⁷	65.52 ²⁸⁸	40.376 ²⁹	16.31 ²⁵
29.4	42.231 ⁵	39.80 ⁸	57.68 ⁴⁰	68.40 ²⁵⁸	40.405 ⁰	16.06 ³¹
June 8.4	42.226 ³³	39.72 ¹⁶	57.28 ⁵⁰	70.98 ²²²	40.405 ²⁸	15.75 ³⁸
18.4	42.193 ⁶⁰	39.56 ²³	56.78 ⁵⁸	73.20 ¹⁷⁹	40.377 ⁵⁵	15.37 ⁴¹
28.3	42.133 ⁸⁵	39.33 ³⁰	56.20 ⁶⁶	74.99 ¹³¹	40.322 ⁸¹	14.96 ⁴⁴
July 8.3	42.048 ¹⁰⁸	39.03 ³⁷	55.54 ⁷¹	76.30 ⁸¹	40.241 ¹⁰³	14.52 ⁴⁷
18.3	41.940 ¹²⁸	38.66 ⁴³	54.83 ⁷⁵	77.11 ²⁹	40.138 ¹²⁴	14.05 ⁴⁷
28.3	41.812 ¹⁴³	38.23 ⁴⁷	54.08 ⁷⁸	77.40 ²⁵	40.014 ¹³⁹	13.58 ⁴⁸
Aug. 7.2	41.669 ¹⁵¹	37.76 ⁵¹	53.30 ⁷⁷	77.15 ⁷⁸	39.875 ¹⁴⁹	13.10 ⁴⁶
17.2	41.518 ¹⁵⁴	37.25 ⁵²	52.53 ⁷⁶	76.37 ¹³⁰	39.726 ¹⁵²	12.64 ⁴⁵
27.2	41.364 ¹⁴⁹	36.73 ⁵³	51.77 ⁷²	75.07 ¹⁷⁹	39.574 ¹⁴⁸	12.19 ⁴⁰
Sept. 6.2	41.215 ¹³⁵	36.20 ⁵⁰	51.05 ⁶⁷	73.28 ²²⁶	39.426 ¹³⁶	11.79 ³²
16.1	41.080 ¹¹²	35.70 ⁴⁴	50.38 ⁶⁰	71.02 ²⁶⁷	39.290 ¹¹⁴	11.47 ²⁴
26.1	40.968 ⁸¹	35.26 ³⁴	49.78 ⁵⁰	68.35 ³⁰⁵	39.176 ⁸⁵	11.23 ¹¹
Oct. 6.1	40.887 ⁴³	34.92 ²¹	49.28 ⁴⁰	65.30 ³³⁶	39.091 ⁴⁸	11.12 ⁵
16.0	40.844 ²	34.71 ³	48.88 ²⁸	61.94 ³⁶²	39.043 ³	11.17 ²²
26.0	40.846 ⁵²	34.68 ¹⁶	48.60 ¹³	58.32 ³⁷⁸	39.040 ⁴⁴	11.39 ⁴⁴
Nov. 5.0	40.898 ¹⁰⁴	34.84 ⁴⁰	48.47 ¹	54.54 ³⁸⁶	39.084 ⁹⁵	11.83 ⁶⁷
15.0	41.002 ¹⁵⁵	35.24 ⁶³	48.48 ¹⁶	50.68 ³⁸⁶	39.179 ¹⁴⁵	12.50 ⁹⁰
24.9	41.157 ²⁰³	35.87 ⁸⁸	48.64 ³¹	46.82 ³⁷³	39.324 ¹⁹⁴	13.40 ¹¹²
Dec. 4.9	41.360 ²⁴⁵	36.75 ¹¹²	48.95 ⁴⁶	43.09 ³⁵¹	39.518 ²³⁶	14.52 ¹³³
14.9	41.605 ²⁸⁰	37.87 ¹³¹	49.41 ⁵⁹	39.58 ³¹⁸	39.754 ²⁷¹	15.85 ¹⁵⁰
24.9	41.885 ³⁰⁷	39.18 ¹⁴⁸	50.00 ⁷¹	36.40 ²⁷⁴	40.025 ²⁹⁸	17.35 ¹⁶²
34.8	42.192	40.66	50.71	33.66	40.323	18.97
Mean Place	40.210	36.64	54.67	57.76	38.439	13.96
Sec δ , Tan δ	1.039	-0.282	3.734	+3.598	1.019	-0.196
L α , L δ	0.00	-0.3	-0.06	-0.3	0.00	-0.3
$\omega \alpha$, $\omega \delta$	-0.01	-0.7	+0.18	-0.7	-0.01	-0.7
AUTHORITY	A. E.		A. E.			

372 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Lupi. Mag. 2.8		κ Centauri. Mag. 3.4		β Boötis. Mag. 3.6	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 14 53	° ' 42 49	h m 14 54	° ' 41 47	h m 14 59	° ' 40 41
Jan. 0.8	31.384 ³⁹²	25.93 ⁵⁵	11.358 ³⁸⁷	42.73 ⁵⁸	3.268 ³³⁷	18.97 ²⁶⁷
10.8	31.776 ⁴⁰⁷	26.48 ⁸⁸	11.745 ⁴⁰⁰	43.31 ⁹¹	3.605 ³⁶⁰	16.30 ²²⁵
20.8	32.183 ⁴⁰⁸	27.36 ¹¹⁸	12.145 ⁴⁰²	44.22 ¹¹⁹	3.965 ³⁷⁰	14.05 ¹⁷³
30.8	32.591 ⁴⁰⁰	28.54 ¹⁴⁵	12.547 ³⁹⁵	45.41 ¹⁴⁴	4.335 ³⁶⁹	12.32 ¹¹⁸
Feb. 9.7	32.991 ³⁸⁴	29.99 ¹⁶⁵	12.942 ³⁷⁸	46.85 ¹⁶⁴	4.704 ³⁵⁸	11.14 ⁵⁸
19.7	33.375 ³⁵⁹	31.64 ¹⁸¹	13.320 ³⁵⁴	48.49 ¹⁷⁹	5.062 ³³⁸	10.56 ²
29.7	33.734 ³³⁰	33.45 ¹⁹²	13.674 ³²⁶	50.28 ¹⁸⁹	5.400 ³⁰⁹	10.58 ⁶¹
Mar. 10.7	34.064 ²⁹⁸	35.37 ¹⁹⁹	14.000 ²⁹³	52.17 ¹⁹⁵	5.709 ²⁷⁴	11.19 ¹¹⁴
20.6	34.362 ²⁶²	37.36 ²⁰¹	14.293 ²⁵⁹	54.12 ¹⁹⁷	5.983 ²³⁵	12.33 ¹⁶²
30.6	34.624 ²²⁴	39.37 ²⁰²	14.552 ²²²	56.09 ¹⁹⁶	6.218 ¹⁹⁴	13.95 ²⁰¹
Apr. 9.6	34.848 ¹⁸⁷	41.39 ¹⁹⁷	14.774 ¹⁸⁶	58.05 ¹⁹²	6.412 ¹⁵¹	15.96 ²³²
19.5	35.035 ¹⁴⁹	43.36 ¹⁹⁰	14.960 ¹⁴⁸	59.97 ¹⁸⁴	6.563 ¹⁰⁷	18.28 ²⁵²
29.5	35.184 ¹⁰⁹	45.26 ¹⁸⁰	15.108 ¹¹⁰	61.81 ¹⁷⁵	6.670 ⁶⁵	20.80 ²⁶³
May 9.5	35.293 ⁶⁹	47.06 ¹⁶⁹	15.218 ⁷⁰	63.56 ¹⁶²	6.735 ²²	23.43 ²⁶⁵
19.5	35.362 ³⁰	48.75 ¹⁵⁴	15.288 ³¹	65.18 ¹⁴⁸	6.757 ¹⁸	26.08 ²⁵⁶
29.4	35.392 ¹¹	50.29 ¹³⁵	15.319 ⁹	66.66 ¹³¹	6.739 ⁵⁷	28.64 ²⁴¹
June 8.4	35.381 ⁵¹	51.64 ¹¹⁵	15.310 ⁴⁷	67.97 ¹¹⁰	6.682 ⁹³	31.05 ²¹⁸
18.4	35.330 ⁸⁹	52.79 ⁹²	15.263 ⁸⁶	69.07 ⁸⁸	6.589 ¹²⁶	33.23 ¹⁸⁹
28.4	35.241 ¹²⁵	53.71 ⁶⁷	15.177 ¹²⁰	69.95 ⁶⁴	6.463 ¹⁵⁶	35.12 ¹⁵⁵
July 8.3	35.116 ¹⁵⁶	54.38 ³⁹	15.057 ¹⁵³	70.59 ³⁶	6.307 ¹⁸¹	36.67 ¹¹⁷
18.3	34.960 ¹⁸⁴	54.77 ¹⁰	14.904 ¹⁸⁰	70.95 ⁹	6.126 ²⁰²	37.84 ⁷⁷
28.3	34.776 ²⁰⁵	54.87 ²⁰	14.724 ¹⁹⁹	71.04 ²⁰	5.924 ²¹⁸	38.61 ³³
Aug. 7.2	34.571 ²¹⁶	54.67 ⁴⁹	14.525 ²¹³	70.84 ⁴⁹	5.706 ²²⁶	38.94 ¹⁰
17.2	34.355 ²²⁰	54.18 ⁷⁷	14.312 ²¹⁶	70.35 ⁷⁶	5.480 ²²⁸	38.84 ⁵⁴
27.2	34.135 ²¹²	53.41 ¹⁰³	14.096 ²⁰⁸	69.59 ¹⁰¹	5.252 ²²¹	38.30 ⁹⁸
Sept. 6.2	33.923 ¹⁹³	52.38 ¹²⁵	13.888 ¹⁹⁰	68.58 ¹²²	5.031 ²⁰⁶	37.32 ¹⁴¹
16.1	33.730 ¹⁶³	51.13 ¹⁴²	13.698 ¹⁶⁰	67.36 ¹³⁹	4.825 ¹⁸³	35.91 ¹⁸¹
26.1	33.567 ¹²²	49.71 ¹⁵⁴	13.538 ¹²⁰	65.97 ¹⁴⁹	4.642 ¹⁴⁹	34.10 ²²⁰
Oct. 6.1	33.445 ⁷²	48.17 ¹⁵⁷	13.418 ⁷⁰	64.48 ¹⁵⁴	4.493 ¹⁰⁶	31.90 ²⁵⁶
16.1	33.373 ¹²	46.60 ¹⁵⁵	13.348 ¹²	62.94 ¹⁴⁹	4.387 ⁵⁸	29.34 ²⁸⁶
26.0	33.361 ⁵³	45.05 ¹⁴⁴	13.336 ⁵¹	61.45 ¹³⁹	4.329 ³	26.48 ³¹¹
Nov. 5.0	33.414 ¹¹⁹	43.61 ¹²⁶	13.387 ¹¹⁸	60.06 ¹²⁰	4.326 ⁵⁷	23.37 ³³¹
15.0	33.533 ¹⁸⁵	42.35 ¹⁰²	13.505 ¹⁸²	58.86 ⁹⁶	4.383 ¹¹⁷	20.06 ³⁴²
24.9	33.718 ²⁴⁶	41.33 ⁷¹	13.687 ²⁴³	57.90 ⁶⁶	4.500 ¹⁷⁷	16.64 ³⁴⁴
Dec. 4.9	33.964 ³⁰¹	40.62 ³⁷	13.930 ²⁹⁷	57.24 ³²	4.677 ²³¹	13.20 ³³⁷
14.9	34.265 ³⁴⁵	40.25 ²	14.227 ³⁴⁰	56.92 ³	4.908 ²⁸¹	9.83 ³²⁰
24.9	34.610 ³⁷⁹	40.23 ³⁶	14.567 ³⁷⁴	56.95 ³⁹	5.189 ³²⁰	6.63 ²⁹²
34.8	34.989	40.59	14.941	57.34	5.509	3.71
Mean Place	32.586	44.55	12.555	61.09	5.002	22.50
Sec δ , Tan δ	1.363	-0.927	1.341	-0.894	1.319	+0.860
L α , L δ	+0.02	-0.3	+0.02	-0.3	-0.02	-0.3
ω α , ω δ	-0.04	-0.7	-0.04	-0.7	+0.04	-0.7
AUTHORITY	A. E.		A. N.		A. E.	

APPARENT PLACES OF STARS, 1924. 373

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Scorpii. Mag. 3.4		ψ Boötis. Mag. 4.7		ζ Lupi. Mag. 3.5	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	^h 14 ^m 59	^o 24 ['] 58	^h 15 ^m 1	^o 27 ['] 14	^h 15 ^m 6	^o 51 ['] 48
Jan.	0.9 35.874 ₃₂₇	48.97 ₁₁₄	9.839 ₃₀₆	34.96 ₂₅₅	47.446 ₄₄₃	19.17 ₇
	10.8 36.201 ₃₄₀	50.11 ₁₃₁	10.145 ₃₂₄	32.41 ₂₂₂	47.889 ₄₆₃	19.24 ₄₇
	20.8 36.541 ₃₄₂	51.42 ₁₄₄	10.469 ₃₃₁	30.19 ₁₈₁	48.352 ₄₇₁	19.71 ₈₄
	30.8 36.883 ₃₃₆	52.86 ₁₅₁	10.800 ₃₂₉	28.38 ₁₃₆	48.823 ₄₆₆	20.55 ₁₁₉
Feb.	9.7 37.219 ₃₂₂	54.37 ₁₅₂	11.129 ₃₁₇	27.02 ₈₅	49.289 ₄₅₁	21.74 ₁₄₈
	19.7 37.541 ₃₀₃	55.89 ₁₅₁	11.446 ₂₉₉	26.17 ₃₂	49.740 ₄₂₇	23.22 ₁₇₄
	29.7 37.844 ₂₇₈	57.40 ₁₄₅	11.745 ₂₇₄	25.85 ₁₈	50.167 ₃₉₇	24.96 ₁₉₄
Mar.	10.7 38.122 ₂₅₂	58.85 ₁₃₆	12.019 ₂₄₅	26.03 ₆₇	50.564 ₃₆₀	26.90 ₂₀₉
	20.6 38.374 ₂₂₃	60.21 ₁₂₆	12.264 ₂₁₃	26.70 ₁₁₀	50.924 ₃₂₂	28.99 ₂₂₁
	30.6 38.597 ₁₉₃	61.47 ₁₁₄	12.477 ₁₇₉	27.80 ₁₄₈	51.246 ₂₈₀	31.20 ₂₂₈
Apr.	9.6 38.790 ₁₆₃	62.61 ₁₀₂	12.656 ₁₄₄	29.28 ₁₇₇	51.526 ₂₃₆	33.48 ₂₃₀
	19.6 38.953 ₁₃₂	63.63 ₈₉	12.800 ₁₀₉	31.05 ₁₉₉	51.762 ₁₉₀	35.78 ₂₂₉
	29.5 39.085 ₁₀₀	64.52 ₇₈	12.909 ₇₄	33.04 ₂₁₂	51.952 ₁₄₂	38.07 ₂₂₃
May	9.5 39.185 ₇₀	65.30 ₆₆	12.983 ₄₀	35.16 ₂₁₇	52.094 ₉₄	40.30 ₂₁₄
	19.5 39.255 ₃₈	65.96 ₅₄	13.023 ₆	37.33 ₂₁₄	52.188 ₄₃	42.44 ₂₀₂
	29.4 39.293 ₇	66.50 ₄₂	13.029 ₂₆	39.47 ₂₀₅	52.231 ₆	44.46 ₁₈₃
June	8.4 39.300 ₂₆	66.92 ₃₀	13.003 ₅₇	41.52 ₁₈₈	52.225 ₅₆	46.29 ₁₆₂
	18.4 39.274 ₅₆	67.22 ₁₇	12.946 ₈₆	43.40 ₁₆₇	52.169 ₁₀₄	47.91 ₁₃₈
	28.4 39.218 ₈₅	67.39 ₅	12.860 ₁₁₂	45.07 ₁₄₂	52.065 ₁₄₉	49.29 ₁₀₈
July	8.3 39.133 ₁₁₃	67.44 ₉	12.748 ₁₃₆	46.49 ₁₁₂	51.916 ₁₉₀	50.37 ₇₇
	18.3 39.020 ₁₃₅	67.35 ₂₃	12.612 ₁₅₆	47.61 ₈₀	51.726 ₂₂₅	51.14 ₄₃
	28.3 38.885 ₁₅₃	67.12 ₃₅	12.456 ₁₇₂	48.41 ₄₇	51.501 ₂₅₂	51.57 ₆
Aug.	7.3 38.732 ₁₆₅	66.77 ₄₉	12.284 ₁₈₁	48.88 ₁₁	51.249 ₂₆₉	51.63 ₃₀
	17.2 38.567 ₁₇₀	66.28 ₅₉	12.103 ₁₈₄	48.99 ₂₅	50.980 ₂₇₄	51.33 ₆₇
	27.2 38.397 ₁₆₅	65.69 ₆₈	11.919 ₁₈₀	48.74 ₆₂	50.706 ₂₆₉	50.66 ₁₀₀
Sept.	6.2 38.232 ₁₅₃	65.01 ₇₅	11.739 ₁₆₈	48.12 ₉₇	50.437 ₂₄₇	49.66 ₁₃₁
	16.1 38.079 ₁₃₀	64.26 ₇₇	11.571 ₁₄₇	47.15 ₁₃₃	50.190 ₂₁₃	48.35 ₁₅₈
	26.1 37.949 ₉₉	63.49 ₇₆	11.424 ₁₁₈	45.82 ₁₆₈	49.977 ₁₆₈	46.77 ₁₇₇
Oct.	6.1 37.850 ₅₈	62.73 ₆₉	11.306 ₈₂	44.14 ₂₀₀	49.809 ₁₀₉	45.00 ₁₉₁
	16.1 37.792 ₁₀	62.04 ₅₈	11.224 ₃₇	42.14 ₂₃₀	49.700 ₄₂	43.09 ₁₉₄
	26.0 37.782 ₄₁	61.46 ₄₁	11.187 ₁₁	39.84 ₂₅₆	49.658 ₃₄	41.15 ₁₉₀
Nov.	5.0 37.823 ₉₇	61.05 ₂₁	11.198 ₆₄	37.28 ₂₇₇	49.692 ₁₁₁	39.25 ₁₇₈
	15.0 37.920 ₁₅₁	60.84 ₂	11.262 ₁₁₈	34.51 ₂₉₃	49.803 ₁₈₉	37.47 ₁₅₆
	25.0 38.071 ₂₀₃	60.86 ₂₉	11.380 ₁₆₉	31.58 ₃₀₁	49.992 ₂₆₂	35.91 ₁₂₈
Dec.	4.9 38.274 ₂₄₉	61.15 ₅₅	11.549 ₂₁₈	28.57 ₃₀₁	50.254 ₃₂₇	34.63 ₉₄
	14.9 38.523 ₂₈₇	61.70 ₈₁	11.767 ₂₅₉	25.56 ₂₉₃	50.581 ₃₈₃	33.69 ₅₆
	24.9 38.810 ₃₁₆	62.51 ₁₀₄	12.026 ₂₉₃	22.63 ₂₇₃	50.964 ₄₂₅	33.13 ₁₆
	34.8 39.126	63.55	12.319	19.90	51.389	32.97
Mean Place	37.054	63.00	11.327	35.37	48.882	39.43
Sec δ , Tan δ	1.103	-0.466	1.125	+0.515	1.617	-1.271
L α , L δ	+0.01	-0.3	-0.01	-0.3	+0.02	-0.3
ω α , ω δ	-0.02	-0.7	+0.02	-0.7	-0.06	-0.7
AUTHORITY	A. E.		A. E.		A. E.	

374 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ι Libræ. Mag. 4·7		γ Triang. Aust. Mag. 3·1		δ Boötis. Mag. 3·5	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 15 7	° 30	h m 15 11	68 23	h m 15 12	33 35
Jan. 0·9	51·875 ³¹³	6·10 ¹²⁸	45·18 ⁶⁸	38·84 ⁵⁹	24·704 ³¹⁰	49·60 ²⁶⁹
10·8	52·188 ³²⁵	7·38 ¹⁴¹	45·86 ⁷²	38·25 ¹⁰	25·014 ³³²	46·91 ²³³
20·8	52·513 ³³⁰	8·79 ¹⁴⁶	46·58 ⁷⁴	38·15 ⁴⁰	25·346 ³⁴³	44·58 ¹⁸⁷
30·8	52·843 ³²⁵	10·25 ¹⁴⁸	47·32 ⁷⁴	38·55 ⁸⁶	25·689 ³⁴⁴	42·71 ¹³⁷
Feb. 9·7	53·168 ³¹⁴	11·73 ¹⁴⁵	48·06 ⁷²	39·41 ¹³⁰	26·033 ³³⁶	41·34 ⁸²
19·7	53·482 ²⁹⁵	13·18 ¹³⁶	48·78 ⁶⁸	40·71 ¹⁷⁰	26·369 ³¹⁸	40·52 ²⁵
29·7	53·777 ²⁷³	14·54 ¹²⁵	49·46 ⁶⁴	42·41 ²⁰³	26·687 ²⁹⁵	40·27 ³⁰
Mar. 10·7	54·050 ²⁴⁹	15·79 ¹¹²	50·10 ⁵⁹	44·44 ²³³	26·982 ²⁶⁵	40·57 ⁸²
20·6	54·299 ²²¹	16·91 ⁹⁸	50·69 ⁵³	46·77 ²⁵⁷	27·247 ²³³	41·39 ¹³⁰
30·6	54·520 ¹⁹³	17·89 ⁸³	51·22 ⁴⁵	49·34 ²⁷⁴	27·480 ¹⁹⁶	42·69 ¹⁷⁰
Apr. 9·6	54·713 ¹⁶⁵	18·72 ⁶⁹	51·67 ³⁸	52·08 ²⁸⁵	27·676 ¹⁶⁰	44·39 ²⁰²
19·6	54·878 ¹³⁶	19·41 ⁵⁵	52·05 ³⁰	54·93 ²⁹³	27·836 ¹²²	46·41 ²²⁵
29·5	55·014 ¹⁰⁶	19·96 ⁴³	52·35 ²¹	57·86 ²⁹³	27·958 ⁸³	48·66 ²⁴⁰
May 9·5	55·120 ⁷⁶	20·39 ³²	52·56 ¹³	60·79 ²⁸⁸	28·041 ⁴⁶	51·06 ²⁴⁴
19·5	55·196 ⁴⁵	20·71 ²¹	52·69 ⁴	63·67 ²⁷⁶	28·087 ⁹	53·50 ²⁴¹
29·4	55·241 ¹⁵	20·92 ¹³	52·73 ⁵	66·43 ²⁵⁹	28·096 ²⁶	55·91 ²³⁰
June 8·4	55·256 ¹⁶	21·05 ⁴	52·68 ¹⁴	69·02 ²³⁵	28·070 ⁶²	58·21 ²¹²
18·4	55·240 ⁴⁶	21·09 ⁵	52·54 ²²	71·37 ²⁰⁶	28·008 ⁹³	60·33 ¹⁸⁷
28·4	55·194 ⁷⁶	21·04 ¹⁴	52·32 ³⁰	73·43 ¹⁷¹	27·915 ¹²³	62·20 ¹⁵⁹
July 8·3	55·118 ¹⁰³	20·90 ²¹	52·02 ³⁷	75·14 ¹³¹	27·792 ¹⁵⁰	63·79 ¹²⁶
18·3	55·015 ¹²⁵	20·69 ²⁹	51·65 ⁴²	76·45 ⁸⁸	27·642 ¹⁷²	65·05 ⁹⁰
28·3	54·890 ¹⁴⁵	20·40 ³⁷	51·23 ⁴⁷	77·33 ⁴²	27·470 ¹⁸⁹	65·95 ⁵¹
Aug. 7·3	54·745 ¹⁵⁷	20·03 ⁴⁵	50·76 ⁴⁹	77·75 ⁶	27·281 ²⁰¹	66·46 ¹²
17·2	54·588 ¹⁶⁴	19·58 ⁴⁹	50·27 ⁵⁰	77·69 ⁵⁵	27·080 ²⁰⁶	66·58 ²⁸
27·2	54·424 ¹⁶²	19·09 ⁵⁴	49·77 ⁴⁹	77·14 ¹⁰³	26·874 ²⁰³	66·30 ⁶⁹
Sept. 6·2	54·262 ¹⁵⁰	18·55 ⁵⁶	49·28 ⁴⁵	76·11 ¹⁴⁶	26·671 ¹⁹¹	65·61 ¹⁰⁹
16·1	54·112 ¹³¹	17·99 ⁵³	48·83 ⁴⁰	74·65 ¹⁸⁵	26·480 ¹⁷¹	64·52 ¹⁴⁹
26·1	53·981 ¹⁰¹	17·46 ⁴⁹	48·43 ³²	72·80 ²¹⁷	26·309 ¹⁴²	63·03 ¹⁸⁶
Oct. 6·1	53·880 ⁶³	16·97 ⁴⁰	48·11 ²²	70·63 ²⁴²	26·167 ¹⁰⁴	61·17 ²²¹
16·1	53·817 ¹⁸	16·57 ²⁶	47·89 ¹²	68·21 ²⁵⁶	26·063 ⁶⁰	58·96 ²⁵³
26·0	53·799 ³¹	16·31 ⁹	47·77 ¹	65·65 ²⁶⁰	26·003 ⁹	56·43 ²⁸⁰
Nov. 5·0	53·830 ⁸⁵	16·22 ¹¹	47·78 ¹³	63·05 ²⁵⁴	25·994 ⁴⁶	53·63 ³⁰²
15·0	53·915 ¹³⁸	16·33 ³⁴	47·91 ²⁶	60·51 ²³⁶	26·040 ¹⁰³	50·61 ³¹⁷
25·0	54·053 ¹⁸⁹	16·67 ⁵⁸	48·17 ³⁸	58·15 ²¹⁰	26·143 ¹⁵⁸	47·44 ³²⁵
Dec. 4·9	54·242 ²³³	17·25 ⁸²	48·55 ⁴⁸	56·05 ¹⁷⁵	26·301 ²¹⁰	44·19 ³²²
14·9	54·475 ²⁷²	18·07 ¹⁰³	49·03 ⁵⁸	54·30 ¹³³	26·511 ²⁵⁶	40·97 ³¹¹
24·9	54·747 ³⁰¹	19·10 ¹²²	49·61 ⁶⁴	52·97 ⁸⁶	26·767 ²⁹³	37·86 ²⁹⁰
34·8	55·048	20·32	50·25	52·11	27·060	34·96
Mean Place	53·099	18·62	47·28	61·60	26·341	50·96
Sec δ, Tan δ	1·061	-0·354	2·716	-2·526	1·201	+0·664
L α, L δ	+0·01	-0·3	+0·05	-0·3	-0·01	-0·3
ω α, ω δ	-0·02	-0·7	-0·11	-0·7	+0·03	-0·7
AUTHORITY	A. N.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 375

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Libræ. Mag. 2.7		α^2 Libræ. Mag. 6.7		γ^2 Ursæ Minoris. Mag. 3.1							
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.						
	^h 15	^m 12	[°] 9	['] 6	^h 15	^m 18	[°] 14	['] 51	^h 15	^m 20	[°] 72	['] 5
Jan. 0.9	53.606	²⁹⁶	2.77	¹⁶³	45.952	³⁰⁰	38.70	¹⁴⁰	46.18	⁶²	69.43	²⁷⁵
10.8	53.902	³¹⁰	4.40	¹⁶⁵	46.252	³¹⁵	40.10	¹⁴⁶	46.80	⁶⁹	66.68	²²¹
20.8	54.212	³¹⁶	6.05	¹⁶⁰	46.567	³²²	41.56	¹⁴⁹	47.49	⁷⁵	64.47	¹⁶¹
30.8	54.528	³¹²	7.65	¹⁵¹	46.889	³¹⁸	43.05	¹⁴⁵	48.24	⁷⁸	62.86	⁹⁶
Feb. 9.7	54.840	³⁰¹	9.16	¹³⁵	47.207	³⁰⁹	44.50	¹³⁶	49.02	⁷⁸	61.90	²⁷
19.7	55.141	²⁸⁵	10.51	¹¹⁶	47.516	²⁹³	45.86	¹²⁴	49.80	⁷⁶	61.63	⁴¹
29.7	55.426	²⁶⁴	11.67	⁹⁵	47.809	²⁷³	47.10	¹⁰⁷	50.56	⁷⁰	62.04	¹⁰⁶
Mar. 10.7	55.690	²⁴¹	12.62	⁷²	48.082	²⁵⁰	48.17	⁹²	51.26	⁶³	63.10	¹⁶⁶
20.6	55.931	²¹⁵	13.34	⁵⁰	48.332	²²⁵	49.09	⁷²	51.89	⁵⁵	64.76	²¹⁷
30.6	56.146	¹⁸⁸	13.84	²⁹	48.557	¹⁹⁸	49.81	⁵⁶	52.44	⁴⁴	66.93	²⁶⁰
Apr. 9.6	56.334	¹⁶¹	14.13	¹⁰	48.755	¹⁷⁰	50.37	³⁹	52.88	³²	69.53	²⁹²
19.6	56.495	¹³²	14.23	⁷	48.925	¹⁴³	50.76	²⁵	53.20	²¹	72.45	³¹²
29.5	56.627	¹⁰⁴	14.16	²⁰	49.068	¹¹⁴	51.01	¹²	53.41	⁸	75.57	³²¹
May 9.5	56.731	⁷⁶	13.96	³¹	49.182	⁸⁴	51.13	²	53.49	³	78.78	³¹⁸
19.5	56.807	⁴⁶	13.65	³⁹	49.266	⁵⁵	51.15	⁶	53.46	¹⁵	81.96	³⁰⁵
29.4	56.853	¹⁶	13.26	⁴⁵	49.321	²⁴	51.09	¹⁵	53.31	²⁶	85.01	²⁸³
June 8.4	56.869	¹³	12.81	⁴⁸	49.345	⁷	50.94	¹⁹	53.05	³⁶	87.84	²⁵³
18.4	56.856	⁴²	12.33	⁵⁰	49.338	³⁸	50.75	²⁵	52.69	⁴⁵	90.37	²¹⁵
28.4	56.814	⁷⁰	11.83	⁵⁰	49.300	⁶⁷	50.50	²⁹	52.24	⁵²	92.52	¹⁷²
July 8.3	56.744	⁹⁵	11.33	⁵⁰	49.233	⁹⁴	50.21	³²	51.72	⁵⁹	94.24	¹²⁵
18.3	56.649	¹¹⁹	10.83	⁴⁸	49.139	¹¹⁹	49.89	³⁷	51.13	⁶⁴	95.49	⁷⁴
28.3	56.530	¹³⁶	10.35	⁴⁶	49.020	¹³⁹	49.52	³⁸	50.49	⁶⁷	96.23	²²
Aug. 7.3	56.394	¹⁵⁰	9.89	⁴²	48.881	¹⁵³	49.14	⁴¹	49.82	⁶⁹	96.45	³⁰
17.2	56.244	¹⁵⁶	9.47	³⁷	48.728	¹⁶¹	48.73	⁴²	49.13	⁶⁹	96.15	⁸⁴
27.2	56.088	¹⁵⁵	9.10	³²	48.567	¹⁶¹	48.31	⁴²	48.44	⁶⁷	95.31	¹³⁵
Sept. 6.2	55.933	¹⁴⁶	8.78	²³	48.406	¹⁵²	47.89	³⁹	47.77	⁶⁴	93.96	¹⁸⁴
16.1	55.787	¹²⁸	8.55	¹³	48.254	¹³⁴	47.50	³⁴	47.13	⁵⁸	91.12	²³⁰
26.1	55.659	¹⁰¹	8.42	⁰	48.120	¹⁰⁷	47.16	²⁶	46.55	⁵²	89.82	²⁷¹
Oct. 6.1	55.558	⁶⁵	8.42	¹⁶	48.013	⁷¹	46.90	¹⁴	46.03	⁴³	87.11	³⁰⁹
16.1	55.493	²⁴	8.58	³³	47.942	²⁸	46.76	⁰	45.60	³³	84.02	³⁴⁰
26.0	55.469	²³	8.91	⁵⁴	47.914	¹⁹	46.76	¹⁸	45.27	²⁰	80.62	³⁶⁴
Nov. 5.0	55.492	⁷⁴	9.45	⁷⁵	47.933	⁷¹	46.94	³⁸	45.07	⁸	76.98	³⁸⁰
15.0	55.566	¹²⁴	10.20	⁹⁷	48.004	¹²³	47.32	⁶⁰	44.99	⁵	73.18	³⁸⁶
25.0	55.690	¹⁷³	11.17	¹¹⁷	48.127	¹⁷⁴	47.92	⁸¹	45.04	¹⁹	69.32	³⁸³
Dec. 4.9	55.863	²¹⁷	12.34	¹³⁷	48.301	²¹⁹	48.73	¹⁰³	45.23	³²	65.49	³⁶⁷
14.9	56.080	²⁵⁵	13.71	¹⁵²	48.520	²⁵⁷	49.76	¹²¹	45.55	⁴⁴	61.82	³⁴²
24.9	56.335	²⁸⁴	15.23	¹⁶²	48.777	²⁸⁷	50.97	¹³⁵	45.99	⁵⁶	58.40	³⁰⁵
34.8	56.619		16.85		49.064		52.32		46.55		55.35	
Mean Place	54.871		12.45		47.239		49.97		50.28		75.78	
Sec δ , Tan δ	1.013		-0.160		1.035		-0.265		3.254		+3.097	
$L \alpha$, $L \delta$	0.00		-0.3		+0.01		-0.3		-0.06		-0.3	
$\omega \alpha$, $\omega \delta$	-0.01		-0.7		-0.01		-0.8		+0.13		-0.8	
AUTHORITY	A. E.						A. E.					

376 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	♄ Draconis. Mag. 3.5		♃ 32 Libræ. Mag. 5.9		♁ 113 G. Lupi. Mag. 3.0	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 15 23	° ′ 59 13	h m 15 23	16 26	h m 15 30	40 54
Jan. 0.9	11.733 ⁴¹¹	49.28 ²⁸⁷	56.696 ²⁹⁹	57.72 ¹³²	2.661 ³⁶³	28.42 ²⁶
10.8	12.144 ⁴⁵⁷	46.41 ²³⁹	56.995 ³¹⁵	59.04 ¹³⁹	3.024 ³⁸⁵	28.68 ⁵⁶
20.8	12.601 ⁴⁸⁷	44.02 ¹⁸¹	57.310 ³²³	60.43 ¹⁴³	3.409 ³⁹⁴	29.24 ⁸²
30.8	13.088 ⁵⁰⁰	42.21 ¹¹⁷	57.633 ³²¹	61.86 ¹⁴¹	3.803 ³⁹⁵	30.06 ¹⁰⁶
Feb. 9.8	13.588 ⁴⁹⁷	41.04 ⁵¹	57.954 ³¹²	63.27 ¹³⁵	4.198 ³⁸⁶	31.12 ¹²⁶
19.7	14.085 ⁴⁸⁰	40.53 ¹⁷	58.266 ²⁹⁷	64.62 ¹²³	4.584 ³⁷¹	32.38 ¹⁴²
29.7	14.565 ⁴⁴⁹	40.70 ⁸⁰	58.563 ²⁷⁸	65.85 ¹¹⁰	4.955 ³⁴⁸	33.80 ¹⁵³
Mar. 10.7	15.014 ⁴⁰⁵	41.50 ¹⁴³	58.841 ²⁵⁵	66.95 ⁹⁴	5.303 ³²³	35.33 ¹⁶¹
20.6	15.419 ³⁵²	42.93 ¹⁹⁵	59.096 ²³⁰	67.89 ⁷⁸	5.626 ²⁹³	36.94 ¹⁶⁶
30.6	15.771 ²⁹²	44.88 ²⁴⁰	59.326 ²⁰⁵	68.67 ⁶¹	5.919 ²⁶²	38.60 ¹⁶⁸
Apr. 9.6	16.063 ²²⁸	47.28 ²⁷⁴	59.531 ¹⁷⁷	69.28 ⁴⁶	6.181 ²²⁸	40.28 ¹⁶⁷
19.6	16.291 ¹⁵⁹	50.02 ²⁹⁸	59.708 ¹⁴⁹	69.74 ³³	6.409 ¹⁹³	41.95 ¹⁶⁴
29.5	16.450 ⁹⁰	53.00 ³¹⁰	59.857 ¹²⁰	70.07 ²⁰	6.602 ¹⁵⁵	43.59 ¹⁶⁰
May 9.5	16.540 ²²	56.10 ³¹¹	59.977 ⁹¹	70.27 ¹¹	6.757 ¹¹⁷	45.19 ¹⁵²
19.5	16.562 ⁴⁵	59.21 ³⁰³	60.068 ⁶⁰	70.38 ²	6.874 ⁷⁶	46.71 ¹⁴³
29.5	16.517 ¹⁰⁸	62.24 ²⁸⁴	60.128 ³⁰	70.40 ⁶	6.950 ³⁵	48.14 ¹³¹
June 8.4	16.409 ¹⁶⁷	65.08 ²⁵⁷	60.158 ³	70.34 ¹²	6.985 ⁶	49.45 ¹¹⁶
18.4	16.242 ²²¹	67.65 ²²⁴	60.155 ³⁴	70.22 ¹⁷	6.979 ⁴⁹	50.61 ⁹⁹
28.4	16.021 ²⁶⁹	69.89 ¹⁸⁴	60.121 ⁶⁴	70.05 ²²	6.930 ⁸⁹	51.60 ⁸⁰
July 8.3	15.752 ³¹⁰	71.73 ¹⁴⁰	60.057 ⁹³	69.83 ²⁷	6.841 ¹²⁶	52.40 ⁵⁹
18.3	15.442 ³⁴⁴	73.13 ⁹²	59.964 ¹¹⁸	69.56 ³¹	6.715 ¹⁶⁰	52.99 ³⁴
28.3	15.098 ³⁶⁸	74.05 ⁴³	59.846 ¹³⁹	69.25 ³⁵	6.555 ¹⁸⁷	53.33 ⁸
Aug. 7.3	14.730 ³⁸³	74.48 ⁹	59.707 ¹⁵⁴	68.90 ³⁸	6.368 ²⁰⁸	53.41 ¹⁹
17.2	14.347 ³⁸⁸	74.39 ⁶⁰	59.553 ¹⁶⁴	68.52 ⁴²	6.160 ²¹⁸	53.22 ⁴⁵
27.2	13.959 ³⁸¹	73.79 ¹¹¹	59.389 ¹⁶⁴	68.10 ⁴³	5.942 ²¹⁹	52.77 ⁶⁹
Sept. 6.2	13.578 ³⁶⁴	72.68 ¹⁶⁰	59.225 ¹⁵⁶	67.67 ⁴²	5.723 ²⁰⁹	52.08 ⁹³
16.2	13.214 ³³²	71.08 ²⁰⁶	59.069 ¹³⁸	67.25 ³⁸	5.514 ¹⁸⁶	51.15 ¹¹²
26.1	12.882 ²⁹¹	69.02 ²⁵⁰	58.931 ¹¹¹	66.87 ³²	5.328 ¹⁵³	50.03 ¹²⁶
Oct. 6.1	12.591 ²³⁶	66.52 ²⁸⁹	58.820 ⁷⁷	66.55 ²²	5.175 ¹⁰⁷	48.77 ¹³⁶
16.1	12.355 ¹⁷¹	63.63 ³²²	58.743 ³³	66.33 ⁹	5.068 ⁵⁴	47.41 ¹³⁷
26.0	12.184 ⁹⁷	60.41 ³⁵⁰	58.710 ¹⁵	66.24 ⁹	5.014 ⁸	46.04 ¹³³
Nov. 5.0	12.087 ¹⁷	56.91 ³⁶⁹	58.725 ⁶⁷	66.33 ²⁷	5.022 ⁷¹	44.71 ¹²¹
15.0	12.070 ⁶⁸	53.22 ³⁷⁹	58.792 ¹¹⁹	66.60 ⁴⁸	5.093 ¹³⁷	43.50 ¹⁰³
25.0	12.138 ¹⁵³	49.43 ³⁸⁰	58.911 ¹⁷⁰	67.08 ⁷¹	5.230 ²⁰⁰	42.47 ⁸⁰
Dec. 4.9	12.291 ²³⁶	45.63 ³⁷⁰	59.081 ²¹⁶	67.79 ⁹²	5.430 ²⁵⁷	41.67 ⁵²
14.9	12.527 ³¹¹	41.93 ³⁴⁹	59.297 ²⁵⁶	68.71 ¹¹⁰	5.687 ³⁰⁶	41.15 ²³
24.9	12.838 ³⁷⁹	38.44 ³¹⁶	59.553 ²⁸⁶	69.81 ¹²⁶	5.993 ³⁴⁶	40.92 ¹⁰
34.9	13.217	35.28	59.839	71.07	6.339	41.02
Mean Place	14.331	54.34	58.010	69.41	4.150	45.87
Sec δ, Tan δ	1.955	+1.680	1.043	-0.295	1.323	-0.867
L α, L δ	-0.03	-0.3	-0.01	-0.3	+0.02	-0.2
ω α, ω δ	+0.07	-0.8	-0.01	-0.8	-0.04	--0.8
AUTHORITY	A. E.				A. E.	

APPARENT PLACES OF STARS, 1924. 377

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Coronæ Bor. Mag. 2.3		α Serpentis. Mag. 2.8		μ Serpentis. Mag. 3.6	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.
	h m 15 31	26° 57'	h m 15 40	6° 39'	h m 15 45	3° 11'
Jan. 0.9	26.570 ²⁸⁶	71.26 ²⁶⁶	29.933 ²⁷²	55.41 ²¹¹	37.681 ²⁷²	46.90 ¹⁷⁵
10.8	26.856 ³⁰⁹	68.60 ²³⁶	30.205 ²⁹¹	53.30 ¹⁹⁹	37.953 ²⁹²	48.65 ¹⁷¹
20.8	27.165 ³²²	66.24 ¹⁹⁸	30.496 ³⁰²	51.31 ¹⁸⁰	38.245 ³⁰³	50.36 ¹⁶¹
30.8	27.487 ³²⁶	64.26 ¹⁵⁴	30.798 ³⁰⁵	49.51 ¹⁵³	38.548 ³⁰⁵	51.97 ¹⁴⁵
Feb. 9.8	27.813 ³²¹	62.72 ¹⁰³	31.103 ²⁹⁹	47.98 ¹²²	38.853 ³⁰¹	53.42 ¹²⁴
19.7	28.134 ³⁰⁷	61.69 ⁵²	31.402 ²⁸⁹	46.76 ⁸⁸	39.154 ²⁹⁰	54.66 ¹⁰⁰
29.7	28.441 ²⁸⁹	61.17 ¹	31.691 ²⁷²	45.88 ⁵¹	39.444 ²⁷⁵	55.66 ⁷³
Mar. 10.7	28.730 ²⁶⁵	61.18 ⁵¹	31.963 ²⁵²	45.37 ¹⁵	39.719 ²⁵⁶	56.39 ⁴⁵
20.7	28.995 ²³⁷	61.69 ⁹⁷	32.215 ²³⁰	45.22 ²⁰	39.975 ²³⁵	56.84 ¹⁸
30.6	29.232 ²⁰⁶	62.66 ¹³⁹	32.445 ²⁰⁴	45.42 ⁵¹	40.210 ²¹¹	57.02 ⁷
Apr. 9.6	29.438 ¹⁷⁴	64.05 ¹⁷¹	32.649 ¹⁷⁸	45.93 ⁷⁸	40.421 ¹⁸⁵	56.95 ²⁹
19.6	29.612 ¹⁴¹	65.76 ¹⁹⁶	32.827 ¹⁵¹	46.71 ¹⁰⁰	40.606 ¹⁵⁹	56.66 ⁴⁸
29.5	29.753 ¹⁰⁶	67.72 ²¹⁵	32.978 ¹²²	47.71 ¹¹⁶	40.765 ¹³²	56.18 ⁶²
May 9.5	29.859 ⁷¹	69.87 ²²³	33.100 ⁹³	48.87 ¹²⁷	40.897 ¹⁰³	55.56 ⁷³
19.5	29.930 ³⁷	72.10 ²²⁴	33.193 ⁶²	50.14 ¹³²	41.000 ⁷³	54.83 ⁷⁹
29.5	29.967 ²	74.34 ²¹⁷	33.255 ³¹	51.46 ¹³³	41.073 ⁴²	54.04 ⁸²
June 8.4	29.969 ³¹	76.51 ²⁰⁴	33.286 ¹	52.79 ¹²⁸	41.115 ¹¹	53.22 ⁸²
18.4	29.938 ⁶⁵	78.55 ¹⁸⁵	33.287 ³⁰	54.07 ¹²¹	41.126 ²⁰	52.40 ⁸⁰
28.4	29.873 ⁹⁵	80.40 ¹⁶¹	33.257 ⁶⁰	55.28 ¹¹⁰	41.106 ⁵¹	51.60 ⁷⁵
July 8.4	29.778 ¹²³	82.01 ¹³³	33.197 ⁸⁹	56.38 ⁹⁶	41.054 ⁸²	50.85 ⁶⁸
18.3	29.655 ¹⁴⁹	83.34 ¹⁰²	33.108 ¹¹⁴	57.34 ⁸⁰	40.973 ¹⁰⁷	50.17 ⁶⁰
28.3	29.506 ¹⁶⁹	84.36 ⁶⁹	32.994 ¹³⁵	58.14 ⁶³	40.866 ¹³⁰	49.57 ⁵¹
Aug. 7.3	29.337 ¹⁸³	85.05 ³⁴	32.859 ¹⁵²	58.77 ⁴⁴	40.736 ¹⁴⁸	49.06 ⁴²
17.2	29.154 ¹⁹²	85.39 ³	32.707 ¹⁶³	59.21 ²⁴	40.588 ¹⁶⁰	48.64 ³⁰
27.2	28.962 ¹⁹³	85.36 ⁴⁰	32.544 ¹⁶⁶	59.45 ³	40.428 ¹⁶⁴	48.34 ¹⁹
Sept. 6.2	28.769 ¹⁸⁵	84.96 ⁷⁷	32.378 ¹⁶⁰	59.48 ²⁰	40.264 ¹⁶⁰	48.15 ⁵
16.2	28.584 ¹⁶⁹	84.19 ¹¹³	32.218 ¹⁴⁷	59.28 ⁴²	40.104 ¹⁴⁶	48.10 ⁹
26.1	28.415 ¹⁴⁴	83.06 ¹⁵⁰	32.071 ¹²⁴	58.86 ⁶⁶	39.958 ¹²⁴	48.19 ²⁶
Oct. 6.1	28.271 ¹¹¹	81.56 ¹⁸⁴	31.947 ⁹⁴	58.20 ⁹⁰	39.834 ⁹⁴	48.45 ⁴³
16.1	28.160 ⁶⁸	79.72 ²¹⁶	31.853 ⁵⁵	57.30 ¹¹⁶	39.740 ⁵⁵	48.88 ⁶³
26.1	28.092 ²²	77.56 ²⁴⁴	31.798 ¹¹	56.14 ¹³⁹	39.685 ¹⁰	49.51 ⁸⁴
Nov. 5.0	28.070 ³⁰	75.12 ²⁶⁹	31.787 ³⁸	54.75 ¹⁶³	39.675 ³⁸	50.35 ¹⁰⁴
15.0	28.100 ⁸⁴	72.43 ²⁸⁷	31.825 ⁸⁸	53.12 ¹⁸³	39.713 ⁸⁹	51.39 ¹²⁵
25.0	28.184 ¹³⁷	69.56 ³⁰⁰	31.913 ¹³⁷	51.29 ²⁰¹	39.802 ¹³⁸	52.64 ¹⁴³
Dec. 4.9	28.321 ¹⁸⁸	66.56 ³⁰³	32.050 ¹⁸³	49.28 ²¹²	39.940 ¹⁸⁴	54.07 ¹⁶⁰
14.9	28.509 ²³²	63.53 ²⁹⁷	32.233 ²²³	47.16 ²¹⁹	40.124 ²²⁴	55.67 ¹⁷⁰
24.9	28.741 ²⁶⁹	60.56 ²⁸³	32.456 ²⁵⁷	44.97 ²¹⁸	40.348 ²⁵⁸	57.37 ¹⁷⁷
34.9	29.010	57.73	32.713	42.79	40.606	59.14
Mean Place	28.169	70.33	31.376	49.48	39.108	55.29
Sec δ , Tan δ	1.122	+0.509	1.007	+0.117	1.002	-0.056
L α , L δ	-0.01	-0.2	0.00	-0.2	0.00	-0.2
ω α , ω δ	+0.02	-0.8	0.00	-0.8	0.00	-0.8
AUTHORITY	A. E.		A. E.		A. E.	

378 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ζ Ursæ Minoris. Mag. 4.3				ε Serpentis. Mag. 3.8				β Triang. Aust. Mag. 3.0			
	R. A.		Dec. N.		R. A.		Dec. N.		R. A.		Dec. S.	
	h	m	°	'	h	m	°	'	h	m	°	'
	15	46	78	1	15	47	4	42	15	48	63	11
Jan. 0.9	38.25	76	39.63	290	0.088	268	26.86	204	23.49	54	31.58	85
10.8	39.01	91	36.73	240	0.356	288	24.82	194	24.03	57	30.73	42
20.8	39.92	101	34.33	185	0.644	300	22.88	176	24.60	61	30.31	0
30.8	40.93	109	32.48	121	0.944	303	21.12	152	25.21	62	30.31	43
Feb. 9.8	42.02	112	31.27	54	1.247	300	19.60	123	25.83	62	30.74	83
19.7	43.14	111	30.73	14	1.547	290	18.37	90	26.45	60	31.57	119
29.7	44.25	105	30.87	80	1.837	274	17.47	56	27.05	57	32.76	153
Mar. 10.7	45.30	97	31.67	142	2.111	255	16.91	21	27.62	54	34.29	181
20.7	46.27	86	33.09	197	2.366	233	16.70	12	28.16	49	36.10	205
30.6	47.13	72	35.06	242	2.599	210	16.82	43	28.65	45	38.15	226
Apr. 9.6	47.85	55	37.48	280	2.809	184	17.25	69	29.10	39	40.41	241
19.6	48.40	38	40.28	304	2.993	157	17.94	90	29.49	33	42.82	252
29.5	48.78	20	43.32	317	3.150	129	18.84	107	29.82	27	45.34	257
May 9.5	48.98	1	46.49	321	3.279	100	19.91	118	30.09	19	47.91	259
19.5	48.99	17	49.70	312	3.379	69	21.09	123	30.28	13	50.50	254
29.5	48.82	34	52.82	295	3.448	39	22.32	125	30.41	5	53.04	245
June 8.4	48.48	49	55.77	268	3.487	8	23.57	121	30.46	2	55.49	229
18.4	47.99	64	58.45	235	3.495	24	24.78	115	30.44	10	57.78	208
28.4	47.35	78	60.80	195	3.471	55	25.93	106	30.34	17	59.86	181
July 8.4	46.57	88	62.75	150	3.416	84	26.99	92	30.17	24	61.67	150
18.3	45.69	96	64.25	102	3.332	110	27.91	78	29.93	30	63.17	114
28.3	44.73	103	65.27	51	3.222	133	28.69	63	29.63	34	64.31	74
Aug. 7.3	43.70	107	65.78	1	3.089	150	29.32	45	29.29	38	65.05	32
17.2	42.63	108	65.77	53	2.939	162	29.77	27	28.91	41	65.37	13
27.2	41.55	107	65.24	105	2.777	167	30.04	8	28.50	40	65.24	57
Sept. 6.2	40.48	104	64.19	155	2.610	162	30.12	13	28.10	39	64.67	100
16.2	39.44	98	62.64	202	2.448	149	29.99	34	27.71	37	63.67	140
26.1	38.46	88	60.62	246	2.299	128	29.65	57	27.34	30	62.27	174
Oct. 6.1	37.58	77	58.16	286	2.171	97	29.08	80	27.04	24	60.53	201
16.1	36.81	64	55.30	320	2.074	59	28.28	104	26.80	15	58.52	222
26.1	36.17	47	52.10	347	2.015	16	27.24	127	26.65	6	56.30	232
Nov. 5.0	35.70	30	48.63	367	1.999	33	25.97	150	26.59	4	53.98	233
15.0	35.40	10	44.96	379	2.032	82	24.47	171	26.63	15	51.65	224
25.0	35.30	9	41.17	379	2.114	132	22.76	188	26.78	25	49.41	206
Dec. 4.9	35.39	30	37.38	370	2.246	178	20.88	201	27.03	34	47.35	180
14.9	35.69	49	33.68	350	2.424	219	18.87	209	27.37	43	45.55	147
24.9	36.18	67	30.18	317	2.643	253	16.78	209	27.80	51	44.08	108
34.9	36.85		27.01		2.896		14.69		28.31		43.00	
Mean Place	44.34		44.34		1.546		20.34		25.84		52.14	
Sec δ, Tan δ	4.821		+4.716		1.003		+0.082		2.218		-1.980	
L α, L δ	-0.10		-0.2		0.00		-0.2		+0.04		-0.2	
ω α, ω δ	+0.17		-0.8		0.00		-0.8		-0.07		-0.8	
AUTHORITY	A. E.				A. E.				A. E.			

APPARENT PLACES OF STARS, 1924. 379

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Serpentis. Mag. 3.9		π Scorpii. Mag. 3.0		δ Scorpii. Mag. 2.5	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 15 52	° ' 8 15 54	h m 15 54	° ' 3 25 53	h m 15 55	° ' 2 22 24
Jan. 0.9	54.941 ₂₆₄	34.98 ₂₄₆	13.465 ₂₉₉	34.37 ₇₂	48.635 ₂₉₀	11.06 ₈₈
10.9	55.205 ₂₈₆	32.52 ₂₂₆	13.764 ₃₂₀	35.09 ₈₉	48.925 ₃₁₃	11.94 ₁₀₀
20.8	55.491 ₃₀₁	30.26 ₁₉₈	14.084 ₃₃₄	35.98 ₁₀₁	49.238 ₃₂₅	12.94 ₁₁₀
30.8	55.792 ₃₀₇	28.28 ₁₆₅	14.418 ₃₃₇	36.99 ₁₀₈	49.563 ₃₂₉	14.04 ₁₁₃
Feb. 9.8	56.099 ₃₀₅	26.63 ₁₂₄	14.755 ₃₃₃	38.07 ₁₁₂	49.892 ₃₂₆	15.17 ₁₁₄
19.7	56.404 ₂₉₅	25.39 ₈₂	15.088 ₃₂₄	39.19 ₁₁₃	50.218 ₃₁₆	16.31 ₁₁₀
29.7	56.699 ₂₈₁	24.57 ₃₇	15.412 ₃₀₈	40.32 ₁₀₉	50.534 ₃₀₂	17.41 ₁₀₃
Mar. 10.7	56.980 ₂₆₃	24.20 ₇	15.720 ₂₉₀	41.41 ₁₀₄	50.836 ₂₈₄	18.44 ₉₄
20.7	57.243 ₂₄₀	24.27 ₄₈	16.010 ₂₆₈	42.45 ₉₇	51.120 ₂₆₂	19.38 ₈₄
30.6	57.483 ₂₁₆	24.75 ₈₆	16.278 ₂₄₄	43.42 ₈₉	51.382 ₂₃₉	20.22 ₇₄
Apr. 9.6	57.699 ₁₈₉	25.61 ₁₁₈	16.522 ₂₁₈	44.31 ₈₁	51.621 ₂₁₄	20.96 ₆₃
19.6	57.888 ₁₆₀	26.79 ₁₄₃	16.740 ₁₉₀	45.12 ₇₃	51.835 ₁₈₇	21.59 ₅₄
29.6	58.048 ₁₃₀	28.22 ₁₆₂	16.930 ₁₆₁	45.85 ₆₆	52.022 ₁₅₈	22.13 ₄₆
May 9.5	58.178 ₁₀₀	29.84 ₁₇₃	17.091 ₁₂₉	46.51 ₅₉	52.180 ₁₂₇	22.59 ₃₈
19.5	58.278 ₆₈	31.57 ₁₇₈	17.220 ₉₆	47.10 ₅₂	52.307 ₉₅	22.97 ₃₁
29.5	58.346 ₃₅	33.35 ₁₇₇	17.316 ₆₁	47.62 ₄₅	52.402 ₆₂	23.28 ₂₅
June 8.4	58.381 ₃	35.12 ₁₆₉	17.377 ₂₆	48.07 ₃₉	52.464 ₂₆	23.53 ₁₉
18.4	58.384 ₃₀	36.81 ₁₅₇	17.403 ₁₂	48.46 ₃₁	52.490 ₁₀	23.72 ₁₃
28.4	58.354 ₆₃	38.38 ₁₄₁	17.391 ₄₈	48.77 ₂₃	52.480 ₄₄	23.85 ₇
July 8.4	58.291 ₉₂	39.79 ₁₂₀	17.343 ₈₂	49.00 ₁₄	52.436 ₇₉	23.92 ₁
18.3	58.199 ₁₂₀	40.99 ₉₉	17.261 ₁₁₄	49.14 ₄	52.357 ₁₀₉	23.93 ₇
28.3	58.079 ₁₄₂	41.98 ₇₃	17.147 ₁₄₂	49.18 ₈	52.248 ₁₃₇	23.86 ₁₅
Aug. 7.3	57.937 ₁₆₂	42.71 ₄₆	17.005 ₁₆₄	49.10 ₁₉	52.111 ₁₅₈	23.71 ₂₂
17.3	57.775 ₁₇₃	43.17 ₁₉	16.841 ₁₇₈	48.91 ₃₀	51.953 ₁₇₂	23.49 ₃₁
27.2	57.602 ₁₇₉	43.36 ₁₀	16.663 ₁₈₄	48.61 ₄₁	51.781 ₁₇₉	23.18 ₃₇
Sept. 6.2	57.423 ₁₇₅	43.26 ₄₁	16.479 ₁₈₀	48.20 ₅₀	51.602 ₁₇₅	22.81 ₄₃
16.2	57.248 ₁₆₃	42.85 ₇₀	16.299 ₁₆₆	47.70 ₅₇	51.427 ₁₆₂	22.38 ₄₇
26.1	57.085 ₁₄₂	42.15 ₁₀₁	16.133 ₁₄₂	47.13 ₆₁	51.265 ₁₃₈	21.91 ₄₇
Oct. 6.1	56.943 ₁₁₁	41.14 ₁₃₀	15.991 ₁₀₈	46.52 ₆₀	51.127 ₁₀₆	21.44 ₄₄
16.1	56.832 ₇₅	39.84 ₁₆₀	15.883 ₆₄	45.92 ₅₇	51.021 ₆₄	21.00 ₃₈
26.1	56.757 ₃₀	38.24 ₁₈₈	15.819 ₁₅	45.35 ₄₇	50.957 ₁₆	20.62 ₂₈
Nov. 5.0	56.727 ₁₉	36.36 ₂₁₂	15.804 ₃₉	44.88 ₃₅	50.941 ₃₇	20.34 ₁₄
15.0	56.746 ₆₉	34.24 ₂₃₄	15.843 ₉₆	44.53 ₁₈	50.978 ₉₁	20.20 ₄
25.0	56.815 ₁₂₀	31.90 ₂₅₀	15.939 ₁₅₀	44.35 ₂	51.069 ₁₄₄	20.24 ₂₃
Dec. 5.0	56.935 ₁₆₈	29.40 ₂₅₉	16.089 ₂₀₁	44.37 ₂₂	51.213 ₁₉₅	20.47 ₄₂
14.9	57.103 ₂₁₁	26.81 ₂₆₂	16.290 ₂₄₆	44.59 ₄₄	51.408 ₂₃₈	20.89 ₆₃
24.9	57.314 ₂₄₇	24.19 ₂₅₆	16.536 ₂₈₃	45.03 ₆₄	51.646 ₂₇₄	21.52 ₈₀
34.9	57.561	21.63	16.819	45.67	51.920	22.32
Mean Place	56.488	30.86	14.973	48.00	50.134	23.89
Sec δ , Tan δ	1.040	+0.285	1.112	-0.486	1.082	-0.412
L α , L δ	-0.01	-0.2	+0.01	-0.2	+0.01	-0.2
ω α , ω δ	+0.01	-0.8	-0.02	-0.9	-0.01	-0.9
AUTHORITY	A. N.		A. N.		A. E.	

380 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β^1 Scorpii. Mag. 2.9		δ Ophiuchi. Mag. 3.0		γ^2 Normæ. Mag. 4.1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 16 0	° ' 35	h m 16 10	° ' 29	h m 16 14	° ' 57
Jan. 0.9	59.318 ²⁸²	42.78 ⁹⁸	20.127 ²⁵⁶	50.32 ¹⁶⁷	6.473 ³⁷⁶	56.97 ⁵⁸
10.9	59.600 ³⁰⁴	43.76 ¹⁰⁸	20.383 ²⁷⁹	51.99 ¹⁶⁴	6.849 ⁴¹²	56.39 ²⁶
20.8	59.904 ³¹⁸	44.84 ¹¹⁴	20.662 ²⁹⁴	53.63 ¹⁵⁵	7.261 ⁴³⁵	56.13 ⁶
30.8	60.222 ³²³	45.98 ¹¹⁴	20.956 ³⁰¹	55.18 ¹⁴⁰	7.696 ⁴⁴⁸	56.19 ³⁶
Feb. 9.8	60.545 ³²⁰	47.12 ¹¹³	21.257 ³⁰¹	56.58 ¹¹⁹	8.144 ⁴⁵⁰	56.55 ⁶⁴
19.8	60.865 ³¹²	48.25 ¹⁰⁵	21.558 ²⁹⁴	57.77 ⁹⁶	8.594 ⁴⁴³	57.19 ⁹⁰
29.7	61.177 ²⁹⁸	49.30 ⁹⁶	21.852 ²⁸²	58.73 ⁶⁹	9.037 ⁴²⁸	58.09 ¹¹¹
Mar. 10.7	61.475 ²⁸¹	50.26 ⁸⁵	22.134 ²⁶⁸	59.42 ⁴²	9.465 ⁴⁰⁸	59.20 ¹³¹
20.7	61.756 ²⁶¹	51.11 ⁷¹	22.402 ²⁴⁹	59.84 ¹⁴	9.873 ³⁸³	60.51 ¹⁴⁷
30.6	62.017 ²³⁸	51.82 ⁵⁹	22.651 ²²⁹	59.98 ¹⁰	10.256 ³⁵³	61.98 ¹⁶⁰
Apr. 9.6	62.255 ²¹⁴	52.41 ⁴⁷	22.880 ²⁰⁵	59.88 ³³	10.609 ³¹⁹	63.58 ¹⁷¹
19.6	62.469 ¹⁸⁸	52.88 ³⁷	23.085 ¹⁸¹	59.55 ⁵¹	10.928 ²⁸²	65.29 ¹⁷⁸
29.6	62.657 ¹⁶⁰	53.25 ²⁷	23.266 ¹⁵⁵	59.04 ⁶⁶	11.210 ²⁴⁰	67.07 ¹⁸⁴
May 9.5	62.817 ¹³⁰	53.52 ²⁰	23.421 ¹²⁶	58.38 ⁷⁷	11.450 ¹⁹⁵	68.91 ¹⁸⁵
19.5	62.947 ⁹⁹	53.72 ¹³	23.547 ⁹⁷	57.61 ⁸³	11.645 ¹⁴⁶	70.76 ¹⁸³
29.5	63.046 ⁶⁵	53.85 ⁸	23.644 ⁶⁵	56.78 ⁸⁶	11.791 ⁹⁶	72.59 ¹⁷⁹
June 8.5	63.111 ³¹	53.93 ⁴	23.709 ³²	55.92 ⁸⁶	11.887 ⁴²	74.38 ¹⁷⁰
18.4	63.142 ⁵	53.97 ¹	23.741 ²	55.06 ⁸²	11.929 ¹²	76.08 ¹⁵⁷
28.4	63.137 ⁴⁰	53.96 ⁶	23.739 ³⁵	54.24 ⁷⁷	11.917 ⁶⁷	77.65 ¹⁴⁰
July 8.4	63.097 ⁷⁴	53.90 ⁹	23.704 ⁶⁶	53.47 ⁷⁰	11.850 ¹¹⁸	79.05 ¹¹⁹
18.3	63.023 ¹⁰⁴	53.81 ¹⁴	23.638 ⁹⁷	52.77 ⁶²	11.732 ¹⁶⁵	80.24 ⁹⁴
28.3	62.919 ¹³²	53.67 ¹⁹	23.541 ¹²³	52.15 ⁵²	11.567 ²⁰⁸	81.18 ⁶⁶
Aug. 7.3	62.787 ¹⁵⁴	53.48 ²⁴	23.418 ¹⁴⁵	51.63 ⁴²	11.359 ²⁴¹	81.84 ³⁴
17.3	62.633 ¹⁶⁸	53.24 ²⁹	23.273 ¹⁶¹	51.21 ³⁰	11.118 ²⁶⁴	82.18 ²
27.2	62.465 ¹⁷⁶	52.95 ³³	23.112 ¹⁶⁸	50.91 ¹⁹	10.854 ²⁷⁵	82.20 ³¹
Sept. 6.2	62.289 ¹⁷³	52.62 ³⁶	22.944 ¹⁶⁸	50.72 ⁶	10.579 ²⁷³	81.89 ⁶⁴
16.2	62.116 ¹⁶²	52.26 ³⁷	22.776 ¹⁵⁸	50.66 ⁸	10.306 ²⁵⁷	81.25 ⁹⁴
26.2	61.954 ¹³⁹	51.89 ³⁶	22.618 ¹⁴⁰	50.74 ²³	10.049 ²²⁷	80.31 ¹²²
Oct. 6.1	61.815 ¹⁰⁸	51.53 ³¹	22.478 ¹¹¹	50.97 ⁴¹	9.822 ¹⁸²	79.09 ¹⁴⁴
16.1	61.707 ⁶⁷	51.22 ²³	22.367 ⁷⁶	51.38 ⁵⁹	9.640 ¹²⁷	77.65 ¹⁶⁰
26.1	61.640 ²¹	50.99 ¹¹	22.291 ³²	51.97 ⁷⁷	9.513 ⁶¹	76.05 ¹⁶⁸
Nov. 5.0	61.619 ³¹	50.88 ³	22.259 ¹⁵	52.74 ⁹⁸	9.452 ¹²	74.37 ¹⁷⁰
15.0	61.650 ⁸⁴	50.91 ²⁰	22.274 ⁶⁴	53.72 ¹¹⁷	9.464 ⁸⁷	72.67 ¹⁶³
25.0	61.734 ¹³⁶	51.11 ³⁸	22.338 ¹¹⁵	54.89 ¹³⁵	9.551 ¹⁶¹	71.04 ¹⁴⁸
Dec. 5.0	61.870 ¹⁸⁶	51.49 ⁵⁸	22.453 ¹⁶²	56.24 ¹⁵¹	9.712 ²³³	69.56 ¹²⁹
14.9	62.056 ²³⁰	52.07 ⁷⁶	22.615 ²⁰³	57.75 ¹⁶²	9.945 ²⁹⁵	68.27 ¹⁰⁴
24.9	62.286 ²⁶⁵	52.83 ⁹¹	22.818 ²⁴⁰	59.37 ¹⁶⁹	10.240 ³⁵¹	67.23 ⁷⁴
34.9	62.551	53.74	23.058	61.06	10.591	66.49
Mean Place	60.830	54.92	21.650	58.91	8.513	74.39
Sec δ , Tan δ	1.061	-0.356	1.002	-0.061	1.555	-1.190
L α , L δ	+0.01	-0.2	0.00	-0.2	+0.03	-0.2
ω α , ω δ	-0.01	-0.9	0.00	-0.9	-0.04	-0.9
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 381

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ε Ophiuchi. Mag. 3·3		σ Scorii. Mag. 3·1		γ Herculis. Mag. 3·8	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 16 ^m 14	^o 4 ['] 30	^h 16 ^m 16	^o 25 ['] 24	^h 16 ^m 18	^o 19 ['] 19
Jan. 0·9	16·340 ^s ₂₅₄	21·31 ^s ₁₆₁	32·286 ^s ₂₈₂	29·54 ^s ₅₉	32·342 ^s ₂₄₅	54·12 ^s ₂₅₅
10·9	16·594 ₂₇₉	22·92 ₁₅₉	32·568 ₃₀₇	30·13 ₇₅	32·587 ₂₇₂	51·57 ₂₃₅
20·9	16·873 ₂₉₃	24·51 ₁₅₀	32·875 ₃₂₄	30·88 ₈₅	32·859 ₂₉₁	49·22 ₂₀₇
30·8	17·166 ₃₀₁	26·01 ₁₃₇	33·199 ₃₃₁	31·73 ₉₂	33·150 ₃₀₁	47·15 ₁₇₁
Feb. 9·8	17·467 ₃₀₁	27·38 ₁₁₇	33·530 ₃₃₂	32·65 ₉₆	33·451 ₃₀₅	45·44 ₁₃₀
19·8	17·768 ₂₉₅	28·55 ₉₅	33·862 ₃₂₆	33·61 ₉₅	33·756 ₃₀₁	44·14 ₈₄
29·7	18·063 ₂₈₄	29·50 ₆₉	34·188 ₃₁₅	34·56 ₉₂	34·057 ₂₉₂	43·30 ₃₆
Mar. 10·7	18·347 ₂₇₀	30·19 ₄₃	34·503 ₂₉₉	35·48 ₈₇	34·349 ₂₇₆	42·94 ₁₁
20·7	18·617 ₂₅₂	30·62 ₁₆	34·802 ₂₈₂	36·35 ₈₀	34·625 ₂₅₇	43·05 ₅₆
30·7	18·869 ₂₃₂	30·78 ₈	35·084 ₂₆₀	37·15 ₇₃	34·882 ₂₃₆	43·61 ₉₈
Apr. 9·6	19·101 ₂₁₀	30·70 ₂₉	35·344 ₂₃₇	37·88 ₆₆	35·118 ₂₁₀	44·59 ₁₃₂
19·6	19·311 ₁₈₅	30·41 ₄₈	35·581 ₂₁₁	38·54 ₅₉	35·328 ₁₈₂	45·91 ₁₆₁
29·6	19·496 ₁₅₉	29·93 ₆₂	35·792 ₁₈₃	39·13 ₅₄	35·510 ₁₅₄	47·52 ₁₈₄
May 9·6	19·655 ₁₃₁	29·31 ₇₂	35·975 ₁₅₂	39·67 ₄₉	35·664 ₁₂₂	49·36 ₁₉₇
19·5	19·786 ₁₀₁	28·59 ₇₉	36·127 ₁₁₉	40·16 ₄₃	35·786 ₈₉	51·33 ₂₀₄
29·5	19·887 ₆₉	27·80 ₈₂	36·246 ₈₄	40·59 ₄₀	35·875 ₅₄	53·37 ₂₀₄
June 8·5	19·956 ₃₇	26·98 ₈₂	36·330 ₄₇	40·99 ₃₅	35·929 ₂₀	55·41 ₁₉₈
18·4	19·993 ₂	26·16 ₇₈	36·377 ₉	41·34 ₃₀	35·949 ₁₆	57·39 ₁₈₅
28·4	19·995 ₃₁	25·38 ₇₄	36·386 ₂₉	41·64 ₂₅	35·933 ₅₁	59·24 ₁₆₈
July 8·4	19·964 ₆₄	24·64 ₆₇	36·357 ₆₆	41·89 ₁₈	35·882 ₈₄	60·92 ₁₄₇
18·4	19·900 ₉₄	23·97 ₅₉	36·291 ₁₀₂	42·07 ₉	35·798 ₁₁₅	62·39 ₁₂₃
28·3	19·806 ₁₂₂	23·38 ₅₁	36·189 ₁₃₂	42·16 ₁	35·683 ₁₄₂	63·62 ₉₅
Aug. 7·3	19·684 ₁₄₄	22·87 ₄₂	36·057 ₁₅₈	42·17 ₈	35·541 ₁₆₄	64·57 ₆₆
17·3	19·540 ₁₆₀	22·45 ₃₁	35·899 ₁₇₆	42·09 ₁₉	35·377 ₁₈₁	65·23 ₃₅
27·2	19·380 ₁₆₈	22·14 ₂₀	35·723 ₁₈₆	41·90 ₂₉	35·196 ₁₈₉	65·58 ₃
Sept. 6·2	19·212 ₁₆₉	21·94 ₈	35·537 ₁₈₆	41·61 ₃₈	35·007 ₁₉₀	65·61 ₃₀
16·2	19·043 ₁₆₀	21·86 ₅	35·351 ₁₇₆	41·23 ₄₅	34·817 ₁₈₂	65·31 ₆₃
26·2	18·883 ₁₄₁	21·91 ₁₉	35·175 ₁₅₆	40·78 ₅₀	34·635 ₁₆₃	64·68 ₉₅
Oct. 6·1	18·742 ₁₁₄	22·10 ₃₆	35·019 ₁₂₅	40·28 ₅₂	34·472 ₁₃₇	63·73 ₁₂₉
16·1	18·628 ₇₈	22·46 ₅₃	34·894 ₈₄	39·76 ₄₉	34·335 ₁₀₂	62·44 ₁₆₀
26·1	18·550 ₃₆	22·99 ₇₀	34·810 ₃₆	39·27 ₄₃	34·233 ₅₉	60·84 ₁₉₀
Nov. 5·1	18·514 ₁₂	23·69 ₉₁	34·774 ₁₆	38·84 ₃₃	34·174 ₁₂	58·94 ₂₁₇
15·0	18·526 ₆₂	24·60 ₁₁₀	34·790 ₇₁	38·51 ₁₉	34·162 ₃₉	56·77 ₂₃₉
25·0	18·588 ₁₁₂	25·70 ₁₂₈	34·861 ₁₂₇	38·32 ₂	34·201 ₉₀	54·38 ₂₅₇
Dec. 5·0	18·700 ₁₅₉	26·98 ₁₄₃	34·988 ₁₇₈	38·30 ₁₆	34·291 ₁₄₀	51·81 ₂₆₈
14·9	18·859 ₂₀₁	28·41 ₁₅₅	35·166 ₂₂₅	38·46 ₃₄	34·431 ₁₈₅	49·13 ₂₇₀
24·9	19·060 ₂₃₈	29·96 ₁₆₂	35·391 ₂₆₄	38·80 ₅₃	34·616 ₂₂₅	46·43 ₂₆₆
34·9	19·298	31·58	35·655	39·33	34·841	43·77
Mean Place	17·877	30·12	33·908	42·56	33·996	49·95
Sec δ, Tan δ	1·003	-0·079	1·107	-0·475	1·060	+0·351
L α, L δ	0·00	-0·2	+0·01	-0·2	-0·01	-0·2
ω α, ω δ	0·00	-0·9	-0·01	-0·9	+0·01	-0·9
AUTHORITY	A. E.		A. N.		A. E.	

382 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Draconis. Mag. 2.9		α Scorpii. Mag. 1.2		β Herculis. Mag. 2.8	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	^h 16 ^m 22	^o 61 ['] 40	^h 16 ^m 24	^o 26 ['] 15	^h 16 ^m 26	^o 21 ['] 39
Jan. 0.9	54.58 ^s 34	67.99 ^s 330	42.974 ^s 278	39.77 ^s 51	55.379 ^s 238	18.85 ^s 264
10.9	54.92 ^s 40	64.69 ^s 291	43.252 ^s 305	40.28 ^s 64	55.617 ^s 267	16.21 ^s 243
20.9	55.32 ^s 46	61.78 ^s 242	43.557 ^s 322	40.92 ^s 76	55.884 ^s 288	13.78 ^s 214
30.8	55.78 ^s 50	59.36 ^s 184	43.879 ^s 332	41.68 ^s 84	56.172 ^s 301	11.64 ^s 176
Feb. 9.8	56.28 ^s 51	57.52 ^s 120	44.211 ^s 334	42.52 ^s 88	56.473 ^s 306	9.88 ^s 134
19.8	56.79 ^s 52	56.32 ^s 53	44.545 ^s 329	43.40 ^s 89	56.779 ^s 304	8.54 ^s 87
29.7	57.31 ^s 51	55.79 ^s 15	44.874 ^s 320	44.29 ^s 86	57.083 ^s 296	7.67 ^s 37
Mar. 10.7	57.82 ^s 49	55.94 ^s 82	45.194 ^s 306	45.15 ^s 83	57.379 ^s 282	7.30 ^s 13
20.7	58.31 ^s 44	56.76 ^s 142	45.500 ^s 289	45.98 ^s 76	57.661 ^s 264	7.43 ^s 59
30.7	58.75 ^s 40	58.18 ^s 198	45.789 ^s 268	46.74 ^s 71	57.925 ^s 242	8.02 ^s 103
Apr. 9.6	59.15 ^s 34	60.16 ^s 243	46.057 ^s 245	47.45 ^s 65	58.167 ^s 218	9.05 ^s 139
19.6	59.49 ^s 27	62.59 ^s 279	46.302 ^s 220	48.10 ^s 60	58.385 ^s 191	10.44 ^s 171
29.6	59.76 ^s 20	65.38 ^s 305	46.522 ^s 192	48.70 ^s 55	58.576 ^s 161	12.15 ^s 193
May 9.6	59.96 ^s 13	68.43 ^s 319	46.714 ^s 162	49.25 ^s 50	58.737 ^s 129	14.08 ^s 208
19.5	60.09 ^s 5	71.62 ^s 323	46.876 ^s 128	49.75 ^s 47	58.866 ^s 95	16.16 ^s 216
29.5	60.14 ^s 3	74.85 ^s 317	47.004 ^s 93	50.22 ^s 43	58.961 ^s 60	18.32 ^s 217
June 8.5	60.11 ^s 9	78.02 ^s 301	47.097 ^s 55	50.65 ^s 39	59.021 ^s 25	20.49 ^s 210
18.4	60.02 ^s 17	81.03 ^s 277	47.152 ^s 17	51.04 ^s 34	59.046 ^s 12	22.59 ^s 198
28.4	59.85 ^s 23	83.80 ^s 245	47.169 ^s 23	51.38 ^s 30	59.034 ^s 49	24.57 ^s 180
July 8.4	59.62 ^s 29	86.25 ^s 208	47.146 ^s 61	51.68 ^s 23	58.985 ^s 83	26.37 ^s 158
18.4	59.33 ^s 34	88.33 ^s 166	47.085 ^s 98	51.91 ^s 15	58.902 ^s 115	27.95 ^s 132
28.3	58.99 ^s 39	89.99 ^s 119	46.987 ^s 129	52.06 ^s 7	58.787 ^s 143	29.27 ^s 103
Aug. 7.3	58.60 ^s 42	91.18 ^s 79	46.858 ^s 157	52.13 ^s 4	58.644 ^s 168	30.30 ^s 73
17.3	58.18 ^s 45	91.88 ^s 19	46.701 ^s 176	52.09 ^s 14	58.476 ^s 185	31.03 ^s 40
27.2	57.73 ^s 45	92.07 ^s 33	46.525 ^s 188	51.95 ^s 25	58.291 ^s 195	31.43 ^s 7
Sept. 6.2	57.28 ^s 45	91.74 ^s 85	46.337 ^s 189	51.70 ^s 34	58.096 ^s 197	31.50 ^s 28
16.2	56.83 ^s 43	90.89 ^s 136	46.148 ^s 181	51.36 ^s 43	57.899 ^s 190	31.22 ^s 63
26.2	56.40 ^s 41	89.53 ^s 185	45.967 ^s 161	50.93 ^s 49	57.709 ^s 173	30.59 ^s 98
Oct. 6.1	55.99 ^s 36	87.68 ^s 232	45.806 ^s 131	50.44 ^s 52	57.536 ^s 147	29.61 ^s 133
16.1	55.63 ^s 30	85.36 ^s 274	45.675 ^s 92	49.92 ^s 51	57.389 ^s 112	28.28 ^s 165
26.1	55.33 ^s 23	82.62 ^s 311	45.583 ^s 45	49.41 ^s 46	57.277 ^s 71	26.63 ^s 196
Nov. 5.1	55.10 ^s 15	79.51 ^s 341	45.538 ^s 7	48.95 ^s 38	57.206 ^s 23	24.67 ^s 224
15.0	54.95 ^s 7	76.10 ^s 364	45.545 ^s 63	48.57 ^s 26	57.183 ^s 28	22.43 ^s 248
25.0	54.88 ^s 2	72.46 ^s 377	45.608 ^s 119	48.31 ^s 10	57.211 ^s 79	19.95 ^s 265
Dec. 5.0	54.90 ^s 12	68.69 ^s 380	45.727 ^s 171	48.21 ^s 7	57.290 ^s 130	17.30 ^s 277
14.9	55.02 ^s 21	64.89 ^s 372	45.898 ^s 218	48.28 ^s 25	57.420 ^s 176	14.53 ^s 280
24.9	55.23 ^s 29	61.17 ^s 351	46.116 ^s 259	48.53 ^s 43	57.596 ^s 218	11.73 ^s 274
34.9	55.52 ^s	57.66 ^s	46.375 ^s	48.96 ^s	57.814 ^s	8.99 ^s
Mean Place	57.55	69.18	44.648	52.73	57.075	14.83
Sec δ , Tan δ	2.108	+1.856	1.115	-0.493	1.076	+0.397
L α , L δ	-0.04	-0.2	+0.01	-0.2	-0.01	-0.2
ω α , ω δ	+0.05	-0.9	-0.01	-0.9	+0.01	-0.9
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924.. 383

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	λ Ophiuchi. Mag. 3·9		τ Scorp.ii. Mag. 2·9		ζ Ophiuchi. Mag. 2·7	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 16 ^m 27	[°] 2 ['] 8	^h 16 ^m 31	[°] 28 ['] 3	^h 16 ^m 32	[°] 10 ['] 24
Jan. 0·9	3·134 ^s ₂₄₁	63·82 ₁₈₉	7·128 ₂₇₇	22·05 ₃₇	56·690 ₂₄₆	41·77 ₁₂₇
10·9	3·375 ₂₆₆	61·93 ₁₈₀	7·405 ₃₀₄	22·42 ₅₂	56·936 ₂₇₃	43·04 ₁₂₈
20·9	3·641 ₂₈₃	60·13 ₁₆₆	7·709 ₃₂₄	22·94 ₆₅	57·209 ₂₉₁	44·32 ₁₂₆
30·8	3·924 ₂₉₃	58·47 ₁₄₇	8·033 ₃₃₄	23·59 ₇₄	57·500 ₃₀₀	45·58 ₁₁₇
Feb. 9·8	4·217 ₂₉₅	57·00 ₁₂₁	8·367 ₃₃₈	24·33 ₈₀	57·800 ₃₀₃	46·75 ₁₀₅
19·8	4·512 ₂₉₃	55·79 ₉₂	8·705 ₃₃₄	25·13 ₈₂	58·103 ₃₀₁	47·80 ₈₉
29·7	4·805 ₂₈₄	54·87 ₆₀	9·039 ₃₂₅	25·95 ₈₃	58·404 ₂₉₃	48·69 ₇₀
Mar. 10·7	5·089 ₂₇₁	54·27 ₂₆	9·364 ₃₁₃	26·78 ₈₀	58·697 ₂₈₂	49·39 ₄₉
20·7	5·360 ₂₅₅	54·01 ₅	9·677 ₂₉₆	27·58 ₇₇	58·979 ₂₆₆	49·88 ₂₉
30·7	5·615 ₂₃₇	54·06 ₃₅	9·973 ₂₇₆	28·35 ₇₂	59·245 ₂₄₈	50·17 ₈
Apr. 9·6	5·852 ₂₁₅	54·41 ₆₁	10·249 ₂₅₄	29·07 ₆₈	59·493 ₂₂₈	50·25 ₉
19·6	6·067 ₁₉₂	55·02 ₈₄	10·503 ₂₃₀	29·75 ₆₄	59·721 ₂₀₆	50·16 ₂₃
29·6	6·259 ₁₆₆	55·86 ₁₀₀	10·733 ₂₀₂	30·39 ₆₂	59·927 ₁₈₀	49·93 ₃₅
May 9·6	6·425 ₁₃₈	56·86 ₁₁₂	10·935 ₁₇₀	31·01 ₅₈	60·107 ₁₅₂	49·58 ₄₄
19·5	6·563 ₁₀₈	57·98 ₁₁₉	11·105 ₁₃₇	31·59 ₅₅	60·259 ₁₂₃	49·14 ₅₀
29·5	6·671 ₇₇	59·17 ₁₂₁	11·242 ₁₀₁	32·14 ₅₃	60·382 ₉₀	48·64 ₅₃
June 8·5	6·748 ₄₃	60·38 ₁₁₉	11·343 ₆₃	32·67 ₄₉	60·472 ₅₆	48·11 ₅₂
18·4	6·791 ₉	61·57 ₁₁₃	11·406 ₂₃	33·16 ₄₅	60·528 ₂₁	47·59 ₅₂
28·4	6·800 ₂₆	62·70 ₁₀₅	11·429 ₁₈	33·61 ₃₉	60·549 ₁₅	47·07 ₄₉
July 8·4	6·774 ₅₉	63·75 ₉₄	11·411 ₅₇	34·00 ₃₃	60·534 ₅₁	46·58 ₄₅
18·4	6·715 ₉₁	64·69 ₈₁	11·354 ₉₅	34·33 ₂₄	60·483 ₈₄	46·13 ₄₁
28·3	6·624 ₁₂₀	65·50 ₆₇	11·259 ₁₂₉	34·57 ₁₄	60·399 ₁₁₄	45·72 ₃₆
Aug. 7·3	6·504 ₁₄₃	66·17 ₅₁	11·130 ₁₅₈	34·71 ₄	60·285 ₁₄₀	45·36 ₃₁
17·3	6·361 ₁₆₁	66·68 ₃₄	10·972 ₁₇₉	34·75 ₉	60·145 ₁₆₀	45·05 ₂₆
27·2	6·200 ₁₇₂	67·02 ₁₈	10·793 ₁₉₁	34·66 ₂₀	59·985 ₁₇₁	44·79 ₂₁
Sept. 6·2	6·028 ₁₇₄	67·20 ₁	10·602 ₁₉₅	34·46 ₃₂	59·814 ₁₇₄	44·58 ₁₅
16·2	5·854 ₁₆₇	67·19 ₂₀	10·407 ₁₈₆	34·14 ₄₄	59·640 ₁₆₉	44·43 ₈
26·2	5·687 ₁₅₀	66·99 ₄₀	10·221 ₁₆₇	33·70 ₅₂	59·471 ₁₅₂	44·35 ₁
Oct. 6·1	5·537 ₁₂₅	66·59 ₆₁	10·054 ₁₃₈	33·18 ₅₆	59·319 ₁₂₆	44·36 ₁₂
16·1	5·412 ₉₁	65·98 ₈₂	9·916 ₁₀₀	32·62 ₅₈	59·193 ₉₂	44·48 ₂₄
26·1	5·321 ₅₁	65·16 ₁₀₄	9·816 ₅₂	32·04 ₅₅	59·101 ₅₀	44·72 ₃₈
Nov. 5·1	5·270 ₄	64·12 ₁₂₆	9·764 ₁	31·49 ₄₈	59·051 ₃	45·10 ₅₄
15·0	5·266 ₄₅	62·86 ₁₄₆	9·765 ₅₇	31·01 ₃₈	59·048 ₄₇	45·64 ₇₀
25·0	5·311 ₉₅	61·40 ₁₆₅	9·822 ₁₁₃	30·63 ₂₂	59·095 ₉₇	46·34 ₈₇
Dec. 5·0	5·406 ₁₄₂	59·75 ₁₇₈	9·935 ₁₆₈	30·41 ₇	59·192 ₁₄₆	47·21 ₁₀₂
14·9	5·548 ₁₈₅	57·97 ₁₈₈	10·103 ₂₁₅	30·34 ₁₂	59·338 ₁₉₁	48·23 ₁₁₅
24·9	5·733 ₂₂₃	56·09 ₁₉₁	10·318 ₂₅₇	30·46 ₂₉	59·529 ₂₂₈	49·38 ₁₂₅
34·9	5·956	54·18	10·575	30·75	59·757	50·63
Mean Place	4·718	56·27	8·848	35·14	58·303	51·64
Sec δ, Tan δ	1·001	+0·037	1·133	-0·533	1·017	-0·184
L α, L δ	0·00	-0·2	+0·01	-0·2	0·00	-0·1
ω α, ω δ	0·00	-0·9	-0·01	-0·9	0·00	-0·9
AUTHORITY	A. N.		A. N.		A. E.	

384 APPARENT PLACES OF STARS, 1924

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	24 Scorpii. Mag. 5.0		ζ Herculis. Mag. 3.0		η Herculis. Mag. 3.6										
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.									
	^h 16	^m 37	^h 17	^m 35	^h 16	^m 38	^h 16	^m 40	^h 39	^m 3					
Jan.	0.9	8.830 ^s ₂₅₂	35.72 ^s ₈₇	23.402 ^s ₂₃₂	25.57 ^s ₂₉₅	15.387 ^s ₂₃₈	59.30 ^s ₃₁₅	10.9	9.082 ^s ₂₈₀	36.59 ^s ₉₆	23.634 ^s ₂₆₇	22.62 ^s ₂₇₀	15.625 ^s ₂₇₉	56.15 ^s ₂₈₆	
	20.9	9.362 ^s ₂₉₈	37.55 ^s ₉₈	23.901 ^s ₂₉₄	19.92 ^s ₂₃₆	15.904 ^s ₃₀₉	53.29 ^s ₂₄₈	30.8	9.660 ^s ₃₀₈	38.53 ^s ₉₈	24.195 ^s ₃₁₀	17.56 ^s ₁₉₃	16.213 ^s ₃₃₀	50.81 ^s ₂₀₁	
Feb.	9.8	9.968 ^s ₃₁₃	39.51 ^s ₉₂	24.505 ^s ₃₂₁	15.63 ^s ₁₄₂	16.543 ^s ₃₄₂	48.80 ^s ₁₄₆	19.8	10.281 ^s ₃₁₀	40.43 ^s ₈₄	24.826 ^s ₃₂₁	14.21 ^s ₈₈	16.885 ^s ₃₄₅	47.34 ^s ₈₈	
	29.8	10.591 ^s ₃₀₃	41.27 ^s ₇₂	25.147 ^s ₃₁₅	13.33 ^s ₃₂	17.230 ^s ₃₄₀	46.46 ^s ₂₇	Mar.	10.7	10.894 ^s ₂₉₂	41.99 ^s ₅₉	25.462 ^s ₃₀₄	13.01 ^s ₂₆	17.570 ^s ₃₂₇	46.19 ^s ₃₃
	20.7	11.186 ^s ₂₇₇	42.58 ^s ₄₆	25.766 ^s ₂₈₅	13.27 ^s ₇₈	17.897 ^s ₃₀₇	46.52 ^s ₉₁	30.7	11.463 ^s ₂₆₀	43.04 ^s ₃₃	26.051 ^s ₂₆₃	14.05 ^s ₁₂₈	18.204 ^s ₂₈₃	47.43 ^s ₁₄₃	
Apr.	9.6	11.723 ^s ₂₄₀	43.37 ^s ₂₀	26.314 ^s ₂₃₆	15.33 ^s ₁₇₂	18.487 ^s ₂₅₃	48.86 ^s ₁₈₉	19.6	11.963 ^s ₂₁₆	43.57 ^s ₁₀	26.550 ^s ₂₀₇	17.05 ^s ₂₀₆	18.740 ^s ₂₁₉	50.75 ^s ₂₂₆	
	29.6	12.179 ^s ₁₉₂	43.67 ^s ₂	26.757 ^s ₁₇₃	19.11 ^s ₂₃₃	18.959 ^s ₁₈₁	53.01 ^s ₂₅₄	May	9.6	12.371 ^s ₁₆₄	43.69 ^s ₅	26.930 ^s ₁₃₈	21.44 ^s ₂₅₀	19.140 ^s ₁₄₂	55.55 ^s ₂₇₃
	19.5	12.535 ^s ₁₃₃	43.64 ^s ₉	27.068 ^s ₁₀₀	23.94 ^s ₂₆₀	19.282 ^s ₉₉	58.28 ^s ₂₈₃	29.5	12.668 ^s ₉₉	43.55 ^s ₁₁	27.168 ^s ₆₂	26.54 ^s ₂₆₀	19.381 ^s ₅₆	61.11 ^s ₂₈₂	
June	8.5	12.767 ^s ₆₄	43.44 ^s ₁₂	27.230 ^s ₂₁	29.14 ^s ₂₅₂	19.437 ^s ₁₁	63.93 ^s ₂₇₄	18.5	12.831 ^s ₂₇	43.32 ^s ₁₃	27.251 ^s ₂₀	31.66 ^s ₂₃₉	19.448 ^s ₃₃	66.67 ^s ₂₅₈	
	28.4	12.858 ^s ₁₁	43.19 ^s ₁₃	27.231 ^s ₆₀	34.05 ^s ₂₁₈	19.415 ^s ₇₇	69.25 ^s ₂₃₅	July	8.4	12.847 ^s ₄₇	43.06 ^s ₁₄	27.171 ^s ₉₈	36.23 ^s ₁₉₂	19.338 ^s ₁₁₉	71.60 ^s ₂₀₇
	18.4	12.800 ^s ₈₄	42.92 ^s ₁₃	27.073 ^s ₁₃₄	38.15 ^s ₁₆₀	19.219 ^s ₁₅₆	73.67 ^s ₁₇₂	28.3	12.716 ^s ₁₁₅	42.79 ^s ₁₅	26.939 ^s ₁₆₅	39.75 ^s ₁₂₇	19.063 ^s ₁₉₁	75.39 ^s ₁₃₅	
Aug.	7.3	12.601 ^s ₁₄₃	42.64 ^s ₁₆	26.774 ^s ₁₉₂	41.02 ^s ₉₀	18.872 ^s ₂₁₈	76.74 ^s ₉₅	17.3	12.458 ^s ₁₆₃	42.48 ^s ₁₈	26.582 ^s ₂₁₂	41.92 ^s ₅₁	18.654 ^s ₂₃₉	77.69 ^s ₅₁	
	27.3	12.295 ^s ₁₇₇	42.30 ^s ₂₀	26.370 ^s ₂₂₃	42.43 ^s ₁₁	18.415 ^s ₂₅₂	78.20 ^s ₇	Sept.	6.2	12.118 ^s ₁₈₀	42.10 ^s ₂₁	26.147 ^s ₂₂₇	42.54 ^s ₃₁	18.163 ^s ₂₅₅	78.27 ^s ₃₉
	16.2	11.938 ^s ₁₇₅	41.89 ^s ₂₁	25.920 ^s ₂₂₂	42.23 ^s ₇₃	17.908 ^s ₂₄₉	77.88 ^s ₈₄	26.2	11.763 ^s ₁₅₈	41.68 ^s ₁₉	25.698 ^s ₂₀₅	41.50 ^s ₁₁₄	17.659 ^s ₂₃₂	77.04 ^s ₁₂₉	
Oct.	6.2	11.605 ^s ₁₃₂	41.49 ^s ₁₅	25.493 ^s ₁₈₀	40.36 ^s ₁₅₃	17.427 ^s ₂₀₆	75.75 ^s ₁₇₂	16.1	11.473 ^s ₉₆	41.34 ^s ₉	25.313 ^s ₁₄₄	38.83 ^s ₁₉₂	17.221 ^s ₁₆₈	74.03 ^s ₂₁₃	
	26.1	11.377 ^s ₅₄	41.25 ^s ₀	25.169 ^s ₁₀₂	36.91 ^s ₂₂₇	17.053 ^s ₁₂₄	71.90 ^s ₂₅₀	Nov.	5.1	11.323 ^s ₅	41.25 ^s ₁₂	25.067 ^s ₅₃	34.64 ^s ₂₅₈	16.929 ^s ₇₁	69.40 ^s ₂₈₄
	15.0	11.318 ^s ₄₆	41.37 ^s ₂₆	25.014 ^s ₁	32.06 ^s ₂₈₅	16.858 ^s ₁₄	66.56 ^s ₃₁₀	25.0	11.364 ^s ₉₉	41.63 ^s ₄₁	25.015 ^s ₅₆	29.21 ^s ₃₀₃	16.844 ^s ₄₅	63.46 ^s ₃₂₈	
Dec.	5.0	11.463 ^s ₁₄₉	42.04 ^s ₅₇	25.071 ^s ₁₁₁	26.18 ^s ₃₁₄	16.889 ^s ₁₀₄	60.18 ^s ₃₄₀	15.0	11.612 ^s ₁₉₅	42.61 ^s ₇₁	25.182 ^s ₁₆₂	23.04 ^s ₃₁₇	16.993 ^s ₁₆₀	56.78 ^s ₃₃₉	
	24.9	11.807 ^s ₂₃₄	43.32 ^s ₈₅	25.344 ^s ₂₀₈	19.87 ^s ₃₀₈	17.153 ^s ₂₁₂	53.39 ^s ₃₂₉	34.9	12.041 ^s	44.17 ^s	25.552 ^s	16.79 ^s	17.365 ^s	50.10 ^s	
Mean Place		10.488	46.82	25.248	22.64	17.376	57.22								
Sec δ, Tan δ		1.049	-0.317	1.176	+0.619	1.288	+0.812								
L α, L δ		+0.01	-0.1	-0.02	-0.1	-0.02	-0.1								
ω α, ω δ		-0.01	-0.9	+0.01	-0.9	+0.02	-0.9								
AUTHORITY		A. N.				A. E.									

APPARENT PLACES OF STARS, 1924. 385

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Triang. Aust. Mag. 1·9		ε Scorpil. Mag. 2·4		ζ Ara. Mag. 3·1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 16 40	68° 53'	h m 16 45	34° 9'	h m 16 52	55° 52'
Jan. 0·9	32·38 ^s 56	7·63 ^s 168	12·313 ^s 279	11·11 4	16·523 ^s 375	3·25 ^s 122
10·9	32·94 64	5·95 ^s 130	12·592 311	11·07 14	16·898 424	2·03 92
20·9	33·58 69	4·65 ^s 89	12·903 334	11·21 30	17·322 463	1·11 61
30·8	34·27 74	3·76 ^s 48	13·237 348	11·51 45	17·785 488	0·50 29
Feb. 9·8	35·01 76	3·28 6	13·585 354	11·96 57	18·273 501	0·21 2
19·8	35·77 76	3·22 35	13·939 354	12·53 65	18·774 506	0·23 33
29·8	36·53 75	3·57 75	14·293 348	13·18 72	19·280 500	0·56 61
Mar. 10·7	37·28 73	4·32 110	14·641 337	13·90 77	19·780 488	1·17 87
20·7	38·01 69	5·42 145	14·978 321	14·67 80	20·268 467	2·04 111
30·7	38·70 65	6·87 174	15·299 303	15·47 82	20·735 442	3·15 132
Apr. 9·6	39·35 59	8·61 201	15·602 281	16·29 84	21·177 409	4·47 152
19·6	39·94 53	10·62 223	15·883 256	17·13 85	21·586 371	5·99 168
29·6	40·47 45	12·85 241	16·139 226	17·98 85	21·957 328	7·67 182
May 9·6	40·92 37	15·26 254	16·365 195	18·83 87	22·285 280	9·49 192
19·5	41·29 28	17·80 262	16·560 159	19·70 86	22·565 224	11·41 198
29·5	41·57 18	20·42 263	16·719 120	20·56 86	22·789 165	13·39 201
June 8·5	41·75 9	23·05 259	16·839 79	21·42 83	22·954 102	15·40 200
18·5	41·84 2	25·64 249	16·918 35	22·25 78	23·056 37	17·40 193
28·4	41·82 12	28·13 231	16·953 9	23·03 74	23·093 30	19·33 181
July 8·4	41·70 21	30·44 208	16·944 53	23·77 65	23·063 94	21·14 164
18·4	41·49 30	32·52 177	16·891 95	24·42 54	22·969 156	22·78 142
28·3	41·19 39	34·29 142	16·796 133	24·96 40	22·813 211	24·20 115
Aug. 7·3	40·80 45	35·71 101	16·663 166	25·36 26	22·602 259	25·35 83
17·3	40·35 49	36·72 56	16·497 190	25·62 9	22·343 296	26·18 50
27·3	39·86 53	37·28 9	16·307 207	25·71 10	22·047 319	26·68 12
Sept. 6·2	39·33 53	37·37 39	16·100 212	25·61 27	21·728 328	26·80 26
16·2	38·80 51	36·98 86	15·888 206	25·34 43	21·400 320	26·54 63
26·2	38·29 47	36·12 132	15·682 189	24·91 59	21·080 296	25·91 99
Oct. 6·2	37·82 41	34·80 171	15·493 160	24·32 71	20·784 256	24·92 130
16·1	37·41 31	33·09 205	15·333 120	23·61 78	20·528 200	23·62 157
26·1	37·10 21	31·04 230	15·213 72	22·83 82	20·328 133	22·05 176
Nov. 5·1	36·89 9	28·74 246	15·141 17	22·01 81	20·195 55	20·29 189
15·0	36·80 3	26·28 253	15·124 42	21·20 74	20·140 28	18·40 194
25·0	36·83 17	23·75 250	15·166 101	20·46 64	20·168 113	16·46 189
Dec. 5·0	37·00 29	21·25 236	15·267 158	19·82 49	20·281 195	14·57 178
15·0	37·29 40	18·89 215	15·425 211	19·33 31	20·476 272	12·79 160
24·9	37·69 51	16·74 186	15·636 257	19·02 14	20·748 341	11·19 136
34·9	38·20	14·88	15·893	18·88	21·089	9·83
Mean Place	36·05	25·67	14·192	24·66	19·145	19·22
Sec δ, Tan δ	2·777	-2·590	1·208	-0·678	1·782	-1·475
L α, L δ	+0·06	-0·1	+0·02	-0·1	+0·04	-0·1
ω α, ω δ	-0·06	-0·9	-0·01	-0·9	-0·03	-1·0
AUTHORITY	A. E.		A. E.		A. E.	

386 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	κ Ophiuchi. Mag. 3·4		30 Ophiuchi. Mag. 5·0		ε Herculis. Mag. 3·9	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 16 54	° 29	h m 16 57	° 6	h m 16 57	° 2
Jan. 0·9	2·508 ²¹⁵	37·96 ²¹⁵	1·472 ²²⁰	26·67 ¹⁵⁰	21·004 ²¹³	18·33 ²⁹⁷
10·9	2·723 ²⁴⁵	35·81 ²⁰⁵	1·692 ²⁵⁰	28·17 ¹⁴⁸	21·217 ²⁵¹	15·36 ²⁷⁵
20·9	2·968 ²⁶⁷	33·76 ¹⁸⁷	1·942 ²⁷¹	29·65 ¹³⁹	21·468 ²⁷⁹	12·61 ²⁴⁴
30·9	3·235 ²⁸¹	31·89 ¹⁶¹	2·213 ²⁸⁴	31·04 ¹²⁷	21·747 ³⁰⁰	10·17 ²⁰²
Feb. 9·8	3·516 ²⁹⁰	30·28 ¹³⁰	2·497 ²⁹³	32·31 ¹⁰⁷	22·047 ³¹³	8·15 ¹⁵⁵
19·8	3·806 ²⁹¹	28·98 ⁹⁴	2·790 ²⁹³	33·38 ⁸⁴	22·360 ³¹⁸	6·60 ¹⁰²
29·8	4·097 ²⁸⁸	28·04 ⁵⁴	3·083 ²⁹⁰	34·22 ⁶⁰	22·678 ³¹⁶	5·58 ⁴⁵
Mar. 10·7	4·385 ²⁷⁹	27·50 ¹⁵	3·373 ²⁸²	34·82 ³²	22·994 ³⁰⁷	5·13 ¹⁰
20·7	4·664 ²⁶⁷	27·35 ²³	3·655 ²⁷¹	35·14 ⁶	23·301 ²⁹⁴	5·23 ⁶⁵
30·7	4·931 ²⁵¹	27·58 ⁶⁰	3·926 ²⁵⁶	35·20 ²⁰	23·595 ²⁷⁴	5·88 ¹¹⁶
Apr. 9·7	5·182 ²³²	28·18 ⁹²	4·182 ²³⁹	35·00 ⁴²	23·869 ²⁵¹	7·04 ¹⁶⁰
19·6	5·414 ²¹¹	29·10 ¹²⁰	4·421 ²¹⁸	34·58 ⁶¹	24·120 ²²³	8·64 ¹⁹⁷
29·6	5·625 ¹⁸⁶	30·30 ¹⁴⁰	4·639 ¹⁹⁶	33·97 ⁷⁵	24·343 ¹⁹³	10·61 ²²⁶
May 9·6	5·811 ¹⁵⁷	31·70 ¹⁵⁵	4·835 ¹⁶⁹	33·22 ⁸⁶	24·536 ¹⁵⁸	12·87 ²⁴⁷
19·6	5·968 ¹²⁸	33·25 ¹⁶⁴	5·004 ¹⁴⁰	32·36 ⁹²	24·694 ¹²¹	15·34 ²⁵⁸
29·5	6·096 ⁹⁵	34·89 ¹⁶⁷	5·144 ¹⁰⁸	31·44 ⁹⁵	24·815 ⁸²	17·92 ²⁶²
June 8·5	6·191 ⁶¹	36·56 ¹⁶⁵	5·252 ⁷⁵	30·49 ⁹⁴	24·897 ⁴²	20·54 ²⁵⁷
18·5	6·252 ²⁴	38·21 ¹⁵⁸	5·327 ³⁸	29·55 ⁸⁹	24·939 ⁰	23·11 ²⁴⁵
28·4	6·276 ¹²	39·79 ¹⁴⁵	5·365 ⁰	28·66 ⁸³	24·939 ⁴¹	25·56 ²²⁶
July 8·4	6·264 ⁴⁸	41·24 ¹³¹	5·365 ³⁵	27·83 ⁷⁴	24·898 ⁸¹	27·82 ²⁰²
18·4	6·216 ⁸³	42·55 ¹¹³	5·330 ⁷¹	27·09 ⁶⁵	24·817 ¹¹⁹	29·84 ¹⁷⁴
28·4	6·133 ¹¹⁵	43·68 ⁹³	5·259 ¹⁰⁴	26·44 ⁵⁵	24·698 ¹⁵⁴	31·58 ¹⁴⁰
Aug. 7·3	6·018 ¹⁴²	44·61 ⁷¹	5·155 ¹³²	25·89 ⁴⁴	24·544 ¹⁸²	32·98 ¹⁰⁵
17·3	5·876 ¹⁶³	45·32 ⁴⁸	5·023 ¹⁵⁵	25·45 ³²	24·362 ²⁰⁶	34·03 ⁶⁷
27·3	5·713 ¹⁷⁸	45·80 ²⁴	4·868 ¹⁷⁰	25·13 ²⁰	24·156 ²²¹	34·70 ²⁶
Sept. 6·3	5·535 ¹⁸⁴	46·04 ¹	4·698 ¹⁷⁷	24·93 ⁸	23·935 ²²⁷	34·96 ¹⁴
16·2	5·351 ¹⁸¹	46·03 ²⁷	4·521 ¹⁷⁵	24·85 ⁵	23·708 ²²⁵	34·82 ⁵⁶
26·2	5·170 ¹⁶⁹	45·76 ⁵³	4·346 ¹⁶²	24·90 ²⁰	23·483 ²¹²	34·26 ⁹⁷
Oct. 6·2	5·001 ¹⁴⁸	45·23 ⁷⁹	4·184 ¹⁴¹	25·10 ³⁴	23·271 ¹⁹⁰	33·29 ¹³⁸
16·1	4·853 ¹¹⁷	44·44 ¹⁰⁶	4·043 ¹⁰⁹	25·44 ⁵⁰	23·081 ¹⁵⁷	31·91 ¹⁷⁷
26·1	4·736 ⁷⁹	43·38 ¹³¹	3·934 ⁷²	25·94 ⁶⁸	22·924 ¹¹⁷	30·14 ²¹³
Nov. 5·1	4·657 ³⁵	42·07 ¹⁵⁶	3·862 ²⁷	26·62 ⁸⁵	22·807 ⁷⁰	28·01 ²⁴⁶
15·1	4·622 ¹³	40·51 ¹⁷⁸	3·835 ²⁰	27·47 ¹⁰²	22·737 ¹⁸	25·55 ²⁷⁴
25·0	4·635 ⁶¹	38·73 ¹⁹⁷	3·855 ⁷¹	28·49 ¹²⁰	22·719 ³⁵	22·81 ²⁹⁴
Dec. 5·0	4·696 ¹¹⁰	36·76 ²¹¹	3·926 ¹¹⁸	29·69 ¹³³	22·754 ⁹⁰	19·87 ³⁰⁹
15·0	4·806 ¹⁵⁵	34·65 ²²⁰	4·044 ¹⁶²	31·02 ¹⁴⁵	22·844 ¹⁴¹	16·78 ³¹⁴
25·0	4·961 ¹⁹⁵	32·45 ²²¹	4·206 ²⁰²	32·47 ¹⁵¹	22·985 ¹⁸⁹	13·64 ³⁰⁷
34·9	5·156	30·24	4·408	33·98	23·174	10·57
Mean Place	4·184	31·41	3·142	35·27	22·868	14·53
Sec δ, Tan δ	1·014	+0·167	1·003	-0·072	1·167	+0·602
L α, L δ	0·00	-0·1	0·00	-0·1	-0·02	-0·1
ω α, ω δ	0·00	-1·0	0·00	-1·0	+0·01	-1·0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 387

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Ophiuchi. Mag. 2·6		ζ Draconis. Mag. 3·2				α Herculis. Mag. 3·1-3·9	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.		
	h m	° ′	h m	° ′	h m	° ′		
	17 5	15 37	17 8	65 48	17 11	14 28		
Jan.	0·9 10·9 20·9 30·9	59·266 ²²⁶ 59·492 ²⁵⁶ 59·748 ²⁷⁹ 60·027 ²⁹⁴	45·35 ⁸⁵ 46·20 ⁸⁹ 47·09 ⁹⁰ 47·99 ⁸⁶	30·43 ²⁷ 30·70 ³⁶ 31·06 ⁴⁴ 31·50 ⁵¹	31·01 ³⁵² 27·49 ³²³ 24·26 ²⁸¹ 21·45 ²³¹	9·146 ¹⁹⁹ 9·345 ²³¹ 9·576 ²⁵⁷ 9·833 ²⁷⁵	39·05 ²³⁶ 36·69 ²²³ 34·46 ²⁰³ 32·43 ¹⁷⁵	
Feb.	9·8 19·8 29·8	60·321 ³⁰³ 60·624 ³⁰⁵ 60·929 ³⁰³	48·85 ⁸⁰ 49·65 ⁶⁸ 50·33 ⁵⁶	32·01 ⁵⁵ 32·56 ⁵⁷ 33·13 ⁵⁸	19·14 ¹⁷¹ 17·43 ¹⁰⁷ 16·36 ³⁸	10·108 ²⁸⁶ 10·394 ²⁹² 10·686 ²⁹⁰	30·68 ¹⁴⁰ 29·28 ⁹⁹ 28·29 ⁵⁷	
Mar.	10·7 20·7 30·7	61·232 ²⁹⁷ 61·529 ²⁸⁶ 61·815 ²⁷³	50·89 ⁴⁰ 51·29 ²⁶ 51·55 ¹¹	33·71 ⁵⁸ 34·29 ⁵⁵ 34·84 ⁵¹	15·98 ²⁹ 16·27 ⁹⁵ 17·22 ¹⁵⁶	10·976 ²⁸⁶ 11·262 ²⁷⁵ 11·537 ²⁶²	27·72 ¹³ 27·59 ³¹ 27·90 ⁷¹	
Apr.	9·7 19·6 29·6	62·088 ²⁵⁷ 62·345 ²³⁷ 62·582 ²¹⁴	51·66 ² 51·64 ¹³ 51·51 ²¹	35·35 ⁴⁵ 35·80 ³⁸ 36·18 ³¹	18·78 ²⁰⁸ 20·86 ²⁵⁴ 23·40 ²⁸⁸	11·799 ²⁴⁴ 12·043 ²²⁴ 12·267 ¹⁹⁹	28·61 ¹⁰⁸ 29·69 ¹³⁸ 31·07 ¹⁶³	
May	9·6 19·6 29·5	62·796 ¹⁸⁸ 62·984 ¹⁵⁸ 63·142 ¹²⁵	51·30 ²⁷ 51·03 ³⁰ 50·73 ³¹	36·49 ²³ 36·72 ¹⁴ 36·86 ⁶	26·28 ³¹³ 29·41 ³²⁷ 32·68 ³³⁰	12·466 ¹⁷² 12·638 ¹⁴² 12·780 ¹⁰⁸	32·70 ¹⁸¹ 34·51 ¹⁹² 36·43 ¹⁹⁶	
June	8·5 18·5 28·4	63·267 ⁹¹ 63·358 ⁵² 63·410 ¹³	50·42 ³⁰ 50·12 ²⁹ 49·83 ²⁵	36·92 ⁴ 36·88 ¹³ 36·75 ²¹	35·98 ³²⁴ 39·22 ³¹⁰ 42·32 ²⁸⁵	12·888 ⁷² 12·960 ³⁵ 12·995 ³	38·39 ¹⁹⁴ 40·33 ¹⁸⁵ 42·18 ¹⁷⁴	
July	8·4 18·4 28·4	63·423 ²⁶ 63·397 ⁶⁴ 63·333 ⁹⁹	49·58 ²² 49·36 ²⁰ 49·16 ¹⁷	36·54 ²⁹ 36·25 ³⁶ 35·89 ⁴²	45·17 ²⁵⁵ 47·72 ²¹⁸ 49·90 ¹⁷⁶	12·992 ⁴¹ 12·951 ⁷⁸ 12·873 ¹¹²	43·92 ¹⁵⁷ 45·49 ¹³⁷ 46·86 ¹¹⁴	
Aug.	7·3 17·3 27·3	63·234 ¹³⁰ 63·104 ¹⁵⁵ 62·949 ¹⁷³	48·99 ¹⁵ 48·84 ¹³ 48·71 ¹²	35·47 ⁴⁷ 35·00 ⁵² 34·48 ⁵⁵	51·66 ¹³⁰ 52·96 ⁸² 53·78 ³⁰	12·761 ¹⁴¹ 12·620 ¹⁶⁵ 12·455 ¹⁸³	48·00 ⁸⁸ 48·88 ⁶¹ 49·49 ³⁴	
Sept.	6·3 16·2 26·2	62·776 ¹⁸¹ 62·595 ¹⁸⁰ 62·415 ¹⁶⁹	48·59 ¹² 48·47 ⁹ 48·38 ⁷	33·93 ⁵⁵ 33·38 ⁵⁵ 32·83 ⁵³	54·08 ²³ 53·85 ⁷⁵ 53·10 ¹²⁶	12·272 ¹⁹¹ 12·081 ¹⁹¹ 11·890 ¹⁸¹	49·83 ⁴ 49·87 ²⁶ 49·61 ⁵⁶	
Oct.	6·2 16·1 26·1	62·246 ¹⁴⁷ 62·099 ¹¹⁷ 61·982 ⁷⁸	48·31 ³ 48·28 ³ 48·31 ¹²	32·30 ⁴⁹ 31·81 ⁴⁴ 31·37 ³⁸	51·84 ¹⁷⁸ 50·06 ²²⁵ 47·81 ²⁶⁹	11·709 ¹⁶² 11·547 ¹³⁴ 11·413 ⁹⁷	49·05 ⁸⁶ 48·19 ¹¹⁶ 47·03 ¹⁴⁶	
Nov.	5·1 15·1 25·0	61·904 ³² 61·872 ¹⁸ 61·890 ⁶⁹	48·43 ²² 48·65 ³³ 48·98 ⁴⁶	30·99 ²⁹ 30·70 ²⁰ 30·50 ¹⁰	45·12 ³⁰⁷ 42·05 ³³⁹ 38·66 ³⁶¹	11·316 ⁵⁵ 11·261 ⁸ 11·253 ⁴¹	45·57 ¹⁷² 43·85 ¹⁹⁷ 41·88 ²¹⁷	
Dec.	5·0 15·0 25·0 34·9	61·959 ¹¹⁸ 62·077 ¹⁶⁵ 62·242 ²⁰⁶ 62·448	49·44 ⁶⁰ 50·04 ⁷² 50·76 ⁸¹ 51·57	30·40 ¹ 30·41 ¹¹ 30·52 ²¹ 30·73	35·05 ³⁷⁵ 31·30 ³⁷⁷ 27·53 ³⁶⁷ 23·86	11·294 ⁸⁹ 11·383 ¹³⁶ 11·519 ¹⁷⁸ 11·697	39·71 ²³² 37·39 ²⁴⁰ 34·99 ²⁴² 32·57	
Mean Place	61·015	55·47	33·83	29·16	10·873	32·91		
Sec δ, Tan δ	1·038	-0·280	2·440	+2·226	1·033	+0·258		
L α, L δ	+0·01	-0·1	-0·06	-0·1	-0·01	-0·1		
ω α, ω δ	0·00	-1·0	+0·03	-1·0	0·00	-1·0		
AUTHORITY	A. E.		A. E.		A. E.			

388 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	δ Herculis. Mag. 3.2		π Herculis. Mag. 3.4		θ Ophiuchi. Mag. 3.4	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.
	h m 17 11	° ′ 24 55	h m 17 12	° ′ 36 53	h m 17 17	° ′ 24 55
Jan. 0.9	52.734 ¹⁹⁷	45.18 ²⁷⁸	21.960 ²⁰¹	41.98 ³¹⁶	18.518 ^{23c}	19.54 ²⁶
10.9	52.931 ²³³	42.40 ²⁶¹	22.161 ²⁴²	38.82 ²⁹³	18.748 ²⁶³	19.80 ³⁶
20.9	53.164 ²⁶²	39.79 ²³⁵	22.403 ²⁷⁷	35.89 ²⁶²	19.011 ²⁸⁹	20.16 ⁴³
30.9	53.426 ²⁸²	37.44 ¹⁹⁹	22.680 ³⁰⁴	33.27 ²¹⁹	19.300 ³⁰⁷	20.59 ⁴⁸
Feb. 9.8	53.708 ²⁹⁶	35.45 ¹⁵⁶	22.984 ³²⁰	31.08 ¹⁶⁹	19.607 ³¹⁷	21.07 ⁴⁹
19.8	54.004 ³⁰³	33.89 ¹⁰⁸	23.304 ³³¹	29.39 ¹¹⁴	19.924 ³²³	21.56 ⁴⁸
29.8	54.307 ³⁰³	32.81 ⁵⁷	23.635 ³³²	28.25 ⁵⁴	20.247 ³²¹	22.04 ⁴⁵
Mar. 10.7	54.610 ²⁹⁸	32.24 ⁴	23.967 ³²⁶	27.71 ⁵	20.568 ³¹⁷	22.49 ⁴⁰
20.7	54.908 ²⁸⁷	32.20 ⁴⁶	24.293 ³¹⁵	27.76 ⁶⁴	20.885 ³⁰⁸	22.89 ³⁵
30.7	55.195 ²⁷²	32.66 ⁹⁵	24.608 ²⁹⁶	28.40 ¹¹⁸	21.193 ²⁹⁷	23.24 ³⁰
Apr. 9.7	55.467 ²⁵²	33.61 ¹³⁷	24.904 ²⁷⁴	29.58 ¹⁶⁶	21.490 ²⁸⁰	23.54 ²⁵
19.6	55.719 ²²⁹	34.98 ¹⁷⁴	25.178 ²⁴⁴	31.24 ²⁰⁸	21.770 ²⁶¹	23.79 ²¹
29.6	55.948 ²⁰³	36.72 ²⁰²	25.422 ²¹³	33.32 ²⁴⁰	22.031 ²³⁸	24.00 ¹⁹
May 9.6	56.151 ¹⁷¹	38.74 ²²⁴	25.635 ¹⁷⁵	35.72 ²⁶⁴	22.269 ²¹¹	24.19 ¹⁹
19.6	56.322 ¹³⁸	40.98 ²³⁶	25.810 ¹³⁶	38.36 ²⁷⁹	22.480 ¹⁸⁰	24.38 ¹⁹
29.5	56.460 ¹⁰²	43.34 ²⁴¹	25.946 ⁹⁴	41.15 ²⁸⁴	22.660 ¹⁴⁵	24.57 ²¹
June 8.5	56.562 ⁶³	45.75 ²³⁹	26.040 ⁵⁰	43.99 ²⁸⁰	22.805 ¹⁰⁸	24.78 ²³
18.5	56.625 ²⁴	48.14 ²³⁰	26.090 ⁵	46.79 ²⁷⁰	22.913 ⁶⁸	25.01 ²³
28.4	56.649 ¹⁷	50.44 ²¹⁴	26.095 ⁴¹	49.49 ²⁵¹	22.981 ²⁵	25.24 ²⁵
July 8.4	56.632 ⁵⁷	52.58 ¹⁹³	26.054 ⁸⁵	52.00 ²²⁷	23.006 ¹⁷	25.49 ²⁵
18.4	56.575 ⁹⁵	54.51 ¹⁶⁸	25.969 ¹²⁶	54.27 ¹⁹⁷	22.989 ⁵⁹	25.74 ²³
28.4	56.480 ¹³⁰	56.19 ¹³⁹	25.843 ¹⁶⁵	56.24 ¹⁶³	22.930 ⁹⁸	25.97 ²⁰
Aug. 7.3	56.350 ¹⁶⁰	57.58 ¹⁰⁸	25.678 ¹⁹⁷	57.87 ¹²⁵	22.832 ¹³³	26.17 ¹⁵
17.3	56.190 ¹⁸⁵	58.66 ⁷³	25.481 ²²⁴	59.12 ⁸³	22.699 ¹⁶¹	26.32 ⁹
27.3	56.005 ²⁰²	59.39 ³⁸	25.257 ²⁴¹	59.95 ⁴¹	22.538 ¹⁸¹	26.41 ¹
Sept. 6.3	55.803 ²¹²	59.77 ⁰	25.016 ²⁵²	60.36 ³	22.357 ¹⁹³	26.42 ⁶
16.2	55.591 ²¹¹	59.77 ³⁷	24.764 ²⁵⁰	60.33 ⁴⁸	22.164 ¹⁹³	26.36 ¹⁵
26.2	55.380 ²⁰²	59.40 ⁷⁵	24.514 ²⁴¹	59.85 ⁹³	21.971 ¹⁸³	26.21 ²¹
Oct. 6.2	55.178 ¹⁸¹	58.65 ¹¹³	24.273 ²¹⁹	58.92 ¹³⁷	21.788 ¹⁶²	26.00 ²⁷
16.1	54.997 ¹⁵³	57.52 ¹⁴⁹	24.054 ¹⁸⁸	57.55 ¹⁷⁹	21.626 ¹³¹	25.73 ³⁰
26.1	54.844 ¹¹⁶	56.03 ¹⁸³	23.866 ¹⁴⁸	55.76 ²¹⁹	21.495 ⁹⁰	25.43 ³¹
Nov. 5.1	54.728 ⁷¹	54.20 ²¹⁶	23.718 ¹⁰⁰	53.57 ²⁵⁵	21.405 ⁴³	25.12 ²⁷
15.1	54.657 ²³	52.04 ²⁴³	23.618 ⁴⁸	51.02 ²⁸⁶	21.362 ⁸	24.85 ²¹
25.0	54.634 ²⁸	49.61 ²⁶⁵	23.570 ⁹	48.16 ³⁰⁹	21.370 ⁶²	24.64 ¹³
Dec. 5.0	54.662 ⁷⁹	46.96 ²⁸¹	23.579 ⁶⁵	45.07 ³²⁵	21.432 ¹¹⁵	24.51 ¹
15.0	54.741 ¹²⁹	44.15 ²⁸⁸	23.644 ¹²¹	41.82 ³³⁰	21.547 ¹⁶⁴	24.50 ¹⁰
25.0	54.870 ¹⁷⁴	41.27 ²⁸⁷	23.765 ¹⁷³	38.52 ³²⁷	21.711 ²⁰⁹	24.60 ²¹
34.9	55.044	38.40	23.938	35.25	21.920	24.81
Mean Place	54.539	40.19	23.936	38.13	20.396	30.48
Sec δ, Tan δ	1.103	+0.465	1.250	+0.751	1.103	-0.465
L α, L δ	-0.01	-0.1	-0.02	-0.1	+0.01	-0.1
ω α, ω δ	+0.01	-1.0	+0.01	-1.0	-0.01	-1.0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 389

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Aræ. Mag. 2.8		σ Ophiuchi. Mag. 4.4		ν Scorpii. Mag. 2.8	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m 17 18	° ′ 55 27	h m 17 22	° ′ 4 12	h m 17 25	° ′ 37 13
Jan. 0.9	55.887 ³³⁶	21.08 ¹⁴²	42.865 ¹⁹³	26.57 ¹⁸⁶	33.409 ²⁴⁹	60.35 ⁵⁰
10.9	56.223 ³⁹⁰	19.66 ¹¹⁸	43.058 ²²⁵	24.71 ¹⁷⁹	33.658 ²⁸⁷	59.85 ³⁴
20.9	56.613 ⁴³²	18.48 ⁹¹	43.283 ²⁵⁰	22.92 ¹⁶⁵	33.945 ³¹⁹	59.51 ¹⁹
30.9	57.045 ⁴⁶⁵	17.57 ⁶²	43.533 ²⁶⁸	21.27 ¹⁴⁶	34.264 ³⁴⁰	59.32 ⁴
Feb. 9.8	57.510 ⁴⁸⁵	16.95 ³²	43.801 ²⁸⁰	19.81 ¹²¹	34.604 ³⁵⁴	59.28 ⁸
19.8	57.995 ⁴⁹⁶	16.63 ⁴	44.081 ²⁸⁵	18.60 ⁹⁰	34.958 ³⁶²	59.36 ¹⁹
29.8	58.491 ⁴⁹⁸	16.59 ²⁴	44.366 ²⁸⁷	17.70 ⁵⁶	35.320 ³⁶³	59.55 ²⁹
Mar. 10.8	58.989 ⁴⁹³	16.83 ⁴⁹	44.653 ²⁸³	17.14 ²¹	35.683 ³⁵⁹	59.84 ³⁸
20.7	59.482 ⁴⁷⁹	17.32 ⁷⁵	44.936 ²⁷⁵	16.93 ¹³	36.042 ³⁵²	60.22 ⁴⁴
30.7	59.961 ⁴⁵⁹	18.07 ⁹⁹	45.211 ²⁶⁵	17.06 ⁴⁶	36.394 ³³⁸	60.66 ⁷¹
Apr. 9.7	60.420 ⁴³⁴	19.06 ¹¹⁹	45.476 ²⁵⁰	17.52 ⁷⁶	36.732 ³²²	61.18 ⁵²
19.6	60.854 ⁴⁰¹	20.25 ¹³⁹	45.726 ²³²	18.28 ¹⁰⁰	37.054 ³⁰¹	61.77 ⁶⁵
29.6	61.255 ³⁶²	21.64 ¹⁵⁵	45.958 ²¹⁰	19.28 ¹²¹	37.355 ²⁷⁷	62.42 ⁷⁹
May 9.6	61.617 ³¹⁶	23.19 ¹⁷¹	46.168 ¹⁸⁶	20.49 ¹³⁴	37.632 ²⁴⁶	63.13 ⁷¹
19.6	61.933 ²⁶⁵	24.90 ¹⁸¹	46.354 ¹⁵⁸	21.83 ¹⁴⁴	37.878 ²¹¹	63.92 ⁸⁴
29.5	62.198 ²⁰⁸	26.71 ¹⁹⁰	46.512 ¹²⁵	23.27 ¹⁴⁷	38.089 ¹⁷²	64.76 ⁸⁹
June 8.5	62.406 ¹⁴⁶	28.61 ¹⁹³	46.637 ⁹¹	24.74 ¹⁴⁶	38.261 ¹²⁹	65.65 ⁹²
18.5	62.552 ⁸⁰	30.54 ¹⁹²	46.728 ⁵⁵	26.20 ¹⁴⁰	38.390 ⁸²	66.57 ⁹⁴
28.5	62.632 ¹⁴	32.46 ¹⁸⁵	46.783 ¹⁷	27.60 ¹³¹	38.472 ³⁴	67.51 ⁹²
July 8.4	62.646 ⁵⁴	34.31 ¹⁷⁴	46.800 ²²	28.91 ¹¹⁸	38.506 ¹⁶	68.43 ⁸⁹
18.4	62.592 ¹²⁰	36.05 ¹⁵⁶	46.778 ⁵⁹	30.09 ¹⁰³	38.490 ⁶³	69.32 ⁸²
28.4	62.472 ¹⁸¹	37.61 ¹³⁵	46.719 ⁹⁴	31.12 ⁸⁷	38.427 ¹⁰⁹	70.14 ⁷⁰
Aug. 7.3	62.291 ²³³	38.96 ¹⁰⁷	46.625 ¹²⁶	31.99 ⁶⁹	38.318 ¹⁵⁰	70.84 ⁵⁸
17.3	62.058 ²⁷⁷	40.03 ⁷⁵	46.499 ¹⁵¹	32.68 ⁵⁰	38.168 ¹⁸³	71.42 ⁴¹
27.3	61.781 ³⁰⁷	40.78 ⁴¹	46.348 ¹⁷¹	33.18 ²⁹	37.985 ²⁰⁷	71.83 ²³
Sept. 6.3	61.474 ³²⁵	41.19 ⁴	46.177 ¹⁸⁰	33.47 ¹⁰	37.778 ²²²	72.06 ³
16.2	61.149 ³²⁵	41.23 ³⁴	45.997 ¹⁸³	33.57 ¹¹	37.556 ²²⁴	72.09 ¹⁸
26.2	60.824 ³⁰⁹	40.89 ⁷¹	45.814 ¹⁷⁴	33.46 ³³	37.332 ²¹⁴	71.91 ³⁸
Oct. 6.2	60.515 ²⁷⁶	40.18 ¹⁰⁴	45.640 ¹⁵⁷	33.13 ⁵⁵	37.118 ¹⁸⁹	71.53 ⁵⁶
16.2	60.239 ²²⁸	39.14 ¹³⁵	45.483 ¹³⁰	32.58 ⁷⁶	36.929 ¹⁵⁹	70.97 ⁷¹
26.1	60.011 ¹⁶⁶	37.79 ¹⁵⁹	45.353 ⁹⁵	31.82 ¹⁰⁰	36.770 ¹¹³	70.26 ⁸²
Nov. 5.1	59.845 ⁹⁴	36.20 ¹⁷⁶	45.258 ⁵⁴	30.82 ¹²¹	36.657 ⁶⁰	69.44 ⁸⁹
15.1	59.751 ¹⁵	34.44 ¹⁸⁷	45.204 ⁹	29.61 ¹⁴¹	36.597 ³	68.55 ⁹¹
25.0	59.736 ⁶⁹	32.57 ¹⁹⁰	45.195 ³⁹	28.20 ¹⁵⁹	36.594 ⁵⁸	67.64 ⁸⁷
Dec. 5.0	59.805 ¹⁵⁰	30.67 ¹⁸⁴	45.234 ⁸⁷	26.61 ¹⁷⁴	36.652 ¹¹⁷	66.77 ⁸¹
15.0	59.955 ²²⁸	28.83 ¹⁷¹	45.321 ¹³²	24.87 ¹⁸⁴	36.769 ¹⁷³	65.96 ⁶⁹
25.0	60.183 ²⁹⁹	27.12 ¹⁵⁵	45.453 ¹⁷³	23.03 ¹⁸⁹	36.942 ²²²	65.27 ⁵⁷
34.9	60.482	25.57	45.626	21.14	37.164	64.70
Mean Place	58.699	35.13	44.584	19.14	35.538	72.24
Sec δ , Tan δ	1.764	-1.453	1.003	+0.074	1.256	-0.760
L α , L δ	+0.04	-0.1	0.00	-0.1	+0.02	-0.1
ω α , ω δ	-0.02	-1.0	0.00	-1.0	-0.01	-1.0
AUTHORITY	A. E.				A. N.	

390 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Aræ. Mag. 3.0		λ Scorpii. Mag. 1.7		β Draconis. Mag. 3.0	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h ^m 17 25	[°] ['] 49 48	^h ^m 17 28	[°] ['] 37 2	^h ^m 17 28	[°] ['] 52 21
Jan. 0.9	55.251 ²⁹⁴	50.68 ¹¹⁹	24.590 ²⁴⁶	47.50 ⁵¹	40.444 ¹⁹⁴	29.09 ³⁵⁰
10.9	55.545 ³⁴²	49.49 ⁹⁸	24.836 ²⁸⁵	46.99 ³⁵	40.638 ²⁵⁵	25.59 ³²⁶
20.9	55.887 ³⁸¹	48.51 ⁷⁵	25.121 ³¹⁵	46.64 ²¹	40.893 ³⁰⁶	22.33 ²⁹²
30.9	56.268 ⁴¹⁰	47.76 ⁵¹	25.436 ³³⁸	46.43 ⁷	41.199 ³⁴⁸	19.41 ²⁴⁷
Feb. 9.8	56.678 ⁴²⁸	47.25 ²⁷	25.774 ³⁵³	46.36 ⁶	41.547 ³⁷⁹	16.94 ¹⁹³
19.8	57.106 ⁴³⁹	46.98 ⁴	26.127 ³⁶¹	46.42 ¹⁷	41.926 ⁴⁰⁰	15.01 ¹³²
29.8	57.545 ⁴⁴²	46.94 ¹⁹	26.488 ³⁶²	46.59 ²⁶	42.326 ⁴¹⁰	13.69 ⁶⁷
Mar. 10.8	57.987 ⁴³⁸	47.13 ³⁹	26.850 ³⁶⁰	46.85 ³⁴	42.736 ⁴⁰⁸	13.02 ¹
20.7	58.425 ⁴²⁸	47.52 ⁶⁰	27.210 ³⁵²	47.19 ⁴²	43.144 ³⁹⁷	13.01 ⁶⁴
30.7	58.853 ⁴¹²	48.12 ⁷⁸	27.562 ³⁴⁰	47.61 ⁴⁹	43.541 ³⁷⁵	13.65 ¹²⁵
Apr. 9.7	59.265 ³⁹¹	48.90 ⁹⁶	27.902 ³²³	48.10 ⁵⁵	43.916 ³⁴⁶	14.90 ¹⁸⁰
19.6	59.656 ³⁶⁴	49.86 ¹¹³	28.225 ³⁰³	48.65 ⁶²	44.262 ³⁰⁹	16.70 ²²⁷
29.6	60.020 ³³²	50.99 ¹²⁶	28.528 ²⁷⁸	49.27 ⁶⁹	44.571 ²⁶⁵	18.97 ²⁶⁵
May 9.6	60.352 ²⁹³	52.25 ¹⁴⁰	28.806 ²⁴⁹	49.96 ⁷⁵	44.836 ²¹⁵	21.62 ²⁹⁴
19.6	60.645 ²⁵⁰	53.65 ¹⁵⁰	29.055 ²¹⁴	50.71 ⁸²	45.051 ¹⁶²	24.56 ³¹³
29.5	60.895 ²⁰⁰	55.15 ¹⁵⁸	29.269 ¹⁷⁴	51.53 ⁸⁷	45.213 ¹⁰⁴	27.69 ³²¹
June 8.5	61.095 ¹⁴⁷	56.73 ¹⁶²	29.443 ¹³²	52.40 ⁹⁰	45.317 ⁴⁵	30.90 ³²⁰
18.5	61.242 ⁸⁸	58.35 ¹⁶³	29.575 ⁸⁵	53.30 ⁹²	45.362 ¹⁵	34.10 ³¹⁰
28.5	61.330 ²⁹	59.98 ¹⁵⁸	29.660 ³⁸	54.22 ⁹²	45.347 ⁷⁶	37.20 ²⁹²
July 8.4	61.359 ³¹	61.56 ¹⁵⁰	29.698 ¹³	55.14 ⁸⁸	45.271 ¹³²	40.12 ²⁶⁶
18.4	61.328 ⁸⁹	63.06 ¹³⁷	29.685 ⁶¹	56.02 ⁸¹	45.139 ¹⁸⁷	42.78 ²³⁴
28.4	61.239 ¹⁴⁵	64.43 ¹¹⁹	29.624 ¹⁰⁶	56.83 ⁷¹	44.952 ²³⁶	45.12 ¹⁹⁸
Aug. 7.3	61.094 ¹⁹⁴	65.62 ⁹⁷	29.518 ¹⁴⁷	57.54 ⁵⁸	44.716 ²⁷⁹	47.10 ¹⁵⁵
17.3	60.900 ²³⁴	66.59 ⁷⁰	29.371 ¹⁸⁰	58.12 ⁴³	44.437 ³¹³	48.65 ¹⁰⁹
27.3	60.666 ²⁶³	67.29 ⁴¹	29.191 ²⁰⁶	58.55 ²⁵	44.124 ³³⁸	49.74 ⁶²
Sept. 6.3	60.403 ²⁸⁰	67.70 ⁹	28.985 ²²¹	58.80 ⁴	43.786 ³⁵²	50.36 ¹¹
16.2	60.123 ²⁸³	67.79 ²⁴	28.764 ²²³	58.84 ¹⁶	43.434 ³⁵⁵	50.47 ³⁹
26.2	59.840 ²⁷⁰	67.55 ⁵⁵	28.541 ²¹⁵	58.68 ³⁵	43.079 ³⁴⁵	50.08 ⁹¹
Oct. 6.2	59.570 ²⁴³	67.00 ⁸⁶	28.326 ¹⁹²	58.33 ⁵³	42.734 ³²⁴	49.17 ¹⁴⁰
16.2	59.327 ²⁰³	66.14 ¹¹²	28.134 ¹⁵⁹	57.80 ⁶⁸	42.410 ²⁹⁰	47.77 ¹⁸⁹
26.1	59.124 ¹⁴⁸	65.02 ¹³³	27.975 ¹¹⁵	57.12 ⁸⁰	42.120 ²⁴⁴	45.88 ²³⁵
Nov. 5.1	58.976 ⁸⁵	63.69 ¹⁴⁸	27.860 ⁶³	56.32 ⁸⁷	41.876 ¹⁸⁹	43.53 ²⁷⁵
15.1	58.891 ¹⁵	62.21 ¹⁵⁸	27.797 ⁶	55.45 ⁹⁰	41.687 ¹²⁶	40.78 ³¹⁰
25.0	58.876 ⁵⁸	60.63 ¹⁵⁹	27.791 ⁵⁴	54.55 ⁸⁷	41.561 ⁵⁸	37.68 ³³⁸
Dec. 5.0	58.934 ¹³⁰	59.04 ¹⁵⁴	27.845 ¹¹³	53.68 ⁸⁰	41.503 ¹³	34.30 ³⁵⁶
15.0	59.064 ¹⁹⁸	57.50 ¹⁴⁴	27.958 ¹⁷⁰	52.88 ⁶⁹	41.516 ⁸⁶	30.74 ³⁶⁴
25.0	59.262 ²⁶³	56.06 ¹²⁹	28.128 ²²⁰	52.19 ⁵⁷	41.602 ¹⁵⁴	27.10 ³⁶¹
34.9	59.525	54.77	28.348	51.62	41.756	23.49
Mean Place	57.809	63.72	26.732	59.20	42.874	25.38
Sec δ , Tan δ	1.550	-1.184	1.253	-0.755	1.637	+1.297
L α , L δ	+0.03	-0.1	+0.02	-0.1	-0.03	-0.1
ω α , ω δ	-0.01	-1.0	-0.01	-1.0	+0.01	-1.0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 391

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Ophiuchi. Mag. 2.1		θ Scorpii. Mag. 2.0		κ Scorpii. Mag. 2.5	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 17 31	° ' 36	h m 17 31	° ' 56	h m 17 37	° ' 59
Jan. 0.9	22.599 ¹⁸¹	57.55 ²²⁵	48.911 ²⁶¹	51.73 ⁸⁶	11.435 ²⁴¹	20.89 ⁶⁷
10.9	22.780 ²¹⁵	55.30 ²¹⁶	49.172 ³⁰³	50.87 ⁶⁹	11.676 ²⁸³	20.22 ⁵²
20.9	22.995 ²⁴³	53.14 ¹⁹⁸	49.475 ³³⁷	50.18 ⁵¹	11.959 ³¹⁵	19.70 ³⁷
30.9	23.238 ²⁶³	51.16 ¹⁷²	49.812 ³⁶²	49.67 ³³	12.274 ³³⁹	19.33 ²²
Feb. 9.8	23.501 ²⁷⁷	49.44 ¹⁴⁰	50.174 ³⁸⁰	49.34 ¹⁵	12.613 ³⁵⁶	19.11 ⁹
19.8	23.778 ²⁸⁴	48.04 ¹⁰²	50.554 ³⁸⁹	49.19 ²	12.969 ³⁶⁶	19.02 ³
29.8	24.062 ²⁸⁹	47.02 ⁶²	50.943 ³⁹³	49.21 ¹⁷	13.335 ³⁷⁰	19.05 ¹⁵
Mar. 10.8	24.351 ²⁸⁷	46.40 ¹⁹	51.336 ³⁹⁰	49.38 ³¹	13.705 ³⁶⁹	19.20 ²⁵
20.7	24.638 ²⁸⁰	46.21 ²³	51.726 ³⁸³	49.69 ⁴⁵	14.074 ³⁶²	19.45 ³⁴
30.7	24.918 ²⁶⁹	46.44 ⁶³	52.109 ³⁷⁰	50.14 ⁵⁸	14.436 ³⁵³	19.79 ⁴⁴
Apr. 9.7	25.187 ²⁵⁵	47.07 ⁹⁹	52.479 ³⁵³	50.72 ⁶⁹	14.789 ³³⁶	20.23 ⁵²
19.6	25.442 ²³⁷	48.06 ¹³⁰	52.832 ³³¹	51.41 ⁸¹	15.125 ³¹⁷	20.75 ⁶¹
29.6	25.679 ²¹⁶	49.36 ¹⁵⁵	53.163 ³⁰³	52.22 ⁹²	15.442 ²⁹³	21.36 ⁷¹
May 9.6	25.895 ¹⁹⁰	50.91 ¹⁷⁴	53.466 ²⁷¹	53.14 ¹⁰³	15.735 ²⁶³	22.07 ⁷⁸
19.6	26.085 ¹⁶⁰	52.65 ¹⁸⁵	53.737 ²³³	54.17 ¹¹¹	15.998 ²²⁸	22.85 ⁸⁷
29.5	26.245 ¹²⁸	54.50 ¹⁹¹	53.970 ¹⁹¹	55.28 ¹¹⁸	16.226 ¹⁸⁹	23.72 ⁹⁴
June 8.5	26.373 ⁹³	56.41 ¹⁹⁰	54.161 ¹⁴³	56.46 ¹²³	16.415 ¹⁴⁵	24.66 ⁹⁹
18.5	26.466 ⁵⁵	58.31 ¹⁸⁴	54.304 ⁹³	57.69 ¹²⁴	16.560 ⁹⁷	25.65 ¹⁰²
28.5	26.521 ¹⁶	60.15 ¹⁷³	54.397 ⁴⁰	58.93 ¹²⁴	16.657 ⁴⁶	26.67 ¹⁰²
July 8.4	26.537 ²³	61.88 ¹⁵⁷	54.437 ¹⁴	60.17 ¹¹⁸	16.703 ⁴	27.69 ¹⁰⁰
18.4	26.514 ⁶¹	63.45 ¹³⁸	54.423 ⁶⁸	61.35 ¹⁰⁹	16.699 ⁵⁵	28.69 ⁹⁷
28.4	26.453 ⁹⁸	64.83 ¹¹⁷	54.355 ¹¹⁶	62.44 ⁹⁶	16.644 ¹⁰²	29.66 ⁷⁹
Aug. 7.3	26.355 ¹²⁹	66.00 ⁹³	54.239 ¹⁶¹	63.40 ⁷⁹	16.542 ¹⁴⁶	30.45 ⁷⁰
17.3	26.226 ¹⁵⁶	66.93 ⁶⁸	54.078 ¹⁹⁹	64.19 ⁵⁹	16.396 ¹⁸²	31.15 ⁵⁴
27.3	26.070 ¹⁷⁷	67.61 ⁴¹	53.879 ²²⁵	64.78 ³⁶	16.214 ²¹⁰	31.69 ³⁴
Sept. 6.3	25.893 ¹⁸⁸	68.02 ¹³	53.654 ²⁴³	65.14 ¹¹	16.004 ²²⁶	32.03 ¹²
16.2	25.705 ¹⁹¹	68.15 ¹⁵	53.411 ²⁴⁶	65.25 ¹⁶	15.778 ²³¹	32.15 ⁹
26.2	25.514 ¹⁸⁵	68.00 ⁴⁴	53.165 ²³⁷	65.09 ⁴¹	15.547 ²²⁴	32.06 ³²
Oct. 6.2	25.329 ¹⁶⁹	67.56 ⁷³	52.928 ²¹⁴	64.68 ⁶⁵	15.323 ²⁰³	31.74 ⁵²
16.2	25.160 ¹⁴³	66.83 ¹⁰¹	52.714 ¹⁷⁸	64.03 ⁸⁶	15.120 ¹⁶⁹	31.22 ⁶⁹
26.1	25.017 ¹¹⁰	65.82 ¹³⁰	52.536 ¹³²	63.17 ¹⁰²	14.951 ¹²⁷	30.53 ⁸⁴
Nov. 5.1	24.907 ⁶⁹	64.52 ¹⁵⁶	52.404 ⁷⁶	62.15 ¹¹⁵	14.824 ⁷⁵	29.69 ⁹⁴
15.1	24.838 ²⁴	62.96 ¹⁸¹	52.328 ¹⁴	61.00 ¹²⁰	14.749 ¹⁶	28.75 ⁹⁹
25.0	24.814 ²³	61.15 ²⁰¹	52.314 ⁵⁰	59.80 ¹²¹	14.733 ⁴⁴	27.76 ⁹⁸
Dec. 5.0	24.837 ⁷¹	59.14 ²¹⁷	52.364 ¹¹⁵	58.59 ¹¹⁶	14.777 ¹⁰⁴	26.78 ⁹³
15.0	24.908 ¹¹⁷	56.97 ²²⁷	52.479 ¹⁷⁶	57.43 ¹⁰⁷	14.881 ¹⁶³	25.85 ⁸⁵
25.0	25.025 ¹⁶⁰	54.70 ²³⁰	52.655 ²³¹	56.36 ⁹⁴	15.044 ²¹⁴	25.00 ⁷³
34.9	25.185	52.40	52.886	55.42	15.258	24.27
Mean Place Sec δ , Tan δ	24.345 1.025	50.93 +0.224	51.236 1.366	63.77 -0.931	13.658 1.287	32.25 -0.810
L α , L δ $\omega \alpha$, $\omega \delta$	-0.01 0.00	-0.1 -1.0	+0.02 -0.01	-0.1 -1.0	+0.02 -0.01	0.0 -1.0
AUTHORITY	A. E.		A. E.		A. N.	

392 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Pavonis. Mag. 3·6		β Ophiuchi. Mag. 2·9		ι Scorpii. Mag. 3·1	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m 17 38	° ' " 64 41	h m 17 39	° ' " 4 35	h m 17 42	° ' " 40 5
Jan. 1·0	12·31 ³⁸	9·94 ²⁰²	41·309 ¹⁷⁸	59·77 ¹⁸³	13·722 ²³⁹	45·29 ⁷⁷
10·9	12·69 ⁴⁶	7·92 ¹⁷⁷	41·487 ²¹¹	57·94 ¹⁷⁷	13·961 ²⁸¹	44·52 ⁶²
20·9	13·15 ⁵²	6·15 ¹⁴⁹	41·698 ²³⁸	56·17 ¹⁶⁴	14·242 ³¹⁴	43·90 ⁴⁷
30·9	13·67 ⁵⁸	4·66 ¹¹⁶	41·936 ²⁵⁷	54·53 ¹⁴⁵	14·556 ³⁴¹	43·43 ³¹
Feb. 9·8	14·25 ⁶¹	3·50 ⁸²	42·193 ²⁷²	53·08 ¹²⁰	14·897 ³⁵⁹	43·12 ¹⁸
19·8	14·86 ⁶³	2·68 ⁴⁷	42·465 ²⁸²	51·88 ⁸⁹	15·256 ³⁷⁰	42·94 ⁵
29·8	15·49 ⁶⁵	2·21 ¹²	42·747 ²⁸⁴	50·99 ⁵⁶	15·626 ³⁷⁴	42·89 ⁸
Mar. 10·8	16·14 ⁶⁴	2·09 ²³	43·031 ²⁸⁴	50·43 ²⁰	16·000 ³⁷⁵	42·97 ¹⁹
20·7	16·78 ⁶⁴	2·32 ⁵⁵	43·315 ²⁸⁰	50·23 ¹⁴	16·375 ³⁶⁹	43·16 ³⁰
30·7	17·42 ⁶¹	2·87 ⁸⁷	43·595 ²⁷⁰	50·37 ⁴⁸	16·744 ³⁶⁰	43·46 ⁴¹
Apr. 9·7	18·03 ⁵⁸	3·74 ¹¹⁷	43·865 ²⁵⁹	50·85 ⁷⁸	17·104 ³⁴⁴	43·87 ⁵⁰
19·7	18·61 ⁵⁵	4·91 ¹⁴⁵	44·124 ²⁴³	51·63 ¹⁰⁴	17·448 ³²⁶	44·37 ⁶¹
29·6	19·16 ⁵⁰	6·36 ¹⁷⁰	44·367 ²²²	52·67 ¹²⁵	17·774 ³⁰¹	44·98 ⁷⁰
May 9·6	19·66 ⁴³	8·06 ¹⁹²	44·589 ¹⁹⁹	53·92 ¹⁴⁰	18·075 ²⁷²	45·68 ⁸¹
19·6	20·09 ³⁷	9·98 ²¹⁰	44·788 ¹⁷²	55·32 ¹⁵⁰	18·347 ²³⁷	46·49 ⁸⁹
29·5	20·46 ²⁹	12·08 ²²³	44·960 ¹⁴⁰	56·82 ¹⁵⁴	18·584 ¹⁹⁶	47·38 ⁹⁸
June 8·5	20·75 ²¹	14·31 ²³¹	45·100 ¹⁰⁶	58·36 ¹⁵³	18·780 ¹⁵³	48·36 ¹⁰³
18·5	20·96 ¹³	16·62 ²³⁴	45·206 ⁷⁰	59·89 ¹⁴⁷	18·933 ¹⁰⁴	49·39 ¹⁰⁷
28·5	21·09 ³	18·96 ²³⁰	45·276 ³⁰	61·36 ¹³⁹	19·037 ⁵²	50·46 ¹⁰⁹
July 8·4	21·12 ⁶	21·26 ²²⁰	45·306 ⁹	62·75 ¹²⁶	19·089 ¹	51·55 ¹⁰⁶
18·4	21·06 ¹⁴	23·46 ²⁰³	45·297 ⁴⁸	64·01 ¹¹⁰	19·090 ⁵¹	52·61 ¹⁰⁰
28·4	20·92 ²³	25·49 ¹⁷⁹	45·249 ⁸⁴	65·11 ⁹⁴	19·039 ¹⁰¹	53·61 ⁹⁰
Aug. 7·4	20·69 ³⁰	27·28 ¹⁵¹	45·165 ¹¹⁷	66·05 ⁷⁵	18·938 ¹⁴⁵	54·51 ⁷⁶
17·3	20·39 ³⁷	28·79 ¹¹⁵	45·048 ¹⁴⁶	66·80 ⁵⁶	18·793 ¹⁸³	55·27 ⁶⁰
27·3	20·02 ⁴¹	29·94 ⁷⁴	44·902 ¹⁶⁷	67·36 ³⁵	18·610 ²¹¹	55·87 ⁴⁰
Sept. 6·3	19·61 ⁴⁴	30·68 ³¹	44·735 ¹⁸⁰	67·71 ¹⁴	18·399 ²²⁹	56·27 ¹⁷
16·2	19·17 ⁴⁵	30·99 ¹⁴	44·555 ¹⁸⁴	67·85 ⁷	18·170 ²³⁵	56·44 ⁶
26·2	18·72 ⁴³	30·85 ⁵⁹	44·371 ¹⁸⁰	67·78 ²⁹	17·935 ²³⁰	56·38 ²⁹
Oct. 6·2	18·29 ⁴⁰	30·26 ¹⁰²	44·191 ¹⁶³	67·49 ⁵¹	17·705 ²⁰⁹	56·09 ⁵⁰
16·2	17·89 ³⁴	29·24 ¹⁴²	44·028 ¹⁴⁰	66·98 ⁷³	17·496 ¹⁷⁵	55·59 ⁷⁰
26·1	17·55 ²⁷	27·82 ¹⁷⁶	43·888 ¹⁰⁸	66·25 ⁹⁵	17·321 ¹³⁵	54·89 ⁸⁶
Nov. 5·1	17·28 ¹⁸	26·06 ²⁰³	43·780 ⁶⁸	65·30 ¹¹⁸	17·186 ⁸¹	54·03 ⁹⁷
15·1	17·10 ⁸	24·03 ²²²	43·712 ²³	64·12 ¹³⁷	17·105 ²⁴	53·06 ¹⁰⁴
25·1	17·02 ²	21·81 ²³²	43·689 ²²	62·75 ¹⁵⁶	17·081 ³⁸	52·02 ¹⁰⁴
Dec. 5·0	17·04 ¹³	19·49 ²³⁴	43·711 ⁷⁰	61·19 ¹⁷¹	17·119 ⁹⁹	50·98 ¹⁰¹
15·0	17·17 ²⁴	17·15 ²²⁷	43·781 ¹¹⁵	59·48 ¹⁸¹	17·218 ¹⁵⁸	49·97 ⁹³
25·0	17·41 ³³	14·88 ²¹²	43·896 ¹⁵⁶	57·67 ¹⁸⁵	17·376 ²¹²	49·04 ⁸²
34·9	17·74	12·76	44·052	55·82	17·588	48·22
Mean Place	16·096	23·11	43·054	52·40	15·997	56·41
Sec δ, Tan δ	2·339	-2·115	1·003	+0·080	1·307	-0·842
L α, L δ	+0·05	0·0	0·00	0·0	+0·02	0·0
ω α, ω δ	-0·01	-1·0	0·00	-1·0	0·00	-1·0
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 393

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	μ Herculis. Mag. 3.5		89 Herculis. Mag. 5.5		γ Draconis. Mag. 2.4	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	^h ^m 17 43	[°] ['] 27 45	^h ^m 17 52	[°] ['] 26 3	^h ^m 17 54	[°] ['] 51 29
Jan. 1.0	27.150 ¹⁶⁴	56.72 ²⁹⁰	19.420 ¹⁵⁶	46.12 ²⁸¹	48.101 ¹⁵⁴	55.26 ³⁵²
10.9	27.314 ²⁰⁴	53.82 ²⁷⁶	19.576 ¹⁹⁵	43.31 ²⁶⁹	48.255 ²¹⁴	51.74 ³³⁴
20.9	27.518 ²³⁷	51.06 ²⁵²	19.771 ²³⁰	40.62 ²⁴⁶	48.469 ²⁶⁹	48.40 ³⁰⁶
30.9	27.755 ²⁶⁴	48.54 ²¹⁸	20.001 ²⁵⁶	38.16 ²¹⁵	48.738 ³¹⁵	45.34 ²⁶⁵
Feb. 9.9	28.019 ²⁸⁴	46.36 ¹⁷⁶	20.257 ²⁷⁶	36.01 ¹⁷⁴	49.053 ³⁵¹	42.69 ²¹⁵
19.8	28.303 ²⁹⁶	44.60 ¹²⁹	20.533 ²⁹⁰	34.27 ¹²⁹	49.404 ³⁷⁹	40.54 ¹⁵⁸
29.8	28.599 ³⁰⁴	43.31 ⁷⁶	20.823 ²⁹⁹	32.98 ⁷⁷	49.783 ³⁹⁵	38.96 ⁹⁵
Mar. 10.8	28.903 ³⁰⁴	42.55 ²²	21.122 ³⁰¹	32.21 ²⁵	50.178 ⁴⁰¹	38.01 ²⁹
20.7	29.207 ²⁹⁹	42.33 ³²	21.423 ²⁹⁸	31.96 ²⁸	50.579 ³⁹⁷	37.72 ³⁶
30.7	29.506 ²⁹⁰	42.65 ⁸³	21.721 ²⁹⁰	32.24 ⁷⁹	50.976 ³⁸³	38.08 ⁹⁹
Apr. 9.7	29.796 ²⁷³	43.48 ¹³⁰	22.011 ²⁷⁷	33.03 ¹²⁵	51.359 ³⁶¹	39.07 ¹⁵⁶
19.7	30.069 ²⁵⁴	44.78 ¹⁷⁰	22.288 ²⁵⁸	34.28 ¹⁶⁵	51.720 ³³⁰	40.63 ²⁰⁷
29.6	30.323 ²³⁰	46.48 ²⁰⁴	22.546 ²³⁶	35.93 ¹⁹⁹	52.050 ²⁹³	42.70 ²⁴⁹
May 9.6	30.553 ²⁰⁰	48.52 ²³⁰	22.782 ²⁰⁸	37.92 ²²⁵	52.343 ²⁴⁷	45.19 ²⁸³
19.6	30.753 ¹⁶⁸	50.82 ²⁴⁶	22.990 ¹⁷⁷	40.17 ²⁴³	52.590 ¹⁹⁶	48.02 ³⁰⁶
29.6	30.921 ¹³¹	53.28 ²⁵⁶	23.167 ¹⁴²	42.60 ²⁵²	52.786 ¹⁴²	51.08 ³²⁰
June 8.5	31.052 ⁹²	55.84 ²⁵⁷	23.309 ¹⁰²	45.12 ²⁵⁴	52.928 ⁸⁴	54.28 ³²⁵
18.5	31.144 ⁵⁰	58.41 ²⁵¹	23.411 ⁶²	47.66 ²⁵⁰	53.012 ²⁴	57.53 ³²⁰
28.5	31.194 ⁶	60.92 ²³⁷	23.473 ¹⁸	50.16 ²³⁷	53.036 ³⁷	60.73 ³⁰⁵
July 8.4	31.200 ³⁶	63.29 ²¹⁹	23.491 ²⁴	52.53 ²¹⁹	52.999 ⁹⁶	63.78 ²⁸⁵
18.4	31.164 ⁷⁸	65.48 ¹⁹⁵	23.467 ⁶⁷	54.72 ¹⁹⁷	52.903 ¹⁵²	66.63 ²⁵⁷
28.4	31.086 ¹¹⁸	67.43 ¹⁶⁶	23.400 ¹⁰⁷	56.69 ¹⁷⁰	52.751 ²⁰⁶	69.20 ²²⁴
Aug. 7.4	30.968 ¹⁵²	69.09 ¹³⁴	23.293 ¹⁴³	58.39 ¹³⁹	52.545 ²⁵¹	71.44 ¹⁸³
17.3	30.816 ¹⁸²	70.43 ¹⁰⁰	23.150 ¹⁷³	59.78 ¹⁰⁵	52.294 ²⁹¹	73.27 ¹⁴¹
27.3	30.634 ²⁰⁵	71.43 ⁶³	22.977 ¹⁹⁷	60.83 ⁷¹	52.003 ³²²	74.68 ⁹⁵
Sept. 6.3	30.429 ²¹⁹	72.06 ²⁴	22.780 ²¹³	61.54 ³³	51.681 ³⁴¹	75.63 ⁴⁶
16.3	30.210 ²²⁴	72.30 ¹⁵	22.567 ²¹⁹	61.87 ⁶	51.340 ³⁵¹	76.09 ⁴
26.2	29.986 ²¹⁹	72.15 ⁵⁶	22.348 ²¹⁷	61.81 ⁴⁴	50.989 ³⁴⁷	76.05 ⁵⁶
Oct. 6.2	29.767 ²⁰⁵	71.59 ⁹⁵	22.131 ²⁰²	61.37 ⁸⁴	50.642 ³³¹	75.49 ¹⁰⁷
16.2	29.562 ¹⁸⁰	70.64 ¹³⁴	21.929 ¹⁸⁰	60.53 ¹²²	50.311 ³⁰³	74.42 ¹⁵⁷
26.1	29.382 ¹⁴⁷	69.30 ¹⁷³	21.749 ¹⁴⁷	59.31 ¹⁵⁸	50.008 ²⁶⁴	72.85 ²⁰⁴
Nov. 5.1	29.235 ¹⁰⁵	67.57 ²⁰⁷	21.602 ¹⁰⁹	57.73 ¹⁹⁴	49.744 ²¹⁵	70.81 ²⁴⁹
15.1	29.130 ⁶⁰	65.50 ²³⁸	21.493 ⁶⁴	55.79 ²²⁵	49.529 ¹⁵⁶	68.32 ²⁸⁷
25.1	29.070 ¹⁰	63.12 ²⁶⁴	21.429 ¹⁵	53.54 ²⁵⁰	49.373 ⁹³	65.45 ³¹⁹
Dec. 5.0	29.060 ⁴¹	60.48 ²⁸³	21.414 ³⁵	51.04 ²⁷¹	49.280 ²⁴	62.26 ³⁴³
15.0	29.101 ⁹¹	57.65 ²⁹⁵	21.449 ⁸⁴	48.33 ²⁸³	49.256 ⁴⁵	58.83 ³⁵⁷
25.0	29.192 ¹³⁹	54.70 ²⁹⁶	21.533 ¹³¹	45.50 ²⁸⁶	49.301 ¹¹³	55.26 ³⁵⁹
35.0	29.331	51.74	21.664	42.64	49.414	51.67
Mean Place	29.003	50.99	21.256	40.03	50.466	49.98
Sec δ , Tan δ	1.130	+0.526	1.113	+0.489	1.606	+1.257
L α , L δ	-0.01	0.0	-0.01	0.0	-0.03	0.0
ω α , ω δ	0.00	-1.0	0.00	-1.0	0.00	-1.0
AUTHORITY	A. E.				A. E.	

394 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ν Ophiuchi. Mag. 3.5		γ Sagittarii. Mag. 3.1		72 Ophiuchi. Mag. 3.7	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	^h ^m 17 54	[°] ['] 9 45	^h ^m 18 0	[°] ['] 30 25	^h ^m 18 3	[°] ['] 9 33
Jan. 1.0	48.688 ¹⁷⁶	47.79 ⁹⁸	53.345 ¹⁹⁷	26.22 ²⁹	42.987 ¹⁵²	14.26 ²⁰³
10.9	48.864 ²⁰⁹	48.77 ⁹⁹	53.542 ²³⁶	25.93 ²¹	43.139 ¹⁸⁷	12.23 ¹⁹⁷
20.9	49.073 ²³⁷	49.76 ⁹⁵	53.778 ²⁶⁸	25.72 ¹⁴	43.326 ²¹⁷	10.26 ¹⁸³
30.9	49.310 ²⁵⁹	50.71 ⁸⁶	54.046 ²⁹²	25.58 ⁷	43.543 ²⁴¹	8.43 ¹⁶²
Feb. 9.9	49.569 ²⁷⁴	51.57 ⁷³	54.338 ³¹²	25.51 ³	43.784 ²⁶⁰	6.81 ¹³³
19.8	49.843 ²⁸⁵	52.30 ⁵⁶	54.650 ³²⁴	25.48 ⁰	44.044 ²⁷²	5.48 ¹⁰⁰
29.8	50.128 ²⁹⁰	52.86 ³⁸	54.974 ³³¹	25.48 ³	44.316 ²⁸⁰	4.48 ⁶²
Mar. 10.8	50.418 ²⁹²	53.24 ¹⁶	55.305 ³³⁵	25.51 ³	44.596 ²⁸⁴	3.86 ²³
20.8	50.710 ²⁸⁹	53.40 ⁴	55.640 ³³³	25.54 ⁵	44.880 ²⁸³	3.63 ¹⁷
30.7	50.999 ²⁸⁴	53.36 ²⁵	55.973 ³²⁷	25.59 ⁶	45.163 ²⁷⁸	3.80 ⁵⁴
Apr. 9.7	51.283 ²⁷⁴	53.11 ⁴²	56.300 ³¹⁷	25.65 ⁷	45.441 ²⁶⁸	4.34 ⁹⁰
19.7	51.557 ²⁶¹	52.69 ⁵⁷	56.617 ³⁰⁴	25.72 ¹¹	45.709 ²⁵⁶	5.24 ¹²⁰
29.6	51.818 ²⁴³	52.12 ⁶⁸	56.921 ²⁸⁴	25.83 ¹⁶	45.965 ²³⁸	6.44 ¹⁴⁶
May 9.6	52.061 ²²²	51.44 ⁷⁶	57.205 ²⁶¹	25.99 ²¹	46.203 ²¹⁵	7.90 ¹⁶⁴
19.6	52.283 ¹⁹⁵	50.68 ⁸⁰	57.466 ²³¹	26.20 ²⁷	46.418 ¹⁹⁰	9.54 ¹⁷⁷
29.6	52.478 ¹⁶⁵	49.88 ⁸⁰	57.697 ¹⁹⁷	26.47 ³⁵	46.608 ¹⁵⁹	11.31 ¹⁸⁴
June 8.5	52.643 ¹³¹	49.08 ⁷⁸	57.894 ¹⁵⁹	26.82 ⁴¹	46.767 ¹²⁴	13.15 ¹⁸⁴
18.5	52.774 ⁹⁴	48.30 ⁷²	58.053 ¹¹⁶	27.23 ⁴⁸	46.891 ⁸⁷	14.99 ¹⁸⁰
28.5	52.868 ⁵³	47.58 ⁶⁵	58.169 ⁷⁰	27.71 ⁵³	46.978 ⁴⁷	16.79 ¹⁷⁰
July 8.5	52.921 ¹³	46.93 ⁵⁷	58.239 ²³	28.24 ⁵⁶	47.025 ⁶	18.49 ¹⁵⁷
18.4	52.934 ²⁸	46.36 ⁴⁷	58.262 ²⁵	28.80 ⁵⁷	47.031 ³⁴	20.06 ¹⁴⁰
28.4	52.906 ⁶⁸	45.89 ³⁸	58.237 ⁷⁰	29.37 ⁵⁵	46.997 ⁷³	21.46 ¹²⁰
Aug. 7.4	52.838 ¹⁰³	45.51 ²⁹	58.167 ¹¹³	29.92 ⁵¹	46.924 ¹⁰⁹	22.66 ¹⁰⁰
17.3	52.735 ¹³⁵	45.22 ²⁰	58.054 ¹⁴⁹	30.43 ⁴³	46.815 ¹⁴⁰	23.66 ⁷⁵
27.3	52.600 ¹⁵⁹	45.02 ¹¹	57.905 ¹⁷⁸	30.86 ³⁴	46.675 ¹⁶⁴	24.41 ⁵¹
Sept. 6.3	52.441 ¹⁷⁵	44.91 ⁴	57.727 ¹⁹⁸	31.20 ²²	46.511 ¹⁸¹	24.92 ²⁶
16.3	52.266 ¹⁸²	44.87 ⁴	57.529 ²⁰⁷	31.42 ⁹	46.330 ¹⁸⁹	25.18 ¹
26.2	52.084 ¹⁷⁹	44.91 ¹²	57.322 ²⁰⁴	31.51 ⁵	46.141 ¹⁸⁸	25.19 ²⁶
Oct. 6.2	51.905 ¹⁶⁶	45.03 ²⁰	57.118 ¹⁹⁰	31.46 ¹⁸	45.953 ¹⁷⁶	24.93 ⁵³
16.2	51.739 ¹⁴³	45.23 ²⁹	56.928 ¹⁶⁵	31.28 ²⁹	45.777 ¹⁵⁶	24.40 ⁷⁸
26.2	51.596 ¹¹¹	45.52 ⁴⁰	56.763 ¹²⁹	30.99 ³⁹	45.621 ¹²⁷	23.62 ¹⁰⁵
Nov. 5.1	51.485 ⁷²	45.92 ⁵⁰	56.634 ⁸⁵	30.60 ⁴⁵	45.494 ⁹⁰	22.57 ¹²⁹
15.1	51.413 ²⁸	46.42 ⁶¹	56.549 ³⁶	30.15 ⁴⁸	45.404 ⁴⁹	21.28 ¹⁵³
25.1	51.385 ¹⁹	47.03 ⁷³	56.513 ¹⁸	29.67 ⁴⁸	45.355 ⁴	19.75 ¹⁷³
Dec. 5.0	51.404 ⁶⁶	47.76 ⁸³	56.531 ⁷¹	29.19 ⁴⁴	45.351 ⁴³	18.02 ¹⁹⁰
15.0	51.470 ¹¹²	48.59 ⁹²	56.602 ¹²⁴	28.75 ³⁹	45.394 ⁸⁷	16.12 ²⁰⁰
25.0	51.582 ¹⁵⁴	49.51 ⁹⁹	56.726 ¹⁷²	28.36 ³²	45.481 ¹³⁰	14.12 ²⁰⁶
35.0	51.736	50.50	56.898	28.04	45.611	12.06
Mean Place	50.508	56.04	55.447	35.52	44.751	7.22
Sec δ , Tan δ	1.015	-0.172	1.160	-0.587	1.014	+0.168
L α , L δ	0.00	0.0	+0.02	0.0	0.00	0.0
$\omega \alpha$, $\omega \delta$	0.00	-1.0	0.00	-1.0	0.00	-1.0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 395

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	μ Sagittarii. Mag. 4.0		η Sagittarii. Mag. 3.2		δ Sagittarii. Mag. 2.8							
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.						
	^h 18	^m 9	[°] 21	['] 4	^h 18	^m 12	^h 18	^m 16	[°] 29	['] 51		
Jan. 1.0	11.091	175	39.96	24	26.741	196	60.51	73	5.585	179	34.23	32
10.9	11.266	211	40.20	28	26.937	239	59.78	64	5.764	219	33.91	28
20.9	11.477	241	40.48	29	27.176	274	59.14	55	5.983	253	33.63	21
30.9	11.718	265	40.77	29	27.450	303	58.59	44	6.236	279	33.42	17
Feb. 9.9	11.983	284	41.06	24	27.753	325	58.15	36	6.515	300	33.25	13
19.8	12.267	296	41.30	19	28.078	341	57.79	28	6.815	315	33.12	12
29.8	12.563	305	41.49	11	28.419	351	57.51	20	7.130	325	33.00	10
Mar. 10.8	12.868	309	41.60	2	28.770	357	57.31	12	7.455	330	32.90	11
20.8	13.177	308	41.62	7	29.127	357	57.19	4	7.785	332	32.79	10
30.7	13.485	305	41.55	15	29.484	353	57.15	3	8.117	328	32.69	9
Apr. 9.7	13.790	297	41.40	22	29.837	345	57.18	13	8.445	322	32.60	7
19.7	14.087	286	41.18	27	30.182	331	57.31	20	8.767	309	32.53	5
29.6	14.373	268	40.91	29	30.513	313	57.51	31	9.076	294	32.48	1
May 9.6	14.641	248	40.62	29	30.826	288	57.82	42	9.370	271	32.49	8
19.6	14.889	222	40.33	27	31.114	258	58.24	53	9.641	245	32.57	14
29.6	15.111	191	40.06	23	31.372	222	58.77	64	9.886	211	32.71	23
June 8.5	15.302	155	39.83	17	31.594	181	59.41	73	10.097	174	32.94	32
18.5	15.457	116	39.66	10	31.775	135	60.14	82	10.271	132	33.26	40
28.5	15.573	73	39.56	3	31.910	86	60.96	88	10.403	86	33.66	47
July 8.5	15.646	30	39.53	3	31.996	35	61.84	91	10.489	39	34.13	52
18.4	15.676	14	39.56	9	32.031	17	62.75	91	10.528	9	34.65	56
28.4	15.662	58	39.65	14	32.014	67	63.66	87	10.519	57	35.21	56
Aug. 7.4	15.604	98	39.79	15	31.947	114	64.53	81	10.462	101	35.77	53
17.3	15.506	133	39.94	17	31.833	155	65.34	69	10.361	139	36.30	49
27.3	15.373	160	40.11	16	31.678	188	66.03	55	10.222	170	36.79	40
Sept. 6.3	15.213	180	40.27	13	31.490	210	66.58	38	10.052	191	37.19	29
16.3	15.033	190	40.40	10	31.280	224	66.96	19	9.861	204	37.48	18
26.2	14.843	190	40.50	6	31.056	224	67.15	2	9.657	206	37.66	4
Oct. 6.2	14.653	178	40.56	2	30.832	210	67.13	22	9.451	193	37.70	9
16.2	14.475	155	40.58	0	30.622	185	66.91	40	9.258	172	37.61	20
26.2	14.320	124	40.58	2	30.437	150	66.51	56	9.086	138	37.41	31
Nov. 5.1	14.196	84	40.56	1	30.287	104	65.95	69	8.948	96	37.10	38
15.1	14.112	40	40.55	1	30.183	53	65.26	79	8.852	49	36.72	43
25.1	14.072	10	40.56	6	30.130	4	64.47	83	8.803	2	36.29	44
Dec. 5.0	14.082	58	40.62	11	30.134	61	63.64	84	8.805	56	35.85	43
15.0	14.140	107	40.73	18	30.195	117	62.80	81	8.861	107	35.42	39
25.0	14.247	152	40.91	23	30.312	169	61.99	75	8.968	155	35.03	34
35.0	14.399		41.14		30.481		61.24		9.123		34.69	
Mean Place	13.052		48.34		29.022		69.44		7.705		42.64	
Sec δ , Tan δ	1.072		-0.385		1.249		-0.748		1.153		-0.574	
L α , L δ	+0.01		0.0		+0.02		0.0		+0.02		0.0	
ω α , ω δ	0.00		-1.0		0.00		-1.0		0.00		-1.0	
AUTHORITY	A. E.		A. N.		A. N.		A. N.		A. N.		A. N.	

APPARENT PLACES OF STARS, 1924. 397

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	λ Sagittarii. Mag. 2.9		α Lyræ. Mag. 0.1		4 H. Scuti. Mag. 4.7								
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.							
	^h 18	^m 23	[°] 25	['] 27	^h 18	^m 34	[°] 38	['] 42	^h 18	^m 38	[°] 9	['] 7	
Jan. 1.0	14.757 ₁₆₆	46.54 ₉	19.960 ₁₀₂	50.70 ₃₁₉	4.970 ₁₃₄	28.63 ₈₈	11.0	14.923 ₂₀₄	46.45 ₄	20.062 ₁₅₂	47.51 ₃₁₂	5.104 ₁₆₉	29.51 ₈₇
20.9	15.127 ₂₃₆	46.41 ₁	20.214 ₁₉₇	44.39 ₂₉₂	5.273 ₂₀₁	30.38 ₈₁	30.9	15.363 ₂₆₃	46.40 ₁	20.411 ₂₃₅	41.47 ₂₆₁	5.474 ₂₂₆	31.19 ₇₂
Feb. 9.9	15.626 ₂₈₄	46.39 ₁	20.646 ₂₆₈	38.86 ₂₂₂	5.700 ₂₄₇	31.91 ₅₈	19.9	15.910 ₃₀₀	46.38 ₃	20.914 ₂₉₅	36.64 ₁₇₃	5.947 ₂₆₄	32.49 ₄₁
29.8	16.210 ₃₀₈	46.35 ₈	21.209 ₃₁₄	34.91 ₁₁₈	6.211 ₂₇₆	32.90 ₂₁	Mar. 10.8	16.518 ₃₁₆	46.27 ₁₂	21.523 ₃₂₇	33.73 ₆₀	6.487 ₂₈₅	33.11 ₀
20.8	16.834 ₃₁₉	46.15 ₁₇	21.850 ₃₃₃	33.13 ₁	6.772 ₂₈₉	33.11 ₂₂	30.7	17.153 ₃₁₇	45.98 ₁₉	22.183 ₃₃₂	33.14 ₆₀	7.061 ₂₉₀	32.89 ₄₃
Apr. 9.7	17.470 ₃₁₁	45.79 ₂₂	22.515 ₃₂₃	33.74 ₁₁₆	7.351 ₂₈₈	32.46 ₆₁	19.7	17.781 ₃₀₁	45.57 ₂₂	22.838 ₃₀₈	34.90 ₁₆₆	7.639 ₂₇₉	31.85 ₇₇
29.7	18.082 ₂₈₈	45.35 ₂₂	23.146 ₂₈₇	36.56 ₂₁₀	7.918 ₂₆₈	31.08 ₈₉	May 9.6	18.370 ₂₆₆	45.13 ₁₇	23.433 ₂₅₈	38.66 ₂₄₆	8.186 ₂₅₁	30.19 ₉₅
19.6	18.636 ₂₄₁	44.96 ₁₁	23.691 ₂₂₅	41.12 ₂₇₄	8.437 ₂₂₉	29.24 ₁₀₀	29.6	18.877 ₂₁₀	44.85 ₅	23.916 ₁₈₅	43.86 ₂₉₂	8.666 ₂₀₂	28.24 ₉₉
June 8.6	19.087 ₁₇₅	44.80 ₄	24.101 ₁₄₁	46.78 ₃₀₂	8.868 ₁₇₀	27.25 ₉₆	18.5	19.262 ₁₃₄	44.84 ₁₂	24.242 ₉₄	49.80 ₃₀₃	9.038 ₁₃₃	26.29 ₈₉
28.5	19.396 ₉₀	44.96 ₂₁	24.336 ₄₄	52.83 ₂₉₆	9.171 ₉₂	25.40 ₇₉	July 8.5	19.486 ₄₅	45.17 ₂₇	24.380 ₆	55.79 ₂₈₂	9.263 ₅₁	24.61 ₆₉
18.4	19.531 ₃	45.44 ₃₃	24.374 ₅₇	58.61 ₂₆₂	9.314 ₈	23.92 ₅₇	28.4	19.528 ₄₈	45.77 ₃₆	24.317 ₁₀₅	61.23 ₂₃₄	9.322 ₃₆	23.35 ₄₄
Aug. 7.4	19.480 ₉₀	46.13 ₃₈	24.212 ₁₅₀	63.57 ₂₀₃	9.286 ₇₅	22.91 ₃₃	17.4	19.390 ₁₂₉	46.51 ₃₆	24.062 ₁₈₉	65.60 ₁₆₇	9.211 ₁₁₂	22.58 ₂₂
27.3	19.261 ₁₆₀	46.87 ₃₃	23.873 ₂₂₂	67.27 ₁₂₆	9.099 ₁₄₁	22.36 ₁₀	Sept. 6.3	19.101 ₁₈₂	47.20 ₂₆	23.651 ₂₄₆	68.53 ₈₅	8.958 ₁₆₄	22.26 ₁
16.3	18.919 ₁₉₅	47.46 ₂₀	23.405 ₂₆₀	69.38 ₄₀	8.794 ₁₇₈	22.25 ₇	26.3	18.724 ₁₉₇	47.66 ₁₀	23.145 ₂₆₅	69.78 ₇	8.616 ₁₈₁	22.32 ₁₆
Oct. 6.2	18.527 ₁₈₈	47.76 ₂	22.880 ₂₅₉	69.71 ₅₃	8.435 ₁₇₆	22.48 ₂₅	16.2	18.339 ₁₆₆	47.78 ₆	22.621 ₂₄₁	69.18 ₁₀₀	8.259 ₁₅₉	22.73 ₃₂
26.2	18.173 ₁₃₇	47.72 ₁₂	22.380 ₂₁₅	68.18 ₁₄₆	8.100 ₁₃₄	23.05 ₄₂	Nov. 5.1	18.036 ₉₈	47.60 ₁₆	22.165 ₁₇₉	66.72 ₁₈₉	7.966 ₁₀₁	23.47 ₅₀
15.1	17.938 ₅₃	47.44 ₁₉	21.986 ₁₃₇	64.83 ₂₂₈	7.865 ₆₂	23.97 ₆₁	25.1	17.885 ₃	47.25 ₁₉	21.849 ₈₈	62.55 ₂₆₄	7.803 ₁₉	24.58 ₆₈
Dec. 5.1	17.882 ₄₆	47.06 ₁₇	21.761 ₃₅	59.91 ₂₉₁	7.784 ₂₆	25.26 ₇₈	15.0	17.928 ₉₆	46.89 ₁₃	21.726 ₁₉	57.00 ₃₁₁	7.810 ₆₉	26.04 ₈₄
25.0	18.024 ₁₄₂	46.76 ₈	21.745 ₇₂	53.89 ₃₂₁	7.879 ₁₁₂	26.88 ₈₉	35.0	18.166	46.68	21.817	50.68	7.991 ₁₁₂	27.77
Mean Place	16.806	54.39	21.915	43.46	6.823	35.59	Sec δ, Tan δ	1.108	-0.476	1.282	+0.801	1.013	-0.161
L α, L δ	+0.01	0.0	-0.02	+0.1	0.00	+0.1	ω α, ω δ	0.00	-1.0	-0.01	-1.0	0.00	-1.0
AUTHORITY	A. N.				A. E.								

398 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ϕ Sagittarii. Mag. 3.3		λ Pavonis. Mag. 4.4		30 Sagittarii. Mag. 6.2	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 18 ^m 40	[°] 27 ['] 4	^h 18 ^m 45	[°] 62 ['] 16	^h 18 ^m 46	[°] 22 ['] 14
Jan. 1.0	52.398 ^s 149	6.19 26	6.81 23	29.06 ^s 230	14.289 ^s 138	54.42 3
11.0	52.547 ^s 189	5.93 23	7.04 31	26.76 ^s 221	14.427 ^s 176	54.45 4
21.0	52.736 ^s 223	5.70 21	7.35 37	24.55 ^s 205	14.603 ^s 210	54.49 3
30.9	52.959 ^s 252	5.49 20	7.72 44	22.50 ^s 186	14.813 ^s 238	54.52 2
Feb. 9.9	53.211 ^s 275	5.29 21	8.16 49	20.64 ^s 163	15.051 ^s 260	54.54 4
19.9	53.486 ^s 294	5.08 23	8.65 53	19.01 ^s 136	15.311 ^s 279	54.50 9
29.8	53.780 ^s 307	4.85 25	9.18 56	17.65 ^s 107	15.590 ^s 293	54.41 17
Mar. 10.8	54.087 ^s 317	4.60 29	9.74 58	16.58 ^s 78	15.883 ^s 303	54.24 25
20.8	54.404 ^s 322	4.31 31	10.32 59	15.80 ^s 46	16.186 ^s 309	53.99 34
30.8	54.726 ^s 324	4.00 34	10.91 59	15.34 ^s 14	16.495 ^s 312	53.65 40
Apr. 9.7	55.050 ^s 321	3.66 34	11.50 58	15.20 ^s 18	16.807 ^s 310	53.25 46
19.7	55.371 ^s 313	3.32 32	12.08 57	15.38 ^s 50	17.117 ^s 303	52.79 48
29.7	55.684 ^s 301	3.00 29	12.65 54	15.88 ^s 82	17.420 ^s 293	52.31 49
May 9.7	55.985 ^s 283	2.71 23	13.19 50	16.70 ^s 112	17.713 ^s 275	51.82 47
19.6	56.268 ^s 258	2.48 15	13.69 46	17.82 ^s 140	17.988 ^s 253	51.35 41
29.6	56.526 ^s 229	2.33 6	14.15 39	19.22 ^s 165	18.241 ^s 225	50.94 34
June 8.6	56.755 ^s 194	2.27 5	14.54 33	20.87 ^s 186	18.466 ^s 192	50.60 25
18.5	56.949 ^s 155	2.32 15	14.87 25	22.73 ^s 203	18.658 ^s 153	50.35 15
28.5	57.104 ^s 109	2.47 25	15.12 17	24.76 ^s 214	18.811 ^s 111	50.20 5
July 8.5	57.213 ^s 63	2.72 34	15.29 8	26.90 ^s 220	18.922 ^s 65	50.15 5
18.5	57.276 ^s 15	3.06 42	15.37 1	29.10 ^s 218	18.987 ^s 19	50.20 15
28.4	57.291 ^s 34	3.48 46	15.36 9	31.28 ^s 210	19.006 ^s 27	50.35 22
Aug. 7.4	57.257 ^s 77	3.94 48	15.27 18	33.38 ^s 193	18.979 ^s 71	50.57 27
17.4	57.180 ^s 119	4.42 47	15.09 25	35.31 ^s 171	18.908 ^s 111	50.84 30
27.3	57.061 ^s 153	4.89 44	14.84 31	37.02 ^s 141	18.797 ^s 144	51.14 31
Sept. 6.3	56.908 ^s 179	5.33 38	14.53 37	38.43 ^s 106	18.653 ^s 170	51.45 30
16.3	56.729 ^s 194	5.71 29	14.16 39	39.49 ^s 66	18.483 ^s 186	51.75 26
26.3	56.535 ^s 199	6.00 19	13.77 41	40.15 ^s 23	18.297 ^s 192	52.01 21
Oct. 6.2	56.336 ^s 194	6.19 9	13.36 40	40.38 ^s 21	18.105 ^s 186	52.22 16
16.2	56.142 ^s 176	6.28 2	12.96 37	40.17 ^s 65	17.919 ^s 171	52.38 10
26.2	55.966 ^s 147	6.26 10	12.59 33	39.52 ^s 108	17.748 ^s 145	52.48 5
Nov. 5.2	55.819 ^s 112	6.16 19	12.26 26	38.44 ^s 144	17.603 ^s 110	52.53 1
15.1	55.707 ^s 69	5.97 23	12.00 19	37.00 ^s 176	17.493 ^s 70	52.54 0
25.1	55.638 ^s 20	5.74 28	11.81 10	35.24 ^s 202	17.423 ^s 23	52.54 0
Dec. 5.1	55.618 ^s 29	5.46 27	11.71 1	33.22 ^s 218	17.398 ^s 25	52.54 0
15.0	55.647 ^s 78	5.19 27	11.70 9	31.04 ^s 229	17.421 ^s 69	52.54 2
25.0	55.725 ^s 124	4.92 25	11.79 18	28.75 ^s 231	17.490 ^s 115	52.56 5
35.0	55.849 ^s	4.67 25	11.97 18	26.44 ^s	17.605 ^s	52.61 5
Mean Place	54.503	13.06	10.74	35.91	16.311	60.99
Sec δ , Tan δ	1.123	-0.511	2.150	-1.903	1.080	-0.409
L α , L δ	+0.01	+0.1	+0.05	+0.1	+0.01	+0.1
ω α , ω δ	+0.01	-1.0	+0.02	-1.0	+0.01	-1.0
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 399

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Lyræ. Mag. 3.4-4.1		σ Sagittarii. Mag. 2.1		ξ Sagittarii. Mag. 3.6	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	^h 18 ^m 47	[°] 33 ['] 16	^h 18 ^m 50	[°] 26 ['] 23	^h 18 ^m 53	[°] 21 ['] 12
Jan. 1.0	14.565 ₉₂	32.29 ₃₀₀	31.051 ₁₃₈	27.32 ₂₅	9.784 ₁₃₀	22.31 ₇
11.0	14.657 ₁₃₇	29.29 ₂₉₄	31.189 ₁₇₈	27.07 ₂₃	9.914 ₁₆₈	22.38 ₈
21.0	14.794 ₁₇₈	26.35 ₂₇₈	31.367 ₂₁₂	26.84 ₂₃	10.082 ₂₀₁	22.46 ₇
30.9	14.972 ₂₁₅	23.57 ₂₅₁	31.579 ₂₄₂	26.61 ₂₃	10.283 ₂₃₀	22.53 ₂
Feb. 9.9	15.187 ₂₄₆	21.06 ₂₁₄	31.821 ₂₆₇	26.38 ₂₄	10.513 ₂₅₄	22.55 ₃
19.9	15.433 ₂₇₂	18.92 ₁₇₀	32.088 ₂₈₆	26.14 ₂₈	10.767 ₂₇₂	22.52 ₁₀
29.8	15.705 ₂₉₂	17.22 ₁₁₉	32.374 ₃₀₁	25.86 ₃₁	11.039 ₂₈₇	22.42 ₁₉
Mar. 10.8	15.997 ₃₀₆	16.03 ₆₄	32.675 ₃₁₂	25.55 ₃₅	11.326 ₂₉₉	22.23 ₂₉
20.8	16.303 ₃₁₄	15.39 ₆	32.987 ₃₁₉	25.20 ₃₉	11.625 ₃₀₆	21.94 ₃₇
30.8	16.617 ₃₁₆	15.33 ₅₀	33.306 ₃₂₃	24.81 ₄₂	11.931 ₃₀₉	21.57 ₄₅
Apr. 9.7	16.933 ₃₁₁	15.83 ₁₀₃	33.629 ₃₂₁	24.39 ₄₂	12.240 ₃₀₉	21.12 ₅₂
19.7	17.244 ₃₀₁	16.86 ₁₅₂	33.950 ₃₁₅	23.97 ₄₁	12.549 ₃₀₃	20.60 ₅₅
29.7	17.545 ₂₈₃	18.38 ₁₉₄	34.265 ₃₀₃	23.56 ₃₈	12.852 ₂₉₄	20.05 ₅₇
May 9.7	17.828 ₂₅₉	20.32 ₂₃₀	34.568 ₂₈₇	23.18 ₃₂	13.146 ₂₇₇	19.48 ₅₅
19.6	18.087 ₂₃₀	22.62 ₂₅₇	34.855 ₂₆₅	22.86 ₂₄	13.423 ₂₅₇	18.93 ₅₀
29.6	18.317 ₁₉₆	25.19 ₂₇₆	35.120 ₂₃₆	22.62 ₁₄	13.680 ₂₂₉	18.43 ₄₃
June 8.6	18.513 ₁₅₅	27.95 ₂₈₇	35.356 ₂₀₁	22.48 ₄	13.909 ₁₉₆	18.00 ₃₄
18.5	18.668 ₁₁₂	30.82 ₂₈₈	35.557 ₁₆₂	22.44 ₈	14.105 ₁₅₉	17.66 ₂₄
28.5	18.780 ₆₅	33.70 ₂₈₃	35.719 ₁₁₉	22.52 ₁₈	14.264 ₁₁₇	17.42 ₁₃
July 8.5	18.845 ₁₇	36.53 ₂₇₁	35.838 ₇₂	22.70 ₂₉	14.381 ₇₂	17.29 ₂
18.5	18.862 ₃₁	39.24 ₂₅₂	35.910 ₂₄	22.99 ₃₇	14.453 ₂₅	17.27 ₈
28.4	18.831 ₇₈	41.76 ₂₂₇	35.934 ₂₄	23.36 ₄₃	14.478 ₂₁	17.35 ₁₆
Aug. 7.4	18.753 ₁₂₂	44.03 ₁₉₈	35.910 ₆₉	23.79 ₄₈	14.457 ₆₄	17.51 ₂₄
17.4	18.631 ₁₆₁	46.01 ₁₆₅	35.841 ₁₁₁	24.27 ₄₈	14.393 ₁₀₆	17.75 ₂₇
27.3	18.470 ₁₉₄	47.66 ₁₂₈	35.730 ₁₄₆	24.75 ₄₆	14.287 ₁₃₈	18.02 ₃₀
Sept. 6.3	18.276 ₂₁₉	48.94 ₈₈	35.584 ₁₇₃	25.21 ₄₀	14.149 ₁₆₆	18.32 ₂₉
16.3	18.057 ₂₃₅	49.82 ₄₇	35.411 ₁₉₂	25.61 ₃₄	13.983 ₁₈₂	18.61 ₂₈
26.3	17.822 ₂₄₁	50.29 ₄	35.219 ₁₉₈	25.95 ₂₅	13.801 ₁₉₀	18.89 ₂₄
Oct. 6.2	17.581 ₂₃₈	50.33 ₄₀	35.021 ₁₉₃	26.20 ₁₅	13.611 ₁₈₆	19.13 ₁₉
16.2	17.343 ₂₂₃	49.93 ₈₄	34.828 ₁₇₈	26.35 ₅	13.425 ₁₇₁	19.32 ₁₄
26.2	17.120 ₂₀₀	49.09 ₁₂₇	34.650 ₁₅₂	26.40 ₅	13.254 ₁₄₇	19.46 ₁₁
Nov. 5.2	16.920 ₁₆₈	47.82 ₁₆₉	34.498 ₁₁₇	26.35 ₁₂	13.107 ₁₁₄	19.57 ₇
15.1	16.752 ₁₂₈	46.13 ₂₀₇	34.381 ₇₆	26.23 ₁₈	12.993 ₇₄	19.64 ₆
25.1	16.624 ₈₆	44.06 ₂₄₀	34.305 ₂₉	26.05 ₂₂	12.919 ₃₀	19.70 ₅
Dec. 5.1	16.540 ₃₄	41.66 ₂₆₉	34.276 ₁₉	25.83 ₂₄	12.889 ₁₆	19.75 ₆
15.0	16.504 ₁₄	38.97 ₂₈₈	34.295 ₆₇	25.59 ₂₄	12.905 ₆₂	19.81 ₈
25.0	16.518 ₆₃	36.09 ₃₀₀	34.362 ₁₁₃	25.35 ₂₄	12.967 ₁₀₆	19.89 ₈
35.0	16.581	33.09	34.475	25.11	13.073	19.97
Mean Place	16.422	24.73	33.153	33.61	11.790	28.54
Sec δ , Tan δ	1.196	+0.656	1.116	-0.496	1.073	-0.388
L α , L δ	-0.02	+0.1	+0.01	+0.1	+0.01	+0.1
ω α , ω δ	-0.01	-1.0	+0.01	-1.0	+0.01	-1.0
AUTHORITY	A. E.		A. E.		A. N.	

400 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Lyrae. Mag. 3.3		ε Aquilæ. Mag. 4.2		ζ Sagittarii. Mag. 2.7	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. S.
	^h ^m 18 56	[°] ['] 32 34	^h ^m 18 56	[°] ['] 14 57	^h ^m 18 57	[°] ['] 29 59
Jan. 1.0	4.170 ₈₂	71.41 ₂₉₅	8.608 ₉₇	57.29 ₂₁₉	44.439 ₁₃₄	18.56 ₄₉
11.0	4.252 ₁₂₇	68.46 ₂₉₁	8.705 ₁₃₅	55.10 ₂₁₅	44.573 ₁₇₅	18.07 ₄₉
21.0	4.379 ₁₆₈	65.55 ₂₇₆	8.840 ₁₆₉	52.95 ₂₀₂	44.748 ₂₁₂	17.58 ₄₇
30.9	4.547 ₂₀₆	62.79 ₂₅₁	9.009 ₁₉₈	50.93 ₁₈₄	44.960 ₂₄₃	17.11 ₄₆
Feb. 9.9	4.753 ₂₃₇	60.28 ₂₁₆	9.207 ₂₂₅	49.09 ₁₅₅	45.203 ₂₆₉	16.65 ₄₇
19.9	4.990 ₂₆₄	58.12 ₁₇₃	9.432 ₂₄₅	47.54 ₁₂₀	45.472 ₂₈₉	16.18 ₄₆
29.9	5.254 ₂₈₆	56.39 ₁₂₂	9.677 ₂₆₂	46.34 ₈₂	45.761 ₃₀₇	15.72 ₄₇
Mar. 10.8	5.540 ₃₀₁	55.17 ₆₉	9.939 ₂₇₅	45.52 ₃₉	46.068 ₃₂₀	15.25 ₄₈
20.8	5.841 ₃₁₁	54.48 ₁₂	10.214 ₂₈₂	45.13 ₅	46.388 ₃₂₇	14.77 ₄₈
30.8	6.152 ₃₁₄	54.36 ₄₄	10.496 ₂₈₇	45.18 ₄₈	46.715 ₃₃₂	14.29 ₄₆
Apr. 9.7	6.466 ₃₁₂	54.80 ₉₈	10.783 ₂₈₅	45.66 ₈₉	47.047 ₃₃₂	13.83 ₄₄
19.7	6.778 ₃₀₂	55.78 ₁₄₆	11.068 ₂₈₀	46.55 ₁₂₆	47.379 ₃₂₈	13.39 ₃₉
29.7	7.080 ₂₈₈	57.24 ₁₈₉	11.348 ₂₆₈	47.81 ₁₅₈	47.707 ₃₁₇	13.00 ₃₃
May 9.7	7.368 ₂₆₅	59.13 ₂₂₅	11.616 ₂₅₂	49.39 ₁₈₃	48.024 ₃₀₀	12.67 ₂₃
19.6	7.633 ₂₃₇	61.38 ₂₅₃	11.868 ₂₂₈	51.22 ₂₀₁	48.324 ₂₇₉	12.44 ₁₃
29.6	7.870 ₂₀₃	63.91 ₂₇₃	12.096 ₂₀₂	53.23 ₂₁₄	48.603 ₂₄₉	12.31 ₀
June 8.6	8.073 ₁₆₅	66.64 ₂₈₅	12.298 ₁₆₈	55.37 ₂₁₉	48.852 ₂₁₅	12.31 ₁₃
18.6	8.238 ₁₂₂	69.49 ₂₈₇	12.466 ₁₃₂	57.56 ₂₁₈	49.067 ₁₇₄	12.44 ₂₅
28.5	8.360 ₇₅	72.36 ₂₈₄	12.598 ₉₁	59.74 ₂₁₂	49.241 ₁₃₀	12.69 ₃₈
July 8.5	8.435 ₂₈	75.20 ₂₇₁	12.689 ₄₈	61.86 ₂₀₀	49.371 ₈₁	13.07 ₄₈
18.5	8.463 ₂₁	77.91 ₂₅₅	12.737 ₄	63.86 ₁₈₃	49.452 ₃₂	13.55 ₅₇
28.4	8.442 ₆₈	80.46 ₂₃₀	12.741 ₃₈	65.69 ₁₆₃	49.484 ₁₈	14.12 ₆₃
Aug. 7.4	8.374 ₁₁₃	82.76 ₂₀₃	12.703 ₈₀	67.32 ₁₄₀	49.466 ₆₆	14.75 ₆₅
17.4	8.261 ₁₅₂	84.79 ₁₇₀	12.623 ₁₁₆	68.72 ₁₁₅	49.400 ₁₀₉	15.40 ₆₅
27.4	8.109 ₁₈₆	86.49 ₁₃₄	12.507 ₁₄₈	69.87 ₈₇	49.291 ₁₄₇	16.05 ₆₀
Sept. 6.3	7.923 ₂₁₃	87.83 ₉₅	12.359 ₁₇₂	70.74 ₅₉	49.144 ₁₇₆	16.65 ₅₃
16.3	7.710 ₂₃₀	88.78 ₅₄	12.187 ₁₈₈	71.33 ₂₈	48.968 ₁₉₆	17.18 ₄₂
26.3	7.480 ₂₃₈	89.32 ₁₂	11.999 ₁₉₅	71.61 ₁	48.772 ₂₀₄	17.60 ₃₀
Oct. 6.3	7.242 ₂₃₅	89.44 ₃₂	11.804 ₁₉₁	71.60 ₃₂	48.568 ₂₀₁	17.90 ₁₇
16.2	7.007 ₂₂₃	89.12 ₇₅	11.613 ₁₈₀	71.28 ₆₃	48.367 ₁₈₆	18.07 ₂
26.2	6.784 ₂₀₁	88.37 ₁₁₈	11.433 ₁₅₈	70.65 ₉₄	48.181 ₁₆₁	18.09 ₁₁
Nov. 5.2	6.583 ₁₇₁	87.19 ₁₅₉	11.275 ₁₃₀	69.71 ₁₂₂	48.020 ₁₂₇	17.98 ₂₃
15.1	6.412 ₁₃₃	85.60 ₁₉₉	11.145 ₉₄	68.49 ₁₅₀	47.893 ₈₅	17.75 ₃₃
25.1	6.279 ₉₀	83.61 ₂₃₂	11.051 ₅₄	66.99 ₁₇₅	47.808 ₃₈	17.42 ₃₉
Dec. 5.1	6.189 ₄₃	81.29 ₂₆₁	10.997 ₁₁	65.24 ₁₉₅	47.770 ₁₂	17.03 ₄₅
15.1	6.146 ₆	78.68 ₂₈₁	10.986 ₃₁	63.29 ₂₁₀	47.782 ₆₁	16.58 ₄₇
25.0	6.152 ₅₄	75.87 ₂₉₅	11.017 ₇₃	61.19 ₂₁₉	47.843 ₁₁₀	16.11 ₄₈
35.0	6.206	72.92	11.090	59.00	47.953	15.63
Mean Place	6.002	63.63	10.351	50.16	46.620	24.37
Sec δ, Tan δ	1.187	+0.639	1.035	+0.267	1.155	-0.577
L α, L δ	-0.02	+0.1	-0.01	+0.1	+0.01	+0.1
ω α, ω δ	-0.01	-1.0	0.00	-1.0	+0.01	-1.0
AUTHORITY	A. E.		A. N.		A. N.	

APPARENT PLACES OF STARS, 1924. 401

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ζ Aquilæ. Mag. 3·0		τ Sagittarii. Mag. 3·4		λ Aquilæ. Mag. 3·6	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 19 I	° 13 44	h m 19 2	° 27 46	h m 19 2	° 4 59
Jan. 1·0	53·256 ⁹²	64·85 ²¹¹	9·663 ¹²⁶	52·89 ³⁷	11·117 ¹⁰⁷	45·00 ¹⁰⁶
11·0	53·348 ¹³¹	62·74 ²⁰⁸	9·789 ¹⁶⁸	52·52 ³⁶	11·224 ¹⁴³	46·06 ¹⁰³
21·0	53·479 ¹⁶⁴	60·66 ¹⁹⁷	9·957 ²⁰³	52·16 ³⁶	11·367 ¹⁷⁵	47·09 ⁹⁶
30·9	53·643 ¹⁹⁴	58·69 ¹⁷⁷	10·160 ²³³	51·80 ³⁷	11·542 ²⁰²	48·05 ⁸⁵
Feb. 9·9	53·837 ²²⁰	56·92 ¹⁵¹	10·393 ²⁶⁰	51·43 ³⁸	11·744 ²²⁶	48·90 ⁶⁸
19·9	54·057 ²⁴¹	55·41 ¹¹⁷	10·653 ²⁸²	51·05 ⁴¹	11·970 ²⁴⁶	49·58 ⁴⁹
29·9	54·298 ²⁶⁰	54·24 ⁸⁰	10·935 ²⁹⁸	50·64 ⁴⁴	12·216 ²⁶²	50·07 ²⁴
Mar. 10·8	54·558 ²⁷²	53·44 ³⁸	11·233 ³¹¹	50·20 ⁴⁷	12·478 ²⁷⁴	50·31 ¹
20·8	54·830 ²⁸²	53·06 ⁵	11·544 ³²⁰	49·73 ⁴⁹	12·752 ²⁸³	50·30 ²⁶
30·8	55·112 ²⁸⁶	53·11 ⁴⁷	11·864 ³²⁶	49·24 ⁵⁰	13·035 ²⁸⁷	50·04 ⁵¹
Apr. 9·7	55·398 ²⁸⁶	53·58 ⁸⁸	12·190 ³²⁶	48·74 ⁵⁰	13·322 ²⁸⁸	49·53 ⁷⁴
19·7	55·684 ²⁸¹	54·46 ¹²³	12·516 ³²²	48·24 ⁴⁸	13·610 ²⁸⁴	48·79 ⁹³
29·7	55·965 ²⁷¹	55·69 ¹⁵⁴	12·838 ³¹³	47·76 ⁴²	13·894 ²⁷⁵	47·86 ¹⁰⁹
May 9·7	56·236 ²⁵⁵	57·23 ¹⁷⁹	13·151 ²⁹⁷	47·34 ³⁴	14·169 ²⁶¹	46·77 ¹²⁰
19·6	56·491 ²³³	59·02 ¹⁹⁸	13·448 ²⁷⁷	47·00 ²⁵	14·430 ²⁴²	45·57 ¹²⁵
29·6	56·724 ²⁰⁶	61·00 ²⁰⁹	13·725 ²⁴⁸	46·75 ¹⁴	14·672 ²¹⁶	44·32 ¹²⁸
June 8·6	56·930 ¹⁷⁴	63·09 ²¹⁵	13·973 ²¹⁵	46·61 ¹	14·888 ¹⁸⁶	43·04 ¹²⁶
18·6	57·104 ¹³⁷	65·24 ²¹⁵	14·188 ¹⁷⁶	46·60 ¹¹	15·074 ¹⁵¹	41·78 ¹¹⁹
28·5	57·241 ⁹⁷	67·39 ²⁰⁷	14·364 ¹³¹	46·71 ²⁴	15·225 ¹¹¹	40·59 ¹¹⁰
July 8·5	57·338 ⁵⁵	69·46 ¹⁹⁶	14·495 ⁸⁵	46·95 ³⁵	15·336 ⁷⁰	39·49 ⁹⁸
18·5	57·393 ¹¹	71·42 ¹⁸⁰	14·580 ³⁶	47·30 ⁴⁶	15·406 ²⁶	38·51 ⁸⁴
28·4	57·404 ³²	73·22 ¹⁶¹	14·616 ¹⁴	47·76 ⁵²	15·432 ¹⁷	37·67 ⁶⁹
Aug. 7·4	57·372 ⁷³	74·83 ¹³⁸	14·602 ⁶⁰	48·28 ⁵⁶	15·415 ⁵⁹	36·98 ⁵⁴
17·4	57·299 ¹¹¹	76·21 ¹¹³	14·542 ¹⁰⁴	48·84 ⁵⁸	15·356 ⁹⁶	36·44 ³⁹
27·4	57·188 ¹⁴³	77·34 ⁸⁶	14·438 ¹⁴¹	49·42 ⁵⁶	15·260 ¹²⁹	36·05 ²⁵
Sept. 6·3	57·045 ¹⁶⁷	78·20 ⁵⁸	14·297 ¹⁷⁰	49·98 ⁴⁹	15·131 ¹⁵⁴	35·80 ¹⁰
16·3	56·878 ¹⁸⁵	78·78 ³⁰	14·127 ¹⁹⁰	50·47 ⁴³	14·977 ¹⁷¹	35·70 ³
26·3	56·693 ¹⁹²	79·08 ⁰	13·937 ¹⁹⁹	50·90 ³²	14·806 ¹⁷⁹	35·73 ¹⁶
Oct. 6·3	56·501 ¹⁹⁰	79·08 ³⁰	13·738 ¹⁹⁶	51·22 ²⁰	14·627 ¹⁷⁷	35·89 ²⁸
16·2	56·311 ¹⁷⁹	78·78 ⁵⁹	13·542 ¹⁸⁴	51·42 ¹⁰	14·450 ¹⁶⁵	36·17 ⁴⁰
26·2	56·132 ¹⁵⁸	78·19 ⁸⁸	13·358 ¹⁶⁰	51·52 ³	14·285 ¹⁴⁴	36·57 ⁵²
Nov. 5·2	55·974 ¹³⁰	77·31 ¹¹⁷	13·198 ¹²⁶	51·49 ¹²	14·141 ¹¹⁵	37·09 ⁶⁴
15·1	55·844 ⁹⁶	76·14 ¹⁴³	13·072 ⁸⁶	51·37 ²¹	14·026 ⁸⁰	37·73 ⁷⁵
25·1	55·748 ⁵⁷	74·71 ¹⁶⁷	12·986 ⁴⁰	51·16 ²⁷	13·946 ⁴¹	38·48 ⁸⁶
Dec. 5·1	55·691 ¹⁶	73·04 ¹⁸⁸	12·946 ⁷	50·89 ³¹	13·905 ²	39·34 ⁹⁵
15·1	55·675 ²⁸	71·16 ²⁰²	12·953 ⁵⁵	50·58 ³⁴	13·907 ⁴³	40·29 ¹⁰³
25·0	55·703 ⁶⁹	69·14 ²¹¹	13·008 ¹⁰²	50·24 ³⁴	13·950 ⁸⁵	41·32 ¹⁰⁶
35·0	55·772	67·03	13·110	49·90	14·035	42·38
Mean Place	54·996	57·79	11·799	58·44	12·935	51·27
Sec δ, Tan δ	1·029	+0·245	1·130	-0·527	1·004	-0·087
L α, L δ	-0·01	+0·1	+0·01	+0·1	0·00	+0·1
ω α, ω δ	0·00	-1·0	+0·01	-1·0	0·00	-1·0
AUTHORITY	A. E.				A. E.	

402 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Coronæ Aust. Mag. 4.1		π Sagittarii. Mag. 3.0		ψ Sagittarii. Mag. 4.9	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 19 4	38 ° 1	h m 19 5	21 ° 8	h m 19 10	25 ° 23
Jan. 1.0	15.720 ¹³⁶	23.28 ¹⁰¹	12.680 ¹¹⁷	39.02 ⁴	50.799 ¹¹⁴	15.52 ²⁴
11.0	15.856 ¹⁸²	22.27 ¹⁰⁰	12.797 ¹⁵⁶	39.06 ³	50.913 ¹⁵⁵	15.28 ²⁶
21.0	16.038 ²²⁴	21.27 ⁹⁷	12.953 ¹⁸⁹	39.09 ¹	51.068 ¹⁹¹	15.02 ²⁷
30.9	16.262 ²⁵⁸	20.30 ⁹³	13.142 ²²⁰	39.10 ⁴	51.259 ²²¹	14.75 ²⁹
Feb. 9.9	16.520 ²⁸⁸	19.37 ⁸⁷	13.362 ²⁴⁴	39.06 ¹⁰	51.480 ²⁴⁷	14.46 ³⁴
19.9	16.808 ³¹³	18.50 ⁸²	13.606 ²⁶⁵	38.96 ¹⁷	51.727 ²⁷⁰	14.12 ³⁸
29.9	17.121 ³³³	17.68 ⁷⁵	13.871 ²⁸¹	38.79 ²⁷	51.997 ²⁸⁷	13.74 ⁴³
Mar. 10.8	17.454 ³⁴⁷	16.93 ⁶⁹	14.152 ²⁹⁵	38.52 ³⁶	52.284 ³⁰¹	13.31 ⁴⁹
20.8	17.801 ³⁵⁸	16.24 ⁶⁰	14.447 ³⁰⁴	38.16 ⁴⁵	52.585 ³¹²	12.82 ⁵⁵
30.8	18.159 ³⁶³	15.64 ⁵⁰	14.751 ³⁰⁹	37.71 ⁵⁴	52.897 ³¹⁹	12.27 ⁵⁸
Apr. 9.8	18.522 ³⁶⁵	15.14 ⁴⁰	15.060 ³¹¹	37.17 ⁶⁰	53.216 ³²¹	11.69 ⁶⁰
19.7	18.887 ³⁵⁹	14.74 ²⁷	15.371 ³⁰⁷	36.57 ⁶⁴	53.537 ³¹⁸	11.09 ⁶⁰
29.7	19.246 ³⁴⁹	14.47 ¹⁴	15.678 ²⁹⁸	35.93 ⁶⁴	53.855 ³¹⁰	10.49 ⁵⁶
May 9.7	19.595 ³³²	14.33 ³	15.976 ²⁸⁵	35.29 ⁶²	54.165 ²⁹⁷	9.93 ⁵¹
19.6	19.927 ³⁰⁸	14.36 ¹⁹	16.261 ²⁶⁵	34.67 ⁵⁸	54.462 ²⁷⁷	9.42 ⁴²
29.6	20.235 ²⁷⁶	14.55 ³⁶	16.526 ²³⁸	34.09 ⁵⁰	54.739 ²⁵¹	9.00 ³²
June 8.6	20.511 ²³⁹	14.91 ⁵³	16.764 ²⁰⁷	33.59 ⁴⁰	54.990 ²¹⁹	8.68 ¹⁹
18.6	20.750 ¹⁹⁶	15.44 ⁶⁹	16.971 ¹⁶⁹	33.19 ²⁹	55.209 ¹⁸¹	8.49 ⁷
28.5	20.946 ¹⁴⁶	16.13 ⁸²	17.140 ¹²⁸	32.90 ¹⁷	55.390 ¹³⁸	8.42 ⁶
July 8.5	21.092 ⁹⁵	16.95 ⁹⁴	17.268 ⁸³	32.73 ⁵	55.528 ⁹²	8.48 ¹⁹
18.5	21.187 ³⁹	17.89 ¹⁰¹	17.351 ³⁷	32.68 ⁷	55.620 ⁴³	8.67 ³⁰
28.5	21.226 ¹⁵	18.90 ¹⁰⁵	17.388 ¹⁰	32.75 ¹⁶	55.663 ⁴	8.97 ³⁹
Aug. 7.4	21.211 ⁶⁸	19.95 ¹⁰⁶	17.378 ⁵⁴	32.91 ²⁴	55.659 ⁵²	9.36 ⁴⁶
17.4	21.143 ¹¹⁷	21.01 ¹⁰⁰	17.324 ⁹⁷	33.15 ²⁹	55.607 ⁹⁴	9.82 ⁴⁹
27.4	21.026 ¹⁵⁸	22.01 ⁹⁰	17.227 ¹³¹	33.44 ³³	55.513 ¹³²	10.31 ⁵⁰
Sept. 6.3	20.868 ¹⁹¹	22.91 ⁷⁶	17.096 ¹⁶⁰	33.77 ³³	55.381 ¹⁶³	10.81 ⁴⁷
16.3	20.677 ²¹⁴	23.67 ⁵⁹	16.936 ¹⁷⁹	34.10 ³²	55.218 ¹⁸²	11.28 ⁴²
26.3	20.463 ²²⁵	24.26 ³⁹	16.757 ¹⁸⁸	34.42 ²⁹	55.036 ¹⁹³	11.70 ³⁴
Oct. 6.3	20.238 ²²³	24.65 ¹⁷	16.569 ¹⁸⁶	34.71 ²⁵	54.843 ¹⁹³	12.04 ²⁶
16.2	20.015 ²⁰⁹	24.82 ⁵	16.383 ¹⁷⁴	34.96 ¹⁹	54.650 ¹⁸¹	12.30 ¹⁶
26.2	19.806 ¹⁸⁴	24.77 ²⁸	16.209 ¹⁵²	35.15 ¹⁵	54.469 ¹⁵⁸	12.46 ⁷
Nov. 5.2	19.622 ¹⁴⁷	24.49 ⁴⁷	16.057 ¹²¹	35.30 ¹¹	54.311 ¹²⁹	12.53 ²
15.2	19.475 ¹⁰³	24.02 ⁶⁵	15.936 ⁸³	35.41 ⁸	54.182 ⁹⁰	12.51 ⁸
25.1	19.372 ⁵²	23.37 ⁷⁹	15.853 ⁴¹	35.49 ⁶	54.092 ⁴⁶	12.43 ¹⁵
Dec. 5.1	19.320 ²	22.58 ⁸⁸	15.812 ⁵	35.55 ⁶	54.046 ¹	12.28 ¹⁷
15.1	19.322 ⁵⁵	21.70 ⁹⁶	15.817 ⁴⁹	35.61 ⁶	54.045 ⁴⁶	12.11 ²¹
25.0	19.377 ¹⁰⁸	20.74 ⁹⁹	15.866 ⁹⁴	35.67 ⁶	54.091 ⁹¹	11.90 ²²
35.0	19.485	19.75	15.960	35.73	54.182	11.68
Mean Place	18.135	28.45	14.692	44.58	52.887	20.61
Sec δ , Tan δ	1.269	-0.782	1.072	-0.387	1.107	-0.475
L α , L δ	+0.02	+0.1	+0.01	+0.1	+0.01	+0.1
ω α , ω δ	+0.01	-1.0	+0.01	-1.0	+0.01	-1.0
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 403

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	δ Draconis. Mag. 3.2		ω Aquilæ. Mag. 5.1		δ Aquilæ. Mag. 3.4							
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.						
	^h 19	^m 12	[°] 67	['] 31	^h 19	^m 14	[°] 11	['] 27	^h 19	^m 21	[°] 2	['] 57
Jan. 1.0	29.49	3	50.21	355	13.222	82	33.05	195	38.246	82	49.85	146
11.0	29.46	8	46.66	357	13.304	119	31.10	193	38.328	119	48.39	144
21.0	29.54	19	43.09	347	13.423	154	29.17	183	38.447	152	46.95	136
30.9	29.73	29	39.62	323	13.577	184	27.34	165	38.599	180	45.59	121
Feb. 9.9	30.02	38	36.39	288	13.761	210	25.69	141	38.779	207	44.38	101
19.9	30.40	46	33.51	241	13.971	232	24.28	110	38.986	229	43.37	76
29.9	30.86	52	31.10	187	14.203	252	23.18	74	39.215	248	42.61	46
Mar. 10.8	31.38	57	29.23	125	14.455	267	22.44	35	39.463	264	42.15	14
20.8	31.95	59	27.98	60	14.722	278	22.09	6	39.727	275	42.01	19
30.8	32.54	61	27.38	6	15.000	284	22.15	46	40.002	282	42.20	51
Apr. 9.8	33.15	60	27.44	72	15.284	286	22.61	85	40.284	287	42.71	82
19.7	33.75	58	28.16	133	15.570	284	23.46	118	40.571	286	43.53	109
29.7	34.33	54	29.49	188	15.854	275	24.64	149	40.857	278	44.62	133
May 9.7	34.87	48	31.37	237	16.129	262	26.13	172	41.135	267	45.95	149
19.6	35.35	40	33.74	278	16.391	242	27.85	191	41.402	249	47.44	163
29.6	35.75	33	36.52	308	16.633	216	29.76	202	41.651	226	49.07	169
June 8.6	36.08	24	39.60	330	16.849	185	31.78	207	41.877	196	50.76	170
18.6	36.32	15	42.90	343	17.034	150	33.85	207	42.073	162	52.46	167
28.5	36.47	4	46.33	347	17.184	110	35.92	200	42.235	124	54.13	159
July 8.5	36.51	5	49.80	341	17.294	69	37.92	189	42.359	82	55.72	148
18.5	36.46	15	53.21	328	17.363	24	39.81	174	42.441	39	57.20	133
28.5	36.31	25	56.49	307	17.387	19	41.55	155	42.480	6	58.53	115
Aug. 7.4	36.06	34	59.56	279	17.368	61	43.10	133	42.474	46	59.68	96
17.4	35.72	41	62.35	244	17.307	99	44.43	110	42.428	86	60.64	77
27.4	35.31	48	64.79	206	17.208	133	45.53	84	42.342	120	61.41	57
Sept. 6.3	34.83	53	66.85	161	17.075	158	46.37	58	42.222	147	61.98	36
16.3	34.30	58	68.46	113	16.917	178	46.95	32	42.075	167	62.34	16
26.3	33.72	60	69.59	61	16.739	187	47.27	3	41.908	178	62.50	5
Oct. 6.3	33.12	61	70.20	8	16.552	187	47.30	24	41.730	178	62.45	24
16.2	32.51	59	70.28	47	16.365	177	47.06	51	41.552	170	62.21	44
26.2	31.92	57	69.81	102	16.188	159	46.55	78	41.382	153	61.77	63
Nov. 5.2	31.35	52	68.79	157	16.029	133	45.77	105	41.229	127	61.14	82
15.2	30.83	46	67.22	208	15.896	101	44.72	130	41.102	95	60.32	100
25.1	30.37	38	65.14	254	15.795	63	43.42	153	41.007	60	59.32	116
Dec. 5.1	29.99	30	62.60	295	15.732	23	41.89	171	40.947	19	58.16	130
15.1	29.69	20	59.65	328	15.709	19	40.18	186	40.928	20	56.86	140
25.0	29.49	10	56.37	348	15.728	59	38.32	195	40.948	60	55.46	146
35.0	29.39		52.89		15.787		36.37		41.008		54.00	
Mean Place	32.56		40.14		14.947		26.16		39.993		43.63	
Sec δ, Tan δ	2.616		+2.417		1.020		+0.203		1.001		+0.052	
L α, L δ	-0.06		+0.1		-0.01		+0.1		0.00		+0.1	
ω α, ω δ	-0.05		-1.0		0.00		-0.9		0.00		-0.9	
AUTHORITY	A. E.		A. E.		A. E.		A. E.		A. E.		A. E.	

404 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	59 G. Telescopii. Mag. 5.6			6 Vulpeculæ. Mag. 4.6			β Cygni. Mag. 3.2					
	R. A.		Dec. S.	R. A.		Dec. N.	R. A.		Dec. N.			
	h	m	°	h	m	°	h	m	°			
	19	21	54	28	19	25	24	30	19	27	27	47
Jan. 1.0	39.029	134	41.96	201	30.834	58	43.93	254	37.636	52	64.75	267
11.0	39.163	198	39.95	201	30.892	98	41.39	254	37.688	95	62.08	267
21.0	39.361	258	37.94	196	30.990	137	38.85	245	37.783	134	59.41	258
30.9	39.619	309	35.98	186	31.127	172	36.40	224	37.917	170	56.83	238
Feb. 9.9	39.928	355	34.12	173	31.299	203	34.16	197	38.087	204	54.45	208
19.9	40.283	393	32.39	158	31.502	231	32.19	159	38.291	233	52.37	172
29.9	40.676	423	30.81	139	31.733	253	30.60	117	38.524	257	50.65	126
Mar. 10.8	41.099	449	29.42	117	31.986	273	29.43	69	38.781	277	49.39	77
20.8	41.548	466	28.25	95	32.259	287	28.74	19	39.058	292	48.62	25
30.8	42.014	478	27.30	70	32.546	296	28.55	32	39.350	303	48.37	27
Apr. 9.8	42.492	481	26.60	43	32.842	300	28.87	81	39.653	305	48.64	79
19.7	42.973	478	26.17	16	33.142	297	29.68	126	39.958	304	49.43	126
29.7	43.451	465	26.01	13	33.439	289	30.94	166	40.262	294	50.69	168
May 9.7	43.916	445	26.14	42	33.728	275	32.60	199	40.556	280	52.37	204
19.6	44.361	418	26.56	71	34.003	253	34.59	227	40.836	257	54.41	235
29.6	44.779	371	27.27	98	34.256	226	36.86	246	41.093	229	56.76	255
June 8.6	45.150	326	28.25	124	34.482	192	39.32	257	41.322	195	59.31	269
18.6	45.476	270	29.49	146	34.674	154	41.89	263	41.517	156	62.00	274
28.5	45.746	205	30.95	165	34.828	112	44.52	260	41.673	112	64.74	273
July 8.5	45.951	136	32.60	178	34.940	68	47.12	251	41.785	67	67.47	266
18.5	46.087	63	34.38	187	35.008	21	49.63	236	41.852	19	70.13	250
28.5	46.150	10	36.25	187	35.029	25	51.99	217	41.871	28	72.63	231
Aug. 7.4	46.140	81	38.12	184	35.004	70	54.16	192	41.843	73	74.94	206
17.4	46.059	148	39.96	171	34.934	110	56.08	164	41.770	115	77.00	178
27.4	45.911	208	41.67	153	34.824	147	57.72	133	41.655	151	78.78	145
Sept. 6.3	45.703	255	43.20	129	34.677	174	59.05	100	41.504	182	80.23	111
16.3	45.448	291	44.49	97	34.503	197	60.05	65	41.322	202	81.34	73
26.3	45.157	312	45.46	64	34.306	207	60.70	28	41.120	216	82.07	34
Oct. 6.3	44.845	316	46.10	25	34.099	210	60.98	10	40.904	218	82.41	5
16.2	44.529	303	46.35	13	33.889	203	60.88	47	40.686	211	82.36	46
26.2	44.226	275	46.22	51	33.686	186	60.41	86	40.475	196	81.90	86
Nov. 5.2	43.951	233	45.71	88	33.500	162	59.55	123	40.279	171	81.04	125
15.2	43.718	179	44.83	120	33.338	130	58.32	158	40.108	139	79.79	163
25.1	43.539	116	43.63	149	33.208	92	56.74	190	39.969	102	78.16	196
Dec. 5.1	43.423	47	42.14	169	33.116	53	54.84	216	39.867	62	76.20	226
15.1	43.376	25	40.45	186	33.063	10	52.68	238	39.805	17	73.94	248
25.0	43.401	95	38.59	196	33.053	33	50.30	251	39.788	26	71.46	264
35.0	43.496		36.63		33.086		47.79		39.814		68.82	
Mean Place	42.290		45.27		32.546		36.08		39.358		56.62	
Sec δ, Tan δ	1.721		-1.401		1.099		+0.456		1.130		+0.527	
L α, L δ	+0.03		+0.1		-0.01		+0.1		-0.01		+0.1	
ω α, ω δ	+0.03		-0.9		-0.01		-0.9		-0.01		-0.9	

A. E.

APPARENT PLACES OF STARS, 1924. 405

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	μ Aquilæ. Mag. 4·7		λ Sagittarii. Mag. 4·7		54 Sagittarii. Mag. 5·5	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 19 30	° ' 12	h m 19 32	25 2	h m 19 36	16 27
Jan. 1·0	20·919 ⁷⁰	66·29 ¹⁶⁸	2·949 ⁹²	65·85 ²⁸	20·313 ⁸²	63·30 ²⁵
11·0	20·989 ¹⁰⁷	64·61 ¹⁶⁶	3·041 ¹³¹	65·57 ³¹	20·395 ¹¹⁹	63·55 ²²
21·0	21·096 ¹⁴⁰	62·95 ¹⁵⁸	3·172 ¹⁶⁸	65·26 ³⁴	20·514 ¹⁵³	63·77 ¹⁷
31·0	21·236 ¹⁷¹	61·37 ¹⁴³	3·340 ²⁰⁰	64·92 ³⁹	20·667 ¹⁸³	63·94 ⁹
Feb. 9·9	21·407 ¹⁹⁸	59·94 ¹²¹	3·540 ²²⁹	64·53 ⁴⁵	20·850 ²¹¹	64·03 ³
19·9	21·605 ²²¹	58·73 ⁹³	3·769 ²⁵³	64·08 ⁵¹	21·061 ²³⁴	64·00 ¹⁴
29·9	21·826 ²⁴²	57·80 ⁶²	4·022 ²⁷³	63·57 ⁵⁸	21·295 ²⁵⁵	63·86 ²⁸
Mar. 10·8	22·068 ²⁵⁹	57·18 ²⁶	4·295 ²⁹¹	62·99 ⁶⁴	21·550 ²⁷²	63·58 ⁴³
20·8	22·327 ²⁷²	56·92 ¹¹	4·586 ³⁰⁵	62·35 ⁷⁰	21·822 ²⁸⁶	63·15 ⁵⁸
30·8	22·599 ²⁸²	57·03 ⁴⁸	4·891 ³¹⁵	61·65 ⁷⁴	22·108 ²⁹⁶	62·57 ⁷¹
Apr. 9·8	22·881 ²⁸⁷	57·51 ⁸²	5·206 ³²¹	60·91 ⁷⁷	22·404 ³⁰³	61·86 ⁸³
19·7	23·168 ²⁸⁶	58·33 ¹¹³	5·527 ³²¹	60·14 ⁷⁶	22·707 ³⁰⁵	61·03 ⁹⁰
29·7	23·454 ²⁸²	59·46 ¹⁴⁰	5·848 ³¹⁷	59·38 ⁷³	23·012 ³⁰¹	60·13 ⁹⁶
May 9·7	23·736 ²⁷⁰	60·86 ¹⁶²	6·165 ³⁰⁷	58·65 ⁶⁷	23·313 ²⁹²	59·17 ⁹⁷
19·7	24·006 ²⁵³	62·48 ¹⁷⁷	6·472 ²⁸⁹	57·98 ⁵⁸	23·605 ²⁷⁶	58·20 ⁹⁵
29·6	24·259 ²³⁰	64·25 ¹⁸⁷	6·761 ²⁶⁶	57·40 ⁴⁶	23·881 ²⁵⁵	57·25 ⁸⁸
June 8·6	24·489 ²⁰¹	66·12 ¹⁹¹	7·027 ²³⁶	56·94 ³³	24·136 ²²⁶	56·37 ⁷⁹
18·6	24·690 ¹⁶⁷	68·03 ¹⁹⁰	7·263 ²⁰⁰	56·61 ¹⁹	24·362 ¹⁹²	55·58 ⁶⁹
28·5	24·857 ¹²⁹	69·93 ¹⁸²	7·463 ¹⁵⁸	56·42 ³	24·554 ¹⁵³	54·89 ⁵⁵
July 8·5	24·986 ⁸⁷	71·75 ¹⁷²	7·621 ¹¹³	56·39 ¹²	24·707 ¹¹⁰	54·34 ⁴⁰
18·5	25·073 ⁴³	73·47 ¹⁵⁶	7·734 ⁶⁵	56·51 ²⁵	24·817 ⁶⁴	53·94 ²⁵
28·5	25·116 ⁰	75·03 ¹³⁹	7·799 ¹⁶	56·76 ³⁷	24·881 ¹⁸	53·69 ¹¹
Aug. 7·4	25·116 ⁴⁴	76·42 ¹¹⁹	7·815 ³²	57·13 ⁴⁵	24·899 ²⁸	53·58 ¹
17·4	25·072 ⁸³	77·61 ⁹⁷	7·783 ⁷⁷	57·58 ⁵³	24·871 ⁷⁰	53·59 ¹¹
27·4	24·989 ¹¹⁸	78·58 ⁷⁴	7·706 ¹¹⁶	58·11 ⁵⁴	24·801 ¹⁰⁹	53·70 ²¹
Sept. 6·4	24·871 ¹⁴⁶	79·32 ⁵²	7·590 ¹⁵⁰	58·65 ⁵⁵	24·692 ¹³⁹	53·91 ²⁸
16·3	24·725 ¹⁶⁷	79·84 ²⁷	7·440 ¹⁷³	59·20 ⁵¹	24·553 ¹⁶³	54·19 ³¹
26·3	24·558 ¹⁷⁸	80·11 ⁴	7·267 ¹⁸⁸	59·71 ⁴⁵	24·390 ¹⁷⁶	54·50 ³⁵
Oct. 6·3	24·380 ¹⁸¹	80·15 ²⁰	7·079 ¹⁹¹	60·16 ³⁶	24·214 ¹⁸⁰	54·85 ³⁴
16·2	24·199 ¹⁷⁴	79·95 ⁴⁴	6·888 ¹⁸³	60·52 ²⁷	24·034 ¹⁷³	55·19 ³⁴
26·2	24·025 ¹⁵⁸	79·51 ⁶⁷	6·705 ¹⁶⁵	60·79 ¹⁷	23·861 ¹⁵⁷	55·53 ³⁴
Nov. 5·2	23·867 ¹³⁵	78·84 ⁸⁹	6·540 ¹³⁹	60·96 ⁸	23·704 ¹³²	55·87 ³²
15·2	23·732 ¹⁰⁴	77·95 ¹¹¹	6·401 ¹⁰⁴	61·04 ¹	23·572 ¹⁰¹	56·19 ³¹
25·1	23·628 ⁶⁸	76·84 ¹³⁰	6·297 ⁶⁴	61·03 ⁹	23·471 ⁶³	56·50 ³²
Dec. 5·1	23·560 ³¹	75·54 ¹⁴⁷	6·233 ²⁰	60·94 ¹⁵	23·408 ²³	56·82 ³⁰
15·1	23·529 ⁹	74·07 ¹⁵⁹	6·213 ²⁴	60·79 ¹⁹	23·385 ¹⁹	57·12 ³⁰
25·1	23·538 ⁴⁸	72·48 ¹⁶⁸	6·237 ⁶⁸	60·60 ²⁴	23·404 ⁵⁹	57·42 ²⁹
35·0	23·586	70·80	6·305	60·36	23·463	57·71
Mean Place	22·631	59·89	5·026	69·63	22·235	67·48
Sec δ , Tan δ	1·008	+0·127	1·104	-0·467	1·043	-0·296
L α , L δ	0·00	+0·2	+0·01	+0·2	+0·01	+0·2
ω α , ω δ	0·00	-0·9	+0·01	-0·9	+0·01	-0·9
AUTHORITY	A. E.					

406 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	<i>f</i> Sagittarii. Mag. 5.1			δ Cygni. Mag. 3.0			γ Aquilæ. Mag. 2.8						
	R. A.		Dec. S.	R. A.		Dec. N.	R. A.		Dec. N.				
	h	m	°	h	m	°	h	m	°				
	19	41	19	42	44	56	19	42	10				
	_s		_s	_s	_s	_s	_s	_s	_s				
Jan. 1.0	53.830	78	38.33	3	34.181	5	50.19	315	37.103	55	43.66	181	
11.0	53.908	116	38.36	2	34.186	60	47.04	322	37.158	92	41.85	180	
21.0	54.024	150	38.34	7	34.246	113	43.82	316	37.250	127	40.05	172	
31.0	54.174	183	38.27	14	34.359	163	40.66	297	37.377	158	38.33	157	
Feb. 9.9	54.357	209	38.13	22	34.522	209	37.69	268	37.535	186	36.76	135	
19.9	54.566	235	37.91	34	34.731	251	35.01	229	37.721	212	35.41	106	
29.9	54.801	256	37.57	44	34.982	287	32.72	180	37.933	234	34.35	73	
Mar. 10.9	55.057	275	37.13	56	35.269	317	30.92	124	38.167	253	33.62	35	
20.8	55.332	289	36.57	68	35.586	340	29.68	66	38.420	269	33.27	4	
30.8	55.621	302	35.89	77	35.926	355	29.02	4	38.689	281	33.31	42	
Apr. 9.8	55.923	308	35.12	85	36.281	361	28.98	57	38.970	287	33.73	80	
19.7	56.231	311	34.27	90	36.642	360	29.55	114	39.257	288	34.53	115	
29.7	56.542	308	33.37	92	37.002	349	30.69	167	39.545	285	35.68	145	
May 9.7	56.850	300	32.45	89	37.351	329	32.36	213	39.830	276	37.13	169	
19.7	57.150	285	31.56	84	37.680	301	34.49	253	40.106	259	38.82	188	
29.6	57.435	263	30.72	76	37.981	265	37.02	284	40.365	237	40.70	200	
June 8.6	57.698	235	29.96	64	38.246	223	39.86	307	40.602	209	42.70	207	
18.6	57.933	201	29.32	51	38.469	174	42.93	319	40.811	175	44.77	207	
28.6	58.134	161	28.81	37	38.643	122	46.12	326	40.986	137	46.84	201	
July 8.5	58.295	116	28.44	21	38.765	66	49.38	323	41.123	96	48.85	192	
18.5	58.411	73	28.23	6	38.831	8	52.61	312	41.219	51	50.77	177	
28.5	58.484	24	28.17	7	38.839	49	55.73	294	41.270	8	52.54	160	
Aug. 7.4	58.508	23	28.24	20	38.790	103	58.67	270	41.278	36	54.14	139	
17.4	58.485	66	28.44	29	38.687	153	61.37	240	41.242	76	55.53	116	
27.4	58.419	107	28.73	37	38.534	198	63.77	204	41.166	113	56.69	91	
Sept. 6.4	58.312	139	29.10	40	38.336	236	65.81	166	41.053	142	57.60	66	
16.3	58.173	163	29.50	43	38.100	263	67.47	122	40.911	165	58.26	41	
26.3	58.010	178	29.93	41	37.837	282	68.69	77	40.746	178	58.67	14	
Oct. 6.3	57.832	183	30.34	39	37.555	291	69.46	28	40.568	182	58.81	13	
16.3	57.649	178	30.73	34	37.264	286	69.74	22	40.386	178	58.68	39	
26.2	57.471	162	31.07	30	36.978	274	69.52	72	40.208	164	58.29	65	
Nov. 5.2	57.309	137	31.37	25	36.704	250	68.80	123	40.044	143	57.64	90	
15.2	57.172	106	31.62	20	36.454	217	67.57	170	39.901	114	56.74	114	
25.1	57.066	68	31.82	16	36.237	177	65.87	214	39.787	81	55.60	136	
Dec. 5.1	56.998	28	31.98	13	36.060	131	63.73	253	39.706	44	54.24	155	
15.1	56.970	13	32.11	10	35.929	81	61.20	285	39.662	6	52.69	170	
25.1	56.983	55	32.21	7	35.848	28	58.35	308	39.656	34	50.99	179	
35.0	57.038		32.28	7	35.820		55.27		39.690		49.20		
Mean Place	55.802		41.92		36.029		40.22		38.781		37.14		
Sec δ , Tan δ	1.064		-0.363		1.413		+0.998		1.017		+0.184		
$l \alpha$, $l \delta$	+0.01		+0.2		-0.02		+0.2		0.00		+0.2		
$\omega \alpha$, $\omega \delta$	+0.01		-0.9		-0.03		-0.9		-0.01		-0.9		
AUTHORITY							A. E.	A. E.					

APPARENT PLACES OF STARS, 1924. 407

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Aquilæ. Mag. 0.9		ϵ Sagittari. Mag. 4.2		β Aquilæ. Mag. 3.9	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 19 47	8 39	h m 19 49	42 3	h m 19 51	6 12
Jan. 1.0	2.834 ⁵⁶	65.50 ¹⁶⁹	58.639 ⁸⁰	68.43 ¹³⁴	33.124 ⁵⁰	63.18 ¹⁵⁷
11.0	2.890 ⁹²	63.81 ¹⁶⁸	58.719 ¹³⁰	67.09 ¹⁴¹	33.174 ⁸⁷	61.61 ¹⁵⁶
21.0	2.982 ¹²⁷	62.13 ¹⁵⁹	58.849 ¹⁷⁵	65.68 ¹⁴⁵	33.261 ¹²⁰	60.05 ¹⁴⁸
31.0	3.109 ¹⁵⁸	60.54 ¹⁴⁵	59.024 ²¹⁷	64.23 ¹⁴⁴	33.381 ¹⁵¹	58.57 ¹³⁴
Feb. 9.9	3.267 ¹⁸⁶	59.09 ¹²³	59.241 ²⁵³	62.79 ¹⁴³	33.532 ¹⁸⁰	57.23 ¹¹⁵
19.9	3.453 ²¹¹	57.86 ⁹⁶	59.494 ²⁸⁷	61.36 ¹³⁹	33.712 ²⁰⁵	56.08 ⁸⁸
29.9	3.664 ²³⁴	56.90 ⁶³	59.781 ³¹⁴	59.97 ¹³²	33.917 ²²⁸	55.20 ⁵⁸
Mar. 10.9	3.898 ²⁵³	56.27 ²⁷	60.095 ³³⁸	58.65 ¹²⁴	34.145 ²⁴⁸	54.62 ²⁴
20.8	4.151 ²⁶⁹	56.00 ¹⁰	60.433 ³⁵⁸	57.41 ¹¹⁵	34.393 ²⁶⁵	54.38 ¹¹
30.8	4.420 ²⁸⁰	56.10 ⁴⁷	60.791 ³⁷³	56.26 ¹⁰²	34.658 ²⁷⁷	54.49 ⁴⁷
Apr. 9.8	4.700 ²⁸⁷	56.57 ⁸⁴	61.164 ³⁸³	55.24 ⁸⁸	34.935 ²⁸⁶	54.96 ⁸⁰
19.7	4.987 ²⁸⁹	57.41 ¹¹⁶	61.547 ³⁸⁷	54.36 ⁷¹	35.221 ²⁸⁹	55.76 ¹¹²
29.7	5.276 ²⁸⁷	58.57 ¹⁴⁵	61.934 ³⁸⁴	53.65 ⁵¹	35.510 ²⁸⁷	56.88 ¹³⁷
May 9.7	5.563 ²⁷⁶	60.02 ¹⁶⁸	62.318 ³⁷⁵	53.14 ²⁹	35.797 ²⁷⁹	58.25 ¹⁵⁹
19.7	5.839 ²⁶²	61.70 ¹⁸⁵	62.693 ³⁵⁶	52.85 ⁶	36.076 ²⁶⁵	59.84 ¹⁷⁵
29.6	6.101 ²³⁹	63.55 ¹⁹⁶	63.049 ³³¹	52.79 ¹⁷	36.341 ²⁴⁴	61.59 ¹⁸⁵
June 8.6	6.340 ²¹²	65.51 ²⁰²	63.380 ²⁹⁶	52.96 ⁴²	36.585 ²¹⁷	63.44 ¹⁹⁰
18.6	6.552 ¹⁷⁸	67.53 ²⁰¹	63.676 ²⁵⁵	53.38 ⁶⁴	36.802 ¹⁸⁵	65.34 ¹⁸⁸
28.6	6.730 ¹⁴¹	69.54 ¹⁹⁵	63.931 ²⁰⁶	54.02 ⁸⁶	36.987 ¹⁴⁸	67.22 ¹⁸²
July 8.5	6.871 ⁹⁹	71.49 ¹⁸⁴	64.137 ¹⁵²	54.88 ¹⁰⁴	37.135 ¹⁰⁷	69.04 ¹⁷¹
18.5	6.970 ⁵⁶	73.33 ¹⁷⁰	64.289 ⁹⁶	55.92 ¹¹⁹	37.242 ⁶³	70.75 ¹⁵⁷
28.5	7.026 ¹¹	75.03 ¹⁵²	64.385 ³⁵	57.11 ¹³⁰	37.305 ¹⁹	72.32 ¹³⁹
Aug. 7.4	7.037 ³¹	76.55 ¹³²	64.420 ²²	58.41 ¹³⁵	37.324 ²⁴	73.71 ¹¹⁹
17.4	7.006 ⁷³	77.87 ¹⁰⁹	64.398 ⁷⁹	59.76 ¹³⁵	37.300 ⁶⁶	74.90 ⁹⁸
27.4	6.933 ¹⁰⁸	78.96 ⁸⁵	64.319 ¹³⁰	61.11 ¹²⁹	37.234 ¹⁰²	75.88 ⁷⁶
Sept. 6.4	6.825 ¹³⁹	79.81 ⁶¹	64.189 ¹⁷²	62.40 ¹¹⁷	37.132 ¹³³	76.64 ⁵³
16.3	6.686 ¹⁶⁰	80.42 ³⁶	64.017 ²⁰⁵	63.57 ¹⁰¹	36.999 ¹⁵⁶	77.17 ³⁰
26.3	6.526 ¹⁷⁵	80.78 ¹¹	63.812 ²²⁷	64.58 ⁷⁹	36.843 ¹⁷¹	77.47 ⁷
Oct. 6.3	6.351 ¹⁷⁹	80.89 ¹⁴	63.585 ²³⁶	65.37 ⁵⁴	36.672 ¹⁷⁷	77.54 ¹⁵
16.3	6.172 ¹⁷⁵	80.75 ³⁸	63.349 ²³¹	65.91 ²⁸	36.495 ¹⁷⁴	77.39 ³⁸
26.2	5.997 ¹⁶¹	80.37 ⁶³	63.118 ²¹⁶	66.19 ²	36.321 ¹⁶¹	77.01 ⁶⁰
Nov. 5.2	5.836 ¹⁴⁰	79.74 ⁸⁶	62.902 ¹⁸⁷	66.17 ²⁹	36.160 ¹⁴¹	76.41 ⁸²
15.2	5.696 ¹¹²	78.88 ¹⁰⁸	62.715 ¹⁵⁰	65.88 ⁵⁵	36.019 ¹¹⁴	75.59 ¹⁰¹
25.1	5.584 ⁷⁹	77.80 ¹²⁹	62.565 ¹⁰³	65.33 ⁷⁸	35.995 ⁸¹	74.58 ¹²⁰
Dec. 5.1	5.505 ⁴²	76.51 ¹⁴⁵	62.462 ⁵⁴	64.55 ⁹⁹	35.824 ⁴⁶	73.38 ¹³⁶
15.1	5.463 ⁴	75.06 ¹⁶⁰	62.408 ²	63.56 ¹¹⁵	35.778 ⁹	72.02 ¹⁴⁸
25.1	5.459 ³⁴	73.46 ¹⁶⁷	62.406 ⁵²	62.41 ¹²⁷	35.769 ²⁹	70.54 ¹⁵⁵
35.0	5.493	71.79	62.458	61.14	35.798	68.99
Mean Place	4.513	59.34	61.204	69.71	34.802	57.27
Sec δ , Tan δ	1.012	+0.152	1.347	-0.903	1.006	+0.109
$L \alpha, L \delta$	0.00	+0.2	+0.02	+0.2	0.00	+0.2
$\omega \alpha, \omega \delta$	0.00	-0.9	+0.03	-0.9	0.00	-0.9
AUTHORITY	A. E.				A. E.	

408 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	g Sagittarii. Mag. 5·1		c Sagittarii. Mag. 4·6		δ Pavonis, Mag. 3·6	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 19 53	° ′ 15 41	h m 19 57	° ′ 27 55	h m 20 I	° ′ 66 22
Jan. 1·1	36·607 ₆₄	35·08 ₂₇	57·133 ₆₅	18·60 ₅₀	12·23 ₇	39·46 ₂₆₀
11·0	36·671 ₁₀₀	35·35 ₂₁	57·198 ₁₀₅	18·10 ₅₆	12·30 ₁₆	36·86 ₂₆₈
21·0	36·771 ₁₃₅	35·56 ₁₆	57·303 ₁₄₃	17·54 ₆₂	12·46 ₂₆	34·18 ₂₆₉
31·0	36·906 ₁₆₆	35·72 ₆	57·446 ₁₇₈	16·92 ₆₉	12·72 ₃₃	31·49 ₂₆₄
Feb. 10·0	37·072 ₁₉₄	35·78 ₄	57·624 ₂₀₈	16·23 ₇₄	13·05 ₄₂	28·85 ₂₅₂
19·9	37·266 ₂₁₉	35·74 ₁₉	57·832 ₂₃₅	15·49 ₈₁	13·47 ₄₈	26·33 ₂₃₅
29·9	37·485 ₂₄₂	35·55 ₃₄	58·067 ₂₆₁	14·68 ₈₆	13·95 ₅₄	23·98 ₂₁₂
Mar. 10·9	37·727 ₂₆₁	35·21 ₄₉	58·328 ₂₈₃	13·82 ₉₁	14·49 ₅₉	21·86 ₁₈₆
20·8	37·988 ₂₇₈	34·72 ₆₅	58·611 ₂₉₉	12·91 ₉₅	15·08 ₆₂	20·00 ₁₅₆
30·8	38·266 ₂₉₂	34·07 ₈₀	58·910 ₃₁₅	11·96 ₉₈	15·70 ₆₅	18·44 ₁₂₂
Apr. 9·8	38·558 ₃₀₀	33·27 ₉₂	59·225 ₃₂₆	10·98 ₉₆	16·35 ₆₇	17·22 ₈₇
19·8	38·858 ₃₀₄	32·35 ₁₀₀	59·551 ₃₃₀	10·02 ₉₄	17·02 ₆₈	16·35 ₅₀
29·7	39·162 ₃₀₄	31·35 ₁₀₇	59·881 ₃₃₁	9·08 ₈₈	17·70 ₆₇	15·85 ₁₁
May 9·7	39·466 ₂₉₇	30·28 ₁₀₉	60·212 ₃₂₄	8·20 ₇₈	18·37 ₆₆	15·74 ₃₀
19·7	39·763 ₂₈₅	29·19 ₁₀₅	60·536 ₃₁₀	7·42 ₆₅	19·03 ₆₂	16·04 ₆₈
29·7	40·048 ₂₆₅	28·14 ₁₀₁	60·846 ₂₉₀	6·77 ₅₁	19·65 ₅₇	16·72 ₁₀₅
June 8·6	40·313 ₂₃₈	27·13 ₉₂	61·136 ₂₆₂	6·26 ₃₄	20·22 ₅₁	17·77 ₁₄₂
18·6	40·551 ₂₀₅	26·21 ₇₉	61·398 ₂₂₈	5·92 ₁₅	20·73 ₄₄	19·19 ₁₇₄
28·6	40·756 ₁₆₇	25·42 ₆₅	61·626 ₁₈₇	5·77 ₃	21·17 ₃₅	20·93 ₂₀₂
July 8·5	40·923 ₁₂₆	24·77 ₅₀	61·813 ₁₄₂	5·80 ₂₀	21·52 ₂₆	22·95 ₂₂₃
18·5	41·049 ₈₀	24·27 ₃₄	61·955 ₉₃	6·00 ₃₇	21·78 ₁₅	25·18 ₂₃₈
28·5	41·129 ₃₃	23·93 ₁₈	62·048 ₄₃	6·37 ₅₁	21·93 ₆	27·56 ₂₄₆
Aug. 7·5	41·162 ₁₂	23·75 ₄	62·091 ₈	6·88 ₆₃	21·99 ₅	30·02 ₂₄₆
17·4	41·150 ₅₆	23·71 ₉	62·083 ₅₆	7·51 ₇₀	21·94 ₁₅	32·48 ₂₃₆
27·4	41·094 ₉₆	23·80 ₂₀	62·027 ₉₉	8·21 ₇₅	21·79 ₂₅	34·84 ₂₁₈
Sept. 6·4	40·998 ₁₂₈	24·00 ₂₇	61·928 ₁₃₆	8·96 ₇₄	21·54 ₃₃	37·02 ₁₉₂
16·4	40·870 ₁₅₄	24·27 ₃₄	61·792 ₁₆₅	9·70 ₇₀	21·21 ₃₉	38·94 ₁₅₇
26·3	40·716 ₁₇₀	24·61 ₃₈	61·627 ₁₈₄	10·40 ₆₂	20·82 ₄₃	40·51 ₁₁₈
Oct. 6·3	40·546 ₁₇₇	24·99 ₃₉	61·443 ₁₉₂	11·02 ₅₂	20·39 ₄₆	41·69 ₇₃
16·3	40·369 ₁₇₃	25·38 ₃₉	61·251 ₁₈₉	11·54 ₃₉	19·93 ₄₇	42·42 ₂₅
26·2	40·196 ₁₆₀	25·77 ₃₉	61·062 ₁₇₆	11·93 ₂₆	19·46 ₄₄	42·67 ₂₆
Nov. 5·2	40·036 ₁₃₈	26·16 ₃₈	60·886 ₁₅₃	12·19 ₁₁	19·02 ₄₁	42·41 ₇₆
15·2	39·898 ₁₁₀	26·54 ₃₇	60·733 ₁₂₃	12·30 ₂	18·61 ₃₄	41·65 ₁₂₁
25·2	39·788 ₇₄	26·91 ₃₅	60·610 ₈₆	12·28 ₁₄	18·27 ₂₇	40·44 ₁₆₃
Dec. 5·1	39·714 ₃₇	27·26 ₃₅	60·524 ₄₄	12·14 ₂₆	18·00 ₁₈	38·81 ₁₉₉
15·1	39·677 ₂	27·61 ₃₂	60·480 ₂	11·88 ₃₆	17·82 ₉	36·82 ₂₂₈
25·1	39·679 ₄₂	27·93 ₃₁	60·478 ₄₂	11·52 ₄₃	17·73 ₁	34·54 ₂₅₀
35·1	39·721	28·24	60·520	11·09	17·74	32·04
Mean Place	38·496	38·44	59·243	20·46	16·88	38·42
Sec δ, Tan δ	1·039	-0·281	1·132	-0·530	2·495	-2·286
L α, L δ	+0·01	+0·2	+0·01	+0·2	+0·05	+0·2
ω α, ω δ	+0·01	-0·9	+0·02	-0·9	+0·08	-0·9

AUTHORITY

A. N.

A. E.

APPARENT PLACES OF STARS, 1924. 409

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ Aquilæ. Mag. 3.4		4 Capricorni. Mag. 6.0				α^2 Capricorni. Mag. 3.8	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.		
	h m 20 7	° ' " 1 2	h m 20 13	° ' " 22 2	h m 20 13	° ' " 12 46		
Jan. 1.1	21.347 ^s 41	47.93 ^s 110	31.614 ^s 46	43.59 ^s 16	48.545 ^s 42	50.55 ^s 40		
11.0	21.388 77	49.03 108	31.660 84	43.43 23	48.587 78	50.95 35		
21.0	21.465 109	50.11 101	31.744 119	43.20 31	48.665 112	51.30 27		
31.0	21.574 140	51.12 89	31.863 153	42.89 39	48.777 143	51.57 17		
Feb. 10.0	21.714 169	52.01 71	32.016 183	42.50 50	48.920 172	51.74 3		
19.9	21.883 196	52.72 50	32.199 211	42.00 60	49.092 200	51.77 13		
29.9	22.079 219	53.22 24	32.410 236	41.40 71	49.292 223	51.64 30		
Mar. 10.9	22.298 240	53.46 4	32.646 259	40.69 82	49.515 246	51.34 49		
20.8	22.538 259	53.42 32	32.905 279	39.87 92	49.761 265	50.85 67		
30.8	22.797 274	53.10 61	33.184 296	38.95 101	50.026 280	50.18 84		
Apr. 9.8	23.071 285	52.49 88	33.480 308	37.94 107	50.306 294	49.34 100		
19.8	23.356 291	51.61 112	33.788 316	36.87 109	50.600 301	48.34 113		
29.7	23.647 292	50.49 132	34.104 319	35.78 109	50.901 303	47.21 121		
May 9.7	23.939 287	49.17 148	34.423 315	34.69 104	51.204 299	46.00 126		
19.7	24.226 276	47.69 158	34.738 304	33.65 97	51.503 290	44.74 126		
29.7	24.502 257	46.11 163	35.042 288	32.68 85	51.793 272	43.48 121		
June 8.6	24.759 233	44.48 164	35.330 262	31.83 72	52.065 248	42.27 115		
18.6	24.992 202	42.84 159	35.592 230	31.11 55	52.313 218	41.12 103		
28.6	25.194 166	41.25 150	35.822 193	30.56 37	52.531 182	40.09 89		
July 8.5	25.360 127	39.75 138	36.015 150	30.19 19	52.713 141	39.20 73		
18.5	25.487 83	38.37 122	36.165 105	30.00 2	52.854 98	38.47 57		
28.5	25.570 38	37.15 105	36.270 55	29.98 16	52.952 51	37.90 39		
Aug. 7.5	25.608 6	36.10 87	36.325 8	30.14 30	53.003 6	37.51 23		
17.4	25.602 47	35.23 68	36.333 40	30.44 43	53.009 39	37.28 7		
27.4	25.555 86	34.55 48	36.293 82	30.87 51	52.970 78	37.21 7		
Sept. 6.4	25.469 119	34.07 30	36.211 119	31.38 57	52.892 114	37.28 19		
16.4	25.350 144	33.77 11	36.092 148	31.95 58	52.778 141	37.47 28		
26.3	25.206 162	33.66 6	35.944 168	32.53 58	52.637 160	37.75 35		
Oct. 6.3	25.044 169	33.72 21	35.776 178	33.11 53	52.477 169	38.10 40		
16.3	24.875 168	33.93 37	35.598 179	33.64 47	52.308 170	38.50 44		
26.2	24.707 159	34.30 51	35.419 169	34.11 40	52.138 160	38.94 46		
Nov. 5.2	24.548 140	34.81 66	35.250 150	34.51 31	51.978 143	39.40 47		
15.2	24.408 116	35.47 78	35.100 124	34.82 22	51.835 117	39.87 48		
25.2	24.292 85	36.25 89	34.976 90	35.04 14	51.718 87	40.35 48		
Dec. 5.1	24.207 52	37.14 99	34.886 54	35.18 5	51.631 52	40.83 48		
15.1	24.155 16	38.13 107	34.832 15	35.23 3	51.579 16	41.31 46		
25.1	24.139 21	39.20 111	34.817 25	35.20 9	51.563 22	41.77 44		
35.1	24.160	40.31	34.842	35.11	51.585	42.21		
Mean Place	23.041	52.50	33.576	45.06	50.356	53.23		
Sec δ , Tan δ	1.000	-0.018	1.079	-0.405	1.025	-0.227		
L α , L δ	0.00	+0.2	+0.01	+0.2	+0.01	+0.2		
ω α , ω δ	0.00	-0.9	+0.01	-0.8	+0.01	-0.8		
AUTHORITY	A. E.		A. E.		A. E.			

410 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Capricorni. Mag. 3.3				γ Cygni. Mag. 2.3				α Pavonis. Mag. 2.1			
	R. A.		Dec. S.		R. A.		Dec. N.		R. A.		Dec. S.	
	h	m	°	'	h	m	°	'	h	m	°	'
	20	16	15	1	20	19	40	0	20	19	56	58
	_s				_s				_s			
Jan. 1.1	42.734	40	18.60	26	28.402	28	56.01	284	35.227	33	50.85	217
11.0	42.774	77	18.86	21	28.374	20	53.17	296	35.260	101	48.68	228
21.0	42.851	110	19.07	12	28.394	67	50.21	296	35.361	165	46.40	236
31.0	42.961	142	19.19	2	28.461	114	47.25	285	35.526	227	44.04	237
Feb. 10.0	43.103	171	19.21	10	28.575	158	44.40	263	35.753	282	41.67	233
19.0	43.274	199	19.11	26	28.733	199	41.77	231	36.035	332	39.34	224
29.0	43.473	223	18.85	41	28.932	238	39.46	188	36.367	378	37.10	210
Mar. 10.9	43.696	246	18.44	58	29.170	272	37.58	140	36.745	417	35.00	193
20.9	43.942	265	17.86	75	29.442	299	36.18	85	37.162	449	33.07	172
30.8	44.207	283	17.11	90	29.741	322	35.33	27	37.611	477	31.35	148
Apr. 9.8	44.490	295	16.21	103	30.063	337	35.06	30	38.088	495	29.87	120
19.8	44.785	303	15.18	113	30.400	343	35.36	86	38.583	507	28.67	90
29.7	45.088	306	14.05	120	30.743	342	36.22	139	39.090	509	27.77	57
May 9.7	45.394	304	12.85	122	31.085	333	37.61	186	39.599	501	27.20	22
19.7	45.698	293	11.63	121	31.418	314	39.47	227	40.100	483	26.98	13
29.7	45.991	277	10.42	114	31.732	288	41.74	261	40.583	453	27.11	48
June 8.6	46.268	253	9.28	106	32.020	254	44.35	287	41.036	412	27.59	82
18.6	46.521	223	8.22	93	32.274	213	47.22	305	41.448	363	28.41	116
28.6	46.744	187	7.29	77	32.487	167	50.27	313	41.811	302	29.57	144
July 8.6	46.931	146	6.52	61	32.654	116	53.40	316	42.113	234	31.01	170
18.5	47.077	102	5.91	44	32.770	63	56.56	309	42.347	159	32.71	189
28.5	47.179	55	5.47	27	32.833	8	59.65	297	42.506	81	34.60	203
Aug. 7.5	47.234	9	5.20	10	32.841	44	62.62	277	42.587	3	36.63	209
17.4	47.243	36	5.10	5	32.797	94	65.39	252	42.590	75	38.72	209
27.4	47.207	77	5.15	18	32.703	140	67.91	222	42.515	147	40.81	199
Sept. 6.4	47.130	112	5.33	29	32.563	180	70.13	187	42.368	211	42.80	181
16.4	47.018	140	5.62	36	32.383	212	72.00	148	42.157	263	44.61	159
26.3	46.878	161	5.98	41	32.171	235	73.48	106	41.894	301	46.20	126
Oct. 6.3	46.717	171	6.39	44	31.936	249	74.54	61	41.593	324	47.46	90
16.3	46.546	170	6.83	46	31.687	252	75.15	15	41.269	331	48.36	50
26.3	46.376	161	7.29	45	31.435	247	75.30	33	40.938	320	48.86	7
Nov. 5.2	46.215	145	7.74	44	31.188	232	74.97	80	40.618	294	48.93	36
15.2	46.070	119	8.18	42	30.956	208	74.17	128	40.324	255	48.57	78
25.2	45.951	89	8.60	40	30.748	178	72.89	172	40.069	202	47.79	117
Dec. 5.1	45.862	54	9.00	38	30.570	140	71.17	213	39.867	142	46.62	151
15.1	45.808	17	9.38	35	30.430	100	69.04	247	39.725	75	45.11	181
25.1	45.791	19	9.73	31	30.330	56	66.57	273	39.650	0	43.30	204
35.1	45.810		10.04		30.274		63.84		39.643	7	41.26	
Mean Place	44.567		20.85		30.017		45.64		38.665		48.35	
Sec δ , Tan δ	1.035		-0.268		1.306		+0.839		1.835		-1.539	
L α , L δ	+0.01		+0.2		-0.02		+0.2		+0.03		+0.2	
ω α , ω δ	+0.01		-0.8		-0.03		-0.8		+0.06		-0.8	
AUTHORITY	A. N.				A. E.				A. E.			

APPARENT PLACES OF STARS, 1924. 411

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ρ Capricorni. Mag. 5.0			ε Delphini. Mag. 4.0			α Indi. Mag. 3.2											
	R. A.		Dec. S.	R. A.		Dec. N.	R. A.		Dec. S.									
	h	m	°	'	h	m	°	'	h	m	°	'						
	20	24	18	3	20	29	11	2	20	32	47	33						
	s		s		s		s		s		s							
Jan. 1.1	29	792	34	56	01	7	33	390	10	44	25	168	10	797	22	31	42	166
11.0	29	826	70	56	08	0	33	400	45	42	57	170	10	819	74	29	76	179
21.0	29	896	105	56	08	9	33	445	80	40	87	165	10	893	125	27	97	190
31.0	30	001	136	55	99	19	33	525	111	39	22	153	11	018	174	26	07	197
Feb. 10.0	30	137	167	55	80	31	33	636	143	37	69	134	11	192	218	24	10	197
19.9	30	304	195	55	49	45	33	779	173	36	35	108	11	410	259	22	13	196
29.9	30	499	221	55	04	58	33	952	200	35	27	77	11	669	296	20	17	191
Mar. 10.9	30	720	245	54	46	74	34	152	225	34	50	42	11	965	330	18	26	182
20.9	30	965	265	53	72	87	34	377	248	34	08	5	12	295	359	16	44	170
30.8	31	230	283	52	85	99	34	625	266	34	03	35	12	654	384	14	74	155
Apr. 9.8	31	513	298	51	86	109	34	891	281	34	38	72	13	038	404	13	19	136
19.8	31	811	308	50	77	117	35	172	291	35	10	108	13	442	416	11	83	114
29.7	32	119	312	49	60	122	35	463	295	36	18	139	13	858	423	10	69	89
May 9.7	32	431	309	48	38	120	35	758	291	37	57	167	14	281	420	9	80	62
19.7	32	740	301	47	18	116	36	049	283	39	24	188	14	701	408	9	18	31
29.7	33	041	286	46	02	107	36	332	266	41	12	203	15	109	388	8	87	1
June 8.6	33	327	263	44	95	95	36	598	243	43	15	213	15	497	358	8	86	30
18.6	33	590	232	44	00	81	36	841	214	45	28	216	15	855	319	9	16	60
28.6	33	822	198	43	19	65	37	055	178	47	44	213	16	174	271	9	76	90
July 8.6	34	020	156	42	54	46	37	233	139	49	57	205	16	445	217	10	66	116
18.5	34	176	111	42	08	27	37	372	95	51	62	193	16	662	156	11	82	137
28.5	34	287	65	41	81	10	37	467	51	53	55	176	16	818	92	13	19	156
Aug. 7.5	34	352	17	41	71	6	37	518	7	55	31	157	16	910	28	14	75	166
17.4	34	369	29	41	77	22	37	525	37	56	88	135	16	938	37	16	41	172
27.4	34	340	71	41	99	33	37	488	76	58	23	110	16	901	97	18	13	170
Sept. 6.4	34	269	108	42	32	42	37	412	111	59	33	86	16	804	150	19	83	161
16.4	34	161	138	42	74	49	37	301	139	60	19	59	16	654	195	21	44	147
26.3	34	023	159	43	23	51	37	162	159	60	78	34	16	459	227	22	91	124
Oct. 6.3	33	864	170	43	74	52	37	003	170	61	12	7	16	232	249	24	15	96
16.3	33	694	173	44	26	50	36	833	173	61	19	20	15	983	255	25	11	65
26.3	33	521	165	44	76	46	36	660	168	60	99	46	15	728	251	25	76	30
Nov. 5.2	33	356	148	45	22	41	36	492	154	60	53	70	15	477	230	26	06	4
15.2	33	208	125	45	63	36	36	338	133	59	83	95	15	247	200	26	02	40
25.2	33	083	94	45	99	31	36	205	107	58	88	117	15	047	160	25	62	73
Dec. 5.1	32	989	60	46	30	24	36	098	77	57	71	137	14	887	113	24	89	104
15.1	32	929	24	46	54	19	36	021	44	56	34	153	14	774	62	23	85	131
25.1	32	905	13	46	73	13	35	977	9	54	81	165	14	712	8	22	54	152
35.1	32	918		46	86		35	968		53	16		14	704		21	02	
Mean Place	31.657		57.39		34.941		38.36		13.553		28.49							
Sec δ, Tan δ	1.052		-0.326		1.019		+0.195		1.482		-1.094							
L α, L δ	+0.01		+0.2		0.00		+0.2		+0.02		+0.2							
ω α, ω δ	+0.01		-0.8		-0.01		-0.8		+0.04		-0.8							
AUTHORITY	A. N.						A. E.											

412 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Delphini. Mag. 3.9		β Pavonis. Mag. 3.6		α Cygni. Mag. 1.3	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	$\begin{matrix} h & m \\ 20 & 36 \\ s \end{matrix}$	$\begin{matrix} ^\circ & ' & '' \\ 15 & 38 \\ s \end{matrix}$	$\begin{matrix} h & m \\ 20 & 38 \\ s \end{matrix}$	$\begin{matrix} ^\circ & ' & '' \\ 66 & 28 \\ s \end{matrix}$	$\begin{matrix} h & m \\ 20 & 38 \\ s \end{matrix}$	$\begin{matrix} ^\circ & ' & '' \\ 45 & 0 \\ s \end{matrix}$
Jan. 1.1	4.985 ⁰	42.59 ¹⁸⁶	3.17 ³	45.69 ²⁵⁷	48.870 ⁶⁴	40.42 ²⁸⁴
11.1	4.985 ³⁵	40.73 ¹⁹¹	3.14 ⁶	43.12 ²⁷⁶	48.806 ¹⁵	37.58 ³⁰¹
21.0	5.020 ⁶⁹	38.82 ¹⁸⁸	3.20 ¹⁵	40.36 ²⁸⁴	48.791 ³⁶	34.57 ³⁰⁷
31.0	5.089 ¹⁰³	36.94 ¹⁷⁶	3.35 ²⁴	37.52 ²⁸⁸	48.827 ⁸⁶	31.50 ³⁰⁰
Feb. 10.0	5.192 ¹³⁵	35.18 ¹⁵⁸	3.59 ³²	34.64 ²⁸²	48.913 ¹³⁷	28.50 ²⁸²
19.9	5.327 ¹⁶⁷	33.60 ¹³¹	3.91 ⁴⁰	31.82 ²⁷³	49.050 ¹⁸⁶	25.68 ²⁵³
29.9	5.494 ¹⁹⁶	32.29 ⁹⁸	4.31 ⁴⁷	29.09 ²⁵⁶	49.236 ²³⁰	23.15 ²¹⁴
Mar. 10.9	5.690 ²²²	31.31 ⁶¹	4.78 ⁵²	26.53 ²³⁴	49.466 ²⁷⁰	21.01 ¹⁶⁶
20.9	5.912 ²⁴⁷	30.70 ²¹	5.30 ⁵⁷	24.19 ²⁰⁸	49.736 ³⁰⁵	19.35 ¹¹³
30.8	6.159 ²⁶⁶	30.49 ²¹	5.87 ⁶¹	22.11 ¹⁷⁸	50.041 ³³³	18.22 ⁵⁵
Apr. 9.8	6.425 ²⁸³	30.70 ⁶³	6.48 ⁶⁴	20.33 ¹⁴⁴	50.374 ³⁵³	17.67 ⁵
19.8	6.708 ²⁹³	31.33 ¹⁰²	7.12 ⁶⁷	18.89 ¹⁰⁷	50.727 ³⁶⁵	17.72 ⁶³
29.8	7.001 ²⁹⁸	32.35 ¹³⁹	7.79 ⁶⁷	17.82 ⁶⁷	51.092 ³⁶⁷	18.35 ¹¹⁸
May 9.7	7.299 ²⁹⁶	33.74 ¹⁶⁹	8.46 ⁶⁶	17.15 ²⁵	51.459 ³⁶⁰	19.53 ¹⁷⁰
19.7	7.595 ²⁸⁷	35.43 ¹⁹⁵	9.12 ⁶⁵	16.90 ¹⁷	51.819 ³⁴⁴	21.23 ²¹⁶
29.7	7.882 ²⁷¹	37.38 ²¹⁴	9.77 ⁶¹	17.07 ⁵⁹	52.163 ³¹⁷	23.39 ²⁵⁴
June 8.6	8.153 ²⁴⁷	39.52 ²²⁷	10.38 ⁵⁶	17.66 ⁹⁹	52.480 ²⁸³	25.93 ²⁸⁵
18.6	8.400 ²¹⁸	41.79 ²³⁴	10.94 ⁴⁹	18.65 ¹³⁸	52.763 ²⁴¹	28.78 ³⁰⁷
28.6	8.618 ¹⁸²	44.13 ²³³	11.43 ⁴²	20.03 ¹⁷²	53.004 ¹⁹³	31.85 ³²²
July 8.6	8.800 ¹⁴³	46.46 ²²⁸	11.85 ³³	21.75 ²⁰¹	53.197 ¹⁴⁰	35.07 ³²⁸
18.5	8.943 ⁹⁹	48.74 ²¹⁷	12.18 ²⁴	23.76 ²²⁵	53.337 ⁸⁴	38.35 ³²⁷
28.5	9.042 ⁵⁴	50.91 ²⁰¹	12.42 ¹³	26.01 ²⁴¹	53.421 ²⁶	41.62 ³¹⁸
Aug. 7.5	9.096 ⁹	52.92 ¹⁸²	12.55 ²	28.42 ²⁴⁹	53.447 ³¹	44.80 ³⁰¹
17.5	9.105 ³⁵	54.74 ¹⁶¹	12.57 ⁸	30.91 ²⁴⁸	53.416 ⁸⁵	47.81 ²⁷⁹
27.4	9.070 ⁷⁵	56.35 ¹³⁵	12.49 ¹⁸	33.39 ²³⁸	53.331 ¹³⁶	50.60 ²⁵¹
Sept. 6.4	8.995 ¹¹¹	57.70 ¹⁰⁷	12.31 ²⁷	35.77 ²¹⁹	53.195 ¹⁸¹	53.11 ²¹⁸
16.4	8.884 ¹³⁹	58.77 ⁸⁰	12.04 ³⁴	37.96 ¹⁹²	53.014 ²¹⁷	55.29 ¹⁸⁰
26.3	8.745 ¹⁶⁰	59.57 ⁵⁰	11.70 ⁴¹	39.88 ¹⁵⁶	52.797 ²⁴⁶	57.09 ¹³⁸
Oct. 6.3	8.585 ¹⁷⁴	60.07 ²¹	11.29 ⁴⁴	41.44 ¹¹⁴	52.551 ²⁶⁴	58.47 ⁹²
16.3	8.411 ¹⁷⁷	60.28 ¹⁰	10.85 ⁴⁷	42.58 ⁶⁸	52.287 ²⁷⁴	59.39 ⁴⁵
26.3	8.234 ¹⁷³	60.18 ³⁹	10.38 ⁴⁶	43.26 ¹⁷	52.013 ²⁷²	59.84 ⁵
Nov. 5.2	8.061 ¹⁶¹	59.79 ⁶⁹	9.92 ⁴⁴	43.43 ³⁵	51.741 ²⁶¹	59.79 ⁵⁶
15.2	7.900 ¹⁴¹	59.10 ⁹⁸	9.48 ³⁹	43.08 ⁸⁶	51.480 ²⁴²	59.23 ¹⁰⁶
25.2	7.759 ¹¹⁶	58.12 ¹²⁴	9.09 ³⁴	42.22 ¹³²	51.238 ²¹⁴	58.17 ¹⁵⁴
Dec. 5.2	7.643 ⁸⁷	56.88 ¹⁴⁷	8.75 ²⁶	40.90 ¹⁷⁵	51.024 ¹⁷⁹	56.63 ¹⁹⁹
15.1	7.556 ⁵⁵	55.41 ¹⁶⁷	8.49 ¹⁷	39.15 ²¹²	50.845 ¹³⁹	54.64 ²³⁸
25.1	7.501 ²⁰	53.74 ¹⁸²	8.32 ⁸	37.03 ²⁴²	50.706 ⁹⁴	52.26 ²⁷⁰
35.1	7.481	51.92	8.24	34.61	50.612	49.56
Mean Place	6.495	36.01	7.74	40.76	50.433	28.97
Sec δ , Tan δ	1.038	+0.280	2.506	-2.297	1.414	+1.000
L α , L δ	-0.01	+0.2	+0.05	+0.3	-0.02	+0.3
ω α , ω δ	-0.01	-0.8	+0.10	-0.8	-0.04	-0.8
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 413

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ε Cygni. Mag. 2·6		ε Aquarii. Mag. 3·8		μ Aquarii. Mag. 4·8	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 20 43	° ′ 33 40	h m 20 43	° ′ 9 46	h m 20 48	° ′ 9 15
Jan. 1·1	6·693 ^s 36	75·08 ^s 252	32·100 ^s 12	27·89 ^s 53	31·695 ^s 8	68·81 ^s 55
11·1	6·657 5	72·56 264	32·112 47	28·42 47	31·703 41	69·36 50
21·0	6·662 46	69·92 266	32·159 79	28·89 38	31·744 74	69·86 40
31·0	6·708 88	67·26 260	32·238 110	29·27 27	31·818 105	70·26 29
Feb. 10·0	6·796 ^s 128	64·66 ^s 241	32·348 ^s 141	29·54 ^s 11	31·923 ^s 135	70·55 ^s 13
20·0	6·924 167	62·25 212	32·489 169	29·65 6	32·058 164	70·68 5
29·9	7·091 204	60·13 176	32·658 196	29·59 26	32·222 191	70·63 24
Mar. 10·9	7·295 ^s 238	58·37 ^s 131	32·854 ^s 222	29·33 ^s 47	32·413 ^s 217	70·39 ^s 46
20·9	7·533 267	57·06 82	33·076 245	28·86 68	32·630 241	69·93 69
30·8	7·800 293	56·24 30	33·321 265	28·18 89	32·871 263	69·24 89
Apr. 9·8	8·093 311	55·94 25	33·586 282	27·29 108	33·134 280	68·35 109
19·8	8·404 323	56·19 77	33·868 295	26·21 124	33·414 293	67·26 125
29·8	8·727 328	56·96 127	34·163 301	24·97 135	33·707 301	66·01 138
May 9·7	9·055 325	58·23 172	34·464 303	23·62 144	34·008 302	64·63 146
19·7	9·380 313	59·95 211	34·767 296	22·18 146	34·310 298	63·17 150
29·7	9·693 293	62·06 244	35·063 284	20·72 145	34·608 286	61·67 148
June 8·7	9·986 266	64·50 269	35·347 263	19·27 140	34·894 266	60·19 143
18·6	10·252 231	67·19 286	35·610 237	17·87 129	35·160 240	58·76 134
28·6	10·483 191	70·05 296	35·847 203	16·58 115	35·400 206	57·42 120
July 8·6	10·674 145	73·01 299	36·050 166	15·43 100	35·606 170	56·22 104
18·5	10·819 97	76·00 294	36·216 122	14·43 82	35·776 127	55·18 86
28·5	10·916 47	78·94 283	36·338 78	13·61 63	35·903 82	54·32 67
Aug. 7·5	10·963 4	81·77 266	36·416 32	12·98 44	35·985 36	53·65 47
17·5	10·959 52	84·43 244	36·448 12	12·54 26	36·021 8	53·18 29
27·4	10·907 97	86·87 216	36·436 54	12·28 8	36·013 50	52·89 11
Sept. 6·4	10·810 137	89·03 184	36·382 91	12·20 7	35·963 87	52·78 5
16·4	10·673 169	90·87 150	36·291 122	12·27 20	35·876 119	52·83 18
26·4	10·504 195	92·37 111	36·169 144	12·47 31	35·757 141	53·01 29
Oct. 6·3	10·309 210	93·48 71	36·025 158	12·78 39	35·616 155	53·30 39
16·3	10·099 217	94·19 29	35·867 163	13·17 47	35·461 161	53·69 46
26·3	9·882 216	94·48 15	35·704 158	13·64 51	35·300 159	54·15 52
Nov. 5·2	9·666 206	94·33 58	35·546 147	14·15 55	35·141 147	54·67 56
15·2	9·460 187	93·75 102	35·399 127	14·70 58	34·994 128	55·23 59
25·2	9·273 162	92·73 143	35·272 101	15·28 59	34·866 103	55·82 61
Dec. 5·2	9·111 133	91·30 181	35·171 72	15·87 60	34·763 75	56·43 62
15·1	8·978 98	89·49 214	35·099 40	16·47 59	34·688 43	57·05 61
25·1	8·880 60	87·35 240	35·059 6	17·06 57	34·645 10	57·66 59
35·1	8·820	84·95	35·053	17·63	34·635	58·25
Mean Place	8·162	65·36	33·795	29·61	33·367	70·39
Sec δ, Tan δ	1·202	+0·667	1·015	-0·172	1·013	-0·163
L α, L δ	-0·01	+0·3	0·00	+0·3	0·00	+0·3
ω α, ω δ	-0·03	-0·8	+0·01	-0·8	+0·01	-0·7
AUTHORITY	A. E.		A. E.		A. E.	

414 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	32 Vulpeculae. Mag. 5.2		γ Microscopii. Mag. 4.7		θ Capricorni. Mag. 4.2	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 20 51	° ' 30'' 27 45	h m 20 56	° ' 30'' 32 33	h m 21 I	° ' 30'' 17 31
Jan. 1.1	17.809 ³³	72.96 ²²⁸	35.956 ⁰	23.95 ⁷⁸	38.870 ¹	69.84 ⁸
11.1	17.776 ⁵	70.68 ²³⁹	35.956 ⁴¹	23.17 ⁹²	38.869 ³²	69.92 ³
21.1	17.781 ⁴²	68.29 ²⁴¹	35.997 ⁷⁸	22.25 ¹⁰⁷	38.901 ⁶⁴	69.89 ¹³
31.0	17.823 ⁸¹	65.88 ²³⁴	36.075 ¹¹⁶	21.18 ¹¹⁸	38.965 ⁹⁸	69.76 ²⁷
Feb. 10.0	17.904 ¹¹⁸	63.54 ²¹⁶	36.191 ¹⁵¹	20.00 ¹²⁹	39.063 ¹²⁸	69.49 ⁴⁰
20.0	18.022 ¹⁵⁴	61.38 ¹⁹⁰	36.342 ¹⁸⁵	18.71 ¹³⁸	39.191 ¹⁵⁹	69.09 ⁵⁷
29.9	18.176 ¹⁸⁹	59.48 ¹⁵⁵	36.527 ²¹⁷	17.33 ¹⁴⁴	39.350 ¹⁸⁷	68.52 ⁷¹
Mar. 10.9	18.365 ²²¹	57.93 ¹¹⁴	36.744 ²⁴⁷	15.89 ¹⁵⁰	39.537 ²¹⁶	67.81 ⁸⁹
20.9	18.586 ²⁵⁰	56.79 ⁶⁷	36.991 ²⁷⁵	14.39 ¹⁵³	39.753 ²⁴¹	66.92 ¹⁰³
30.9	18.836 ²⁷⁵	56.12 ¹⁹	37.266 ²⁹⁹	12.86 ¹⁵³	39.994 ²⁶⁵	65.89 ¹¹⁸
Apr. 9.8	19.111 ²⁹⁵	55.93 ³¹	37.565 ³²⁰	11.33 ¹⁴⁹	40.259 ²⁸⁴	64.71 ¹²⁹
19.8	19.406 ³⁰⁸	56.24 ⁸⁰	37.885 ³³⁷	9.84 ¹⁴²	40.543 ³⁰⁰	63.42 ¹³⁷
29.8	19.714 ³¹⁴	57.04 ¹²⁶	38.222 ³⁴⁶	8.42 ¹³²	40.843 ³¹¹	62.05 ¹⁴²
May 9.8	20.028 ³¹⁴	58.30 ¹⁶⁷	38.568 ³⁵⁰	7.10 ¹¹⁷	41.154 ³¹⁵	60.63 ¹⁴²
19.7	20.342 ³⁰⁵	59.97 ²⁰⁴	38.918 ³⁴⁷	5.93 ⁹⁹	41.469 ³¹²	59.21 ¹³⁸
29.7	20.647 ²⁸⁸	62.01 ²³²	39.265 ³³⁴	4.94 ⁷⁸	41.781 ³⁰²	57.83 ¹³⁰
June 8.7	20.935 ²⁶⁴	64.33 ²⁵⁴	39.599 ³¹⁴	4.16 ⁵⁴	42.083 ²⁸⁴	56.53 ¹¹⁷
18.6	21.199 ²³³	66.87 ²⁷⁰	39.913 ²⁸⁵	3.62 ³⁰	42.367 ²⁵⁹	55.36 ¹⁰²
28.6	21.432 ¹⁹⁶	69.57 ²⁷⁷	40.198 ²⁴⁹	3.32 ³	42.626 ²²⁶	54.34 ⁸²
July 8.6	21.628 ¹⁵⁴	72.34 ²⁷⁸	40.447 ²⁰⁷	3.29 ²³	42.852 ¹⁸⁹	53.52 ⁶⁴
18.6	21.782 ¹⁰⁸	75.12 ²⁷³	40.654 ¹⁵⁹	3.52 ⁴⁶	43.041 ¹⁴⁶	52.88 ⁴¹
28.5	21.890 ⁶⁰	77.85 ²⁶¹	40.813 ¹⁰⁷	3.98 ⁶⁹	43.187 ¹⁰⁰	52.47 ²¹
Aug. 7.5	21.950 ¹²	80.46 ²⁴⁴	40.920 ⁵⁴	4.67 ⁸⁶	43.287 ⁵³	52.26 ¹
17.5	21.962 ³⁴	82.90 ²²¹	40.974 ²	5.53 ¹⁰¹	43.340 ⁷	52.25 ¹⁷
27.4	21.928 ⁷⁸	85.11 ¹⁹⁶	40.976 ⁴⁹	6.54 ¹¹⁰	43.347 ³⁸	52.42 ³³
Sept. 6.4	21.850 ¹¹⁶	87.07 ¹⁶⁶	40.927 ⁹³	7.64 ¹¹⁵	43.309 ⁷⁸	52.75 ⁴⁵
16.4	21.734 ¹⁴⁹	88.73 ¹³³	40.834 ¹³²	8.79 ¹¹²	43.231 ¹¹¹	53.20 ⁵⁵
26.4	21.585 ¹⁷³	90.06 ⁹⁸	40.702 ¹⁶²	9.91 ¹⁰⁶	43.120 ¹³⁸	53.75 ⁶⁰
Oct. 6.3	21.412 ¹⁸⁹	91.04 ⁶²	40.540 ¹⁸¹	10.97 ⁹⁴	42.982 ¹⁵⁵	54.35 ⁶³
16.3	21.223 ¹⁹⁷	91.66 ²³	40.359 ¹⁹⁰	11.91 ⁷⁹	42.827 ¹⁶³	54.98 ⁶²
26.3	21.026 ¹⁹⁷	91.89 ¹⁷	40.169 ¹⁸⁹	12.70 ⁵⁹	42.664 ¹⁶²	55.60 ⁵⁹
Nov. 5.3	20.829 ¹⁸⁶	91.72 ⁵⁶	39.980 ¹⁷⁸	13.29 ³⁸	42.502 ¹⁵³	56.19 ⁵⁴
15.2	20.643 ¹⁷¹	91.16 ⁹⁵	39.802 ¹⁵⁸	13.67 ¹⁶	42.349 ¹³⁵	56.73 ⁴⁷
25.2	20.472 ¹⁴⁸	90.21 ¹³¹	39.644 ¹²⁹	13.83 ⁶	42.214 ¹¹²	57.20 ⁴⁰
Dec. 5.2	20.324 ¹²¹	88.90 ¹⁶⁵	39.515 ⁹⁷	13.77 ²⁷	42.102 ⁸⁴	57.60 ³³
15.1	20.203 ⁸⁸	87.25 ¹⁹⁵	39.418 ⁶⁰	13.50 ⁴⁸	42.018 ⁵³	57.93 ²³
25.1	20.115 ⁵⁴	85.30 ²¹⁸	39.358 ²⁰	13.02 ⁶⁶	41.965 ²⁰	58.16 ¹⁵
35.1	20.061	83.12	39.338	12.36	41.945	58.31
Mean Place	19.233	64.27	38.056	20.93	40.624	69.15
Sec δ, Tan δ	1.130	+0.527	1.186	-0.638	1.049	-0.316
L α, L δ	-0.01	+0.3	+0.01	+0.3	+0.01	+0.3
ω α, ω δ	-0.02	-0.7	+0.03	-0.7	+0.02	-0.7
AUTHORITY	A. E.					

APPARENT PLACES OF STARS, 1924. 415

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	61 Cygni (1st star). Mag. 5.6			ζ Cygni. Mag. 3.4			α Equulei. Mag. 4.1					
	R. A.		Dec. N.	R. A.		Dec. N.	R. A.		Dec. N.			
	h	m	°	'	h	m	°	'	h	m	°	'
	21	3	38	22	21	9	29	54	21	12	4	55
Jan. 1.1	27.872	57	40.00	245	40.705	53	60.95	225	0.055	20	61.83	125
11.1	27.815	14	37.55	262	40.652	18	58.70	239	0.035	10	60.58	124
21.1	27.801	29	34.93	268	40.634	20	56.31	244	0.045	42	59.34	120
31.0	27.830	73	32.25	266	40.654	59	53.87	240	0.087	72	58.14	109
Feb. 10.0	27.903	117	29.59	250	40.713	97	51.47	225	0.159	104	57.05	93
20.0	28.020	160	27.09	224	40.810	136	49.22	201	0.263	134	56.12	72
29.9	28.180	202	24.85	190	40.946	172	47.21	169	0.397	164	55.40	46
Mar. 10.9	28.382	241	22.95	147	41.118	208	45.52	130	0.561	193	54.94	16
20.9	28.623	276	21.48	97	41.326	241	44.22	83	0.754	221	54.78	15
30.9	28.899	305	20.51	44	41.567	269	43.39	36	0.975	244	54.93	49
Apr. 9.8	29.204	338	20.07	11	41.836	292	43.03	16	1.219	266	55.42	80
19.8	29.532	345	20.18	66	42.128	309	43.19	65	1.485	283	56.22	111
29.8	29.877	352	20.84	119	42.437	319	43.84	112	1.768	293	57.33	138
May 9.8	30.229	351	22.03	168	42.756	321	44.96	157	2.061	299	58.71	160
19.7	30.580	342	23.71	211	43.077	316	46.53	194	2.360	296	60.31	178
29.7	30.922	322	25.82	247	43.393	301	48.47	227	2.656	286	62.09	190
June 8.7	31.244	296	28.29	278	43.694	280	50.74	252	2.942	269	63.99	196
18.6	31.540	262	31.07	300	43.974	250	53.26	270	3.211	246	65.95	197
28.6	31.802	221	34.07	314	44.224	214	55.96	282	3.457	215	67.92	193
July 8.6	32.023	174	37.21	320	44.438	172	58.78	285	3.672	179	69.85	183
18.6	32.197	122	40.41	319	44.610	127	61.63	282	3.851	139	71.68	170
28.5	32.319	72	43.60	312	44.737	80	64.45	273	3.990	95	73.38	154
Aug. 7.5	32.391	19	46.72	297	44.817	30	67.18	259	4.085	52	74.92	134
17.5	32.410	33	49.69	277	44.847	18	69.77	237	4.137	7	76.26	113
27.4	32.377	80	52.46	250	44.829	62	72.14	214	4.144	34	77.39	91
Sept. 6.4	32.297	123	54.96	220	44.767	103	74.28	185	4.110	72	78.30	68
16.4	32.174	159	57.16	186	44.664	137	76.13	153	4.038	103	78.98	46
26.4	32.015	188	59.02	147	44.527	164	77.66	117	3.935	129	79.44	23
Oct. 6.3	31.827	208	60.49	105	44.363	184	78.83	81	3.806	146	79.67	2
16.3	31.619	219	61.54	62	44.179	195	79.64	42	3.660	155	79.69	18
26.3	31.400	221	62.16	16	43.984	198	80.06	2	3.505	156	79.51	38
Nov. 5.3	31.179	214	62.32	31	43.786	192	80.08	38	3.349	150	79.13	57
15.2	30.965	200	62.01	76	43.594	179	79.70	80	3.199	136	78.56	73
25.2	30.765	178	61.25	121	43.415	161	78.90	118	3.063	117	77.83	90
Dec. 5.2	30.587	151	60.04	163	43.254	135	77.72	154	2.946	93	76.93	103
15.1	30.436	117	58.41	200	43.119	107	76.18	186	2.853	66	75.90	115
25.1	30.319	80	56.41	231	43.012	74	74.32	213	2.787	38	74.75	122
35.1	30.239		54.10		42.938		72.19		2.749		73.53	
Mean Place	29.264		29.52		42.042		51.87		1.499		58.22	
Sec δ, Tan δ	1.276		+0.792		1.154		+0.575		1.004		+0.086	
L α, L δ	-0.01		+0.3		-0.01		+0.3		0.00		+0.3	
ω α, ω δ	-0.04		-0.7		-0.03		-0.7		0.00		-0.7	
AUTHORITY	A. E.			A. E.			A. E.					

416 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	θ^1 Microscopii. Mag. 4.9		α Cephei. Mag. 2.6		ι Capricorni. Mag. 4.3	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	$\begin{matrix} h & m \\ 2I & I5 \\ s \end{matrix}$	$\begin{matrix} \circ & ' \\ 4I & 7 \end{matrix}$	$\begin{matrix} h & m \\ 2I & I6 \\ s \end{matrix}$	$\begin{matrix} \circ & ' \\ 62 & I5 \end{matrix}$	$\begin{matrix} h & m \\ 2I & I7 \\ s \end{matrix}$	$\begin{matrix} \circ & ' \\ I7 & 9 \end{matrix}$
Jan. 1.1	52.063 ₂₉	59.48 ₁₂₁	44.48 ₂₃	62.15 ₂₇₂	59.365 ₁₇	34.23 ₉
11.1	52.034 ₁₅	58.27 ₁₄₁	44.25 ₁₅	59.43 ₃₀₄	59.348 ₁₆	34.32 ₁
21.1	52.049 ₅₈	56.86 ₁₅₉	44.10 ₈	56.39 ₃₂₄	59.364 ₄₈	34.31 ₁₄
31.0	52.107 ₉₉	55.27 ₁₇₃	44.02 ₀	53.15 ₃₃₁	59.412 ₇₉	34.17 ₂₉
Feb. 10.0	52.206 ₁₄₁	53.54 ₁₈₅	44.02 ₈	49.84 ₃₂₆	59.491 ₁₁₁	33.88 ₄₃
20.0	52.347 ₁₇₉	51.69 ₁₉₂	44.10 ₁₇	46.58 ₃₀₈	59.602 ₁₄₁	33.45 ₅₉
Mar. 1.0	52.526 ₂₁₆	49.77 ₁₉₆	44.27 ₂₅	43.50 ₂₇₇	59.743 ₁₇₂	32.86 ₇₆
10.9	52.742 ₂₅₂	47.81 ₁₉₇	44.52 ₃₂	40.73 ₂₃₇	59.915 ₂₀₀	32.10 ₉₄
20.9	52.994 ₂₈₆	45.84 ₁₉₄	44.84 ₃₈	38.36 ₁₈₇	60.115 ₂₂₉	31.16 ₁₀₉
30.9	53.280 ₃₁₆	43.90 ₁₈₈	45.22 ₄₄	36.49 ₁₃₀	60.344 ₂₅₄	30.07 ₁₂₄
Apr. 9.8	53.596 ₃₄₁	42.02 ₁₇₇	45.66 ₄₈	35.19 ₇₀	60.598 ₂₇₇	28.83 ₁₃₇
19.8	53.937 ₃₆₃	40.25 ₁₆₃	46.14 ₅₀	34.49 ₈	60.875 ₂₉₄	27.46 ₁₄₅
29.8	54.300 ₃₇₈	38.62 ₁₄₅	46.64 ₅₂	34.41 ₅₃	61.169 ₃₀₈	26.01 ₁₅₁
May 9.8	54.678 ₃₈₅	37.17 ₁₂₂	47.16 ₅₂	34.94 ₁₁₄	61.477 ₃₁₄	24.50 ₁₅₁
19.7	55.063 ₃₈₄	35.95 ₉₇	47.68 ₅₀	36.08 ₁₆₉	61.791 ₃₁₅	22.99 ₁₄₈
29.7	55.447 ₃₇₄	34.98 ₆₇	48.18 ₄₆	37.77 ₂₁₈	62.106 ₃₀₇	21.51 ₁₃₉
June 8.7	55.821 ₃₅₆	34.31 ₃₇	48.64 ₄₂	39.95 ₂₆₂	62.413 ₂₉₁	20.12 ₁₂₈
18.7	56.177 ₃₂₇	33.94 ₆	49.06 ₃₆	42.57 ₂₉₇	62.704 ₂₆₉	18.84 ₁₁₁
28.6	56.504 ₂₉₀	33.88 ₂₇	49.42 ₃₀	45.54 ₃₂₅	62.973 ₂₃₈	17.73 ₉₃
July 8.6	56.794 ₂₄₇	34.15 ₅₇	49.72 ₂₃	48.79 ₃₄₃	63.211 ₂₀₂	16.80 ₇₂
18.6	57.041 ₁₉₅	34.72 ₈₅	49.95 ₁₅	52.22 ₃₅₅	63.413 ₁₆₀	16.08 ₅₀
28.5	57.236 ₁₃₉	35.57 ₁₁₁	50.10 ₆	55.77 ₃₅₈	63.573 ₁₁₆	15.58 ₂₇
Aug. 7.5	57.375 ₈₂	36.68 ₁₃₂	50.16 ₁	59.35 ₃₅₃	63.689 ₆₉	15.31 ₆
17.5	57.457 ₂₂	38.00 ₁₄₆	50.15 ₁₀	62.88 ₃₄₀	63.758 ₂₂	15.25 ₁₃
27.5	57.479 ₃₄	39.46 ₁₅₆	50.05 ₁₇	66.28 ₃₂₀	63.780 ₂₃	15.38 ₃₁
Sept. 6.4	57.445 ₈₇	41.02 ₁₅₇	49.88 ₂₄	69.48 ₂₉₃	63.757 ₆₃	15.69 ₄₅
16.4	57.358 ₁₃₁	42.59 ₁₅₄	49.64 ₂₉	72.41 ₂₅₉	63.694 ₉₉	16.14 ₅₆
26.4	57.227 ₁₆₉	44.13 ₁₄₂	49.35 ₃₆	75.00 ₂₂₁	63.595 ₁₂₇	16.70 ₆₃
Oct. 6.4	57.058 ₁₉₆	45.55 ₁₂₄	48.99 ₃₉	77.21 ₁₇₇	63.468 ₁₄₅	17.33 ₆₆
16.3	56.862 ₂₁₀	46.79 ₁₀₁	48.60 ₄₂	78.98 ₁₂₇	63.323 ₁₅₈	17.99 ₆₇
26.3	56.652 ₂₁₄	47.80 ₇₅	48.18 ₄₃	80.25 ₇₄	63.165 ₁₅₉	18.66 ₆₄
Nov. 5.3	56.438 ₂₀₈	48.55 ₄₄	47.75 ₄₄	80.99 ₁₈	63.006 ₁₅₂	19.30 ₅₉
15.2	56.230 ₁₈₉	48.99 ₁₃	47.31 ₄₃	81.17 ₃₉	62.854 ₁₃₈	19.89 ₅₃
25.2	56.041 ₁₆₃	49.12 ₁₉	46.88 ₄₀	80.78 ₉₇	62.716 ₁₁₈	20.42 ₄₅
Dec. 5.2	55.878 ₁₃₁	48.93 ₅₀	46.48 ₃₇	79.81 ₁₅₂	62.598 ₉₃	20.87 ₃₆
15.2	55.747 ₉₂	48.43 ₇₉	46.11 ₃₂	78.29 ₂₀₄	62.505 ₆₅	21.23 ₂₇
25.1	55.655 ₅₂	47.64 ₁₀₆	45.79 ₂₇	76.25 ₂₄₉	62.440 ₃₃	21.50 ₁₇
35.1	55.603	46.58	45.52	73.76	62.407	21.67
Mean Place	54.374	53.61	46.06	47.45	61.055	32.67
Sec δ , Tan δ	1.328	-0.873	2.149	+1.902	1.047	-0.309
L α , L δ	+0.02	+0.3	-0.03	+0.3	+0.01	+0.3
ω α , ω δ	+0.04	-0.7	-0.10	-0.7	+0.02	-0.7
AUTHORITY	A. N.		A. E.			

APPARENT PLACES OF STARS, 1924. 417

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Pavonis. Mag. 4.3			ζ Capricorni. Mag. 3.9			β Aquarii. Mag. 3.1					
	R. A.	Dec. S.		R. A.	Dec. S.		R. A.	Dec. S.				
	^h 21	^m 20	^o 65	['] 42	^h 21	^m 22	^o 22	['] 44	^h 21	^m 27	^o 5	['] 54
Jan. 1.1	6.62	12	50.51	241	18.121	21	31.94	20	32.064	26	22.36	67
11.1	6.50	4	48.10	267	18.100	12	31.74	35	32.038	3	23.03	62
21.1	6.46	4	45.43	286	18.112	45	31.39	49	32.041	33	23.65	53
31.0	6.51	13	42.57	299	18.157	78	30.90	65	32.074	63	24.18	40
Feb. 10.0	6.64	20	39.58	304	18.235	110	30.25	79	32.137	93	24.58	24
20.0	6.84	29	36.54	302	18.345	143	29.46	93	32.230	124	24.82	6
Mar. 1.0	7.13	36	33.52	294	18.488	174	28.53	108	32.354	154	24.88	14
10.9	7.49	43	30.58	279	18.662	204	27.45	122	32.508	184	24.74	43
20.9	7.92	48	27.79	259	18.866	233	26.23	134	32.692	212	24.31	65
30.9	8.40	53	25.20	233	19.099	260	24.89	144	32.904	238	23.66	88
Apr. 9.9	8.93	58	22.87	203	19.359	283	23.45	151	33.142	261	22.78	112
19.8	9.51	62	20.84	168	19.642	303	21.94	154	33.403	281	21.66	131
29.8	10.13	64	19.16	130	19.945	317	20.40	154	33.684	294	20.35	148
May 9.8	10.77	64	17.86	88	20.262	324	18.86	149	33.978	302	18.87	161
19.7	11.41	64	16.98	45	20.586	325	17.37	141	34.280	303	17.26	167
29.7	12.05	62	16.53	0	20.911	318	15.96	127	34.583	296	15.59	171
June 8.7	12.67	60	16.53	45	21.229	302	14.69	110	34.879	283	13.88	167
18.7	13.27	54	16.98	88	21.531	280	13.59	90	35.162	261	12.21	161
28.6	13.81	48	17.86	129	21.811	250	12.69	68	35.423	233	10.60	149
July 8.6	14.29	40	19.15	167	22.061	213	12.01	44	35.656	198	9.11	134
18.6	14.69	32	20.82	199	22.274	171	11.57	20	35.854	160	7.77	116
28.6	15.01	22	22.81	224	22.445	124	11.37	4	36.014	116	6.61	96
Aug. 7.5	15.23	12	25.05	242	22.569	77	11.41	26	36.130	72	5.65	75
17.5	15.35	1	27.47	252	22.646	28	11.67	45	36.202	27	4.90	54
27.5	15.36	9	29.99	252	22.674	19	12.12	62	36.229	15	4.36	33
Sept. 6.4	15.27	18	32.51	242	22.655	61	12.74	74	36.214	54	4.03	14
16.4	15.09	26	34.93	224	22.594	99	13.48	82	36.160	88	3.89	4
26.4	14.83	33	37.17	195	22.495	128	14.30	85	36.072	116	3.93	19
Oct. 6.4	14.50	40	39.12	159	22.367	150	15.15	84	35.956	136	4.12	33
16.3	14.10	42	40.71	116	22.217	162	15.99	79	35.820	146	4.45	44
26.3	13.68	44	41.87	68	22.055	165	16.78	71	35.674	151	4.89	53
Nov. 5.3	13.24	44	42.55	17	21.890	160	17.49	60	35.523	145	5.42	59
15.3	12.80	41	42.72	36	21.730	145	18.09	47	35.378	135	6.01	66
25.2	12.39	37	42.36	88	21.585	126	18.56	33	35.243	117	6.67	69
Dec. 5.2	12.02	32	41.48	136	21.459	100	18.89	19	35.126	95	7.36	71
15.2	11.70	24	40.12	181	21.359	70	19.08	4	35.031	70	8.07	72
25.1	11.46	17	38.31	219	21.289	38	19.12	11	34.961	42	8.79	70
35.1	11.29		36.12		21.251		19.01		34.919		9.49	
Mean Place	10.83		41.33		19.899		28.94		33.559		22.85	
Sec δ, Tan δ	2.431		-2.216		1.084		-0.419		1.005		-0.103	
L α, L δ	+0.04		+0.3		+0.01		+0.3		0.00		+0.3	
ω α, ω δ	+0.11		-0.6		+0.02		-0.6		+0.01		-0.6	
AUTHORITY	A. E.			A. E.			A. E.					

418 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Cephei. Mag. 3.3		ξ Aquarii. Mag. 4.8		ϵ Pegasi. Mag. 2.5	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 21 27	° ' " 70 13	h m 21 33	° ' " 8 11	h m 21 40	° ' " 9 31
Jan. 1.1	39.46 ³⁷	52.58 ²⁶⁰	40.959 ³¹	45.16 ⁵⁶	25.887 ⁴⁷	36.88 ¹³⁵
11.1	39.09 ²⁹	49.98 ²⁹⁷	40.928 ¹	45.72 ⁴⁸	25.840 ¹⁹	35.53 ¹³⁸
21.1	38.80 ¹⁷	47.01 ³²¹	40.927 ²⁸	46.20 ³⁸	25.821 ¹¹	34.15 ¹³⁷
31.1	38.63 ⁷	43.80 ³³⁵	40.955 ⁵⁸	46.58 ²⁵	25.832 ⁴¹	32.78 ¹²⁹
Feb. 10.0	38.56 ⁶	40.45 ³³⁵	41.013 ⁸⁸	46.83 ⁹	25.873 ⁷³	31.49 ¹¹⁵
20.0	38.62 ¹⁷	37.10 ³²²	41.101 ¹²⁰	46.92 ⁹	25.946 ¹⁰⁵	30.34 ⁹⁵
Mar. 1.0	38.79 ²⁹	33.88 ²⁹⁶	41.221 ¹⁴⁸	46.83 ³¹	26.051 ¹³⁷	29.39 ⁶⁹
10.9	39.08 ³⁹	30.92 ²⁵⁹	41.369 ¹⁸⁰	46.52 ⁵³	26.188 ¹⁶⁹	28.70 ³⁹
20.9	39.47 ⁴⁸	28.33 ²¹²	41.549 ²⁰⁹	45.99 ⁷⁶	26.357 ¹⁹⁹	28.31 ⁶
30.9	39.95 ⁵⁷	26.21 ¹⁵⁹	41.758 ²³⁵	45.23 ⁹⁸	26.556 ²²⁹	28.25 ³⁰
Apr. 9.9	40.52 ⁶²	24.62 ⁹⁹	41.993 ²⁶⁰	44.25 ¹¹⁹	26.785 ²⁵⁴	28.55 ⁶⁴
19.8	41.14 ⁶⁶	23.63 ³⁷	42.253 ²⁸⁰	43.06 ¹³⁸	27.039 ²⁷⁵	29.19 ⁹⁹
29.8	41.80 ⁶⁸	23.26 ²⁶	42.533 ²⁹⁴	41.68 ¹⁵²	27.314 ²⁹⁰	30.18 ¹³¹
May 9.8	42.48 ⁶⁸	23.52 ⁸⁶	42.827 ³⁰⁴	40.16 ¹⁶²	27.604 ³⁰⁰	31.49 ¹⁵⁷
19.8	43.16 ⁶⁶	24.38 ¹⁴⁵	43.131 ³⁰⁶	38.54 ¹⁶⁷	27.904 ³⁰²	33.06 ¹⁸⁰
29.7	43.82 ⁶²	25.83 ¹⁹⁷	43.437 ³⁰¹	36.87 ¹⁶⁷	28.206 ²⁹⁶	34.86 ¹⁹⁷
June 8.7	44.44 ⁵⁵	27.80 ²⁴⁴	43.738 ²⁸⁷	35.20 ¹⁶³	28.502 ²⁸²	36.83 ²⁰⁹
18.7	44.99 ⁴⁸	30.24 ²⁸⁴	44.025 ²⁶⁸	33.57 ¹⁵⁴	28.784 ²⁶³	38.92 ²¹⁴
28.6	45.47 ⁴⁰	33.08 ³¹⁶	44.293 ²³⁹	32.03 ¹⁴¹	29.047 ²³⁴	41.06 ²¹⁴
July 8.6	45.87 ³⁰	36.24 ³³⁹	44.532 ²⁰⁵	30.62 ¹²⁴	29.281 ²⁰¹	43.20 ²⁰⁸
18.6	46.17 ¹⁹	39.63 ³⁵⁶	44.737 ¹⁶⁷	29.38 ¹⁰⁵	29.482 ¹⁶²	45.28 ¹⁹⁸
28.6	46.36 ⁹	43.19 ³⁶³	44.904 ¹²⁴	28.33 ⁸⁴	29.644 ¹²⁰	47.26 ¹⁸⁴
Aug. 7.5	46.45 ²	46.82 ³⁶²	45.028 ⁷⁹	27.49 ⁶³	29.764 ⁷⁶	49.10 ¹⁶⁵
17.5	46.43 ¹³	50.44 ³⁵⁵	45.107 ³⁴	26.86 ⁴¹	29.840 ³³	50.75 ¹⁴⁵
27.5	46.30 ²³	53.99 ³³⁸	45.141 ⁹	26.45 ²⁰	29.873 ¹⁰	52.20 ¹²²
Sept. 6.5	46.07 ³²	57.37 ³¹⁵	45.132 ⁴⁸	26.25 ²	29.863 ⁴⁹	53.42 ⁹⁹
16.4	45.75 ⁴¹	60.52 ²⁸⁵	45.084 ⁸⁴	26.23 ¹⁵	29.814 ⁸⁴	54.41 ⁷⁴
26.4	45.34 ⁴⁸	63.37 ²⁴⁹	45.000 ¹¹²	26.38 ²⁹	29.730 ¹¹¹	55.15 ⁵⁰
Oct. 6.4	44.86 ⁵⁴	65.86 ²⁰⁶	44.888 ¹³¹	26.67 ⁴¹	29.619 ¹³²	55.65 ²⁵
16.3	44.32 ⁵⁸	67.92 ¹⁵⁸	44.757 ¹⁴⁵	27.08 ⁵⁰	29.487 ¹⁴⁵	55.90 ¹
26.3	43.74 ⁶²	69.50 ¹⁰⁶	44.612 ¹⁴⁹	27.58 ⁵⁷	29.342 ¹⁵¹	55.91 ²²
Nov. 5.3	43.12 ⁶³	70.56 ⁴⁹	44.463 ¹⁴⁵	28.15 ⁶¹	29.191 ¹⁵⁰	55.69 ⁴⁴
15.3	42.49 ⁶³	71.05 ¹⁰	44.318 ¹³⁵	28.76 ⁶⁴	29.041 ¹⁴¹	55.25 ⁶⁶
25.2	41.86 ⁶⁰	70.95 ⁶⁹	44.183 ¹¹⁸	29.40 ⁶⁵	28.900 ¹²⁸	54.59 ⁸⁵
Dec. 5.2	41.26 ⁵⁶	70.26 ¹²⁸	44.065 ⁹⁸	30.05 ⁶⁵	28.772 ¹⁰⁹	53.74 ¹⁰⁴
15.2	40.70 ⁵¹	68.98 ¹⁸⁴	43.967 ⁷³	30.70 ⁶³	28.663 ⁸⁷	52.70 ¹¹⁹
25.2	40.19 ⁴⁴	67.14 ²³³	43.894 ⁴⁶	31.33 ⁶⁰	28.576 ⁶¹	51.51 ¹³⁰
35.1	39.75	64.81	43.848	31.93	28.515	50.21
Mean Place	41.22	36.69	42.456	44.83	27.176	33.02
Sec δ , Tan δ	2.956	+2.782	1.010	-0.144	1.014	+0.168
L α , L δ	-0.05	+0.3	0.00	+0.3	0.00	+0.3
ω α , ω δ	-0.15	-0.6	+0.01	-0.6	-0.01	-0.6
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 419

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	δ Capricorni. Mag. 3.0		γ Gruis. Mag. 3.2		16 Pegasi. Mag. 5.1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 21 42	° ′ 16 28	h m 21 49	° ′ 37 43	h m 21 49	° ′ 25 33
Jan. 1.1	49.310 ³⁷	25.30 ¹⁵	17.849 ⁶⁰	31.24 ⁹³	35.038 ⁷⁷	69.17 ¹⁸⁶
11.1	49.273 ⁸	25.45 ²	17.789 ²⁴	30.31 ¹¹⁶	34.961 ⁴⁸	67.31 ²⁰³
21.1	49.265 ²²	25.47 ¹²	17.765 ¹⁵	29.15 ¹³⁹	34.913 ¹⁵	65.28 ²¹⁰
31.1	49.287 ⁵³	25.35 ²⁸	17.780 ⁵²	27.76 ¹⁵⁹	34.898 ¹⁸	63.18 ²⁰⁹
Feb. 10.0	49.340 ⁸⁵	25.07 ⁴⁴	17.832 ⁹¹	26.17 ¹⁷⁵	34.916 ⁵⁵	61.09 ¹⁹⁹
20.0	49.425 ¹¹⁵	24.63 ⁶¹	17.923 ¹²⁹	24.42 ¹⁸⁷	34.971 ⁹²	59.10 ¹⁸²
Mar. 1.0	49.540 ¹⁴⁷	24.02 ⁸⁰	18.052 ¹⁶⁷	22.55 ¹⁹⁸	35.063 ¹²⁹	57.28 ¹⁵⁴
10.9	49.687 ¹⁷⁸	23.22 ⁹⁸	18.219 ²⁰⁴	20.57 ²⁰⁵	35.192 ¹⁶⁷	55.74 ¹²²
20.9	49.865 ²⁰⁸	22.24 ¹¹⁶	18.423 ²⁴⁰	18.52 ²⁰⁷	35.359 ²⁰²	54.52 ⁸¹
30.9	50.073 ²³⁷	21.08 ¹³¹	18.663 ²⁷³	16.45 ²⁰⁷	35.561 ²³⁵	53.71 ³⁸
Apr. 9.9	50.310 ²⁶³	19.77 ¹⁴⁵	18.936 ³⁰⁵	14.38 ²⁰¹	35.796 ²⁶⁵	53.33 ⁷
19.8	50.573 ²⁸⁵	18.32 ¹⁵⁵	19.241 ³³⁰	12.37 ¹⁹²	36.061 ²⁸⁸	53.40 ⁵³
29.8	50.858 ³⁰¹	16.77 ¹⁶¹	19.571 ³⁵²	10.45 ¹⁷⁸	36.349 ³⁰⁶	53.93 ⁹⁷
May 9.8	51.159 ³¹³	15.16 ¹⁶³	19.923 ³⁶⁴	8.67 ¹⁵⁹	36.655 ³¹⁵	54.90 ¹³⁸
19.8	51.472 ³¹⁶	13.53 ¹⁶¹	20.287 ³⁷¹	7.08 ¹³⁶	36.970 ³¹⁸	56.28 ¹⁷⁶
29.7	51.788 ³¹³	11.92 ¹⁵⁴	20.658 ³⁶⁸	5.72 ¹¹⁰	37.288 ³¹²	58.04 ²⁰⁶
June 8.7	52.101 ³⁰¹	10.38 ¹⁴¹	21.026 ³⁵⁷	4.62 ⁸⁰	37.600 ²⁹⁷	60.10 ²³²
18.7	52.402 ²⁸¹	8.97 ¹²⁶	21.383 ³³⁵	3.82 ⁴⁸	37.897 ²⁷⁵	62.42 ²⁵⁰
28.6	52.683 ²⁵⁵	7.71 ¹⁰⁶	21.718 ³⁰⁵	3.34 ¹⁵	38.172 ²⁴⁵	64.92 ²⁶³
July 8.6	52.938 ²²¹	6.65 ⁸⁶	22.023 ²⁶⁷	3.19 ¹⁸	38.417 ²¹⁰	67.55 ²⁶⁷
18.6	53.159 ¹⁸³	5.79 ⁶²	22.290 ²²³	3.37 ⁵⁰	38.627 ¹⁶⁸	70.22 ²⁶⁷
28.6	53.342 ¹³⁹	5.17 ³⁸	22.513 ¹⁷¹	3.87 ⁸⁰	38.795 ¹²⁵	72.89 ²⁶⁰
Aug. 7.5	53.481 ⁹³	4.79 ¹⁴	22.684 ¹¹⁸	4.67 ¹⁰⁶	38.920 ⁷⁸	75.49 ²⁴⁷
17.5	53.574 ⁴⁷	4.65 ⁷	22.802 ⁶²	5.73 ¹²⁸	38.998 ³¹	77.96 ²³¹
27.5	53.621 ²	4.72 ²⁷	22.864 ⁷	7.01 ¹⁴³	39.029 ¹³	80.27 ²⁰⁸
Sept. 6.5	53.623 ⁴⁰	4.99 ⁴⁴	22.871 ⁴⁴	8.44 ¹⁵³	39.016 ⁵⁵	82.35 ¹⁸³
16.4	53.583 ⁷⁷	5.43 ⁵⁷	22.827 ⁹¹	9.97 ¹⁵⁵	38.961 ⁹¹	84.18 ¹⁵⁶
26.4	53.506 ¹⁰⁸	6.00 ⁶⁷	22.736 ¹³¹	11.52 ¹⁵¹	38.870 ¹²³	85.74 ¹²⁴
Oct. 6.4	53.398 ¹³⁰	6.67 ⁷²	22.605 ¹⁶¹	13.03 ¹⁴⁰	38.747 ¹⁴⁵	86.98 ⁹²
16.3	53.268 ¹⁴⁵	7.39 ⁷⁴	22.444 ¹⁸²	14.43 ¹²⁴	38.602 ¹⁶²	87.90 ⁵⁸
26.3	53.123 ¹⁵¹	8.13 ⁷³	22.262 ¹⁹²	15.67 ¹⁰¹	38.440 ¹⁷¹	88.48 ²²
Nov. 5.3	52.972 ¹⁵⁰	8.86 ⁶⁹	22.070 ¹⁹³	16.68 ⁷⁵	38.269 ¹⁷²	88.70 ¹⁵
15.3	52.822 ¹⁴⁰	9.55 ⁶²	21.877 ¹⁸³	17.43 ⁴⁵	38.097 ¹⁶⁷	88.55 ⁵⁰
25.2	52.682 ¹²⁴	10.17 ⁵³	21.694 ¹⁶⁷	17.88 ¹⁵	37.930 ¹⁵⁵	88.05 ⁸⁵
Dec. 5.2	52.558 ¹⁰⁴	10.70 ⁴⁵	21.527 ¹⁴²	18.03 ¹⁶	37.775 ¹⁴⁰	87.20 ¹¹⁸
15.2	52.454 ⁸⁰	11.15 ³⁴	21.385 ¹¹²	17.87 ⁴⁶	37.635 ¹¹⁷	86.02 ¹⁴⁹
25.2	52.374 ⁵³	11.49 ²²	21.273 ⁷⁹	17.41 ⁷⁵	37.518 ⁹⁴	84.53 ¹⁷⁴
35.1	52.321	11.71	21.194	16.66	37.424	82.79
Mean Place	50.892	22.48	19.891	23.28	36.183	61.41
Sec δ, Tan δ	1.043	-0.296	1.264	-0.774	1.109	+0.478
L α, L δ	0.00	+0.3	+0.01	+0.3	-0.01	+0.3
ω α, ω δ	+0.02	-0.6	+0.04	-0.5	-0.03	-0.5
AUTHORITY	A. E.		A. E.		A. E.	

420 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	α Aquarii. Mag. 3.2		α Gruis. Mag. 2.2		ι Pegasi. Mag. 4.0	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 22 I	° ' 0 4I	h m 22 3	° ' 47 I9	h m 22 3	° ' 24 58
Jan. 1.1	51.580 ₅₄	22.22 87	24.678 ₉₈	58.99 ₁₃₁	27.220 ₈₇	31.21 ₁₇₆
11.1	51.526 ₃₀	23.09 83	24.580 ₅₇	57.68 ₁₆₂	27.133 ₅₇	29.45 ₁₉₂
21.1	51.496 ₂	23.92 76	24.523 ₁₃	56.06 ₁₈₉	27.076 ₂₈	27.53 ₂₀₁
31.1	51.494 ₂₆	24.68 65	24.510 ₃₃	54.17 ₂₁₂	27.048 ₅	25.52 ₂₀₂
Feb. 10.0	51.520 ₅₆	25.33 50	24.543 ₇₈	52.05 ₂₂₉	27.053 ₄₁	23.50 ₁₉₄
20.0	51.576 ₈₇	25.83 31	24.621 ₁₂₃	49.76 ₂₄₁	27.094 ₇₇	21.56 ₁₇₇
Mar. 1.0	51.663 ₁₁₈	26.14 8	24.744 ₁₆₈	47.35 ₂₄₉	27.171 ₁₁₅	19.79 ₁₅₂
11.0	51.781 ₁₅₁	26.22 17	24.912 ₂₁₃	44.86 ₂₅₃	27.286 ₁₅₄	18.27 ₁₂₁
20.9	51.932 ₁₈₃	26.05 45	25.125 ₂₅₅	42.33 ₂₅₀	27.440 ₁₈₈	17.06 ₈₃
30.9	52.115 ₂₁₂	25.60 72	25.380 ₂₉₆	39.83 ₂₄₄	27.628 ₂₂₅	16.23 ₄₁
Apr. 9.9	52.327 ₂₄₁	24.88 99	25.676 ₃₃₄	37.39 ₂₃₁	27.853 ₂₅₅	15.82 ₃
19.8	52.568 ₂₆₅	23.89 124	26.010 ₃₆₅	35.08 ₂₁₄	28.108 ₂₈₂	15.85 ₄₈
29.8	52.833 ₂₈₄	22.65 147	26.375 ₃₉₁	32.94 ₁₉₃	28.390 ₃₀₁	16.33 ₉₁
May 9.8	53.117 ₂₉₇	21.18 164	26.766 ₄₁₀	31.01 ₁₆₅	28.691 ₃₁₅	17.24 ₁₃₂
19.8	53.414 ₃₀₃	19.54 178	27.176 ₄₁₉	29.36 ₁₃₅	29.006 ₃₁₈	18.56 ₁₆₈
29.7	53.717 ₃₀₁	17.76 186	27.595 ₄₁₉	28.01 ₁₀₀	29.324 ₃₁₆	20.24 ₂₀₀
June 8.7	54.018 ₂₉₃	15.90 189	28.014 ₄₀₈	27.01 64	29.640 ₃₀₄	22.24 ₂₂₆
18.7	54.311 ₂₇₆	14.01 186	28.422 ₃₈₈	26.37 24	29.944 ₂₈₃	24.50 ₂₄₄
28.7	54.587 ₂₅₂	12.15 179	28.810 ₃₅₆	26.13 15	30.227 ₂₅₆	26.94 ₂₅₈
July 8.6	54.839 ₂₂₁	10.36 167	29.166 ₃₁₆	26.28 54	30.483 ₂₂₂	29.52 ₂₆₄
18.6	55.060 ₁₈₅	8.69 152	29.482 ₂₆₅	26.82 91	30.705 ₁₈₂	32.16 ₂₆₃
28.6	55.245 ₁₄₅	7.17 133	29.747 ₂₁₁	27.73 124	30.887 ₁₃₉	34.79 ₂₅₈
Aug. 7.5	55.390 ₁₀₂	5.84 112	29.958 ₁₄₉	28.97 152	31.026 ₉₄	37.37 ₂₄₆
17.5	55.492 ₅₈	4.72 90	30.107 ₈₆	30.49 175	31.120 ₉₈	39.83 ₂₃₀
27.5	55.550 ₁₆	3.82 68	30.193 ₂₃	32.24 191	31.168 ₃	42.13 ₂₀₉
Sept. 6.5	55.566 ₂₅	3.14 46	30.216 ₃₉	34.15 199	31.171 ₃₉	44.22 ₁₈₅
16.4	55.541 ₆₀	2.68 24	30.177 ₉₄	36.14 200	31.132 ₇₆	46.07 ₁₅₈
26.4	55.481 ₉₀	2.44 5	30.083 ₁₄₃	38.14 191	31.056 ₁₀₈	47.65 ₁₂₉
Oct. 6.4	55.391 ₁₁₃	2.39 12	29.940 ₁₈₃	40.05 174	30.948 ₁₃₃	48.94 ₉₇
16.4	55.278 ₁₃₀	2.51 29	29.757 ₂₁₁	41.79 151	30.815 ₁₅₀	49.91 ₆₄
26.3	55.148 ₁₃₈	2.80 43	29.546 ₂₂₈	43.30 121	30.665 ₁₆₂	50.55 ₂₉
Nov. 5.3	55.010 ₁₃₉	3.23 55	29.318 ₂₃₄	44.51 86	30.503 ₁₆₆	50.84 ₅
15.3	54.871 ₁₃₅	3.78 65	29.084 ₂₂₈	45.37 47	30.337 ₁₆₃	50.79 ₄₁
25.2	54.736 ₁₂₄	4.43 73	28.856 ₂₁₂	45.84 7	30.174 ₁₅₄	50.38 ₇₅
Dec. 5.2	54.612 ₁₀₉	5.16 81	28.644 ₁₈₈	45.91 33	30.020 ₁₄₀	49.63 ₁₀₈
15.2	54.503 ₉₀	5.97 84	28.456 ₁₅₆	45.58 73	29.880 ₁₂₂	48.55 ₁₃₇
25.2	54.413 ₆₇	6.81 86	28.300 ₁₂₀	44.85 109	29.758 ₁₀₀	47.18 ₁₆₄
35.1	54.346	7.67	28.180	43.76	29.658	45.54
Mean Place	52.868	22.60	27.014	48.16	28.289	23.80
Sec δ , Tan δ	1.000	-0.012	1.475	-1.085	1.103	+0.466
L α , L δ	0.00	+0.3	+0.01	+0.3	-0.01	+0.3
ω α , ω δ	0.00	-0.5	+0.06	-0.5	-0.03	-0.5
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 421

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ζ Cephei. Mag. 3.6		θ Aquarii. Mag. 4.3		α Tucanæ. Mag. 2.9	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 22 8	57 49	h m 22 12	8 9	h m 22 13	60 37
Jan. 1.1	11.920 ²⁴⁵	49.40 ²²¹	48.138 ⁶⁰	46.27 ⁵³	15.26 ¹⁹	93.57 ¹⁸³
11.1	11.675 ¹⁹⁶	47.19 ²⁵⁹	48.078 ³⁵	46.80 ⁴⁴	15.07 ¹²	91.74 ²²⁰
21.1	11.479 ¹⁴⁰	44.60 ²⁸⁸	48.043 ¹⁰	47.24 ³³	14.95 ⁶	89.54 ²⁵¹
31.1	11.339 ⁷⁷	41.72 ³⁰⁵	48.033 ¹⁹	47.57 ¹⁹	14.89 ⁰	87.03 ²⁷⁵
Feb. 10.0	11.262 ⁸	38.67 ³¹¹	48.052 ⁴⁸	47.76 ²	14.89 ⁷	84.28 ²⁹³
20.0	11.254 ⁶³	35.56 ³⁰⁴	48.100 ⁷⁹	47.78 ¹⁷	14.96 ¹³	81.35 ³⁰³
Mar. 1.0	11.317 ¹³⁵	32.52 ²⁸⁵	48.179 ¹¹¹	47.61 ³⁹	15.09 ¹⁹	78.32 ³⁰⁷
11.0	11.452 ²⁰⁶	29.67 ²⁵⁵	48.290 ¹⁴⁴	47.22 ⁶¹	15.28 ²⁶	75.25 ³⁰⁵
20.9	11.658 ²⁷³	27.12 ²¹⁴	48.434 ¹⁷⁶	46.61 ⁸⁴	15.54 ³²	72.20 ²⁹⁶
30.9	11.931 ³³²	24.98 ¹⁶⁷	48.610 ²⁰⁷	45.77 ¹⁰⁶	15.86 ³⁷	69.24 ²⁸¹
Apr. 9.9	12.263 ³⁸⁴	23.31 ¹¹²	48.817 ²³⁶	44.71 ¹²⁸	16.23 ⁴³	66.43 ²⁵⁹
19.8	12.647 ⁴²⁴	22.19 ⁵⁵	49.053 ²⁶³	43.43 ¹⁴⁷	16.66 ⁴⁷	63.84 ²³³
29.8	13.071 ⁴⁵²	21.64 ⁵	49.316 ²⁸³	41.96 ¹⁶¹	17.13 ⁵⁰	61.51 ²⁰²
May 9.8	13.523 ⁴⁶⁸	21.69 ⁶³	49.599 ²⁹⁹	40.35 ¹⁷³	17.63 ⁵³	59.49 ¹⁶⁵
19.8	13.991 ⁴⁷⁰	22.32 ¹²⁰	49.898 ³⁰⁶	38.62 ¹⁷⁹	18.16 ⁵⁵	57.84 ¹²⁴
29.7	14.461 ⁴⁵⁸	23.52 ¹⁷³	50.204 ³⁰⁸	36.83 ¹⁷⁹	18.71 ⁵⁵	56.60 ⁸¹
June 8.7	14.919 ⁴³⁴	25.25 ²¹⁹	50.512 ³⁰¹	35.04 ¹⁷⁶	19.26 ⁵³	55.79 ³⁵
18.7	15.353 ³⁹⁷	27.44 ²⁶⁰	50.813 ²⁸⁶	33.28 ¹⁶⁷	19.79 ⁵¹	55.44 ¹¹
28.7	15.750 ³⁵⁰	30.04 ²⁹⁴	51.099 ²⁶⁴	31.61 ¹⁵⁴	20.30 ⁴⁷	55.55 ⁵⁸
July 8.6	16.100 ²⁹⁵	32.98 ³²⁰	51.363 ²³⁴	30.07 ¹³⁶	20.77 ⁴²	56.13 ¹⁰¹
18.6	16.395 ²³³	36.18 ³³⁸	51.597 ¹⁹⁹	28.71 ¹¹⁷	21.19 ³⁶	57.14 ¹⁴³
28.6	16.628 ¹⁶⁵	39.56 ³⁵⁰	51.796 ¹⁵⁹	27.54 ⁹⁵	21.55 ²⁸	58.57 ¹⁷⁹
Aug. 7.5	16.793 ⁹⁶	43.06 ³⁵²	51.955 ¹¹⁷	26.59 ⁷¹	21.83 ²¹	60.36 ²⁰⁹
17.5	16.889 ²⁵	46.58 ³⁴⁸	52.072 ⁷²	25.88 ⁴⁷	22.04 ¹²	62.45 ²³²
27.5	16.914 ⁴³	50.06 ³³⁵	52.144 ²⁹	25.41 ²⁵	22.16 ³	64.77 ²⁴⁶
Sept. 6.5	16.871 ¹⁰⁹	53.41 ³¹⁷	52.173 ¹²	25.16 ⁴	22.19 ⁵	67.23 ²⁵¹
16.4	16.762 ¹⁶⁸	56.58 ²⁹⁰	52.161 ⁴⁹	25.12 ¹⁵	22.14 ¹³	69.74 ²⁴⁷
26.4	16.594 ²²¹	59.48 ²⁵⁹	52.112 ⁸¹	25.27 ³²	22.01 ²⁰	72.21 ²³²
Oct. 6.4	16.373 ²⁶⁶	62.07 ²²¹	52.031 ¹⁰⁶	25.59 ⁴⁵	21.81 ²⁶	74.53 ²⁰⁸
16.4	16.107 ³⁰¹	64.28 ¹⁷⁸	51.925 ¹²⁴	26.04 ⁵⁵	21.55 ³⁰	76.61 ¹⁷⁵
26.3	15.806 ³²⁷	66.06 ¹³⁰	51.801 ¹³⁴	26.59 ⁶²	21.25 ³⁴	78.36 ¹³⁵
Nov. 5.3	15.479 ³⁴⁴	67.36 ⁷⁸	51.667 ¹³⁸	27.21 ⁶⁷	20.91 ³⁵	79.71 ⁸⁹
15.3	15.135 ³⁴⁹	68.14 ²³	51.529 ¹³⁴	27.88 ⁶⁸	20.56 ³⁴	80.60 ⁴⁰
25.2	14.786 ³⁴⁵	68.37 ³³	51.395 ¹²⁵	28.56 ⁶⁹	20.22 ³³	81.00 ¹¹
Dec. 5.2	14.441 ³³¹	68.04 ⁸⁹	51.270 ¹¹¹	29.25 ⁶⁷	19.89 ³¹	80.89 ⁶²
15.2	14.110 ³⁰⁶	67.15 ¹⁴⁴	51.159 ⁹⁴	29.92 ⁶³	19.58 ²⁶	80.27 ¹¹²
25.2	13.804 ²⁷²	65.71 ¹⁹²	51.065 ⁷²	30.55 ⁵⁸	19.32 ²¹	79.15 ¹⁵⁸
35.1	13.532	63.79	50.993	31.13	19.11	77.57
Mean Place	12.916	34.64	49.462	44.06	18.41	79.97
Sec δ, Tan δ	1.878	+1.590	1.010	-0.143	2.039	-1.777
L α, L δ	-0.02	+0.4	0.00	+0.4	+0.02	+0.4
ω α, ω δ	-0.09	-0.5	+0.01	-0.5	+0.11	-0.5
AUTHORITY	A. E.		A. E.		A. E.	

422 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	γ Aquarii. Mag. 4.0		α Aquarii. Mag. 4.9		η Aquarii. Mag. 4.1	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 22 17	° ' I 45	h m 22 26	° ' II 3	h m 22 31	° ' 0 30
Jan. 1.2	42.653 ^s 65	75.18 80	36.333 ^s 70	65.96 41	25.944 ^s 74	35.50 83
11.1	42.588 41	75.98 75	36.263 46	66.37 30	25.870 53	36.33 79
21.1	42.547 16	76.73 67	36.217 21	66.67 15	25.817 29	37.12 71
31.1	42.531 11	77.40 56	36.196 5	66.82 0	25.788 2	37.83 61
Feb. 10.1	42.542 41	77.96 40	36.201 35	66.82 17	25.786 26	38.44 47
20.0	42.583 71	78.36 22	36.236 65	66.65 38	25.812 57	38.91 27
Mar. 1.0	42.654 ^s 103	78.58 0	36.301 97	66.27 58	25.869 89	39.18 6
11.0	42.757 136	78.58 25	36.398 131	65.69 80	25.958 122	39.24 19
20.9	42.893 170	78.33 52	36.529 164	64.89 101	26.080 157	39.05 45
30.9	43.063 201	77.81 78	36.693 197	63.88 123	26.237 190	38.60 73
Apr. 9.9	43.264 231	77.03 105	36.890 229	62.65 142	26.427 221	37.87 100
19.9	43.495 257	75.98 128	37.119 256	61.23 158	26.648 250	36.87 125
29.8	43.752 279	74.70 150	37.375 280	59.65 171	26.898 273	35.62 148
May 9.8	44.031 295	73.20 167	37.655 297	57.94 180	27.171 291	34.14 166
19.8	44.326 303	71.53 180	37.952 308	56.14 183	27.462 302	32.48 180
29.8	44.629 305	69.73 186	38.260 312	54.31 180	27.764 306	30.68 189
June 8.7	44.934 298	67.87 190	38.572 307	52.51 175	28.070 301	28.79 193
18.7	45.232 284	65.97 186	38.879 294	50.76 164	28.371 288	26.86 192
28.7	45.516 262	64.11 178	39.173 274	49.12 148	28.659 269	24.94 184
July 8.6	45.778 233	62.33 166	39.447 246	47.64 128	28.928 241	23.10 174
18.6	46.011 198	60.67 151	39.693 212	46.36 106	29.169 209	21.36 158
28.6	46.209 160	59.16 130	39.905 173	45.30 83	29.378 170	19.78 139
Aug. 7.6	46.369 118	57.86 109	40.078 130	44.47 57	29.548 130	18.39 119
17.5	46.487 74	56.77 87	40.208 88	43.90 32	29.678 88	17.20 96
27.5	46.561 32	55.90 63	40.296 42	43.58 9	29.766 44	16.24 72
Sept. 6.5	46.593 9	55.27 42	40.338 2	43.49 12	29.810 4	15.52 50
16.5	46.584 45	54.85 20	40.340 37	43.61 32	29.814 33	15.02 28
26.4	46.539 77	54.65 0	40.303 70	43.93 47	29.781 64	14.74 7
Oct. 6.4	46.462 102	54.65 17	40.233 97	44.40 59	29.717 92	14.67 11
16.4	46.360 119	54.82 32	40.136 117	44.99 68	29.625 111	14.78 27
26.3	46.241 131	55.14 45	40.019 130	45.67 72	29.514 124	15.05 41
Nov. 5.3	46.110 135	55.59 57	39.889 135	46.39 74	29.390 130	15.46 54
15.3	45.975 133	56.16 65	39.754 134	47.13 73	29.260 131	16.00 64
25.3	45.842 125	56.81 72	39.620 127	47.86 69	29.129 125	16.64 71
Dec. 5.2	45.717 112	57.53 77	39.493 115	48.55 63	29.004 115	17.35 78
15.2	45.605 96	58.30 80	39.378 100	49.18 57	28.889 101	18.13 81
25.2	45.509 76	59.10 79	39.278 80	49.75 47	28.788 84	18.94 82
35.2	45.433	59.89	39.198	50.22	28.704	19.76
Mean Place	43.877	74.59	37.627	62.26	27.085	34.73
Sec δ, Tan δ	1.000	-0.031	1.019	-0.196	1.000	-0.009
L α, L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α, ω δ	0.00	-0.4	+0.01	-0.4	0.00	-0.4
AUTHORITY	A. E.		A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 423

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	κ Aquarii. Mag. 5.3		ζ Pegasi. Mag. 3.6		β Gruis. Mag. 2.2	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m	° ′	h m	° ′	h m	° ′
	22 33	4 36	22 37	10 25	22 38	47 16
Jan. 1.2	48.111 ^s 75	75.73 67	39.266 86	65.24 117	6.099 ^s 137	71.22 109
11.1	48.036 52	76.40 60	39.180 65	64.07 123	5.962 ^s 101	70.13 146
21.1	47.984 30	77.00 51	39.115 41	62.84 124	5.861 62	68.67 178
31.1	47.954 3	77.51 36	39.074 14	61.60 119	5.799 21	66.89 207
Feb. 10.1	47.951 24	77.87 22	39.060 14	60.41 109	5.778 23	64.82 229
20.0	47.975 56	78.09 2	39.074 46	59.32 93	5.801 68	62.53 249
Mar. 1.0	48.031 87	78.11 19	39.120 80	58.39 71	5.869 114	60.04 261
11.0	48.118 120	77.92 44	39.200 115	57.68 45	5.983 161	57.43 270
20.9	48.238 155	77.48 67	39.315 152	57.23 14	6.144 207	54.73 272
30.9	48.393 188	76.81 93	39.467 186	57.09 18	6.351 252	52.01 269
Apr. 9.9	48.581 221	75.88 118	39.653 219	57.27 52	6.603 295	49.32 261
19.9	48.802 248	74.70 138	39.872 249	57.79 86	6.898 333	46.71 248
29.8	49.050 273	73.32 158	40.121 273	58.65 117	7.231 368	44.23 227
May 9.8	49.323 292	71.74 173	40.394 292	59.82 146	7.599 392	41.96 203
19.8	49.615 303	70.01 182	40.686 303	61.28 171	7.991 409	39.93 173
29.8	49.918 307	68.19 188	40.989 307	62.99 190	8.400 418	38.20 138
June 8.7	50.225 303	66.31 187	41.296 303	64.89 205	8.818 415	36.82 101
18.7	50.528 292	64.44 183	41.599 290	66.94 213	9.233 403	35.81 61
28.7	50.820 271	62.61 171	41.889 270	69.07 217	9.636 378	35.20 19
July 8.6	51.091 245	60.90 158	42.159 243	71.24 214	10.014 345	35.01 24
18.6	51.336 212	59.32 139	42.402 211	73.38 206	10.359 302	35.25 65
28.6	51.548 175	57.93 118	42.613 172	75.44 194	10.661 251	35.90 103
Aug. 7.6	51.723 133	56.75 96	42.785 132	77.38 179	10.912 193	36.93 137
17.5	51.856 91	55.79 72	42.917 89	79.17 159	11.105 133	38.30 167
27.5	51.947 48	55.07 48	43.006 47	80.76 137	11.238 70	39.97 190
Sept. 6.5	51.995 7	54.59 25	43.053 7	82.13 115	11.308 8	41.87 204
16.5	52.002 30	54.34 4	43.060 31	83.28 91	11.316 50	43.91 212
26.4	51.972 63	54.30 14	43.029 63	84.19 66	11.266 103	46.03 209
Oct. 6.4	51.909 90	54.44 30	42.966 89	84.85 43	11.163 147	48.12 198
16.4	51.819 110	54.74 44	42.877 110	85.28 20	11.016 183	50.10 179
26.3	51.709 124	55.18 55	42.767 125	85.48 4	10.833 208	51.89 153
Nov. 5.3	51.585 130	55.73 63	42.642 132	85.44 26	10.625 222	53.42 119
15.3	51.455 130	56.36 68	42.510 134	85.18 46	10.493 226	54.61 82
25.3	51.325 125	57.04 72	42.376 131	84.72 66	10.177 220	55.43 41
Dec. 5.2	51.200 115	57.76 73	42.245 123	84.06 83	9.957 204	55.84 2
15.2	51.085 102	58.49 73	42.122 110	83.23 98	9.753 182	55.82 44
25.2	50.983 84	59.22 69	42.012 95	82.25 111	9.571 153	55.38 85
35.2	50.899	59.91	41.917	81.14	9.418	54.53
Mean Place	49.286	73.61	40.266	62.89	8.195	57.74
Sec δ , Tan δ	1.003	-0.081	1.017	+0.184	1.474	-1.083
$L \alpha, L \delta$	0.00	+0.4	0.00	+0.4	+0.01	+0.4
$\omega \alpha, \omega \delta$	+0.01	-0.4	-0.01	-0.4	+0.07	-0.4
AUTHORITY			A. E.		A. E.	

424 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	η Pegasi. Mag. 3·1		ε Gruis. Mag. 3·7		μ Pegasi. Mag. 3·7	
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.
	h m	° ′	h m	° ′	h m	° ′
	22 39	29 49	22 43	51 42	22 46	24 11
Jan. 1·2	25·394 ₁₂₀	31·58 ₁₆₃	56·026 ₁₆₅	75·29 ₁₂₃	19·149 ₁₁₀	65·88 ₁₄₇
11·1	25·274 ₉₇	29·95 ₁₈₆	55·861 ₁₂₅	74·06 ₁₆₂	19·039 ₉₀	64·41 ₁₆₆
21·1	25·177 ₆₉	28·09 ₂₀₁	55·736 ₈₃	72·44 ₁₉₇	18·949 ₆₅	62·75 ₁₇₇
31·1	25·108 ₃₉	26·08 ₂₀₉	55·653 ₃₇	70·47 ₂₂₇	18·884 ₃₆	60·98 ₁₈₃
Feb. 10·1	25·069 ₃	23·99 ₂₀₈	55·616 ₁₀	68·20 ₂₅₁	18·848 ₅	59·15 ₁₇₉
20·0	25·066 ₃₅	21·91 ₁₉₇	55·626 ₆₀	65·69 ₂₇₀	18·843 ₃₀	57·36 ₁₆₈
Mar. 1·0	25·101 ₇₅	19·94 ₁₇₈	55·686 ₁₁₁	62·99 ₂₈₂	18·873 ₆₉	55·68 ₁₄₈
11·0	25·176 ₁₁₈	18·16 ₁₅₁	55·797 ₁₆₃	60·17 ₂₉₀	18·942 ₁₀₈	54·20 ₁₂₃
20·9	25·294 ₁₆₀	16·65 ₁₁₇	55·960 ₂₁₃	57·27 ₂₉₀	19·050 ₁₄₈	52·97 ₈₉
30·9	25·454 ₂₀₀	15·48 ₇₈	56·173 ₂₆₃	54·37 ₂₈₆	19·198 ₁₈₈	52·08 ₅₃
Apr. 9·9	25·654 ₂₃₉	14·70 ₃₃	56·436 ₃₁₀	51·51 ₂₇₅	19·386 ₂₂₄	51·55 ₁₂
19·9	25·893 ₂₇₁	14·37 ₁₁	56·746 ₃₅₂	48·76 ₂₅₈	19·610 ₂₅₇	51·43 ₂₉
29·8	26·164 ₂₉₈	14·48 ₅₇	57·098 ₃₈₈	46·18 ₂₃₆	19·867 ₂₈₅	51·72 ₇₂
May 9·8	26·462 ₃₁₇	15·05 ₁₀₁	57·486 ₄₁₈	43·82 ₂₀₇	20·152 ₃₀₄	52·44 ₁₁₁
19·8	26·779 ₃₂₉	16·06 ₁₄₂	57·904 ₄₃₈	41·75 ₁₇₄	20·456 ₃₁₇	53·55 ₁₄₇
29·8	27·108 ₃₃₁	17·48 ₁₇₈	58·342 ₄₄₈	40·01 ₁₃₇	20·773 ₃₂₂	55·02 ₁₈₀
June 8·7	27·439 ₃₂₅	19·26 ₂₁₀	58·790 ₄₄₇	38·64 ₉₇	21·095 ₃₁₈	56·82 ₂₀₇
18·7	27·764 ₃₀₉	21·36 ₂₃₆	59·237 ₄₃₅	37·67 ₅₃	21·413 ₃₀₄	58·89 ₂₂₈
28·7	28·073 ₂₈₇	23·72 ₂₅₅	59·672 ₄₁₀	37·14 ₈	21·717 ₂₈₃	61·17 ₂₄₃
July 8·6	28·360 ₂₅₅	26·27 ₂₆₇	60·082 ₃₇₅	37·06 ₃₇	22·000 ₂₅₅	63·60 ₂₅₃
18·6	28·615 ₂₁₉	28·94 ₂₇₄	60·457 ₃₃₁	37·43 ₇₉	22·255 ₂₂₁	66·13 ₂₅₄
28·6	28·834 ₁₇₇	31·68 ₂₇₄	60·788 ₂₇₆	38·22 ₁₂₀	22·476 ₁₈₁	68·67 ₂₅₃
Aug. 7·6	29·011 ₁₃₂	34·42 ₂₆₈	61·064 ₂₁₅	39·42 ₁₅₆	22·657 ₁₃₉	71·20 ₂₄₃
17·5	29·143 ₈₆	37·10 ₂₅₆	61·279 ₁₅₀	40·98 ₁₈₆	22·796 ₉₅	73·63 ₂₃₁
27·5	29·229 ₄₁	39·66 ₂₄₁	61·429 ₈₁	42·84 ₂₀₉	22·891 ₅₁	75·94 ₂₁₃
Sept. 6·5	29·270 ₃	42·07 ₂₁₉	61·510 ₁₄	44·93 ₂₂₄	22·942 ₉	78·07 ₁₉₂
16·5	29·267 ₄₄	44·26 ₁₉₅	61·524 ₅₀	47·17 ₂₃₀	22·951 ₃₀	79·99 ₁₆₈
26·4	29·223 ₇₉	46·21 ₁₆₇	61·474 ₁₀₉	49·47 ₂₂₆	22·921 ₆₅	81·67 ₁₄₁
Oct. 6·4	29·144 ₁₀₉	47·88 ₁₃₆	61·365 ₁₆₀	51·73 ₂₁₄	22·856 ₉₃	83·08 ₁₁₂
16·4	29·035 ₁₃₃	49·24 ₁₀₃	61·205 ₂₀₀	53·87 ₁₉₃	22·763 ₁₁₇	84·20 ₈₃
26·3	28·902 ₁₅₀	50·27 ₆₈	61·005 ₂₃₀	55·80 ₁₆₂	22·646 ₁₃₄	85·03 ₅₁
Nov. 5·3	28·752 ₁₆₁	50·95 ₃₂	60·775 ₂₄₈	57·42 ₁₂₇	22·512 ₁₄₅	85·54 ₁₈
15·3	28·591 ₁₆₆	51·27 ₆	60·527 ₂₅₅	58·69 ₈₅	22·367 ₁₅₀	85·72 ₁₄
25·3	28·425 ₁₆₅	51·21 ₄₀	60·272 ₂₅₀	59·54 ₄₀	22·217 ₁₄₉	85·58 ₄₆
Dec. 5·2	28·260 ₁₅₉	50·77 ₈₄	60·022 ₂₃₅	59·94 ₆	22·068 ₁₄₄	85·12 ₇₈
15·2	28·101 ₁₄₇	49·97 ₁₁₅	59·787 ₂₁₂	59·88 ₅₂	21·924 ₁₃₄	84·34 ₁₀₇
25·2	27·954 ₁₃₁	48·82 ₁₄₅	59·575 ₁₈₂	59·36 ₉₈	21·790 ₁₂₁	83·27 ₁₃₃
35·2	27·823	47·37	59·393	58·38	21·669	81·94
Mean Place	26·234	23·49	58·282	60·56	19·985	59·57
Sec δ, Tan δ	1·153	+0·573	1·614	-1·267	1·096	+0·449
L α, L δ	-0·01	+0·4	+0·01	+0·4	0·00	+0·4
ω α, ω δ	-0·04	-0·3	+0·08	-0·3	-0·03	-0·3
AUTHORITY	A. E.		A. E.		A. N.	

APPARENT PLACES OF STARS, 1924. 425

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	λ Aquarii. Mag. 3·8		δ Aquarii. Mag. 3·5		α Piscis Australis. Mag. 1·3	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. S.
	h m 22 48	° ′ 7 58	h m 22 50	° ′ 16 13	h m 22 53	° ′ 30 1
Jan. 1·2	37·886 ⁸³	67·76 ⁵⁴	35·864 ⁸⁷	37·84 ²⁴	25·814 ¹⁰³	42·30 ²⁹
11·1	37·803 ⁶³	68·30 ⁴³	35·777 ⁶⁶	38·08 ⁶	25·711 ⁷⁹	42·01 ⁵⁷
21·1	37·740 ⁴¹	68·73 ³¹	35·711 ⁴³	38·14 ¹²	25·632 ⁵³	41·44 ⁸⁴
31·1	37·699 ¹⁷	69·04 ¹⁶	35·668 ¹⁸	38·02 ³¹	25·579 ²⁴	40·60 ¹¹⁰
Feb. 10·1	37·682 ¹²	69·20 ²	35·650 ¹¹	37·71 ⁵²	25·555 ⁸	39·50 ¹³³
20·0	37·694 ⁴¹	69·18 ²¹	35·661 ⁴²	37·19 ⁷²	25·563 ⁴²	38·17 ¹⁵⁵
Mar. 1·0	37·735 ⁷³	68·97 ⁴³	35·703 ⁷⁴	36·47 ⁹⁴	25·605 ⁷⁸	36·62 ¹⁷⁵
11·0	37·808 ¹⁰⁷	68·54 ⁶⁵	35·777 ¹⁰⁸	35·53 ¹¹⁴	25·683 ¹¹⁵	34·87 ¹⁹²
21·0	37·915 ¹⁴³	67·89 ⁸⁹	35·885 ¹⁴⁴	34·39 ¹³⁴	25·798 ¹⁵⁴	32·95 ²⁰⁶
30·9	38·058 ¹⁷⁷	67·00 ¹¹²	36·029 ¹⁸⁰	33·05 ¹⁵³	25·952 ¹⁹²	30·89 ²¹⁵
Apr. 9·9	38·235 ²¹¹	65·88 ¹³³	36·209 ²¹⁴	31·52 ¹⁶⁹	26·144 ²³⁰	28·74 ²²¹
19·9	38·446 ²⁴¹	64·55 ¹⁵³	36·423 ²⁴⁵	29·83 ¹⁸¹	26·374 ²⁶³	26·53 ²²³
29·8	38·687 ²⁶⁷	63·02 ¹⁶⁹	36·668 ²⁷³	28·02 ¹⁸⁹	26·637 ²⁹³	24·30 ²²⁰
May 9·8	38·954 ²⁸⁸	61·33 ¹⁸¹	36·941 ²⁹⁴	26·13 ¹⁹⁴	26·930 ³¹⁷	22·10 ²¹⁰
19·8	39·242 ³⁰³	59·52 ¹⁸⁸	37·235 ³⁰⁹	24·19 ¹⁹³	27·247 ³³⁵	20·00 ¹⁹⁷
29·8	39·545 ³⁰⁹	57·64 ¹⁹⁰	37·544 ³¹⁷	22·26 ¹⁸⁷	27·582 ³⁴⁴	18·03 ¹⁷⁶
June 8·7	39·854 ³⁰⁸	55·74 ¹⁸⁶	37·861 ³¹⁷	20·39 ¹⁷⁶	27·926 ³⁴⁴	16·27 ¹⁵³
18·7	40·162 ²⁹⁸	53·88 ¹⁷⁹	38·178 ³⁰⁸	18·63 ¹⁶⁰	28·270 ³³⁶	14·74 ¹²⁶
28·7	40·460 ²⁸¹	52·09 ¹⁶⁶	38·486 ²⁹⁰	17·03 ¹⁴⁰	28·606 ³²⁰	13·48 ⁹⁴
July 8·7	40·741 ²⁵⁷	50·43 ¹⁴⁸	38·776 ²⁶⁶	15·63 ¹¹⁶	28·926 ²⁹⁴	12·54 ⁶¹
18·6	40·998 ²²⁶	48·95 ¹²⁸	39·042 ²³⁵	14·47 ⁹⁰	29·220 ²⁵⁹	11·93 ²⁶
28·6	41·224 ¹⁸⁹	47·67 ¹⁰⁵	39·277 ¹⁹⁸	13·57 ⁶³	29·479 ²¹⁹	11·67 ⁸
Aug. 7·6	41·413 ¹⁴⁹	46·62 ⁸⁰	39·475 ¹⁵⁷	12·94 ³⁴	29·698 ¹⁷⁷	11·75 ⁴²
17·5	41·562 ¹⁰⁷	45·82 ⁵⁵	39·632 ¹¹³	12·60 ⁷	29·875 ¹²⁸	12·17 ⁷²
27·5	41·669 ⁶⁴	45·27 ³⁰	39·745 ⁶⁹	12·53 ¹⁹	30·003 ⁷⁹	12·89 ⁹⁹
Sept. 6·5	41·733 ²³	44·97 ⁷	39·814 ²⁶	12·72 ⁴²	30·082 ³¹	13·88 ¹²⁰
16·5	41·756 ¹⁶	44·90 ¹⁴	39·840 ¹⁵	13·14 ⁶¹	30·113 ¹⁵	15·08 ¹³⁷
26·4	41·740 ⁵⁰	45·04 ³²	39·825 ⁵⁰	13·75 ⁷⁷	30·098 ⁵⁶	16·45 ¹⁴⁵
Oct. 6·4	41·690 ⁷⁸	45·36 ⁴⁷	39·775 ⁸⁰	14·52 ⁸⁷	30·042 ⁹¹	17·90 ¹⁴⁹
16·4	41·612 ¹⁰¹	45·83 ⁵⁹	39·695 ¹⁰⁴	15·39 ⁹²	29·951 ¹¹⁸	19·39 ¹⁴⁴
26·4	41·511 ¹¹⁶	46·42 ⁶⁷	39·591 ¹²¹	16·31 ⁹⁵	29·833 ¹³⁹	20·83 ¹³⁴
Nov. 5·3	41·395 ¹²⁵	47·09 ⁷²	39·470 ¹³¹	17·26 ⁹¹	29·694 ¹⁵¹	22·17 ¹¹⁷
15·3	41·270 ¹²⁸	47·81 ⁷⁴	39·339 ¹³³	18·17 ⁸⁵	29·543 ¹⁵⁶	23·34 ⁹⁷
25·3	41·142 ¹²⁵	48·55 ⁷³	39·206 ¹³²	19·02 ⁷⁴	29·387 ¹⁵³	24·31 ⁷²
Dec. 5·2	41·017 ¹¹⁹	49·28 ⁷¹	39·074 ¹²³	19·76 ⁶³	29·234 ¹⁴⁶	25·03 ⁴⁶
15·2	40·898 ¹⁰⁶	49·99 ⁶⁶	38·951 ¹¹²	20·39 ⁴⁹	29·088 ¹³¹	25·49 ¹⁷
25·2	40·792 ⁹¹	50·65 ⁵⁸	38·839 ⁹⁵	20·88 ³³	28·957 ¹¹²	25·66 ¹²
35·2	40·701	51·23	38·744	21·21	28·845	25·54
Mean Place	39·027	63·92	37·107	31·38	27·288	31·77
Sec δ, Tan δ	1·010	-0·140	1·041	-0·291	1·155	-0·578
L α, L δ	0·00	+0·4	0·00	+0·4	0·00	+0·4
ω α, ω δ	+0·01	-0·3	+0·02	-0·3	+0·04	-0·3
AUTHORITY	A. E.		A. E.		A. E.	

426 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	β Piscium. Mag. 4.6		β Pegasi. Mag. 2.2-2.7		α Pegasi. Mag. 2.6	
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.
	h m	° ' "	h m	° ' "	h m	° ' "
	22 59	3 24	23 0	27 40	23 0	14 47
Jan. 1.2	59.612 ⁹³	37.43 ⁸⁹	4.518 ¹²⁵	19.72 ¹⁴⁴	57.575 ¹⁰³	48.78 ¹¹⁹
11.2	59.519 ⁷⁴	36.54 ⁹⁰	4.393 ¹⁰⁶	18.28 ¹⁶⁷	57.472 ⁸⁵	47.59 ¹³⁰
21.1	59.445 ⁵⁴	35.64 ⁸⁵	4.287 ⁸²	16.61 ¹⁸²	57.387 ⁶⁴	46.29 ¹³⁴
31.1	59.391 ³¹	34.79 ⁷⁷	4.205 ⁵⁵	14.79 ¹⁹⁰	57.323 ⁴⁰	44.95 ¹³⁴
Feb. 10.1	59.360 ⁴	34.02 ⁶⁵	4.150 ²³	12.89 ¹⁹⁰	57.283 ¹²	43.61 ¹²⁸
20.0	59.356 ²⁶	33.37 ⁴⁸	4.127 ¹⁴	10.99 ¹⁸³	57.271 ²¹	42.33 ¹¹⁴
Mar. 1.0	59.382 ⁵⁹	32.89 ²⁷	4.141 ⁵³	9.16 ¹⁶⁶	57.292 ⁵⁵	41.19 ⁹⁵
11.0	59.441 ⁹³	32.62 ³	4.194 ⁹⁵	7.50 ¹⁴¹	57.347 ⁹²	40.24 ⁷⁰
21.0	59.534 ¹²⁹	32.59 ²⁵	4.289 ¹³⁷	6.09 ¹¹⁰	57.439 ¹³⁰	39.54 ⁴¹
30.9	59.663 ¹⁶⁶	32.84 ⁵³	4.426 ¹⁷⁹	4.99 ⁷⁴	57.569 ¹⁶⁸	39.13 ⁸
Apr. 9.9	59.829 ²⁰¹	33.37 ⁸²	4.605 ²¹⁹	4.25 ³³	57.737 ²⁰⁴	39.05 ²⁷
19.9	60.030 ²³²	34.19 ¹¹¹	4.824 ²⁵⁴	3.92 ⁹	57.941 ²³⁷	39.32 ⁶³
29.9	60.262 ²⁶⁰	35.30 ¹³⁵	5.078 ²⁸⁴	4.01 ⁵²	58.178 ²⁶⁶	39.95 ⁹⁷
May 9.8	60.522 ²⁸²	36.65 ¹⁵⁸	5.362 ³⁰⁸	4.53 ⁹⁵	58.444 ²⁸⁸	40.92 ¹²⁹
19.8	60.804 ²⁹⁸	38.23 ¹⁷⁸	5.670 ³²²	5.48 ¹³⁴	58.732 ³⁰³	42.21 ¹⁵⁸
29.8	61.102 ³⁰⁶	40.01 ¹⁹⁰	5.992 ³²⁸	6.82 ¹⁶⁹	59.035 ³¹¹	43.79 ¹⁸³
June 8.7	61.408 ³⁰⁶	41.91 ¹⁹⁹	6.320 ³²⁷	8.51 ²⁰⁰	59.346 ³¹⁰	45.62 ²⁰²
18.7	61.714 ²⁹⁷	43.90 ²⁰¹	6.647 ³¹⁶	10.51 ²²⁴	59.656 ³⁰¹	47.64 ²¹⁵
28.7	62.011 ²⁸⁰	45.91 ¹⁹⁹	6.963 ²⁹⁶	12.75 ²⁴⁴	59.957 ²⁸³	49.79 ²²³
July 8.7	62.291 ²⁵⁸	47.90 ¹⁹¹	7.259 ²⁶⁸	15.19 ²⁵⁶	60.240 ²⁵⁹	52.02 ²²⁵
18.6	62.549 ²²⁷	49.81 ¹⁷⁹	7.527 ²³⁶	17.75 ²⁶³	60.499 ²²⁹	54.27 ²²²
28.6	62.776 ¹⁹³	51.60 ¹⁶³	7.763 ¹⁹⁷	20.38 ²⁶³	60.728 ¹⁹²	56.49 ²¹⁴
Aug. 7.6	62.969 ¹⁵⁴	53.23 ¹⁴⁴	7.960 ¹⁵⁵	23.01 ²⁵⁸	60.920 ¹⁵³	58.63 ²⁰¹
17.6	63.123 ¹¹²	54.67 ¹²²	8.115 ¹¹⁰	25.59 ²⁴⁸	61.073 ¹¹²	60.64 ¹⁸⁴
27.5	63.235 ⁷¹	55.89 ¹⁰⁰	8.225 ⁶⁶	28.07 ²³²	61.185 ⁷⁰	62.48 ¹⁶⁵
Sept. 6.5	63.306 ³¹	56.89 ⁷⁶	8.291 ²³	30.39 ²¹³	61.255 ²⁹	64.13 ¹⁴³
16.5	63.337 ⁷	57.65 ⁵³	8.314 ¹⁷	32.52 ¹⁹⁰	61.284 ⁹	65.56 ¹¹⁹
26.4	63.330 ⁴⁰	58.18 ³¹	8.297 ⁵⁴	34.42 ¹⁶⁴	61.275 ⁴³	66.75 ⁹⁵
Oct. 6.4	63.290 ⁶⁸	58.49 ⁹	8.243 ⁸⁴	36.06 ¹³⁶	61.232 ⁷²	67.70 ⁶⁹
16.4	63.222 ⁹¹	58.58 ⁸	8.159 ¹¹¹	37.42 ¹⁰⁴	61.160 ⁹⁵	68.39 ⁴⁴
26.4	63.131 ¹⁰⁸	58.50 ²⁷	8.048 ¹²⁹	38.46 ⁷²	61.065 ¹¹³	68.83 ¹⁹
Nov. 5.3	63.023 ¹¹⁹	58.23 ⁴¹	7.919 ¹⁴⁴	39.18 ³⁹	60.952 ¹²⁴	69.02 ⁵
15.3	62.904 ¹²⁴	57.82 ⁵⁶	7.775 ¹⁵²	39.57 ⁴	60.828 ¹³¹	68.97 ²⁹
25.3	62.780 ¹²³	57.26 ⁶⁶	7.623 ¹⁵⁴	39.61 ³¹	60.697 ¹³²	68.68 ⁵²
Dec. 5.3	62.657 ¹¹⁹	56.60 ⁷⁵	7.469 ¹⁵²	39.30 ⁶⁶	60.565 ¹²⁹	68.16 ⁷⁴
15.2	62.538 ¹¹¹	55.85 ⁸⁴	7.317 ¹⁴⁵	38.64 ⁹⁸	60.436 ¹²¹	67.42 ⁹⁴
25.2	62.427 ⁹⁹	55.01 ⁸⁷	7.172 ¹³⁴	37.66 ¹²⁷	60.315 ¹⁰⁹	66.48 ¹¹⁰
35.2	62.328	54.14	7.038	36.39	60.206	65.38
Mean Place	60.561	38.11	5.249	12.70	58.410	45.80
Sec δ , Tan δ	1.002	+0.060	1.129	+0.524	1.034	+0.264
L α , L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α , ω δ	-0.01	-0.3	-0.03	-0.3	-0.02	-0.3
AUTHORITY			A. E.		A. E.	

APPARENT PLACES OF STARS, 1924. 427

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	♄ Aquarii. Mag. 3.8		γ Tucanæ. Mag. 4.1		γ Piscium. Mag. 3.9	
	R. A.	Dec. S.	R. A.	Dec. S.	R. A.	Dec. N.
	h m 23 5	° ' 21 34	h m 23 12	° ' 58 38	h m 23 13	° ' 2 51
Jan. 1.2	22.542 ₁₀₀	75.87 7	57.781 ₂₄₉	88.92 ₁₂₄	12.619 ₉₇	58.78 ₈₅
11.2	22.442 ₈₀	75.94 ₁₅	57.532 ₂₀₉	87.68 ₁₇₀	12.522 ₈₁	57.93 ₈₅
21.1	22.362 ₅₈	75.79 ₃₉	57.323 ₁₆₃	85.98 ₂₁₂	12.441 ₆₂	57.08 ₈₀
31.1	22.304 ₃₃	75.40 ₆₁	57.160 ₁₁₂	83.86 ₂₄₇	12.379 ₄₁	56.28 ₇₁
Feb. 10.1	22.271 ₅	74.79 ₈₄	57.048 ₅₆	81.39 ₂₇₆	12.338 ₁₅	55.57 ₆₀
20.0	22.266 ₂₆	73.95 ₁₀₆	56.992 ₂	78.63 ₂₉₉	12.323 ₁₄	54.97 ₄₂
Mar. 1.0	22.292 ₆₀	72.89 ₁₂₇	56.994 ₆₂	75.64 ₃₁₅	12.337 ₄₆	54.55 ₂₂
11.0	22.352 ₉₅	71.62 ₁₄₈	57.056 ₁₂₅	72.49 ₃₂₄	12.383 ₈₁	54.33 ₁
21.0	22.447 ₁₃₂	70.14 ₁₆₇	57.181 ₁₈₇	69.25 ₃₂₅	12.464 ₁₁₈	54.34 ₂₈
30.9	22.579 ₁₇₀	68.47 ₁₈₂	57.368 ₂₄₉	66.00 ₃₂₂	12.582 ₁₅₅	54.62 ₅₆
Apr. 9.9	22.749 ₂₀₆	66.65 ₁₉₅	57.617 ₃₀₉	62.78 ₃₁₀	12.737 ₁₉₁	55.18 ₈₄
19.9	22.955 ₂₄₀	64.70 ₂₀₄	57.926 ₃₆₄	59.68 ₂₉₂	12.928 ₂₂₄	56.02 ₁₁₁
29.9	23.195 ₂₇₀	62.66 ₂₀₉	58.290 ₄₁₂	56.76 ₂₆₇	13.152 ₂₅₄	57.13 ₁₃₇
May 9.8	23.465 ₂₉₅	60.57 ₂₀₈	58.702 ₄₅₄	54.09 ₂₃₇	13.406 ₂₇₈	58.50 ₁₅₉
19.8	23.760 ₃₁₃	58.49 ₂₀₃	59.156 ₄₈₅	51.72 ₂₀₁	13.684 ₂₉₅	60.09 ₁₇₆
29.8	24.073 ₃₂₄	56.46 ₁₉₁	59.641 ₅₀₆	49.71 ₁₅₉	13.979 ₃₀₇	61.85 ₁₉₀
June 8.7	24.397 ₃₂₆	54.55 ₁₇₆	60.147 ₅₁₃	48.12 ₁₁₅	14.286 ₃₀₇	63.75 ₁₉₉
18.7	24.723 ₃₂₀	52.79 ₁₅₅	60.660 ₅₀₇	46.97 ₆₇	14.593 ₃₀₂	65.74 ₂₀₀
28.7	25.043 ₃₀₅	51.24 ₁₃₀	61.167 ₄₈₈	46.30 ₁₇	14.895 ₂₈₇	67.74 ₁₉₉
July 8.7	25.348 ₂₈₂	49.94 ₁₀₃	61.655 ₄₅₇	46.13 ₃₂	15.182 ₂₆₆	69.73 ₁₉₀
18.6	25.630 ₂₅₃	48.91 ₇₂	62.112 ₄₁₁	46.45 ₈₁	15.448 ₂₃₈	71.63 ₁₇₈
28.6	25.883 ₂₁₆	48.19 ₄₁	62.523 ₃₅₆	47.26 ₁₂₇	15.686 ₂₀₅	73.41 ₁₆₂
Aug. 7.6	26.099 ₁₇₅	47.78 ₁₀	62.879 ₂₉₀	48.53 ₁₆₈	15.891 ₁₆₇	75.03 ₁₄₂
17.6	26.274 ₁₃₂	47.68 ₂₁	63.169 ₂₁₇	50.21 ₂₀₃	16.058 ₁₂₆	76.45 ₁₂₁
27.5	26.406 ₈₆	47.89 ₄₈	63.386 ₁₃₉	52.24 ₂₃₃	16.184 ₈₇	77.66 ₉₈
Sept. 6.5	26.492 ₄₂	48.37 ₇₂	63.525 ₆₀	54.57 ₂₅₀	16.271 ₄₆	78.64 ₇₄
16.5	26.534 ₀	49.09 ₉₂	63.585 ₁₈	57.07 ₂₆₀	16.317 ₈	79.38 ₅₁
26.4	26.534 ₃₈	50.01 ₁₀₇	63.567 ₉₂	59.67 ₂₅₉	16.325 ₂₆	79.89 ₂₈
Oct. 6.4	26.496 ₇₁	51.08 ₁₁₅	63.475 ₁₅₈	62.26 ₂₄₉	16.299 ₅₅	80.17 ₈
16.4	26.425 ₉₈	52.23 ₁₁₉	63.317 ₂₁₄	64.75 ₂₂₇	16.244 ₇₉	80.25 ₁₁
26.4	26.327 ₁₁₈	53.42 ₁₁₆	63.103 ₂₅₉	67.02 ₁₉₆	16.165 ₉₇	80.14 ₂₇
Nov. 5.3	26.209 ₁₃₀	54.58 ₁₀₈	62.844 ₂₉₂	68.98 ₁₅₈	16.068 ₁₁₀	79.87 ₄₃
15.3	26.079 ₁₃₇	55.66 ₉₆	62.552 ₃₁₁	70.56 ₁₁₃	15.958 ₁₁₈	79.44 ₅₅
25.3	25.942 ₁₃₇	56.62 ₈₁	62.241 ₃₁₆	71.69 ₆₃	15.840 ₁₁₈	78.89 ₆₅
Dec. 5.3	25.805 ₁₃₁	57.43 ₆₃	61.925 ₃₁₁	72.32 ₁₀	15.722 ₁₁₈	78.24 ₇₄
15.2	25.674 ₁₂₁	58.06 ₄₃	61.614 ₂₉₂	72.42 ₄₂	15.604 ₁₁₂	77.50 ₈₀
25.2	25.553 ₁₀₈	58.49 ₁₉	61.322 ₂₆₆	72.00 ₉₄	15.492 ₁₀₂	76.70 ₈₄
35.2	25.445	58.68	61.056	71.06	15.390	75.86
Mean Place	23.785	67.03	60.164	70.99	13.498	60.14
Sec δ, Tan δ	1.075	-0.396	1.922	-1.642	1.001	+0.050
L α, L δ	0.00	+0.4	+0.01	+0.4	0.00	+0.4
ω α, ω δ	+0.03	-0.2	+0.11	-0.2	0.00	-0.2
AUTHORITY	A. E.		A. E.		A. N.	

428 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	ψ^3 Aquarii. Mag. 5.2		τ Pegasi. Mag. 4.7		κ Piscium. Mag. 4.9	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	$\begin{matrix} h & m \\ 23 & 14 \\ s \end{matrix}$	$\begin{matrix} ^\circ & ' \\ 10 & 1 \end{matrix}$	$\begin{matrix} h & m \\ 23 & 16 \\ s \end{matrix}$	$\begin{matrix} ^\circ & ' \\ 23 & 19 \end{matrix}$	$\begin{matrix} h & m \\ 23 & 23 \\ s \end{matrix}$	$\begin{matrix} ^\circ & ' \\ 0 & 50 \end{matrix}$
Jan. 1.2	59.537 ⁹⁸	41.25 ⁴⁸	51.683 ¹²⁴	31.83 ¹²⁷	1.335 ¹⁰¹	19.46 ⁸⁰
11.2	59.439 ⁸¹	41.73 ³⁶	51.559 ¹⁰⁸	30.56 ¹⁴⁵	1.234 ⁸⁸	18.66 ⁷⁶
21.1	59.358 ⁶³	42.09 ²¹	51.451 ⁸⁸	29.11 ¹⁵⁹	1.146 ⁷⁰	17.90 ⁶⁹
31.1	59.295 ⁴⁰	42.30 ²	51.363 ⁶⁴	27.52 ¹⁶⁵	1.076 ⁴⁹	17.21 ⁶⁰
Feb. 10.1	59.255 ¹⁵	42.32 ¹⁵	51.299 ³⁵	25.87 ¹⁶⁵	1.027 ²⁵	16.61 ⁴⁷
20.1	59.240 ¹⁵	42.17 ³⁶	51.264 ¹	24.22 ¹⁵⁷	1.002 ⁴	16.14 ³⁰
Mar. 1.0	59.255 ⁴⁵	41.81 ⁵⁷	51.263 ³⁵	22.65 ¹⁴²	1.006 ³⁶	15.84 ⁹
11.0	59.300 ⁸¹	41.24 ⁸¹	51.298 ⁷⁶	21.23 ¹¹⁹	1.042 ⁷¹	15.75 ¹⁴
21.0	59.381 ¹¹⁶	40.43 ¹⁰³	51.374 ¹¹⁷	20.04 ⁹⁰	1.113 ¹⁰⁷	15.89 ⁴⁰
30.9	59.497 ¹⁵⁴	39.40 ¹²⁵	51.491 ¹⁵⁹	19.14 ⁵⁷	1.220 ¹⁴⁵	16.29 ⁶⁷
Apr. 9.9	59.651 ¹⁹⁰	38.15 ¹⁴⁷	51.650 ¹⁹⁹	18.57 ¹⁹	1.365 ¹⁸¹	16.96 ⁹³
19.9	59.841 ²²³	36.68 ¹⁶⁵	51.849 ²³⁶	18.38 ²⁰	1.546 ²¹⁶	17.89 ¹²⁰
29.9	60.064 ²⁵⁴	35.03 ¹⁷⁹	52.085 ²⁶⁷	18.58 ⁶⁰	1.762 ²⁴⁷	19.09 ¹⁴³
May 9.8	60.318 ²⁷⁹	33.24 ¹⁹⁰	52.352 ²⁹³	19.18 ⁹⁸	2.009 ²⁷³	20.52 ¹⁶³
19.8	60.597 ²⁹⁷	31.34 ¹⁹⁷	52.645 ³¹¹	20.16 ¹³³	2.282 ²⁹²	22.15 ¹⁸⁰
29.8	60.894 ³⁰⁹	29.37 ¹⁹⁶	52.956 ³²⁰	21.49 ¹⁶⁶	2.574 ³⁰³	23.95 ¹⁹²
June 8.8	61.203 ³¹²	27.41 ¹⁹²	53.276 ³²²	23.15 ¹⁹³	2.877 ³⁰⁷	25.87 ¹⁹⁷
18.7	61.515 ³⁰⁷	25.49 ¹⁸³	53.598 ³¹⁴	25.08 ²¹⁵	3.184 ³⁰³	27.84 ¹⁹⁹
28.7	61.822 ²⁹³	23.66 ¹⁶⁸	53.912 ²⁹⁹	27.23 ²³¹	3.487 ²⁹⁰	29.83 ¹⁹⁴
July 8.7	62.115 ²⁷³	21.98 ¹⁴⁹	54.211 ²⁷⁵	29.54 ²⁴²	3.777 ²⁷¹	31.77 ¹⁸⁶
18.6	62.388 ²⁴⁵	20.49 ¹²⁷	54.486 ²⁴⁴	31.96 ²⁴⁶	4.048 ²⁴⁴	33.63 ¹⁷¹
28.6	62.633 ²¹¹	19.22 ¹⁰¹	54.730 ²¹⁰	34.42 ²⁴⁴	4.292 ²¹¹	35.34 ¹⁵⁴
Aug. 7.6	62.844 ¹⁷⁴	18.21 ⁷⁵	54.940 ¹⁶⁹	36.86 ²³⁸	4.503 ¹⁷⁵	36.88 ¹³³
17.6	63.018 ¹³²	17.46 ⁴⁸	55.109 ¹²⁸	39.24 ²²⁷	4.678 ¹³⁶	38.21 ¹¹⁰
27.5	63.150 ⁹¹	16.98 ²²	55.237 ⁸⁶	41.51 ²¹¹	4.814 ⁹⁵	39.31 ⁸⁷
Sept. 6.5	63.241 ⁴⁹	16.76 ⁴	55.323 ⁴⁴	43.62 ¹⁹¹	4.909 ⁵⁵	40.18 ⁶²
16.5	63.290 ¹⁰	16.80 ²⁶	55.367 ⁴	45.53 ¹⁷⁰	4.964 ¹⁷	40.80 ³⁹
26.5	63.300 ²⁶	17.06 ⁴⁵	55.371 ³²	47.23 ¹⁴⁵	4.981 ¹⁷	41.19 ¹⁷
Oct. 6.4	63.274 ⁵⁶	17.51 ⁶¹	55.339 ⁶³	48.68 ¹¹⁸	4.964 ⁴⁷	41.36 ³
16.4	63.218 ⁸¹	18.12 ⁷²	55.276 ⁸⁹	49.86 ⁹¹	4.917 ⁷²	41.33 ²¹
26.4	63.137 ¹⁰¹	18.84 ⁷⁹	55.187 ¹¹⁰	50.77 ⁶¹	4.845 ⁹²	41.12 ³⁷
Nov. 5.3	63.036 ¹¹³	19.63 ⁸³	55.077 ¹²⁶	51.38 ³²	4.753 ¹⁰⁶	40.75 ⁴⁹
15.3	62.923 ¹²¹	20.46 ⁸²	54.951 ¹³⁵	51.70 ¹	4.647 ¹¹⁵	40.26 ⁶⁰
25.3	62.802 ¹²³	21.28 ⁷⁹	54.816 ¹⁴¹	51.71 ²⁹	4.532 ¹¹⁸	39.66 ⁶⁸
Dec. 5.3	62.679 ¹²⁰	22.07 ⁷⁴	54.675 ¹⁴¹	51.42 ⁵⁹	4.414 ¹¹⁸	38.98 ⁷⁴
15.2	62.559 ¹¹⁴	22.81 ⁶⁵	54.534 ¹³⁷	50.83 ⁸⁷	4.296 ¹¹⁴	38.24 ⁷⁸
25.2	62.445 ¹⁰³	23.46 ⁵⁶	54.397 ¹³⁰	49.96 ¹¹²	4.182 ¹⁰⁶	37.46 ⁷⁹
35.2	62.342	24.02	54.267	48.84	4.076	36.67
Mean Place	60.556	35.54	52.350	26.60	2.185	21.90
Sec δ , Tan δ	1.016	-0.177	1.089	+0.431	1.000	+0.015
L α , L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α , ω δ	+0.01	-0.2	-0.03	-0.2	0.00	-0.2
AUTHORITY				A. E.		A. E.

APPARENT PLACES OF STARS, 1924. 429

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	♋ Phœnicis. Mag. 4·8		♊ Piscium. Mag. 4·3		γ Cephei. Mag. 3·4	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. N.
	h m 23 30	° ′ 43 1	h m 23 36	° ′ 5 12	h m 23 36	° ′ 77 12
Jan. 1·2	57·885 ₁₆₆	83·98 ₅₃	1·686 ₁₀₈	49·80 ₈₈	13·62 ₉₀	46·54 ₉₀
11·2	57·719 ₁₄₃	83·45 ₉₄	1·578 ₉₆	48·92 ₈₉	12·72 ₈₃	45·64 ₁₅₀
21·2	57·576 ₁₁₇	82·51 ₁₃₁	1·482 ₈₁	48·03 ₈₆	11·89 ₇₄	44·14 ₂₀₃
31·1	57·459 ₈₆	81·20 ₁₆₇	1·401 ₆₂	47·17 ₈₀	11·15 ₆₂	42·11 ₂₄₉
Feb. 10·1	57·373 ₅₁	79·53 ₁₉₈	1·339 ₃₈	46·37 ₇₀	10·53 ₄₈	39·62 ₂₈₃
20·1	57·322 ₁₂	77·55 ₂₂₄	1·301 ₁₀	45·67 ₅₅	10·05 ₃₁	36·79 ₃₀₇
Mar. 1·0	57·310 ₂₉	75·31 ₂₄₇	1·291 ₂₂	45·12 ₃₅	9·74 ₁₃	33·72 ₃₁₇
11·0	57·339 ₇₄	72·84 ₂₆₄	1·313 ₅₈	44·77 ₁₃	9·61 ₅	30·55 ₃₁₆
21·0	57·413 ₁₂₀	70·20 ₂₇₆	1·371 ₉₅	44·64 ₁₃	9·66 ₂₄	27·39 ₃₀₂
31·0	57·533 ₁₆₈	67·44 ₂₈₃	1·466 ₁₃₃	44·77 ₄₀	9·90 ₄₁	24·37 ₂₇₅
Apr. 9·9	57·701 ₂₁₄	64·61 ₂₈₄	1·599 ₁₇₂	45·17 ₆₉	10·31 ₅₈	21·62 ₂₄₀
19·9	57·915 ₂₅₈	61·77 ₂₇₉	1·771 ₂₀₈	45·86 ₉₈	10·89 ₇₃	19·22 ₁₉₅
29·9	58·173 ₂₉₉	58·98 ₂₆₇	1·979 ₂₄₁	46·84 ₁₂₄	11·62 ₈₄	17·27 ₁₄₄
May 9·0	58·472 ₃₃₃	56·31 ₂₅₀	2·220 ₂₆₈	48·08 ₁₄₉	12·46 ₉₃	15·83 ₈₉
19·8	58·805 ₃₆₁	53·81 ₂₂₆	2·488 ₂₈₈	49·57 ₁₆₈	13·39 ₉₉	14·94 ₃₁
29·8	59·166 ₃₈₁	51·55 ₁₉₉	2·776 ₃₀₃	51·25 ₁₈₅	14·38 ₁₀₁	14·63 ₂₈
June 8·8	59·547 ₃₈₉	49·56 ₁₆₄	3·079 ₃₀₈	53·10 ₁₉₆	15·39 ₁₀₂	14·91 ₈₅
18·7	59·936 ₃₈₉	47·92 ₁₂₆	3·387 ₃₀₆	55·06 ₂₀₁	16·41 ₉₉	15·76 ₁₃₉
28·7	60·325 ₃₇₇	46·66 ₈₄	3·693 ₂₉₅	57·07 ₂₀₂	17·40 ₉₃	17·15 ₁₉₀
July 8·7	60·702 ₃₅₇	45·82 ₄₂	3·988 ₂₇₆	59·09 ₁₉₇	18·33 ₈₆	19·05 ₂₃₇
18·7	61·059 ₃₂₆	45·40 ₄	4·264 ₂₅₂	61·06 ₁₈₆	19·19 ₇₅	21·42 ₂₇₇
28·6	61·385 ₂₈₇	45·44 ₄₇	4·516 ₂₂₁	62·92 ₁₇₃	19·94 ₆₄	24·19 ₃₁₀
Aug. 7·6	61·672 ₂₃₉	45·91 ₈₈	4·737 ₁₈₅	64·65 ₁₅₅	20·58 ₅₁	27·29 ₃₃₈
17·6	61·911 ₁₉₀	46·79 ₁₂₆	4·922 ₁₄₇	66·20 ₁₃₄	21·09 ₃₇	30·67 ₃₅₇
27·6	62·101 ₁₃₄	48·05 ₁₅₈	5·069 ₁₀₈	67·54 ₁₁₂	21·46 ₂₃	34·24 ₃₇₀
Sept. 6·5	62·235 ₇₇	49·63 ₁₈₄	5·177 ₆₈	68·66 ₈₈	21·69 ₈	37·94 ₃₇₅
16·5	62·312 ₂₃	51·47 ₂₀₃	5·245 ₃₀	69·54 ₆₅	21·77 ₇	41·69 ₃₇₁
26·5	62·335 ₃₀	53·50 ₂₁₃	5·275 ₅	70·19 ₄₃	21·70 ₂₁	45·40 ₃₆₀
Oct. 6·4	62·305 ₇₆	55·63 ₂₁₃	5·270 ₃₅	70·62 ₂₀	21·49 ₃₄	49·00 ₃₄₁
16·4	62·229 ₁₁₆	57·76 ₂₀₅	5·235 ₆₁	70·82 ₁	21·15 ₄₈	52·41 ₃₁₄
26·4	62·113 ₁₄₈	59·81 ₁₈₉	5·174 ₈₂	70·83 ₁₈	20·67 ₆₀	55·55 ₂₈₀
Nov. 5·4	61·965 ₁₇₃	61·70 ₁₆₄	5·092 ₉₈	70·65 ₃₄	20·07 ₇₁	58·35 ₂₃₇
15·3	61·792 ₁₈₇	63·34 ₁₃₃	4·994 ₁₀₈	70·31 ₄₈	19·36 ₇₉	60·72 ₁₈₈
25·3	61·605 ₁₉₅	64·67 ₉₇	4·886 ₁₁₆	69·83 ₆₁	18·57 ₈₆	62·60 ₁₃₄
Dec. 5·3	61·410 ₁₉₅	65·64 ₅₇	4·770 ₁₁₇	69·22 ₇₁	17·71 ₉₁	63·94 ₇₄
15·3	61·215 ₁₈₇	66·21 ₁₄	4·653 ₁₁₆	68·51 ₇₉	16·80 ₉₃	64·68 ₁₁
25·2	61·028 ₁₇₃	66·35 ₂₇	4·537 ₁₁₁	67·72 ₈₄	15·87 ₉₂	64·79 ₅₁
35·2	60·855	66·08	4·426	66·88	14·95	64·28
Mean Place	59·413	67·95	2·417	51·26	12·96	29·48
Sec δ, Tan δ	1·368	-0·934	1·004	+0·091	4·517	+4·404
L α, L δ	0·00	+0·4	0·00	+0·4	-0·01	+0·4
ω α, ω δ	+0·06	-0·1	-0·01	-0·1	-0·29	-0·1
AUTHORITY			A. E.		A. E.	

430 APPARENT PLACES OF STARS, 1924.

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	λ Piscium. Mag. 4.6		δ Sculptoris. Mag. 4.6		φ Pegasi. Mag. 5.2			
	R. A.	Dec. N.	R. A.	Dec. S.	R. A.	Dec. N.		
	^h 23	^m 38	^h 23	^m 44	^h 23	^m 48	^h 18	^m 41
	^s	[°] 1	^s	[°] 21	^s	[°] 18	^s	[°] 41
Jan. 1.2	9.326	39.05	57.023	76.75	36.597	55.98		
11.2	9.219	38.27	56.891	76.78	36.471	54.95		
21.2	9.122	37.51	56.774	76.50	36.355	53.77		
31.1	9.041	36.81	56.675	75.90	36.251	52.49		
Feb. 10.1	8.978	36.20	56.598	75.01	36.167	51.16		
20.1	8.939	35.73	56.547	73.83	36.108	49.84		
Mar. 1.1	8.927	35.41	56.526	72.39	36.077	48.58		
11.0	8.946	35.29	56.540	70.71	36.081	47.46		
21.0	9.000	35.41	56.592	68.80	36.123	46.54		
31.0	9.092	35.78	56.684	66.70	36.205	45.88		
Apr. 9.9	9.222	36.41	56.817	64.45	36.331	45.50		
19.9	9.390	37.32	56.991	62.09	36.498	45.46		
29.9	9.595	38.48	57.205	59.66	36.704	45.76		
May 9.9	9.832	39.89	57.456	57.22	36.945	46.41		
19.8	10.097	41.49	57.739	54.83	37.217	47.40		
29.8	10.384	43.28	58.048	52.54	37.512	48.71		
June 8.8	10.684	45.19	58.374	50.40	37.822	50.30		
18.8	10.991	47.16	58.712	48.48	38.139	52.14		
28.7	11.296	49.16	59.050	46.82	38.455	54.15		
July 8.7	11.591	51.12	59.381	45.46	38.760	56.30		
18.7	11.868	53.00	59.695	44.46	39.048	58.54		
28.6	12.121	54.74	59.985	43.81	39.311	60.79		
Aug. 7.6	12.342	56.31	60.243	43.54	39.544	63.02		
17.6	12.529	57.68	60.463	43.64	39.741	65.16		
27.6	12.678	58.83	60.640	44.10	39.900	67.18		
Sept. 6.5	12.786	59.74	60.772	44.90	40.019	69.05		
16.5	12.856	60.40	60.858	45.98	40.098	70.73		
26.5	12.888	60.82	60.899	47.30	40.139	72.19		
Oct. 6.5	12.886	61.03	60.898	48.79	40.144	73.43		
16.4	12.852	61.02	60.859	50.38	40.117	74.43		
26.4	12.792	60.83	60.786	52.00	40.062	75.18		
Nov. 5.4	12.711	60.49	60.687	53.58	39.983	75.68		
15.3	12.613	60.01	60.567	55.04	39.886	75.93		
25.3	12.506	59.43	60.432	56.34	39.774	75.93		
Dec. 5.3	12.391	58.76	60.290	57.41	39.652	75.69		
15.3	12.274	58.03	60.145	58.22	39.524	75.20		
25.2	12.158	57.26	60.002	58.74	39.394	74.50		
35.2	12.048	56.48	59.867	58.95	39.266	73.60		
Mean Place	10.083	41.92	58.129	63.80	37.121	53.26		
Sec δ, Tan δ	1.000	+0.024	1.138	-0.544	1.056	+0.338		
L α, L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4		
ω α, ω δ	0.00	-0.1	+0.04	-0.1	-0.02	-0.1		
AUTHORITY			A. E.		A. E.			

APPARENT PLACES OF STARS, 1924. 431

AT UPPER TRANSIT AT GREENWICH.

Mean Solar Date.	27 Piscium. Mag. 5.1		ω Piscium. Mag. 4.0		2 Ceti. Mag. 4.6	
	R. A.	Dec. S.	R. A.	Dec. N.	R. A.	Dec. S.
	h m 23 54	° ′ 3 58	h m 23 55	° ′ 6 26	h m 23 59	° ′ 17 45
Jan. 1.2	46.205 ₁₁₂	44.94 ₆₇	23.848 ₁₁₄	31.69 ₈₅	50.004 ₁₂₁	42.84 ₃₈
11.2	46.093 ₁₀₃	45.61 ₅₈	23.734 ₁₀₇	30.84 ₈₇	49.883 ₁₁₂	43.22 ₁₆
21.2	45.990 ₉₀	46.19 ₄₆	23.627 ₉₅	29.97 ₈₆	49.771 ₉₈	43.38 ₈
31.1	45.900 ₇₄	46.65 ₃₄	23.532 ₇₈	29.11 ₈₁	49.673 ₈₂	43.30 ₃₂
Feb. 10.1	45.826 ₅₃	46.99 ₁₇	23.454 ₅₆	28.30 ₇₁	49.591 ₅₉	42.98 ₅₇
20.1	45.773 ₂₇	47.16 ₂	23.398 ₂₉	27.59 ₅₈	49.532 ₃₂	42.41 ₈₁
Mar. 1.1	45.746 ₄	47.14 ₂₂	23.369 ₂	27.01 ₄₀	49.500 ₂	41.60 ₁₀₆
11.0	45.750 ₃₈	46.92 ₄₅	23.371 ₃₇	26.61 ₁₉	49.498 ₃₃	40.54 ₁₂₉
21.0	45.788 ₇₅	46.47 ₇₀	23.408 ₇₅	26.42 ₆	49.531 ₇₁	39.25 ₁₅₂
31.0	45.863 ₁₁₄	45.77 ₉₄	23.483 ₁₁₅	26.48 ₃₃	49.602 ₁₁₁	37.73 ₁₇₂
Apr. 9.9	45.977 ₁₅₃	44.83 ₁₁₈	23.598 ₁₅₄	26.81 ₆₂	49.713 ₁₅₁	36.01 ₁₉₄
19.9	46.130 ₁₉₁	43.65 ₁₄₁	23.752 ₁₉₃	27.43 ₉₀	49.864 ₁₉₀	34.11 ₂₀₄
29.9	46.321 ₂₂₆	42.24 ₁₆₂	23.945 ₂₂₈	28.33 ₁₁₇	50.054 ₂₂₇	32.07 ₂₁₅
May 9.9	46.547 ₂₅₅	40.62 ₁₇₈	24.173 ₂₅₈	29.50 ₁₄₂	50.281 ₂₅₉	29.92 ₂₂₁
19.8	46.802 ₂₈₀	38.84 ₁₉₀	24.431 ₂₈₂	30.92 ₁₆₄	50.540 ₂₈₅	27.71 ₂₂₀
29.8	47.082 ₂₉₇	36.94 ₁₉₈	24.713 ₂₉₈	32.56 ₁₈₁	50.825 ₃₀₅	25.51 ₂₁₆
June 8.8	47.379 ₃₀₆	34.96 ₂₀₁	25.011 ₃₀₇	34.37 ₁₉₃	51.130 ₃₁₅	23.35 ₂₀₅
18.8	47.685 ₃₀₈	32.95 ₁₉₈	25.318 ₃₀₈	36.30 ₂₀₁	51.445 ₃₁₈	21.30 ₁₈₉
28.7	47.993 ₃₀₀	30.97 ₁₈₉	25.626 ₃₀₁	38.31 ₂₀₃	51.763 ₃₁₄	19.41 ₁₆₈
July 8.7	48.293 ₂₈₅	29.08 ₁₇₆	25.927 ₂₈₄	40.34 ₂₀₀	52.077 ₃₀₀	17.73 ₁₄₃
18.7	48.578 ₂₆₄	27.32 ₁₅₉	26.211 ₂₆₃	42.34 ₁₉₁	52.377 ₂₇₇	16.30 ₁₁₃
28.6	48.842 ₂₃₅	25.73 ₁₃₈	26.474 ₂₃₃	44.25 ₁₇₉	52.654 ₂₅₀	15.17 ₈₂
Aug. 7.6	49.077 ₂₀₂	24.35 ₁₁₄	26.707 ₂₀₁	46.04 ₁₆₁	52.904 ₂₁₇	14.35 ₄₉
17.6	49.279 ₁₆₅	23.21 ₈₈	26.908 ₁₆₄	47.65 ₁₄₃	53.121 ₁₇₈	13.86 ₁₆
27.6	49.444 ₁₂₆	22.33 ₆₁	27.072 ₁₂₆	49.08 ₁₂₀	53.299 ₁₃₈	13.70 ₁₅
Sept. 6.5	49.570 ₈₇	21.72 ₃₆	27.198 ₈₇	50.28 ₉₈	53.437 ₉₆	13.85 ₄₅
16.5	49.657 ₅₀	21.36 ₁₂	27.285 ₄₉	51.26 ₇₄	53.533 ₅₆	14.30 ₇₁
26.5	49.707 ₁₄	21.24 ₁₂	27.334 ₁₅	52.00 ₅₁	53.589 ₁₈	15.01 ₉₂
Oct. 6.5	49.721 ₁₉	21.36 ₃₁	27.349 ₁₇	52.51 ₃₀	53.607 ₁₇	15.93 ₁₀₈
16.4	49.702 ₄₅	21.67 ₄₇	27.332 ₄₄	52.81 ₈	53.590 ₄₈	17.01 ₁₁₈
26.4	49.657 ₆₉	22.14 ₆₀	27.288 ₆₇	52.89 ₁₀	53.542 ₇₃	18.19 ₁₂₂
Nov. 5.4	49.588 ₈₇	22.74 ₇₀	27.221 ₈₆	52.79 ₂₆	53.469 ₉₄	19.41 ₁₂₁
15.3	49.501 ₁₀₁	23.44 ₇₅	27.135 ₁₀₀	52.53 ₄₂	53.375 ₁₀₈	20.62 ₁₁₅
25.3	49.400 ₁₀₉	24.19 ₇₇	27.035 ₁₀₉	52.11 ₅₅	53.267 ₁₁₉	21.77 ₁₀₃
Dec. 5.3	49.291 ₁₁₅	24.96 ₇₈	26.926 ₁₁₅	51.56 ₆₅	53.148 ₁₂₄	22.80 ₈₉
15.3	49.176 ₁₁₆	25.74 ₇₅	26.811 ₁₁₈	50.91 ₇₄	53.024 ₁₂₇	23.69 ₇₁
25.2	49.060 ₁₁₃	26.49 ₇₀	26.693 ₁₁₅	50.17 ₈₁	52.897 ₁₂₁	24.40 ₅₀
35.2	48.947	27.19	26.578	49.36	52.776	24.90
Mean Place	46.922	39.57	24.456	33.45	50.851	32.59
Sec δ, Tan δ	1.002	-0.070	1.006	+0.113	1.050	-0.320
L α, L δ	0.00	+0.4	0.00	+0.4	0.00	+0.4
ω α, ω δ	0.00	0.0	-0.01	0.0	+0.02	0.0
AUTHORITY	A. N.		A. E.		A. N.	

432 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.			Var. of (°'s R.A. in 1 hour of Long.	Sid. Time of Semid. pass [†] Merid.	Apparent Declination.			Var. of (°'s Dec. in 1 hour of Long.	Semi-diameter.	Hor. Par.			
			h	m	s			°	'	"				'	"	"
Jan. 0	Moon II. L.	-	13	23	26.66	139.08	67.19	S.	4	38	0.3	-692.9	16	7.25	59	9.93
	Moon II. U.	24.2	13	51	31.17	141.75	67.84		6	54	56.6	-674.6	16	11.97	59	27.27
1	Moon II. L.	-	14	20	10.07	144.79	68.57	S.	9	7	3.1	-644.5	16	16.32	59	43.23
	Moon II. U.	25.3	14	49	27.21	148.10	69.36		11	11	53.5	-601.8	16	20.17	59	57.36
2	Moon II. L.	-	15	19	24.79	151.50	70.15	S.	13	6	55.0	-546.3	16	23.39	60	9.17
	Moon II. U.	26.3	15	50	2.89	154.81	70.91		14	49	33.1	-478.0	16	25.84	60	18.16
3	Moon II. L.	-	16	21	18.86	157.78	71.59	S.	16	17	18.3	-397.6	16	27.39	60	23.85
	Moon II. U.	27.4	16	53	7.16	160.15	72.12		17	27	54.3	-306.8	16	27.94	60	25.88
4	Moon II. L.	-	17	25	19.27	161.70	72.46	S.	18	19	28.2	-207.8	16	27.42	60	23.95
	Moon II. U.	28.4	17	57	44.09	162.25	72.57		18	50	40.4	-103.7	16	25.78	60	17.95
5	Moon II. L.	-	18	30	8.92	161.69	72.44	S.	19	0	50.5	+ 1.9	16	23.04	60	7.88
6	Moon II. U.	29.4	19	2	20.33	160.03	72.04	S.	18	50	2.5	+105.4	16	19.23	59	53.92
	Moon I. L.	-	19	31	42.85	157.50	71.43		18	19	3.1	+203.3	16	14.46	59	36.42
7	Moon I. U.	1.0	20	2	52.92	154.06	70.62	S.	17	29	16.5	+292.8	16	8.85	59	15.80
	Moon I. L.	-	20	33	18.05	150.05	69.67		16	22	35.8	+372.1	16	2.54	58	52.66
8	Moon I. U.	2.1	21	2	52.83	145.71	68.64	S.	15	1	12.1	+439.9	15	55.72	58	27.61
	Moon I. L.	-	21	31	34.75	141.28	67.57		13	27	25.9	+495.9	15	48.55	58	1.31
9	Moon I. U.	3.1	21	59	23.91	136.95	66.53	S.	11	43	36.9	+540.4	15	41.22	57	34.42
	Moon I. L.	-	22	26	22.59	132.89	65.53		9	51	59.0	+574.2	15	33.90	57	7.56
10	Moon I. U.	4.1	22	52	34.70	129.20	64.62	S.	7	54	36.1	+598.1	15	26.75	56	41.29
	Moon I. L.	-	23	18	5.30	125.98	63.81		5	53	19.8	+613.2	15	19.89	56	16.14
11	Moon I. U.	5.2	23	43	0.20	123.26	63.12	S.	3	49	49.4	+620.6	15	13.46	55	52.54
	Moon I. L.	-	0	7	25.63	121.07	62.57		1	45	32.5	+621.1	15	7.56	55	30.87
4 Ceti		6.3	0	3	50						2 58					
	54 B. Ceti	6.3	0	20	36			S.			2 38					
12	Moon I. U.	6.2	0	31	27.99	119.42	62.15	N.	0	18	13.6	+615.6	15	2.26	55	11.42
	Moon I. L.	-	0	55	13.71	118.29	61.87		2	20	19.6	+604.6	14	57.63	54	54.41
26 Ceti		6.0	0	59	54					0 57						
33 Ceti		6.1	1	6	38					2 2						
13	Moon I. U.	7.2	1	18	49.07	117.68	61.70	N.	4	19	42.8	+588.5	14	53.70	54	40.02
	Moon I. L.	-	1	42	20.11	117.57	61.68		6	15	25.2	+567.8	14	50.53	54	28.36
μ Piscium		5.0	1	26	11					5 45						
ν Piscium		4.7	1	37	28					5 6						
14	Moon I. U.	8.2	2	5	52.58	117.92	61.77	N.	8	6	30.8	+542.4	14	48.11	54	19.48
	Moon I. L.	-	2	29	31.87	118.70	61.96		9	52	5.3	+512.6	14	46.45	54	13.38
25 Arietis		6.5	2	23	21					9 52						
85 Ceti		6.3	2	38	23					10 25						
15	Moon I. U.	9.3	2	53	22.82	119.86	62.26	N.	11	31	13.8	+478.1	14	45.53	54	10.04
	Moon I. L.	-	3	17	29.78	121.35	62.63		13	3	0.7	+438.9	14	45.35	54	9.37
147 B. Arietis		5.8	3	2	14					12 54						
8 B. Tauri		6.2	3	19	59			N.	12	22						

MOON-CULMINATING STARS, 1924. 433

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Sid. Time of Semid. pass ^s Merid.	Apparent			Semi-diameter.	Hor. Par.
			Right Ascension.	Var. of C's R.A. in 1 hour of Long.	8		Declination.	Var. of C's Dec. in 1 hour of Long.	'		
Jan. 16	Moon I. U.	10.3	3 41 56.36	123.12	8	63.07	N. 14 26 28.9	+394.9	' 14 45.87	' 54 11.27	
	Moon I. L.	-	4 6 45.41	125.08		63.56	15 40 39.2	+346.0	' 14 47.05	' 54 15.59	
	179 B. Tauri	5.9	4 3 24				14 57				
	γ Tauri	3.9	4 15 29				15 27				
17	Moon I. U.	11.3	4 31 58.83	127.17		64.07	N. 16 44 32.2	+292.0	' 14 48.84	' 54 22.16	
	Moon I. L.	-	4 57 37.50	129.28		64.58	17 37 8.6	+233.2	' 14 51.19	' 54 30.79	
	318 B. Tauri	5.7	4 53 0				17 2				
	m Tauri	5.0	5 2 58				18 33				
18	Moon I. U.	12.4	5 23 41.17	131.32		65.07	N. 18 17 30.4	+169.7	' 14 54.04	' 54 41.24	
	Moon I. L.	-	5 50 8.44	133.19		65.51	18 44 44.7	+102.0	' 14 57.32	' 54 53.29	
	130 Tauri	5.6	5 43 1				17 42				
	64 Orionis	5.1	5 58 58				19 41				
19	Moon I. U.	13.4	6 16 56.83	134.82		65.89	N. 18 58 4.8	+30.8	' 15 0.96	' 55 6.66	
	Moon I. L.	-	6 44 2.88	136.13		66.20	18 56 53.6	-43.0	' 15 4.90	' 55 21.11	
	74 B. Geminor.	6.2	6 42 58				18 16				
	110 B. Geminor.	6.2	6 58 1				17 52				
20	Moon I. U.	14.4	7 11 22.42	137.06		66.41	N. 18 40 46.9	-118.3	' 15 9.06	' 55 36.36	
	Moon I. L.	-	7 38 50.84	137.61		66.53	18 9 34.2	-193.8	' 15 13.36	' 55 52.16	
	162 B. Geminor.	5.7	7 27 27				17 15				
	209 B. Geminor.	6.2	7 47 33				19 31				
21	Moon I. U.	15.5	8 6 23.49	137.77		66.57	N. 17 23 21.3	-268.1	' 15 17.74	' 56 8.24	
	θ Cancri	5.5	8 27 17				18 21				
	54 Cancri	6.3	8 46 49				15 38				
	22	Moon II. L.	-	8 36 9.09	137.59		66.53	N. 16 22 31.1	-339.8	' 15 22.14	' 56 24.40
Moon II. U.		16.5	9 3 37.67	137.14		66.43	15 7 42.4	-407.6	' 15 26.51	' 56 40.43	
12 B. Leonis		6.3	9 21 21				16 55				
ψ Leonis		5.6	9 39 37				14 22				
23	Moon II. L.	-	9 30 59.71	136.51		66.28	N. 13 39 49.8	-470.2	' 15 30.80	' 56 56.16	
	Moon II. U.	17.6	9 58 13.70	135.81		66.13	12 0 1.4	-526.7	' 15 34.97	' 57 11.46	
	44 Leonis	5.9	10 21 16				9 10				
	49 Leonis	5.7	10 31 4				9 2				
24	Moon II. L.	-	10 25 19.29	135.14		65.98	N. 10 9 37.1	-576.1	' 15 38.99	' 57 26.21	
	Moon II. U.	18.6	10 52 17.45	134.59		65.88	8 10 6.5	-617.7	' 15 42.84	' 57 40.35	
	χ Leonis	4.7	11 1 7				7 45				
	σ Leonis	4.1	11 17 14				6 27				
25	Moon II. L.	-	11 19 10.25	134.26		65.82	N. 6 3 6.9	-650.9	' 15 46.52	' 57 53.85	
	Moon II. U.	19.6	11 46 0.79	134.22		65.85	3 50 21.4	-675.2	' 15 50.01	' 58 6.67	
	10 Virginis	6.2	12 5 48				2 19				
	190 B. Virginis	7.4	12 26 42				3 56				
26	Moon II. L.	-	12 12 52.99	134.54		65.96	N. 1 33 38.4	-690.4	' 15 53.32	' 58 18.81	
	Moon II. U.	20.7	12 39 51.43	135.27		66.17	S. 0 45 10.0	-696.1	' 15 56.44	' 58 30.25	
	48 Virginis	6.5	13 0 0				3 15				
	65 Virginis	6.0	13 19 23				S. 4 32				

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.			Var. of \odot 's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^g Merid.	Apparent Declination.			Var. of \odot 's Dec. in 1 hour of Long.	Semi-diameter.	Hor. Par.	
			h	m	s			°	'	"				
Jan. 27	Moon II. L.	-	13	7	10	136.42	66.48	S.	3	4	7.6	-691.9	15 59.36	58 40.99
	Moon II. U.	21.7	13	34	27.12	137.99	66.89		5	21	14.6	-677.6	16 2.08	58 50.98
	598 B. Virginis	6.1	13	50	59				7	41				
235 G. Virginis	6.5	14	13	58				7	11					
28	Moon II. L.	-	14	2	14.47	139.97	67.40	S.	7	34	27.7	-652.8	16 4.59	59 0.16
	Moon II. U.	22.7	14	30	27.67	142.29	67.98		9	41	39.8	-617.4	16 6.84	59 8.45
	17 Libræ	6.4	14	54	6				10	51				
130 B. Libræ	5.9	15	19	42				12	6					
29	Moon II. L.	-	14	59	10.39	144.87	68.61	S.	11	40	41.8	-571.1	16 8.82	59 15.70
	Moon II. U.	23.8	15	28	25.02	147.58	69.26		13	29	23.4	-514.0	16 10.47	59 21.76
	202 B. Libræ	6.4	15	51	58				14	11				
91 B. Scorpïi	6.1	16	11	33				14	39					
30	Moon II. L.	-	15	58	12.31	150.28	69.90	S.	15	5	36.4	-446.4	16 11.74	59 26.42
	Moon II. U.	24.8	16	28	30.93	152.77	70.48		16	27	18.5	-369.0	16 12.57	59 29.47
31	Moon II. L.	-	16	59	17.31	154.87	70.95	S.	17	32	39.2	-283.1	16 12.90	59 30.67
	Moon II. U.	25.8	17	30	25.49	156.38	71.28		18	20	5.6	-190.3	16 12.66	59 29.80
Feb. 1	Moon II. L.	-	18	1	47.43	157.14	71.43	S.	18	48	29.2	- 93.1	16 11.81	59 26.67
	Moon II. U.	26.9	18	33	13.49	157.05	71.38		18	57	11.7	+ 6.0	16 10.29	59 21.10
2	Moon II. L.	-	19	4	33.13	156.07	71.13	S.	18	46	8.4	+104.1	16 8.09	59 13.03
	Moon II. U.	27.9	19	35	35.91	154.25	70.67		18	15	49.0	+198.2	16 5.20	59 2.42
3	Moon II. L.	-	20	6	12.33	151.70	70.04	S.	17	27	16.1	+285.9	16 1.64	58 49.36
	Moon II. U.	29.0	20	36	14.53	148.58	69.28		16	22	0.0	+365.2	15 57.45	58 33.99
4	Moon II. L.	-	21	5	36.77	145.08	68.42	S.	15	1	51.6	+434.4	15 52.71	58 16.57
5	Moon I. U.	0.5	21	32	0.61	141.54	67.51	S.	13	28	55.9	+493.0	15 47.49	57 57.42
	Moon I. L.	-	21	59	56.67	137.82	66.59		11	45	23.5	+540.6	15 41.90	57 36.92
6	Moon I. U.	1.5	22	27	8.79	134.23	65.71	S.	9	53	25.4	+577.3	15 36.07	57 15.50
	Moon I. L.	-	22	53	39.25	130.89	64.88		7	55	7.9	+603.9	15 30.10	56 53.60
7	Moon I. U.	2.5	23	19	31.55	127.89	64.13	S.	5	52	29.1	+621.0	15 24.13	56 31.67
	Moon I. L.	-	23	44	50.14	125.28	63.49		3	47	17.3	+629.6	15 18.27	56 10.18
8	Moon I. U.	3.6	0	9	40.00	123.11	62.95	S.	1	41	10.5	+630.4	15 12.65	55 49.55
	Moon I. L.	-	0	34	6.52	121.39	62.53	N.	0	24	23.6	+624.2	15 7.37	55 30.17
9	Moon I. U.	4.6	0	58	15.24	120.14	62.24	N.	2	28	6.2	+611.9	15 2.53	55 12.40
	Moon I. L.	-	1	22	11.70	119.35	62.06		4	28	47.0	+594.0	14 58.21	54 56.56
	f Piscium	5.3	1	13	52				3	13				
μ Piscium	5.0	1	26	11				5	45					
10	Moon I. U.	5.6	1	46	1.37	119.00	61.99	N.	6	25	21.7	+571.0	14 54.49	54 42.90
	Moon I. L.	-	2	9	49.51	119.09	62.04		8	16	51.2	+543.2	14 51.43	54 31.60
	39 B. Arietis	6.5	2	0	50				7	22				
ξ Arietis	5.5	2	20	44				N.	10	16				

MOON-CULMINATING STARS, 1924. 435

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent		Var. of (α 's R.A. in 1 hour of Long.	Sid. Time of Semi- pass ^s Merid.	Apparent		Var. of (α 's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			Right Ascension.	Declination.							
Feb. 11	Moon I. U.	6.7	h m s	s	s	N. 10 2 19.4	+510.8	14 49.07	54 23.00		
	Moon I. L.	-	2 33 41.12	119.58	62.20	11 40 52.7	+474.0	14 47.45	54 17.06		
	μ Ceti	4.4	2 40 50	120.44	62.44	9 48					
	147 B. Arietis	5.8	3 2 13			12 54					
12	Moon I. U.	7.7	3 21 52.97	121.63	62.76	N. 13 11 38.2	+432.8	14 46.59	54 13.92		
	Moon I. L.	-	3 46 21.09	123.10	63.15	14 33 43.1	+387.3	14 46.51	54 13.60		
	30 B. Tauri	6.4	3 33 32			15 11					
	λ Tauri	3.3	3 56 28			12 16					
13	Moon I. U.	8.7	4 11 8.32	124.80	63.59	N. 15 46 14.5	+337.2	14 47.19	54 16.11		
	Moon I. L.	-	4 36 16.98	126.66	64.07	16 48 18.9	+282.8	14 48.63	54 21.40		
	275 B. Tauri	6.5	4 29 17			16 10					
	302 B. Tauri	6.1	4 41 51			18 36					
14	Moon I. U.	9.7	5 1 48.55	128.61	64.55	N. 17 39 3.4	+223.9	14 50.80	54 29.38		
	Moon I. L.	-	5 27 43.61	130.56	65.03	18 17 35.8	+160.8	14 53.67	54 39.90		
	353 B. Tauri	6.5	5 16 28			19 44					
	120 Tauri	5.6	5 29 5			18 29					
15	Moon I. U.	10.8	5 54 1.77	132.45	65.48	N. 18 43 7.0	+93.8	14 57.18	54 52.78		
	Moon I. L.	-	6 20 41.69	134.18	65.88	18 54 52.4	+23.3	15 1.27	55 7.80		
	71 Orionis	5.1	6 10 23			19 11					
	ν Geminor.	4.1	6 24 28			20 16					
16	Moon I. U.	11.8	6 47 41.11	135.68	66.23	N. 18 52 14.4	-50.0	15 5.87	55 24.67		
	Moon I. L.	-	7 14 57.04	136.92	66.50	18 34 44.9	-125.1	15 10.89	55 43.10		
	ζ Gemin.(var.)	3.7	6 59 37			20 41					
	56 Geminor.	5.2	7 17 29			20 35					
17	Moon I. U.	12.8	7 42 25.98	137.85	66.70	N. 18 2 8.3	-201.0	15 16.24	56 2.72		
	Moon I. L.	-	8 10 4.14	138.46	66.82	17 14 22.5	-276.4	15 21.80	56 23.14		
	10 H. Cancri	6.1	8 0 23			19 3					
	δ^1 Cancri	5.9	8 19 2			18 34					
18	Moon I. U.	13.9	8 37 47.75	138.77	66.87	N. 16 11 42.2	-349.9	15 27.48	56 43.97		
	Moon I. L.	-	9 5 33.49	138.82	66.86	14 54 38.9	-420.0	15 33.15	57 4.78		
	α^2 Cancri	5.7	8 53 22			15 52					
	π Cancri	5.6	9 11 3			15 15					
19	Moon I. U.	14.9	9 33 18.58	138.67	66.81	N. 13 24 1.2	-485.4	15 38.70	57 25.16		
	ν Leonis	5.0	9 54 9			12 48					
	34 Leonis	6.4	10 7 34			13 44					
20	Moon I. L.	-	10 1 1.16	138.41	66.74	N. 11 40 54.8	-544.6	15 44.02	57 44.70		
	Moon II. U.	16.0	10 30 53.58	138.10	66.67	9 46 41.6	-596.3	15 49.02	58 3.05		
	ι Leonis	5.3	10 45 17			10 57					
	χ Leonis	4.7	11 1 7			7 45					
21	Moon II. L.	-	10 58 29.22	137.86	66.61	N. 7 42 57.3	-639.6	15 53.61	58 19.88		
	Moon II. U.	17.0	11 26 2.69	137.75	66.60	5 31 29.8	-673.4	15 57.71	58 34.92		
	451 B. Leonis	7.0	11 38 33			2 47					
	δ Virginis	5.2	11 56 4			N. 4 5					

436 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of (<i>s</i> 's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^e Merid.	Apparent		Var. of (<i>s</i> 's Dec. in 1 hour of Long.	Semi-		Hor. Par.
			Right Ascension.	<i>h</i>	<i>m</i>			<i>s</i>	Declination.		<i>'</i>	<i>"</i>		diameter.	'	"
Feb. 22	Moon II. L.	-	11 53 36	06	137.85	66.65	N. 3 14 17.2	-69.0	16 1.26	58 47.97			
	Moon II. U.	18.0	12 21 12	12	138.21	66.76	N. 0 53 25.3	-709.8	16 4.25	58 58.92			
	γ Virg. (mean)	2.9	12 37 50				S. 1 2						
	k Virginis	5.7	12 55 46				3 24						
23	Moon II. L.	-	12 48 54	20	138.86	66.95	S. 1 28 54.3	-711.5	16 6.64	59 7.70			
	Moon II. U.	19.1	13 16 45	98	139.82	67.22	3 50 26.5	-701.9	16 8.45	59 14.33			
	566 B. Virginis	6.4	13 39 58				5 7						
	598 B. Virginis	6.1	13 51 0				7 41						
24	Moon II. L.	-	13 44 51	17	141.09	67.57	S. 6 8 54.6	-680.9	16 9.69	59 18.89			
	Moon II. U.	20.1	14 13 13	27	142.63	67.98	8 22 2.0	-648.5	16 10.40	59 21.49			
	8 B. Libræ	6.9	14 34 56				10 14						
	13 Libræ	5.7	14 50 16				11 35						
25	Moon II. L.	-	14 41 55	23	144.39	68.44	S. 10 27 34.1	-605.0	16 10.61	59 22.27			
	Moon II. U.	21.1	15 10 59	15	146.28	68.93	12 23 20.5	-551.0	16 10.37	59 21.39			
	γ Libræ	4.0	15 31 17				14 32						
	195 B. Libræ	6.2	15 47 24				13 54						
26	Moon II. L.	-	15 40 25	96	148.18	69.41	S. 14 7 17.5	-486.9	16 9.72	59 19.02			
	Moon II. U.	22.2	16 10 15	11	149.98	69.86	15 37 30.7	-413.8	16 8.71	59 15.31			
	24 Scorpii	5.0	16 37 10				17 36						
	78 B. Ophiuchi	6.5	16 51 38				16 41						
27	Moon II. L.	-	16 40 24	46	151.52	70.23	S. 16 52 18.5	-332.9	16 7.37	59 10.38			
	Moon II. U.	23.2	17 10 50	11	152.67	70.50	17 50 16.3	-245.8	16 5.72	59 4.32			
	192 B. Ophiuchi	6.3	17 20 10				18 22						
	305 B. Ophiuchi	6.3	17 51 26				18 47						
28	Moon II. L.	-	17 41 26	59	153.31	70.64	S. 18 30 19.2	-154.1	16 3.78	58 57.22			
	Moon II. U.	24.3	18 12 7	13	153.34	70.63	18 51 46.2	-60.1	16 1.58	58 49.12			
29	Moon II. L.	-	18 42 44	04	152.70	70.45	S. 18 54 22.1	+34.0	15 59.10	58 40.02			
	Moon II. U.	25.3	19 13 9	44	151.42	70.12	18 38 18.6	+126.0	15 56.35	58 29.94			
Mar. 1	Moon II. L.	-	19 43 15	77	149.54	69.63	S. 18 4 14.0	+213.9	15 53.33	58 18.87			
	Moon II. U.	26.3	20 12 56	38	147.15	69.02	17 13 9.9	+295.6	15 50.04	58 6.80			
2	Moon II. L.	-	20 42 5	98	144.39	68.32	S. 16 6 28.6	+369.9	15 46.49	57 53.74			
	Moon II. U.	27.4	21 10 40	85	141.39	67.55	14 45 47.8	+435.4	15 42.68	57 39.75			
3	Moon II. L.	-	21 38 38	98	138.29	66.75	S. 13 12 55.8	+491.6	15 38.62	57 24.88			
	Moon II. U.	28.4	22 5 59	92	135.21	65.96	11 29 47.1	+538.2	15 34.36	57 9.23			
4	Moon II. L.	-	22 32 44	64	132.27	65.20	S. 9 38 18.4	+575.0	15 29.92	56 52.93			
5	Moon II. U.	29.4	22 58 55	27	129.55	64.49	S. 7 40 24.6	+602.4	15 25.36	56 36.19			
	Moon I. L.	-	23 22 27	14	127.20	63.86	5 37 56.8	+620.8	15 20.72	56 19.18			
6	Moon I. U.	0.9	23 47 40	46	125.08	63.32	S. 3 32 40.3	+630.6	15 16.09	56 2.17			
	Moon I. L.	-	0 12 30	41	123.31	62.87	S. 1 26 13.6	+632.6	15 11.52	55 45.41			
7	Moon I. U.	1.9	0 37 1	41	121.92	62.53	N. 0 39 51.9	+627.2	15 7.10	55 29.19			
	Moon I. L.	-	1 1 18	00	120.91	62.29	N. 2 44 12.0	+615.1	15 2.90	55 13.78			

MOON-CULMINATING STARS, 1924. 437

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass [†] Merid.	Apparent		Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			Right Ascension.	h	m			s	Declination.			
Mar. 8	Moon I. U.	2.9	1 25 24.73	120.28	62.15	N. 4 45 29.4	+596.8	14 59.00	54 59.47			
	Moon I. L.	-	1 49 26.09	120.01	62.12	6 42 33.0	+572.9	14 55.48	54 46.55			
9	Moon I. U.	4.0	2 13 26.36	120.10	62.17	N. 8 34 17.0	+543.6	14 52.41	54 35.28			
	Moon I. L.	-	2 37 29.62	120.50	62.32	10 19 40.2	+509.5	14 49.86	54 25.91			
10	Moon I. U.	5.0	3 1 39.64	121.21	62.55	N. 11 57 45.1	+470.6	14 47.88	54 18.65			
	Moon I. L.	-	3 25 59.78	122.19	62.84	13 27 36.9	+427.3	14 46.54	54 13.72			
8 B. Tauri		6.2	3 19 59			12 22						
	30 B. Tauri	6.4	3 33 31			15 11						
11	Moon I. U.	6.0	3 50 33.00	123.39	63.18	N. 14 48 23.5	+379.8	14 45.87	54 11.27			
	Moon I. L.	-	4 15 21.74	124.76	63.57	15 59 14.5	+328.1	14 45.92	54 11.45			
193 B. Tauri		6.2	4 8 9			17 5						
	71 Tauri	4.6	4 22 1			15 27						
12	Moon I. U.	7.1	4 40 27.84	126.27	63.98	N. 16 59 21.3	+272.4	14 46.71	54 14.34			
	Moon I. L.	-	5 5 52.57	127.86	64.41	17 47 56.8	+212.9	14 48.26	54 20.03			
m Tauri		5.0	5 2 57			18 33						
353 B. Tauri		6.5	5 16 27			19 44						
13	Moon I. U.	8.1	5 31 36.48	129.46	64.83	N. 18 24 16.7	+149.8	14 50.57	54 28.52			
	Moon I. L.	-	5 57 39.48	131.03	65.22	18 47 39.4	+ 83.4	14 53.64	54 39.79			
57 Orionis		5.8	5 50 27			19 44						
68 Orionis		5.7	6 7 32			19 48						
14	Moon I. U.	9.1	6 24 0.79	132.51	65.59	N. 18 57 27.8	+ 14.2	14 57.44	54 53.75			
	Moon I. L.	-	6 50 39.07	133.85	65.92	18 53 10.6	- 57.4	15 1.95	55 10.27			
74 B. Geminor.		6.2	6 42 58			18 16						
110 B. Geminor.		6.2	6 58 1			17 52						
15	Moon I. U.	10.2	7 17 32.48	135.02	66.19	N. 18 34 23.3	-130.7	15 7.10	55 29.17			
	Moon I. L.	-	7 44 38.89	136.01	66.41	18 0 50.7	-204.8	15 12.83	55 50.20			
f Geminor.		5.3	7 35 6			17 51						
85 Geminor.		5.2	7 51 15			20 5						
16	Moon I. U.	11.2	8 11 56.00	136.81	66.58	N. 17 12 28.4	-278.8	15 19.05	56 13.03			
	Moon I. L.	-	8 39 21.59	137.43	66.70	16 9 24.4	-351.6	15 25.66	56 37.29			
90 B. Cancri		6.3	8 31 53			15 34						
54 Cancri		6.3	8 46 49			15 38						
17	Moon I. U.	12.2	9 6 53.73	137.91	66.79	N. 14 52 0.8	-421.9	15 32.53	57 2.52			
	Moon I. L.	-	9 34 30.92	138.28	66.85	13 20 55.1	-488.4	15 39.54	57 28.24			
12 B. Leonis		6.3	9 21 21			16 55						
ψ Leonis		5.6	9 39 37			14 22						
18	Moon I. U.	13.3	10 2 12.29	138.61	66.90	N. 11 37 0.9	-549.7	15 46.52	57 53.87			
	Moon I. L.	-	10 29 57.68	138.96	66.97	9 41 28.5	-604.5	15 53.33	58 18.85			
44 Leonis		5.9	10 21 16			9 10						
49 Leonis		5.7	10 31 4			N. 9 2						

438 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass# Merid.	Apparent		Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			Right Ascension.	h	m			s	Declination.			
Mar. 19	Moon I. U.	14.3	10 57 47.63	139.39	67.06	N. 7 35 45.3	-651.3	15 59.79	58 42.58			
	Moon I. L.	-	11 25 43.46	139.95	67.18	5 21 35.2	-688.8	16 5.76	59 4.46			
	σ Leonis	4.1	11 17 14			6 27						
451	B. Leonis	7.0	11 38 33			2 47						
20	Moon I. U.	15.3	11 53 47.08	140.69	67.36	N. 3 0 57.3	-715.7	16 11.07	59 23.97			
	10 Virginis	6.2	12 5 49			N. 2 19						
	γ Virg. (mean)	2.9	12 37 50			S. 1 2						
21	Moon II. L.	-	12 24 16.12	141.70	67.60	N. 0 36 4.9	-731.0	16 15.61	59 40.62			
	Moon II. U.	16.4	12 52 43.52	142.91	67.91	S. 1 50 37.1	-733.8	16 19.26	59 54.03			
	65 Virginis	6.0	13 19 24			4 32						
	80 Virginis	5.6	13 31 35			5 1						
22	Moon II. L.	-	13 21 26.75	144.34	68.28	S. 4 16 34.6	-723.5	16 21.96	60 3.94			
	Moon II. U.	17.4	13 50 28.42	145.97	68.70	6 39 8.7	-699.9	16 23.67	60 10.20			
	235 G. Virginis	6.5	14 13 59			7 11						
	8 B. Libræ	6.9	14 34 56			10 14						
23	Moon II. L.	-	14 19 50.47	147.73	69.16	S. 8 55 38.4	-662.9	16 24.38	60 12.81			
	Moon II. U.	18.5	14 49 34.05	149.54	69.63	11 3 26.3	-613.0	16 24.13	60 11.88			
	130 B. Libræ	5.9	15 19 43			12 6						
	γ Libræ	4.0	15 31 17			14 32						
24	Moon II. L.	-	15 19 39.13	151.29	70.09	S. 13 0 2.4	-551.1	16 22.97	60 7.64			
	Moon II. U.	19.5	15 50 4.20	152.85	70.49	14 43 9.6	-478.4	16 21.00	60 0.41			
	98 B. Scorpil	6.1	16 14 44			14 41						
	φ Ophiuchi	4.4	16 26 48			16 27						
25	Moon II. L.	-	16 20 46.22	154.09	70.83	S. 16 10 48.4	-396.7	16 18.32	59 50.57			
	Moon II. U.	20.5	16 51 40.49	154.87	71.04	17 21 21.1	-307.8	16 15.04	59 38.55			
	125 B. Ophiuchi	6.2	17 3 51			17 31						
	192 B. Ophiuchi	6.3	17 20 11			18 22						
26	Moon II. L.	-	17 22 40.92	155.10	71.11	S. 18 13 35.9	-214.1	16 11.29	59 24.76			
	Moon II. U.	21.6	17 53 40.35	154.69	71.04	18 46 49.0	-117.9	16 7.16	59 9.63			
	Y. Sagit. (var.)	5.4	18 16 55			18 54						
	121 B. Sagittarii	5.9	18 34 22			21 7						
27	Moon II. L.	-	18 24 31.02	153.64	70.79	S. 19 0 45.8	-21.8	16 2.78	58 53.52			
	Moon II. U.	22.6	18 55 5.26	151.96	70.39	18 55 39.8	+72.2	15 58.22	58 36.79			
	45 Sagittarii	6.0	19 17 25			18 27						
	267 B. Sagittarii	5.8	19 32 39			18 24						
28	Moon II. L.	-	19 25 15.98	149.74	69.84	S. 18 32 10.3	+161.8	15 53.56	58 19.70			
	Moon II. U.	23.6	19 54 57.24	147.07	69.18	17 51 19.2	+245.6	15 48.87	58 2.48			
	σ Capricor.	5.5	20 15 1			19 21						
	47 B. Capricor.	6.2	20 31 14			16 47						
29	Moon II. L.	-	20 24 4.53	144.10	68.43	S. 16 54 25.4	+322.1	15 44.19	57 45.32			
	Moon II. U.	24.7	20 52 35.01	140.96	67.62	S. 15 43 1.2	+390.5	15 39.56	57 28.33			

MOON-CULMINATING STARS, 1924. 439

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.			Var. of (s R.A. in 1 hour of Long.	Sid. Time of Semid. pass* Merid.	Apparent Declination.			Var. of (s Dec. in 1 hour of Long.	Semi-diameter.	Hor. Par.	
			h	m	s			°	'	"				°
Mar. 30	Moon II. L.	-	21	20	27.42	137.78	66.80	S.	14	18	47.0	+450.4	15 35.00	57 11.60
	Moon II. U.	25.7	21	47	42.02	134.68	65.98		12	43	27.8	+501.4	15 30.53	56 55.18
31	Moon II. L.	-	22	14	20.35	131.75	65.20	S.	10	58	49.9	+543.5	15 26.16	56 39.12
	Moon II. U.	26.8	22	40	24.97	129.07	64.48		9	6	38.8	+576.9	15 21.88	56 23.44
Apr. 1	Moon II. L.	-	23	5	59.20	126.69	63.83	S.	7	8	37.0	+602.0	15 17.72	56 8.17
	Moon II. U.	27.8	23	31	6.92	124.65	63.27		5	6	24.2	+618.9	15 13.68	55 53.34
2	Moon II. L.	-	23	55	52.32	122.98	62.82	S.	3	1	35.0	+628.1	15 9.77	55 39.00
	Moon II. U.	28.8	0	20	19.81	121.67	62.45	S.	0	55	40.2	+629.9	15 6.01	55 25.20
3	Moon II. L.	-	0	44	33.76	120.72	62.19	N.	1	9	54.3	+624.7	15 2.42	55 12.03
4	Moon I. U.	0.2	1	6	34.46	120.15	62.04	N.	3	13	46.6	+612.9	14 59.03	54 59.58
	Moon I. L.	-	1	30	34.34	119.89	61.68		5	14	39.2	+594.8	14 55.87	54 47.98
5	Moon I. U.	1.2	1	54	32.98	119.94	62.01	N.	7	11	18.9	+570.8	14 52.98	54 37.38
	Moon I. L.	-	2	18	33.99	120.28	62.12		9	2	35.9	+541.1	14 50.41	54 27.93
6	Moon I. U.	2.3	2	42	40.69	120.88	62.31	N.	10	47	24.4	+506.1	14 48.19	54 19.78
	Moon I. L.	-	3	6	55.98	121.70	62.56		12	24	42.0	+466.0	14 46.38	54 13.13
7	Moon I. U.	3.3	3	31	22.27	122.71	62.86	N.	13	53	29.8	+421.2	14 45.03	54 8.17
	Moon I. L.	-	3	56	1.47	123.85	63.19		15	12	52.4	+371.9	14 44.18	54 5.06
8	Moon I. U.	4.3	4	20	54.95	125.08	63.55	N.	16	21	57.8	+318.4	14 43.89	54 3.99
	Moon I. L.	-	4	46	3.56	126.36	63.92		17	19	58.2	+261.1	14 44.19	54 5.11
9	Moon I. U.	5.4	5	11	27.51	127.63	64.29	N.	18	6	9.3	+200.2	14 45.14	54 8.57
	Moon I. L.	-	5	37	6.56	128.86	64.64		18	39	51.8	+136.4	14 46.75	54 14.51
120 Tauri		5.6	5	29	4				18	29				
130 Tauri		5.6	5	43	0				17	42				
10	Moon I. U.	6.4	6	2	59.92	130.01	64.96	N.	19	0	31.4	+ 69.8	14 49.07	54 23.01
	Moon I. L.	-	6	29	6.41	131.05	65.24		19	7	39.3	+ 1.2	14 52.10	54 34.15
	15 Geminor.	6.5	6	23	15				20	50				
	74 B. Geminor.	6.2	6	42	57				18	16				
11	Moon I. U.	7.4	6	55	24.61	131.96	65.49	N.	19	0	53.3	- 69.1	14 55.86	54 47.95
	Moon I. L.	-	7	21	52.92	132.74	65.70		18	39	58.1	-140.3	15 0.34	55 4.39
	56 Geminor.	5.2	7	17	28				20	35				
	162 B. Geminor.	5.7	7	27	26				17	15				
12	Moon I. U.	8.5	7	48	29.77	133.39	65.86	N.	18	4	46.0	-211.7	15 5.53	55 23.41
	Moon I. L.	-	8	15	13.80	133.94	65.99		17	15	18.2	-282.8	15 11.37	55 44.87
	ζ Can. (mean)	4.7	8	7	52				17	53				
	δ ^a Caneri	6.2	8	21	32				17	18				
13	Moon I. U.	9.5	8	42	3.94	134.42	66.10	N.	16	11	44.8	-352.5	15 17.83	56 8.57
	Moon I. L.	-	9	8	59.67	134.87	66.19		14	54	26.3	-420.1	15 24.83	56 34.24
	0 ^a Caneri	5.7	8	53	21				15	52				
	π Caneri	5.6	9	11	3				N.	15	15			

440 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of 's R.A. in 1 hour of Long.	Sid. Time of Semid. pass# Merid.	Apparent			Var. of 's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			Right Ascension.	h	m			s	Declination.	'			
Apr. 14	Moon I. U.	10.5	9 36	0 97	135.36	66.30	N. 13 23 54.3	-484.6	15 32.26	57 1.52			
	Moon I. L.	-	10 3	8 56	135.93	66.41	11 40 52.5	-544.9	15 40.01	57 29.96			
	ν Leonis	5.0	9 54	9			12 48						
34	Leonis	6.4	10 7	34			13 44						
15	Moon I. U.	11.6	10 30	23.78	136.64	66.56	N. 9 46 18.0	-599.8	15 47.93	57 59.05			
	Moon I. L.	-	10 57	48.68	137.55	66.76	7 41 23.0	-648.1	15 55.87	58 28.18			
	ι Leonis	5.3	10 45	17			10 57						
χ Leonis	4.7	11 1	7			7 45							
16	Moon I. U.	12.6	11 25	25.91	138.70	67.02	N. 5 27 35.1	-688.4	16 3.63	58 56.67			
	Moon I. L.	-	11 53	18.62	140.13	67.36	3 6 38.9	-719.2	16 11.03	59 23.80			
	b Virginis	5.2	11 56	5			4 5						
10	Virginis	6.2	12 5	49			2 19						
17	Moon I. U.	13.6	12 21	30.30	141.86	67.77	N. 0 40 36.9	-739.2	16 17.85	59 48.84			
	Moon I. L.	-	12 50	4 53	143.89	68.25	S. 1 48 11.6	-746.8	16 23.90	60 11.04			
	γ Virg. (mean)	2.9	12 37	50			1 2						
k Virginis	5.7	12 55	46			3 24							
18	Moon I. U.	14.7	13 19	4.74	146.19	68.81	S. 4 17 11.1	-740.8	16 28.99	60 29.74			
	88 Virginis	6.5	13 44	21			6 28						
	623 B. Virginis	6.5	14 0	22			8 54						
19	Moon II. L.	-	13 50	52.66	148.80	69.42	S. 6 43 32.9	-720.3	16 32.98	60 44.36			
	Moon II. U.	15.7	14 20	53.91	151.42	70.05	9 4 18.8	-684.8	16 35.73	60 54.45			
	8 B. Libræ	6.9	14 34	57			10 14						
18	Libræ	5.9	14 54	48			10 50						
20	Moon II. L.	-	14 51	26.66	154.02	70.69	S. 11 16 27.1	-634.1	16 37.17	60 59.75			
	Moon II. U.	16.8	15 22	29.72	156.44	71.28	13 16 59.8	-569.0	16 37.28	61 0.16			
	7 Libræ	5.5	15 39	49			15 26						
49	Libræ	5.4	15 56	5			16 19						
21	Moon II. L.	-	15 53	59.78	158.49	71.80	S. 15 3 11.2	-490.8	16 36.09	60 55.78			
	Moon II. U.	17.8	16 25	51.31	159.99	72.18	16 32 36.3	-401.7	16 33.67	60 46.93			
	78 B. Ophiuchi	6.5	16 51	40			16 41						
125	B. Ophiuchi	6.2	17 3	51			17 31						
22	Moon II. L.	-	16 57	56.62	160.76	72.39	S. 17 43 18.9	-304.3	16 30.16	60 34.02			
	Moon II. U.	18.8	17 30	6.31	160.70	72.42	18 33 58.1	-201.7	16 25.69	60 17.61			
	16 G. Sagittarii	6.4	17 55	30			20 20						
16	Sagittarii	5.9	18 10	43			20 25						
23	Moon II. L.	-	18 2	9.90	159.74	72.23	S. 19 3 52.0	- 97.3	16 20.44	59 58.35			
	Moon II. U.	19.9	18 33	56.74	157.92	71.83	19 12 58.7	+ 5.7	16 14.59	59 36.89			
	173 B. Sagittarii	6.4	18 58	40			19 13						
d Sagittarii	5.0	19 13	12			19 5							
24	Moon II. L.	-	19 5	16.95	155.33	71.24	S. 19 1 52.4	+104.4	16 8.32	59 13.88			
	Moon II. U.	20.9	19 36	2.11	152.11	70.48	18 31 38.6	+196.6	16 1.80	58 49.94			
	57 Sagittarii	6.0	19 47	48			19 14						
σ Capricorni	5.5	20 15	1			S. 19 21							

MOON-CULMINATING STARS, 1924. 441

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^r Merid.	Apparent			Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.			
			Right Ascension.	h	m			s	Declination.	'				"	'	"
Apr. 25	Moon II. L.	-	20	6	5.92	148.47	69.62	S. 17	43	46.3	+280.6	15	55.17	58	25.61	
	Moon II. U.	22.0	20	35	24.33	144.58	68.66	16	40	0.6	+355.4	15	48.57	58	1.38	
	21 Capricorni	6.5	20	56	35			17	50							
29 Capricorni	5.5	21	11	33			15	29								
26	Moon II. L.	-	21	3	55.65	140.64	67.69	S. 15	22	15.2	+420.5	15	42.10	57	37.62	
	Moon II. U.	23.0	21	31	40.18	136.81	66.71	13	52	26.3	+476.0	15	35.84	57	14.66	
	μ Capricorni	5.2	21	49	9			13	55							
	ε Aquarii	5.4	22	6	34			11	56							
27	Moon II. L.	-	21	58	39.96	133.20	65.78	S. 12	12	29.0	+522.0	15	29.86	56	52.71	
	Moon II. U.	24.0	22	24	58.33	129.92	64.91	10	24	13.6	+559.1	15	24.20	56	31.93	
	70 Aquarii	6.1	22	44	30			10	57							
	81 Aquarii	6.4	22	57	26			7	28							
28	Moon II. L.	-	22	50	39.57	127.02	64.12	S. 8	29	24.5	+587.7	15	18.88	56	12.44	
	Moon II. U.	25.1	23	15	48.59	124.55	63.45	6	29	39.8	+608.4	15	13.94	55	54.28	
29	Moon II. L.	-	23	40	30.59	122.52	62.88	S. 4	26	31.8	+621.7	15	9.36	55	37.47	
	Moon II. U.	26.1	0	4	50.96	120.95	62.43	2	21	26.5	+628.0	15	5.15	55	22.02	
30	Moon II. L.	-	0	28	55.02	119.80	62.09	S. 0	15	45.9	+627.7	15	1.30	55	7.90	
	Moon II. U.	27.1	0	52	47.92	119.08	61.87	N. 1	49	12.4	+621.0	14	57.81	54	55.08	
May 1	Moon II. L.	-	1	16	34.60	118.76	61.76	N. 3	52	13.9	+608.2	14	54.66	54	43.54	
	Moon II. U.	28.2	1	40	19.59	118.80	61.75	5	52	6.3	+589.5	14	51.86	54	33.24	
2	Moon II. L.	-	2	4	7.08	119.17	61.83	N. 7	47	39.6	+565.1	14	49.39	54	24.20	
	Moon II. U.	29.2	2	28	0.76	119.82	62.00	9	37	45.6	+535.0	14	47.26	54	16.39	
3	Moon I. L.	-	2	49	59.35	120.68	62.23	N. 11	21	18.0	+499.5	14	45.48	54	9.85	
4	Moon I. U.	0.6	3	14	13.73	121.75	62.52	N. 12	57	12.4	+458.7	14	44.06	54	4.61	
	Moon I. L.	-	3	38	41.92	122.96	62.86	14	24	27.1	+412.9	14	43.00	54	0.74	
5	Moon I. U.	1.6	4	3	25.17	124.25	63.21	N. 15	42	3.2	+362.3	14	42.35	53	58.33	
	Moon I. L.	-	4	28	24.03	125.56	63.58	16	49	5.7	+307.4	14	42.11	53	57.46	
6	Moon I. U.	2.6	4	53	38.39	126.82	63.94	N. 17	44	44.4	+248.4	14	42.32	53	58.23	
	Moon I. L.	-	5	19	7.42	128.00	64.28	18	28	14.6	+186.1	14	43.01	54	0.76	
7	Moon I. U.	3.7	5	44	49.73	129.03	64.57	N. 18	58	58.4	+120.8	14	44.21	54	5.18	
	Moon I. L.	-	6	10	43.43	129.89	64.83	19	16	25.0	+ 53.3	14	45.96	54	11.59	
8	Moon I. U.	4.7	6	36	46.35	130.56	65.04	N. 19	20	11.4	- 15.8	14	48.28	54	20.12	
	Moon I. L.	-	7	2	56.15	131.04	65.19	19	10	3.4	- 85.7	14	51.21	54	30.86	
110 56	B. Geminor.	6.2	6	58	0			17	52							
	56 Geminorum	5.2	7	17	28			20	35							
9	Moon I. U.	5.7	7	29	10.65	131.35	65.30	N. 18	45	55.2	-155.7	14	54.76	54	43.89	
	Moon I. L.	-	7	55	27.91	131.51	65.36	18	7	49.3	-225.1	14	58.95	54	59.27	
209	B. Geminor.	6.2	7	47	32			19	31							
10	H. Cancri	6.1	8	0	22			N. 19	3							

442 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass# Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
May 10	Moon I. U.	6.8	8 21 46.48	131.58	65.41	N. 17 15 56.9	-293.3	15 3.78	55 17.01
	Moon I. L.	-	8 48 5.57	131.60	65.42	16 10 37.3	-359.6	15 9.25	55 37.09
	♁ Cancri	4.2	8 40 22			18 26			
	♁ ^a Cancri	5.7	8 53 21			15 52			
11	Moon I. U.	7.8	9 14 25.11	131.66	65.45	N. 14 52 17.6	-423.2	15 15.34	55 59.42
	Moon I. L.	-	9 40 45.90	131.82	65.49	13 21 33.1	-483.6	15 22.00	56 23.86
	11 Leonis	6.5	9 33 53			14 41			
	♁ Leonis	5.0	9 54 9			12 48			
12	Moon I. U.	8.8	10 7 9.58	132.16	65.57	N. 11 39 7.5	-540.0	15 29.17	56 50.19
	Moon I. L.	-	10 33 38.61	132.73	65.71	9 45 53.6	-591.5	15 36.78	57 18.12
	♁ Leonis	3.8	10 28 49			9 42			
	♁ Leonis	5.3	10 45 17			10 57			
13	Moon I. U.	9.9	11 0 16.31	133.61	65.92	N. 7 42 54.4	-637.4	15 44.72	57 47.25
	Moon I. L.	-	11 27 6.65	134.85	66.21	5 31 24.0	-676.5	15 52.85	58 17.11
	♁ Leonis	4.1	11 17 14			6 27			
	451 B. Leonis	7.0	11 38 33			2 47			
14	Moon I. U.	10.9	11 54 14.21	136.49	66.61	N. 3 12 50.8	-707.6	16 1.03	58 47.12
	Moon I. L.	-	12 21 44.00	138.55	67.10	0 48 57.9	-729.5	16 9.06	59 16.59
	10 Virginis	6.2	12 5 49			N. 2 19			
	♁ Virg. (mean)	2.9	12 37 50			S. 1 2			
15	Moon I. U.	11.9	12 49 41.16	141.05	67.70	S. 1 38 14.8	-740.7	16 16.75	59 44 80
	Moon I. L.	-	13 18 10.81	143.96	68.39	4 6 29.2	-739.6	16 23.87	60 10.95
	48 Virginis	6.5	13 0 1			3 15			
	66 Virginis	5.7	13 20 37			4 46			
16	Moon I. U.	13.0	13 47 17.53	147.22	69.17	S. 6 33 9.3	-724.7	16 30.22	60 34.24
	Moon I. L.	-	14 17 4.97	150.72	70.00	8 55 22.9	-694.9	16 35.57	60 53.88
	235 G. Virginis	6.5	14 14 0			7 11			
	8 B. Libræ	6.9	14 34 57			10 14			
17	Moon I. U.	14.0	14 47 35.24	154.33	70.85	S. 11 10 5.2	-649.4	16 39.74	61 9.18
	Moon I. L.	-	15 18 48.41	157.83	71.68	13 14 5.1	-587.9	16 42.56	61 19.55
	130 B. Libræ	5.9	15 19 44			12 6			
	♁ Libræ	4.0	15 31 18			14 32			
18	Moon II. U.	15.0	15 53 6.68	161.03	72.42	S. 15 4 14.8	-511.2	16 43.94	61 24.61
	98 B. Scorpïi	6.1	16 14 45			14 41			
	24 Scorpïi	5.0	16 37 13			17 36			
19	Moon II. L.	-	16 25 35.92	163.64	73.02	S. 16 37 40.0	-420.9	16 43.82	61 24.16
	Moon II. U.	16.1	16 58 30.62	165.31	73.43	17 51 52.5	-319.6	16 42.21	61 18.25
	192 B. Ophiuchi	6.3	17 20 12			18 22			
	305 B. Ophiuchi	6.3	17 51 29			18 47			
20	Moon II. L.	-	17 31 39.15	165.92	73.59	S. 18 45 1.5	-211.0	16 39.18	61 7.14
	Moon II. U.	17.1	18 4 48.01	165.35	73.49	19 16 2.0	-98.9	16 34.87	60 51.32
	100 B. Sagittarii	5.0	18 27 1			18 27			
	29 Sagittarii	5.3	18 45 11			S. 20 25			

MOON-CULMINATING STARS, 1924. 443

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^s Merid.	Apparent		Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			Right Ascension.	h	m			s	Declination.			
May 21	Moon II. L.	-	18	37	43.00	163.62	73.12	S. 19 24 39.0	+ 12.3	16 29.45	60 31.41	
	Moon II. U.	18.2	19	10	10.60	160.82	72.50	19 11 26.1	+118.8	16 23.11	60 8.14	
	267 B. Sagittarii	5.8	19	32	40			18 24				
	57 Sagittarii	6.0	19	47	49			19 14				
22	Moon II. L.	-	19	41	59.20	157.16	71.67	S. 18 37 38.5	+217.6	16 16.07	59 42.33	
	Moon II. U.	19.2	20	12	59.98	152.89	70.68	17 45 3.8	+306.4	16 8.56	59 14.77	
	61 B. Capricor.	5.9	20	36	18			16 24				
	19 Capricorni	5.7	20	50	31			18 13				
23	Moon II. L.	-	20	43	7.27	148.29	69.60	S. 16 35 50.3	+383.9	16 0.78	58 46.20	
	Moon II. U.	20.3	21	12	18.52	143.59	68.46	15 12 15.8	+449.8	15 52.92	58 17.34	
	42 Capricorni	5.1	21	37	26			14 23				
	μ Capricorni	5.2	21	49	10			13 54				
24	Moon II. L.	-	21	40	34.01	139.03	67.34	S. 13 36 39.8	+504.3	15 45.14	57 48.78	
	Moon II. U.	21.3	22	7	56.25	134.74	66.26	11 51 16.3	+547.9	15 37.57	57 21.01	
	58 Aquarii	6.4	22	27	40			11 18				
	70 Aquarii	6.1	22	44	31			10 57				
25	Moon II. L.	-	22	34	29.42	130.86	65.27	S. 9 58 10.1	+581.5	15 30.31	56 54.46	
	Moon II. U.	22.3	23	0	18.86	127.46	64.38	7 59 15.7	+606.1	15 23.51	56 29.42	
	317 B. Aquarii	6.3	23	16	46			6 19				
	342 B. Aquarii	6.5	23	27	36			4 30				
26	Moon II. L.	-	23	25	30.55	124.58	63.60	S. 5 56 16.3	+622.5	15 17.17	56 6.14	
	Moon II. U.	23.4	23	50	10.89	122.24	62.97	3 50 45.1	+631.5	15 11.34	55 44.75	
	5 Ceti	6.3	0	4	19			2 52				
	10 Ceti	6.4	0	22	44			0 28				
27	Moon II. L.	-	0	14	26.31	120.42	62.46	S. 1 44 6.4	+633.8	15 6.06	55 25.35	
	Moon II. U.	24.4	0	38	23.13	119.13	62.08	N. 0 22 22.1	+629.9	15 1.32	55 7.98	
28	Moon II. L.	-	1	2	7.46	118.34	61.83	N. 2 27 28.4	+620.2	14 57.14	54 52.63	
	Moon II. U.	25.4	1	25	45.05	118.00	61.71	4 30 4.5	+604.9	14 53.50	54 39.26	
29	Moon II. L.	-	1	49	21.21	118.09	61.70	N. 6 29 4.5	+584.2	14 50.38	54 27.83	
	Moon II. U.	26.4	2	13	0.80	118.56	61.80	8 23 24.5	+558.2	14 47.77	54 18.26	
30	Moon II. L.	-	2	36	48.04	119.36	61.98	N. 10 12 0.9	+527.0	14 45.65	54 10.46	
	Moon II. U.	27.5	3	0	46.57	120.43	62.24	11 53 51.1	+490.5	14 43.99	54 4.36	
31	Moon II. L.	-	3	24	59.28	121.71	62.56	N. 13 27 52.7	+448.9	14 42.77	53 59.87	
	Moon II. U.	28.5	3	49	28.28	123.14	62.92	14 53 4.5	+402.2	14 41.97	53 56.94	
June 1	Moon II. L.	-	4	14	14.80	124.62	63.31	N. 16 8 26.9	+350.7	14 41.58	53 55.51	
	Moon II. U.	29.5	4	39	19.18	126.10	63.69	17 13 3.3	+294.6	14 41.59	53 55.55	
2	Moon I. L.	-	5	2	32.80	127.44	64.05	N. 18 6 1.5	+234.4	14 41.99	53 57.04	
3	Moon I. U.	0.9	5	28	9.73	128.69	64.38	N. 18 46 34.8	+170.6	14 42.79	53 59.96	
	Moon I. L.	-	5	54	0.47	129.73	64.67	19 14 4.2	+103.9	14 43.99	54 4.36	
4	Moon I. U.	2.0	6	20	2.25	130.52	64.89	N. 19 27 59.1	+ 35.0	14 45.59	54 10.23	
	Moon I. L.	-	6	46	11.89	131.04	65.05	N. 19 27 59.1	- 35.1	14 47.61	54 17.66	

444 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Sid. Time of Semid. pass [†] Merid.	Apparent			Semi-diameter.	Hor. Par.
			Right Ascension.	Var. of C ^h R. A. in 1 hour of Long.	s		Declination.	Var. of C ^h Dec. in 1 hour of Long.	'		
			h m s	s	s	° ' "	"	' "	' "	' "	
June 5	Moon I. U.	3.0	7 12 26.09	131.28	65.14	N. 19 13 54.0	-105.7	14 50.07	54 26.68		
	Moon I. L.	-	7 38 41.69	131.28	65.17	18 45 44.5	-175.7	14 52.98	54 37.36		
6	Moon I. U.	4.0	8 4 55.90	131.06	65.15	N. 18 3 41.9	-244.4	14 56.36	54 49.76		
	Moon I. L.	-	8 31 6.63	130.71	65.08	17 8 6.8	-311.0	15 0.23	55 3.96		
7	Moon I. U.	5.1	8 57 12.57	130.28	65.01	N. 15 59 29.6	-374.7	15 4.59	55 19.97		
	Moon I. L.	-	9 23 13.38	129.87	64.93	14 38 27.9	-435.0	15 9.46	55 37.84		
227	B. Cancrī	6.4	9 17 4			15 42					
7	Leonis	6.2	9 31 44			14 43					
8	Moon I. U.	6.1	9 49 9.77	129.56	64.87	N. 13 5 46.9	-491.2	15 14.83	55 57.54		
	Moon I. L.	-	10 15 3.46	129.43	64.86	11 22 18.1	-542.8	15 20.68	56 19.04		
34	Leonis	6.4	10 7 33			13 44					
44	Leonis	5.9	10 21 15			9 10					
9	Moon I. U.	7.1	10 40 57.19	129.58	64.91	N. 9 28 59.4	-589.4	15 27.00	56 42.22		
	Moon I. L.	-	11 6 54.66	130.06	65.05	7 26 55.3	-630.3	15 33.73	57 6.93		
χ	Leonis	4.7	11 1 6			7 45					
σ	Leonis	4.1	11 17 14			6 27					
10	Moon I. U.	8.2	11 33 0.35	130.96	65.28	N. 5 17 18.0	-664.8	15 40.82	57 32.95		
	Moon I. L.	-	11 59 19.51	132.32	65.63	3 1 28.2	-692.2	15 48.18	57 59.95		
b	Virginis	5.2	11 56 4			4 5					
10	Virginis	6.2	12 5 49			2 19					
11	Moon I. U.	9.2	12 25 57.90	134.17	66.10	N. 0 40 57.5	-711.5	15 55.69	58 27.51		
	Moon I. L.	-	12 53 1.70	136.55	66.68	S. 1 42 30.5	-721.5	16 3.23	58 55.18		
γ	Virg. (mean)	2.9	12 37 50			1 2					
46	Virginis	6.1	12 56 42			2 58					
12	Moon I. U.	10.2	13 20 37.11	139.44	67.39	S. 4 6 57.4	-721.1	16 10.63	59 22.35		
	Moon I. L.	-	13 48 50.19	142.82	68.21	6 30 9.1	-708.8	16 17.72	59 48.36		
88	Virginis	6.5	13 44 21			6 28					
623	B. Virginis	6.5	14 0 21			8 54					
13	Moon I. U.	11.3	14 17 46.30	146.60	69.11	S. 8 49 35.5	-683.3	16 24.29	60 12.50		
	Moon I. L.	-	14 47 29.60	150.66	70.07	11 2 30.6	-643.4	16 30.16	60 34.01		
8	B. Libræ	6.9	14 34 57			10 14					
17	Libræ	6.4	14 54 8			10 51					
14	Moon I. U.	12.3	15 18 2.41	154.81	71.04	S. 13 5 56.6	-588.3	16 35.10	60 52.15		
	Moon I. L.	-	15 49 24.49	158.83	71.97	14 56 49.8	-517.9	16 38.93	61 6.22		
190	B. Libræ	6.5	15 39 11			14 48					
49	Libræ	5.4	15 56 6			16 19					
15	Moon I. U.	13.3	16 21 32.49	162.41	72.79	S. 16 32 9.5	-433.0	16 41.49	61 15.62		
	Moon I. L.	-	16 54 19.42	165.26	73.44	17 49 10.1	-335.1	16 42.67	61 19.93		
24	Scorpii	5.0	16 37 13			17 36					
29	Ophiuchi	6.4	16 57 27			18 46					
16	Moon I. U.	14.4	17 27 34.77	167.10	73.85	S. 18 45 34.5	-227.5	16 42.38	61 18.87		
	16 G. Sagittarii	6.4	17 55 31			20 20					
15	Sagittarii	5.3	18 10 43			S. 20 45					

MOON-CULMINATING STARS, 1924. 445

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of (δ 's R.A. in 1 hour of Long.	Sid. Time of Semi- pass \ddagger Merid.	Apparent			Var. of (δ 's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.					
			Right Ascension.	h	m			s	Declination.	o				'	"			
June 17	Moon II. L.	-	18 32	18	32	97	167	71	73	19 19 46	0	-113	8	16 40	63	61 12	44	
	Moon II. U.	15	4	18 37	2	21	166	94	73	83	19 30 58	8	+1	5	16 37	46	61 0	82
	190 B. Sagittarii	5	4	19 35	5	1					19 24							
	226 B. Sagittarii	6	4	19 17	12						19 22							
18	Moon II. L.	-	19 10	14	33	164	87	73	37	19 19 20	8	+113	9	16 33	00	60 44	44	
	Moon II. U.	16	5	19 42	54	59	161	67	72	65	18 45 51	1	+219	5	16 27	39	60 23	87
	σ Capricorni	5	5	20 15	3						19 21							
	47 B. Capricor.	6	2	20 31	16						16 47							
19	Moon II. L.	-	20 14	50	87	157	59	71	71	17 52 12	8	+315	0	16 20	84	59 59	82	
	Moon II. U.	17	5	20 45	54	46	152	94	70	64	16 40 39	1	+398	4	16 13	56	59 33	09
	29 Capricorni	5	5	21 11	34						15 29							
	18 Aquarii	5	5	21 20	4						13 12							
20	Moon II. L.	-	21 16	0	25	148	01	69	47	15 13 41	9	+468	8	16 5	76	59 4	49	
	Moon II. U.	18	6	21 45	6	63	143	08	68	29	13 33 58	9	+526	2	15 57	68	58 34	80
	e Aquarii	5	4	22 6	35						11 56							
	σ Aquarii	4	9	22 26	39						11 4							
21	Moon II. L.	-	22 13	14	88	138	35	67	14	11 44 3	9	+571	0	15 49	49	58 4	77	
	Moon II. U.	19	6	22 40	28	53	134	00	66	06	9 46 21	5	+604	3	15 41	39	57 35	05
	h Aquarii	5	4	23 1	13						8 6							
	317 B. Aquarii	6	3	23 16	47						6 19							
22	Moon II. L.	-	23 6	52	67	130	12	65	07	7 43 3	0	+627	2	15 33	53	57 6	20	
	Moon II. U.	20	6	23 32	33	47	126	78	64	22	5 36 5	2	+641	0	15 26	04	56 38	68
	24 Piscium	6	1	23 49	2						3 35							
	5 Ceti	6	3	0 4	19						2 52							
23	Moon II. L.	-	23 57	37	62	124	01	63	50	3 27 11	2	+646	7	15 19	01	56 12	89	
	Moon II. U.	21	7	0 22	12	02	121	82	62	91	1 17 51	8	+645	4	15 12	53	55 49	10
	14 Ceti	5	4	0 31	39						S. 0 55							
	26 Ceti	6	0	0 59	55						N. 0 58							
24	Moon II. L.	-	0 46	23	56	120	20	62	47	N. 0 50 32	7	+637	7	15 6	64	55 27	51	
	Moon II. U.	22	7	1 10	18	91	119	12	62	17	2 56 49	9	+624	3	15 1	40	55 8	26
	μ Piscium	5	0	1 26	13						5 45							
	v Piscium	4	7	1 37	29						5 6							
25	Moon II. L.	-	1 34	4	44	118	55	61	99	N. 4 59 53	9	+605	5	14 56	81	54 51	43	
	Moon II. U.	23	7	1 57	46	10	118	46	61	95	6 58 42	5	+581	7	14 52	89	54 37	04
	ξ^1 Ceti	4	5	2 8	59						8 29							
	389 B. Ceti	6	3	2 25	32						9 14							
26	Moon II. L.	-	2 21	29	30	118	81	62	01	N. 8 52 16	2	+553	1	14 49	63	54 25	06	
	Moon II. U.	24	7	2 45	18	94	119	53	62	17	10 39 37	0	+519	6	14 47	01	54 15	46
27	Moon II. L.	-	3 9	19	22	120	57	62	42	N. 12 19 47	2	+481	3	14 45	02	54 8	14	
	Moon II. U.	25	8	3 33	33	63	121	87	62	73	13 51 48	7	+438	2	14 43	62	54 3	00
28	Moon II. L.	-	3 58	4	75	123	34	63	09	N. 15 14 44	4	+390	3	14 42	78	53 59	93	
	Moon II. U.	26	8	4 22	54	29	124	92	63	47	N. 16 27 37	4	+337	8	14 42	48	53 58	81

446 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass# Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
June 29	Moon II. L.	-	4 48 3.01	126.52	63.87	N. 17 29 32.5	+280.7	14 42.66	53 59.50
	Moon II. U.	27.8	5 13 30.55	128.05	64.24	18 19 37.5	+219.5	14 43.31	54 1.88
30	Moon II. L.	-	5 39 15.61	129.43	64.58	N. 18 57 5.3	+154.6	14 44.39	54 5.83
	Moon II. U.	28.9	6 5 15.94	130.58	64.87	19 21 15.9	+ 86.7	14 45.86	54 11.24
July 1	Moon II. L.	-	6 31 28.49	131.46	65.08	N. 19 31 37.3	+ 16.6	14 47.71	54 18.01
	Moon I. U.	0.3	6 55 39.21	132.00	65.23	N. 19 27 48.7	- 54.8	14 49.90	54 26.05
2	Moon I. L.	-	7 22 5.03	132.25	65.30	19 9 40.5	-126.5	14 52.42	54 35.31
	Moon I. U.	1.3	7 48 31.93	132.19	65.30	N. 18 37 15.6	-197.4	14 55.26	54 45.72
3	Moon I. L.	-	8 14 56.42	131.85	65.23	17 50 49.6	-266.6	14 58.40	51 57.26
	Moon I. U.	2.3	8 41 15.62	131.32	65.11	N. 16 50 49.3	-332.9	15 1.85	55 9.91
4	Moon I. L.	-	9 7 27.51	130.65	64.97	15 37 53.3	-395.7	15 5.60	55 23.65
	Moon I. U.	3.4	9 33 31.12	129.95	64.82	N. 14 12 48.7	-454.2	15 9.64	55 38.50
5	Moon I. L.	-	9 59 26.55	129.31	64.68	12 36 31.6	-507.8	15 13.99	55 54.46
	Moon I. U.	4.4	10 25 15.07	128.81	64.59	N. 10 50 4.4	-555.8	15 18.64	56 11.53
6	Moon I. L.	-	10 50 59.01	128.56	64.55	8 54 35.6	-598.0	15 23.58	56 29.67
	Moon I. U.	5.4	11 16 41.72	128.62	64.60	N. 6 51 18.9	-633.7	15 28.81	56 48.87
7	Moon I. L.	-	11 42 27.48	129.08	64.74	4 41 33.5	-662.7	15 34.31	57 9.05
	451 B. Leonis δ Virginis	7.0 5.2	11 38 32 11 56 4			2 47 4 5			
8	Moon I. U.	6.5	12 8 21.32	129.98	65.00	N. 2 26 44.0	-684.3	15 40.04	57 30.08
	Moon I. L.	-	12 34 28.90	131.37	65.37	0 8 21.9	-698.0	15 45.97	57 51.83
9	190 B. Virginis γ Virg. (mean)	7.4 2.9	12 26 43 12 37 49			N. 3 56 S. 1 2			
	Moon I. U.	7.5	13 0 56.37	133.29	65.87	S. 2 11 53.3	-703.0	15 52.02	58 14.04
10	Moon I. L.	-	13 27 50.04	135.74	66.50	4 32 13.0	-698.6	15 58.12	58 36.43
	66 Virginis 566 B. Virginis	5.7 6.4	13 20 37 13 39 58			4 46 5 7			
11	Moon I. U.	8.5	13 55 16.22	138.71	67.24	S. 6 50 37.2	-683.7	16 4.17	58 58.64
	Moon I. L.	-	14 23 20.81	142.13	68.08	9 4 55.0	-657.3	16 10.05	59 20.23
12	235 G. Virginis 8 B. Libræ	6.5 6.9	14 14 0 14 34 57			7 11 10 14			
	Moon I. U.	9.6	14 52 8.86	145.93	69.00	S. 11 12 42.8	-618.5	16 15.63	59 40.70
13	Moon I. L.	-	15 21 43.97	149.95	69.96	13 11 26.8	-566.5	16 20.75	59 59.49
	130 B. Libræ γ Libræ	5.9 4.0	15 19 44 15 31 18			12 6 14 32			
14	Moon I. U.	10.6	15 52 7.79	153.93	70.90	S. 14 58 26.0	-501.0	16 25.25	60 16.02
	Moon I. L.	-	16 23 19.27	157.68	71.79	16 30 58.4	-422.2	16 28.98	60 29.69
15	98 B. Scorpil 24 Scorpil	6.1 5.0	16 14 45 16 37 13			14 41 S. 17 36			

MOON-CULMINATING STARS, 1924. 447

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass# Merid.	Apparent		Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			Right Ascension.	h	m			s	Declination.			
July 13	Moon I. U.	11.7	16 55 14	19	160.94	72.54	S. 17 46 29	1	-331.0	16 31.78	60 39.95	
	Moon I. L.	-	17 27 44	90	163.43	73.12	18 42 41	3	-229.5	16 33.51	60 46.31	
	192 B. Ophiuchi	6.3	17 20 13				18 22					
	158 G. Ophiuchi	6.7	17 34 13				21 52					
14	Moon I. U.	12.7	18 04 0	48	164.90	73.44	S. 19 17 48	1	-120.7	16 34.07	60 48.38	
	Moon I. L.	-	18 33 47	43	165.22	73.50	19 30 43	1	- 8.2	16 33.41	60 45.94	
	95 B. Sagittarii	5.7	18 25 47				18 47					
	128 B. Sagittarii	6.3	18 40 49				21 5					
15	Moon I. U.	13.7	19 6 50	83	164.32	73.26	S. 19 21 7	4	+103.7	16 31.49	60 38.91	
	266 B. Sagittarii	6.1	19 32 3				19 1					
	57 Sagittarii	6.0	19 47 50				19 14					
16	Moon I. L.	-	19 39 35	76	162.25	72.76	S. 18 49 32	6	+211.0	16 28.36	60 27.44	
	Moon II. U.	14.8	20 14 12	84	159.29	72.02	17 57 16	5	+310.0	16 24.10	60 11.80	
	61 B. Capricor.	5.9	20 36 19				16 23					
	94 B. Capricor.	5.7	20 53 28				16 19					
17	Moon II. L.	-	20 45 41	30	155.35	71.09	S. 16 46 15	2	+398.1	16 18.83	59 52.45	
	Moon II. U.	15.8	21 16 19	26	150.92	70.06	15 18 52	1	+473.5	16 12.71	59 29.97	
	44 Capricorni	6.0	21 38 58				14 45					
	μ Capricorni	5.2	21 49 11				13 54					
18	Moon II. L.	-	21 46 2	62	146.30	68.95	S. 13 37 44	6	+535.5	16 5.91	59 5.01	
	Moon II. U.	16.9	22 14 50	50	141.71	67.85	11 45 34	3	+584.1	15 58.62	58 38.27	
	167 G. Aquarii	6.3	22 34 25				8 17					
	78 Aquarii	6.3	22 50 39				7 36					
19	Moon II. L.	-	22 42 44	57	137.36	66.79	S. 9 44 57	8	+620.0	15 51.04	58 10.45	
	Moon II. U.	17.9	23 9 48	49	133.37	65.81	7 38 21	4	+644.3	15 43.35	57 42.24	
	342 B. Aquarii	6.5	23 27 38				4 30					
	20 Piscium	5.6	23 44 4				3 11					
20	Moon II. L.	-	23 36 7	35	129.86	64.93	S. 5 27 57	2	+658.1	15 35.73	57 14.25	
	Moon II. U.	18.9	0 1 47	08	126.86	64.18	3 15 42	7	+662.9	15 28.32	56 47.05	
	54 B. Ceti	6.3	0 20 38				2 38					
	14 Ceti	5.4	0 31 40				0 55					
21	Moon II. L.	-	0 26 54	06	124.40	63.55	S. 1 3 20	9	+659.5	15 21.25	56 21.12	
	Moon II. U.	20.0	0 51 34	95	122.50	63.07	N. 1 7 38	0	+649.2	15 14.64	55 56.86	
	33 Ceti	6.1	1 6 40				2 3					
	117 G. Piscium	6.5	1 22 59				3 9					
22	Moon II. L.	-	1 15 56	27	121.14	62.72	N. 3 15 54	7	+632.6	15 8.58	55 34.60	
	Moon II. U.	21.0	1 40 4	37	120.29	62.49	5 20 19	1	+610.6	15 3.13	55 14.60	
	39 B. Arietis	6.5	2 0 52				7 22					
	ξ Arietis	5.5	2 20 45				10 16					
23	Moon II. L.	-	2 4 5	26	119.93	62.40	N. 7 19 47	5	+583.4	14 58.34	54 57.05	
	Moon II. U.	22.0	2 28 4	56	120.02	62.41	9 13 20	9	+551.4	14 54.26	54 42.06	
	μ Ceti	4.4	2 40 51				9 48					
	147 B. Arietis	5.8	3 2 14				N. 12 54					

448 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.	Var. of (α 's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^s Merid.	Apparent Declination.	Var. of (δ 's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	" "	' "	' "
July 24	Moon II. L.	-	2 52 7.34	120.51	62.53	N. 11 0 3.6	+514.9	14 50.90	54 29.72
	Moon II. U.	23.1	3 16 18.11	121.34	62.74	12 39 1.6	+474.0	14 48.26	54 20.03
	30 B. Tauri	6.4	3 33 32			15 11			
	λ Tauri	3.3	3 56 29			12 17			
25	Moon II. L.	-	3 40 40.70	122.47	63.01	N. 14 9 21.8	+428.6	14 46.33	54 12.97
	Moon II. U.	24.1	4 5 18.17	123.81	63.34	15 30 11.7	+378.9	14 45.11	54 8.49
26	Moon II. L.	-	4 30 12.72	125.30	63.71	N. 16 40 39.3	+324.9	14 44.57	54 6.49
	Moon II. U.	25.1	4 55 25.59	126.85	64.08	17 39 53.7	+267.2	14 44.67	54 6.87
27	Moon II. L.	-	5 20 57.04	128.38	64.44	N. 18 27 6.6	+204.7	14 45.38	54 9.46
	Moon II. U.	26.2	5 46 46.32	129.81	64.78	19 1 33.2	+139.1	14 46.65	54 14.11
28	Moon II. L.	-	6 12 51.71	131.06	65.07	N. 19 22 33.9	+ 70.6	14 48.43	54 20.65
	Moon II. U.	27.2	6 39 10.67	132.06	65.30	19 29 37.6	- 0.3	14 50.67	54 28.87
29	Moon II. L.	-	7 5 39.95	132.77	65.46	N. 19 22 21.6	- 72.5	14 53.32	54 38.59
	Moon II. U.	28.2	7 32 15.89	133.17	65.54	19 0 35.2	-145.2	14 56.32	54 49.61
30	Moon II. L.	-	7 58 54.71	133.25	65.55	N. 18 24 20.0	-217.2	14 59.62	55 1.74
	Moon II. U.	29.3	8 25 32.80	133.05	65.49	17 33 50.5	-287.4	15 3.17	55 14.77
31	Moon I. L.	-	8 49 56.30	132.64	65.38	N. 16 29 34.9	-354.7	15 6.93	55 28.57
Aug. 1	Moon I. U.	0.7	9 16 24.61	132.05	65.24	N. 15 12 14.0	-418.1	15 10.86	55 42.97
	Moon I. L.	-	9 42 45.27	131.38	65.08	13 42 40.1	-476.7	15 14.90	55 57.82
2	Moon I. U.	1.7	10 8 57.78	130.71	64.92	N. 12 1 56.3	-529.6	15 19.04	56 13.02
	Moon I. L.	-	10 35 2.78	130.14	64.80	10 11 14.1	-576.3	15 23.26	56 28.48
3	Moon I. U.	2.8	11 1 1.92	129.75	64.73	N. 8 11 53.1	-616.0	15 27.52	56 44.13
	Moon I. L.	-	11 26 57.89	129.63	64.73	6 5 18.7	-648.4	15 31.81	56 59.89
4	Moon I. U.	3.8	11 52 54.27	129.83	64.81	N. 3 53 2.3	-673.0	15 36.13	57 15.73
	Moon I. L.	-	12 18 55.41	130.43	65.00	N. 1 36 40.1	-689.3	15 40.46	57 31.60
5	Moon I. U.	4.8	12 45 6.25	131.46	65.29	S. 0 42 6.5	-697.0	15 44.77	57 47.45
	Moon I. L.	-	13 11 32.19	132.95	65.70	3 1 31.3	-695.6	15 49.07	58 3.23
	48 Virginis	6.5	13 0 0			3 15			
	65 Virginis	6.0	13 19 23			4 32			
6	Moon I. U.	5.9	13 38 18.82	134.91	66.23	S. 5 19 42.0	-684.6	15 53.32	58 18.83
	Moon I. L.	-	14 5 31.72	137.32	66.86	7 34 40.1	-663.4	15 57.49	58 34.14
	623 B. Virginis	6.5	14 0 21			8 54			
	235 G. Virginis	6.5	14 13 59			7 11			
7	Moon I. U.	6.9	14 33 16.13	140.15	67.58	S. 9 44 21.4	-631.6	16 1.54	58 49.00
	Moon I. L.	-	15 1 36.58	143.31	68.36	11 46 34.7	-588.7	16 5.42	59 3.22
	17 Librae	6.4	14 54 8			10 51			
	130 B. Librae	5.9	15 19 43			12 6			
8	Moon I. U.	8.0	15 30 36.42	146.69	69.19	S. 13 39 4.3	-534.3	16 9.05	59 16.56
	Moon I. L.	-	16 0 17.42	150.14	70.02	15 19 31.9	-468.4	16 12.37	59 28.72
	203 B. Librae	6.2	15 52 18			14 36			
91 B. Scorpii	6.1	16 11 36			S. 14 40				

MOON-CULMINATING STARS, 1924. 449

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Sid. Time of Semid. pass ^g Merid.	Apparent			Semi-diameter.	Hor. Par.
			Right Ascension.	Var. of C's R.A. in 1 hour of Long.	8		Declination.	Var. of C's Dec. in 1 hour of Long.	'		
			h m s	s	s	° ' "	"	' "	' "		
Aug. 9	Moon I. U.	9.0	16 30 39.18	153.45	70.80	S. 16 45 40.5	-391.2	16 15 27	59 39.38		
	Moon I. L.	-	17 1 38.84	156 41	71.48	17 55 20 8	-303 9	16 17.67	59 48.18		
	90 B. Ophiuchi	6.5	16 55 21			18 8					
	164 B. Ophiuchi	6.0	17 15 30			17 41					
10	Moon I. U.	10.0	17 33 10.75	158.79	72.01	S. 18 46 38.4	-207.8	16 19.47	59 54.78		
	Moon I. L.	-	18 5 6.64	160.37	72.35	19 18 2.1	-105.3	16 20.57	59 58.82		
	16 G. Sagittarii	6.4	17 55 31			20 20					
	64 B. Sagittarii	6.1	18 11 5			18 41					
11	Moon I. U.	11.1	18 37 15.99	161.01	72.47	S. 19 28 32.0	+0.7	16 20.89	60 0.02		
	Moon I. L.	-	19 9 26.85	160.62	72 34	19 17 45.4	+106.8	16 20.37	59 58.11		
	187 B. Sagittarii	6.4	19 2 44			18 51					
	226 B. Sagittarii	6.4	19 17 13			19 22					
12	Moon I. U.	12.1	19 41 26.94	159.22	71.98	S. 18 46 0.6	+209.8	16 18.97	59 52.97		
	Moon I. L.	-	20 13 4.63	156 92	71.41	17 54 15.6	+306.4	16 16.67	59 44.51		
	σ Capricorni	5.5	20 15 3			19 21					
	π Capricorni	5.2	20 23 1			18 27					
13	Moon I. U.	13.2	20 44 10.07	153.88	70.66	S. 16 44 3.8	+393.9	16 13.49	59 32.83		
	Moon I. L.	-	21 14 35.75	150.33	69.80	15 17 26.5	+470.3	16 9.47	59 18.10		
	θ Capricorni	4.2	21 1 43			17 32					
	18 Aquarii	5.5	21 20 5			13 12					
14	Moon II. U.	14.2	21 46 34.56	146.33	68.86	S. 13 36 44.1	+534.6	16 4.71	59 0.62		
	e Aquarii	5.4	22 6 36			11 56					
	σ Aquarii	4.9	22 26 40			11 4					
	15	Moon II. L.	-	22 15 26.92	142.41	67.91	S. 11 44 26.9	+586.1	15 59.30	58 40.76	
Moon II. U.		15.2	22 43 32.70	138.59	66.97	9 43 6.6	+625.2	15 53.37	58 18.99		
h Aquarii		5.4	23 1 15			8 6					
317 B. Aquarii		6.3	23 16 48			6 19					
16	Moon II. L.	-	23 10 54.03	135.02	66.09	S. 7 35 10.8	+652.2	15 47.06	57 55.83		
	Moon II. U.	16.3	23 37 34.52	131.79	65.29	5 22 57.8	+668.2	15 40.51	57 31.79		
	27 Piscium	5.1	23 54 49			3 58					
	5 Ceti	6.3	0 4 21			2 52					
17	Moon II. L.	-	0 3 38.73	128.98	64.59	S. 3 8 34.3	+674.1	15 33.87	57 7.42		
	Moon II. U.	17.3	0 29 11.94	126.63	64.00	S. 0 53 54.4	+671.1	15 27.28	56 43.24		
	26 Ceti	6.0	0 59 56			N. 0 58					
	33 Ceti	6.1	1 6 41			2 3					
18	Moon II. L.	-	0 54 19.73	124.75	63.54	N. 1 19 20.5	+660.1	15 20.87	56 19.73		
	Moon II. U.	18.3	1 19 7.75	123.34	63.19	3 29 40.9	+642.2	15 14.77	55 57.34		
	v Piscium	4.7	1 37 31			5 6					
	39 B. Arietis	6.5	2 0 52			7 22					
19	Moon II. L.	-	1 43 41.60	122.38	62.97	N. 5 35 47.2	+617.9	15 9.08	55 36.46		
	Moon II. U.	19.4	2 8 6.67	121.87	62.86	7 36 28.9	+588.1	15 3.90	55 17.43		
	389 B. Ceti	6.3	2 25 34			9 14					
	μ Ceti	4.4	2 40 52			N. 9 48					

450 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^s Merid.	Apparent			Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			Right Ascension.	h m s	s			Declination.	° ' "	"			
Aug. 20	Moon II. L.	-	2 32 28.06	121.76	62.85	N. 9 30 42.3	+553.3	14 59.30	55 0.54				
	Moon II. U.	20.4	2 56 50.43	122.03	62.93	11 17 29.3	+513.8	14 55.34	54 46.01				
	8 B. Tauri	6.2	3 20 1			12 22							
30	B. Tauri	6.4	3 33 33			15 11							
21	Moon II. L.	-	3 21 17.96	122.61	63.10	N. 12 55 55.4	+469.9	14 52.07	54 34.02				
	Moon II. U.	21.4	3 45 54.28	123.48	63.33	14 25 9.7	+421.8	14 49.52	54 24.68				
	179 B. Tauri	5.9	4 3 25			14 58							
	58 Tauri	5.4	4 16 19			14 55							
22	Moon II. L.	-	4 10 42.33	124.56	63.62	N. 15 44 23.1	+369.8	14 47.73	54 18.08				
	Moon II. U.	22.5	4 35 44.37	125.80	63.93	16 52 48.3	+313.8	14 46.68	54 14.24				
	318 B. Tauri	5.7	4 53 0			17 2							
	353 B. Tauri	6.5	5 16 29			19 44							
23	Moon II. L.	-	5 1 1.86	127.12	64.27	N. 17 49 40.2	+254.2	14 46.38	54 13.14				
	Moon II. U.	23.5	5 26 35.42	128.47	64.60	18 34 15.9	+191.2	14 46.82	54 14.74				
	130 Tauri	5.6	5 43 1			17 42							
	64 Orionis	5.1	5 58 58			19 41							
24	Moon II. L.	-	5 52 24.81	129.75	64.90	N. 19 5 56.1	+125.0	14 47.96	54 18.94				
	Moon II. U.	24.5	6 18 29.03	130.92	65.18	19 24 6.0	+56.2	14 49.78	54 25.61				
25	Moon II. L.	-	6 44 46.27	131.92	65.40	N. 19 28 16.8	-14.7	14 52.22	54 34.57				
	Moon II. U.	25.6	7 11 14.18	132.69	65.57	19 18 7.8	-87.0	14 55.23	54 45.62				
26	Moon II. L.	-	7 37 49.96	133.23	65.67	N. 18 53 27.6	-159.8	14 58.75	54 58.54				
	Moon II. U.	26.6	8 4 30.70	133.52	65.72	18 14 15.6	-232.1	15 2.70	55 13.05				
27	Moon II. L.	-	8 31 13.49	133.58	65.70	N. 17 20 43.3	-303.0	15 7.02	55 28.87				
	Moon II. U.	27.6	8 57 55.78	133.44	65.64	16 13 14.7	-371.3	15 11.60	55 45.71				
28	Moon II. L.	-	9 24 35.51	133.16	65.55	N. 14 52 27.3	-435.9	15 16.38	56 3.25				
	Moon II. U.	28.7	9 51 11.40	132.81	65.45	13 19 11.1	-495.9	15 21.26	56 21.17				
29	Moon II. L.	-	10 17 43.03	132.46	65.35	N. 11 34 28.8	-550.1	15 26.17	56 39.17				
30	Moon I. U.	0.2	10 42 0 14	132.18	65.27	N. 9 39 34.5	-597.7	15 31.02	56 56.96				
	Moon I. L.	-	11 8 25.33	132.05	65.24	7 35 53.1	-637.9	15 35.73	57 14.26				
31	Moon I. U.	1.2	11 34 50.06	132.12	65.28	N. 5 24 58.9	-669.7	15 40.25	57 30.85				
	Moon I. L.	-	12 1 17.20	132.46	65.39	3 8 34.7	-692.8	15 44.52	57 46.53				
Sept. 1	Moon I. U.	2.2	12 27 50.36	133.12	65.58	N. 0 48 30.5	-706.3	15 48.50	58 1.14				
	Moon I. L.	-	12 54 33.57	134.14	65.87	S. 1 33 17.2	-709.9	15 52.16	58 14.58				
2	Moon I. U.	3.3	13 21 31.21	135.53	66.26	S. 3 54 46.6	-703.2	15 55.49	58 26.77				
	Moon I. L.	-	13 48 47.73	137.29	66.73	6 13 51.5	-685.8	15 58.46	58 37.67				
3	Moon I. U.	4.3	14 16 27.43	139.38	67.29	S. 8 28 22.1	-657.5	16 1.07	58 47.28				
	Moon I. L.	-	14 44 34.08	141.77	67.91	10 36 6.3	-618.1	16 3.34	58 55.61				
4	Moon I. U.	5.3	15 13 10.73	144.37	68.58	S. 12 34 51.5	-567.6	16 5.27	59 2.67				
	Moon I. L.	-	15 42 19.21	147.05	69.26	14 22 26.3	-506.4	16 6.85	59 8.49				
	γ Librae	4.0	15 31 18			14 32							
	202 B. Librae	6.4	15 52 0			S. 14 11							

MOON-CULMINATING STARS, 1924. 451

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass* Merid.	Apparent			Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			Right Ascension.	h	m			s	Declination.	°			
Sept. 5	Moon I. U.	6.4	16 11 59.82	149.70	69.92	S. 15 56 44.0	-434.9	16 8.10	59 13.08				
	Moon I. L.	-	16 42 11.08	152.13	70.51	17 15 46.4	-354.0	16 9.02	59 16.42				
	24 Scorpii	5.0	16 37 12			17 36							
	78 B. Ophiuchi	6.5	16 51 40			16 41							
6	Moon I. U.	7.4	17 12 49.42	154.18	71.00	S. 18 17 48.3	-265.1	16 9.58	59 18.49				
	Moon I. L.	-	17 43 49.31	155.69	71.35	19 1 23.2	-169.8	16 9.78	59 19.22				
	158 G. Ophiuchi	6.7	17 34 13			21 52							
	305 B. Ophiuchi	6.3	17 51 29			18 47							
7	Moon I. U.	8.4	18 15 3.30	156.52	71.52	S. 19 25 27.9	-70.5	16 9.59	59 18.54				
	Moon I. L.	-	18 46 22.64	156.57	71.51	19 29 27.6	+30.6	16 9.00	59 16.37				
	128 B. Sagittarii	6.3	18 40 49			21 5							
	36 Sagittarii	5.1	18 52 52			20 45							
8	Moon I. U.	9.5	19 17 37.85	155.83	71.30	S. 19 13 18.5	+130.6	16 7.97	59 12.58				
	Moon I. L.	-	19 48 39.52	154.33	70.91	18 37 28.8	+226.9	16 6.47	59 7.10				
	f Sagittarii	5.1	19 41 58			19 56							
	57 Sagittarii	6.0	19 47 50			19 14							
9	Moon I. U.	10.5	20 19 19.10	152.17	70.35	S. 17 42 57.4	+317.1	16 4.49	58 59.82				
	Moon I. L.	-	20 49 29.47	149.49	69.68	16 31 9.5	+399.3	16 2.01	58 50.73				
	81 B. Capricorni	6.4	20 45 5			18 19							
	21 Capricorni	6.5	20 56 38			17 49							
10	Moon I. U.	11.6	21 19 5.39	146.45	68.90	S. 15 3 51.8	+471.9	15 59.03	58 39.79				
	Moon I. L.	-	21 48 3.63	143.24	68.09	13 23 7.0	+533.7	15 55.56	58 27.05				
	45 Capricorni	5.8	21 39 55			15 6							
	t Aquarii	4.4	22 2 23			14 14							
11	Moon I. U.	12.6	22 16 22.95	139.99	67.27	S. 11 31 6.7	+584.4	15 51.63	58 12.61				
	Moon I. L.	-	22 44 3.81	136.85	66.46	9 30 6.5	+623.7	15 47.27	57 56.62				
	213 B. Aquarii	6.5	22 39 7			8 42							
	78 Aquarii	6.3	22 50 39			7 36							
12	Moon I. U.	13.6	23 11 8.17	133.92	65.72	S. 7 22 21.2	+652.0	15 42.55	57 39.29				
	342 B. Aquarii	6.5	23 27 39			4 30							
	20 Piscium	5.6	23 44 5			3 11							
13	Moon II. L.	-	23 39 49.16	131.18	65.05	S. 5 10 1.1	+669.6	15 37.53	57 20.88				
	Moon II. U.	14.7	0 5 49.27	128.90	64.47	2 55 9.8	+677.3	15 32.31	57 1.70				
	54 B. Ceti	6.3	0 20 39			2 38							
	14 Ceti	5.4	0 31 41			0 55							
14	Moon II. L.	-	0 31 24.30	127.00	63.99	S. 0 39 42.5	+675.8	15 26.97	56 42.09				
	Moon II. U.	15.7	0 56 38.86	125.49	63.61	N. 1 34 35.0	+665.8	15 21.60	56 22.40				
	f Piscium	5.3	1 13 55			3 13							
	μ Piscium	5.0	1 26 15			5 45							
15	Moon II. L.	-	1 21 37.68	124.37	63.34	N. 3 46 6.0	+648.2	15 16.31	56 3.00				
	Moon II. U.	16.7	1 46 25.34	123.63	63.17	5 53 23.3	+623.6	15 11.21	55 44.25				
	64 Ceti	5.8	2 7 23			8 13							
	ξ Arietis	5.5	2 20 47			N. 10 16							

452 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag	Apparent Right Ascension.			Var. of α 's R.A. in 1 hour of Long.	Sid. Time of Semi- <i>pass.</i> Merid.	Apparent Declination			Var of δ 's Dec. in 1 hour of Long.	Semi-diameter.	Hor. Par.		
			h	m	s			°	'	"				°	'
Sept. 16	Moon II. L.	-	2	11	6.30	123.25	63.10	N. 7	55	7.6	+592.8	15	6.37	55	26.51
	Moon II. U.	17.8	2	35	44.64	123.19	63.12	9	50	7.7	+556.3	15	1.90	55	10.11
	λ Ceti	4.7	2	55	41			8	37						
	147 B. Arietis	5.8	3	2	16			12	54						
17	Moon II. L.	-	3	0	24.11	123.43	63.21	N. 11	37	18.7	+514.7	14	57.88	54	55.35
	Moon II. U.	18.8	3	25	8.00	123.92	63.37	13	15	41.8	+468.4	14	54.39	54	42.52
	30 B. Tauri	6.4	3	33	34			15	11						
	179 B. Tauri	5.9	4	3	26			14	58						
18	Moon II. L.	-	3	49	59.10	124.62	63.58	N. 14	44	23.0	+417.8	14	51.48	54	31.86
	Moon II. U.	19.8	4	14	59.62	125.48	63.84	16	2	33.1	+363.3	14	49.22	54	23.57
	89 Tauri	5.8	4	33	50			15	53						
	1 Tauri	5.1	4	46	58			18	43						
19	Moon II. L.	-	4	40	11.14	126.45	64.11	N. 17	9	26.7	+305.1	14	47.65	54	17.81
	Moon II. U.	20.9	5	5	34.64	127.47	64.39	18	4	22.5	+243.7	14	46.81	54	14.72
	115 Tauri	5.3	5	22	46			17	54						
	130 Tauri	5.6	5	43	2			17	42						
20	Moon II. L.	-	5	31	10.44	128.49	64.67	N. 18	46	43.2	+179.3	14	46.72	54	14.38
	Moon II. U.	21.9	5	56	58.25	129.46	64.93	19	15	56.1	+112.4	14	47.38	54	16.83
	292 B. Orionis	6.5	6	17	1			17	48						
	ν Geminorum	4.1	6	24	28			20	16						
21	Moon II. L.	-	6	22	57.21	130.34	65.15	N. 19	31	33.1	+43.4	14	48.79	54	22.07
	Moon II. U.	22.9	6	49	5.99	131.10	65.33	19	33	12.3	-27.1	14	50.99	54	30.07
	ζ Gem. (var.)	3.7	6	59	37			20	41						
	56 Geminorum	5.2	7	17	29			20	35						
22	Moon II. L.	-	7	15	22.94	131.70	65.47	N. 19	20	38.2	-98.7	14	53.89	54	40.72
	Moon II. U.	24.0	7	41	46.20	132.15	65.56	18	53	43.2	-170.5	14	57.48	54	53.89
	10 H. Cancri	6.1	8	0	23			19	3						
	d^1 Cancri	5.9	8	19	2			18	35						
23	Moon II. L.	-	8	8	13.90	132.44	65.61	N. 18	12	27.7	-241.9	15	1.71	55	9.39
	Moon II. U.	25.0	8	34	44.32	132.61	65.63	17	17	2.1	-312.1	15	6.50	55	26.97
24	Moon II. L.	-	9	1	16.12	132.68	65.61	N. 16	7	46.6	-380.1	15	11.78	55	46.36
	Moon II. U.	26.0	9	27	48.42	132.70	65.58	14	45	12.0	-445.0	15	17.46	56	7.20
25	Moon II. L.	-	9	54	20.94	132.73	65.56	N. 13	10	2.9	-505.9	15	23.43	56	29.10
	Moon II. U.	27.1	10	20	54.08	132.81	65.55	11	23	12.4	-561.6	15	29.57	56	51.65
26	Moon II. L.	-	10	47	28.97	133.03	65.58	N. 9	25	48.4	-611.3	15	35.76	57	14.38
	Moon II. U.	28.1	11	14	7.41	133.42	65.65	7	19	11.2	-653.7	15	41.88	57	36.82
27	Moon II. L.	-	11	40	51.87	134.04	65.80	N. 5	4	53.1	-687.9	15	47.78	57	58.49
	Moon II. U.	29.1	12	7	45.34	134.93	66.02	2	44	39.6	-712.8	15	53.35	58	18.92
28	Moon I. L.	-	12	32	38.67	136.05	66.32	N. 0	20	27.8	-727.4	15	58.46	58	37.69

MOON-CULMINATING STARS, 1924. 453

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag	Apparent Right Ascension.	Var. of R.A. in 1 hour of Long.	Sid. Time of Semid. pass- Merid.	Apparent Declination.	Var. of Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	s	s	° ' "	"	' "	' "
Sept. 29	Moon I. U.	0 7	13 0 00.7	137.56	66.70	S. 2 5 34.3	-731.0	16 3.02	58 54.42
	Moon I. L.	-	13 27 41.24	139.36	67 17	4 31 8.8	-722.7	16 6.93	59 8.79
30	Moon I. U.	1 7	13 55 45.77	141.44	67 71	S. 6 53 50.3	-702.1	16 10.15	59 20.59
	Moon I. L.	-	14 24 16.77	143.76	68 31	9 11 8.2	-668.8	16 12.62	59 29.67
Oct. 1	Moon I. U.	2 8	14 53 16.48	146.21	68.95	S. 11 20 30.6	-622.8	16 14.35	59 36.00
	Moon I. L.	-	15 22 46.04	148.71	69.58	13 19 27.1	-564.6	16 15.33	59 39.61
2	Moon I. U.	3 8	15 52 45.02	151.10	70.20	S. 15 5 34.3	-494.8	16 15.61	59 40.63
	Moon I. L.	-	16 23 11.31	153.23	70 74	16 36 40.4	-414.6	16 15.24	59 39.25
3	Moon I. U.	4 8	16 54 0.84	154.94	71.18	S. 17 50 50.7	-325.8	16 14.26	59 35.69
	Moon I. L.	-	17 25 7.69	156.09	71.47	18 46 32.7	-230.3	16 12.77	59 30.21
192 158	B. Ophiuchi	6 3	17 20 11			18 22			
	G. Ophiuchi	6 7	17 34 12			21 52			
4	Moon I. U.	5 9	17 56 24.37	156.56	71.60	S. 19 22 40.9	-130.6	16 10.83	59 23.07
	Moon I. L.	-	18 27 42.30	156.29	71.54	19 38 39.8	-20.2	16 8.50	59 14.53
21 121	Sagittari	5 0	18 20 51			20 35			
	B. Sagittari	5 9	18 34 23			21 7			
5	Moon I. U.	6 9	18 58 52.40	155.27	71.29	S. 19 34 24.9	+71.3	16 5.85	59 4.81
	Moon I. L.	-	19 29 45.94	153.55	70.87	19 10 22.3	+168.4	16 2.94	58 54.11
45 267	Sagittari	6 0	19 17 27			18 27			
	B. Sagittari	5 8	19 32 41			18 24			
6	Moon I. U.	8 0	20 0 15.13	151.23	70.29	S. 18 27 26.4	+259.9	15 50.80	58 42.61
	Moon I. L.	-	20 30 13.69	148.47	69.60	17 26 54.5	+344.1	15 56.48	58 30.41
7 61	Capricorni	5 2	20 23 1			18 27			
	B. Capricor.	5 9	20 36 19			16 23			
7	Moon I. U.	9 0	20 59 37.18	145.41	68.82	S. 16 10 22.9	+419.7	15 52.99	58 17.62
	Moon I. L.	-	21 28 23.04	142.23	68.01	14 39 40.2	+485.8	15 49.36	58 4.30
18 42	Aquari	5 5	21 20 5			13 12			
	Capricorni	5 1	21 37 28			14 23			
8	Moon I. U.	10 0	21 56 30.62	139.05	67.19	S. 12 56 43.6	+541.9	15 45.60	57 50.50
	Moon I. L.	-	22 24 0.79	136.01	66.39	11 3 34.2	+587.9	15 41.72	57 36.25
15 167	Aquari	6 1	22 14 59			13 41			
	G. Aquari	6 3	22 34 25			8 17			
9	Moon I. U.	11 1	22 50 55.75	133.20	65.64	S. 9 2 13.4	+623.9	15 37.73	57 21.59
	Moon I. L.	-	23 17 18.76	130.69	64.97	6 54 40.4	+650.0	15 33.63	57 6.56
7 337	Aquari	4 4	23 10 26			6 27			
	B. Aquari	6 4	23 25 39			4 57			
10	Moon I. U.	12 1	23 43 13.71	128.53	64.40	S. 4 42 51.5	+666.6	15 29.45	56 51.22
	Moon I. L.	-	0 8 44.93	126.74	63.92	2 28 37.8	+674.2	15 25.21	56 35.66
4 54	Ceti	6.3	0 3 53			2 58			
	B. Ceti	6.3	0 20 39			S. 2 38			

454 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^r Merid.	Apparent			Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			Right Ascension.	h	m			s	Declination.	°			
Oct. 11	Moon I. U.	13.1	0 33 56.98	125.33	63.54	S. 0 13 45.0	+673.2	15 20.94	56 19.96				
	Moon I. L.	-	0 58 54.43	124.30	63.26	N. 2 0 6.8	+664.1	15 16.66	56 4.28				
	26 Ceti	6.0	0 59 57			0 58							
	33 Ceti	6.1	1 6 42			2 3							
12	Moon II. U.	14.2	1 25 47.91	123.62	63.09	N. 4 11 22.9	+647.4	15 12.43	55 48.76				
	<i>v</i> Piscium	4.7	1 37 31			5 6							
	39 B. Arietis	6.5	2 0 53			7 23							
13	Moon II. L.	-	1 50 29.11	123.30	63.01	N. 6 18 35.3	+623.5	15 8.30	55 33.58				
	Moon II. U.	15.2	2 15 8.42	123.29	63.02	8 20 21.1	-593.0	15 4.31	55 18.95				
	389 B. Ceti	6.3	2 25 35			9 14							
	<i>μ</i> Ceti	4.4	2 40 53			9 48							
14	Moon II. L.	-	2 39 49.24	123.55	63.11	N. 10 15 23.7	+556.4	15 0.54	55 5.10				
	Moon II. U.	16.2	3 4 34.50	124.03	63.26	12 2 32.0	+514.1	14 57.04	54 52.25				
	8 B. Tauri	6.2	3 20 2			12 22							
	30 B. Tauri	6.4	3 33 35			15 11							
15	Moon II. L.	-	3 29 26.58	124.68	63.46	N. 13 40 41.1	+466.6	14 53.87	54 40.62				
	Moon II. U.	17.3	3 54 27.24	125.45	63.69	15 8 51.1	+414.4	14 51.10	54 30.47				
	48 Tauri	6.3	4 11 30			15 13							
	264 B. Tauri	4.8	4 26 15			16 2							
16	Moon II. L.	-	4 19 37.60	126.29	63.94	N. 16 26 8.8	-357.9	14 48.80	54 22.02				
	Moon II. U.	18.3	4 44 58.20	127.14	64.21	17 31 46.8	-297.8	14 47.02	54 15.48				
	<i>m</i> Tauri	5.0	5 3 0			18 33							
	353 B. Tauri	6.5	5 16 30			19 44							
17	Moon II. L.	-	5 10 28.89	127.96	64.46	N. 18 25 3.4	+234.5	14 45.81	54 11.06				
	Moon II. U.	19.3	5 36 9.05	128.71	64.68	19 5 23.9	+168.6	14 45.23	54 8.94				
	57 Orionis	5.8	5 50 29			19 44							
	68 Orionis	5.7	6 7 34			19 48							
18	Moon II. L.	-	6 1 57.53	129.35	64.88	N. 19 32 20.3	+100.5	14 45.33	54 9.27				
	Moon II. U.	20.4	6 27 52.84	129.85	65.04	19 45 31.0	+31.0	14 46.12	54 12.20				
	74 B. Geminor.	6.2	6 42 59			18 16							
	110 B. Geminor.	6.2	6 58 2			17 52							
19	Moon II. L.	-	6 53 53.29	130.20	65.15	N. 19 44 41.9	-39.3	14 47.65	54 17.81				
	Moon II. U.	21.4	7 19 57.14	130.42	65.22	19 29 46.0	-110.0	14 49.93	54 26.15				
	79 Geminorum	6.3	7 40 44			20 30							
	85 Geminorum	5.2	7 51 16			20 5							
20	Moon II. L.	-	7 46 2.79	130.51	65.25	N. 19 0 43.2	-180.4	14 52.95	54 37.25				
	Moon II. U.	22.4	8 12 8.92	130.50	65.25	18 17 40.9	-249.8	14 56.72	54 51.09				
	90 B. Cancri	6.3	8 31 54			15 34							
	54 Cancri	6.3	8 46 49			15 38							
21	Moon II. L.	-	8 38 14.65	130.45	65.23	N. 17 20 53.7	-317.8	15 1.21	55 7.58				
	Moon II. U.	23.5	9 4 19.66	130.39	65.20	16 10 43.5	-383.5	15 6.39	55 26.57				
	12 B. Leonis	6.3	9 21 21			16 55							
	<i>ψ</i> Leonis	5.6	9 39 37			N. 14 22							

MOON-CULMINATING STARS, 1924. 455

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^g Merid.	Apparent			Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.	
			Right Ascension.	h	m			s	Declination.	'				"
Oct. 22	Moon II. L.	-	9 30 24	28	130° 39	65° 18	N. 14 47 39	9	-446	5	15 12	19	55 47	87
	Moon II. U.	24.5	9 56 29	51	130° 51	65° 18	13 12 21	0	-506	0	15 18	55	56 11	22
23	Moon II. L.	-	10 22 37	10	130° 79	65° 23	N. 11 25 33	3	-561	2	15 25	38	56 36	26
	Moon II. U.	25.5	10 48 49	50	131° 32	65° 33	9 28 13	3	-611	2	15 32	55	57 2	59
24	Moon II. L.	-	11 15 9	79	132° 12	65° 50	N. 7 21 29	1	-655	1	15 39	94	57 29	71
	Moon II. U.	26.6	11 41 41	64	133° 25	65° 76	5 6 40	6	-691	7	15 47	39	57 57	06
25	Moon II. L.	-	12 8 29	21	134° 74	66° 11	N. 2 45 21	7	-719	9	15 54	75	58 24	05
	Moon II. U.	27.6	12 35 36	91	136° 60	66° 56	N. 0 19 21	8	-738	4	16 1	82	58 50	02
26	Moon II. L.	-	13 3 9	35	138° 86	67° 10	S. 2 9 15	1	-745	8	16 8	44	59 14	31
	Moon II. U.	28.6	13 31 10	97	141° 47	67° 74	4 38 8	6	-740	9	16 14	42	59 36	26
27	Moon II. L.	-	13 59 45	74	144° 38	68° 45	S. 7 4 43	8	-722	6	16 19	60	59 55	29
28	Moon I. U.	0.2	14 26 38	36	147° 37	69° 22	S. 9 26 14	2	-690	0	16 23	84	60 10	85
	Moon I. L.	-	14 56 26	00	150° 58	70° 01	11 39 45	3	-642	7	16 27	03	60 22	54
29	Moon I. U.	1.3	15 26 51	90	153° 72	70° 77	S. 13 42 20	4	-580	8	16 29	09	60 30	11
	Moon I. L.	-	15 57 54	09	156° 59	71° 48	15 31 8	7	-595	1	16 30	00	60 33	44
30	Moon I. U.	2.3	16 29 28	11	158° 98	72° 07	S. 17 3 33	3	-417	1	16 29	77	60 32	58
	Moon I. L.	-	17 1 26	93	160° 69	72° 50	18 17 20	8	-319	3	16 28	45	60 27	74
31	Moon I. U.	3.3	17 33 41	24	161° 54	72° 73	S. 19 10 49	7	-214	6	16 26	14	60 19	27
	Moon I. L.	-	18 6 0	08	161° 43	72° 74	19 42 56	4	-106	2	16 22	96	60 7	60
Nov. 1	Moon I. U.	4.4	18 38 11	62	160° 33	72° 51	S. 19 53 18	6	+ 2	2	16 19	04	59 53	22
	Moon I. L.	-	19 10 4	31	158° 31	72° 05	19 42 15	1	+107	5	16 14	54	59 36	71
2	Moon I. U.	5.4	19 41 27	88	155° 50	71° 40	S. 19 10 41	3	+206	9	16 9	60	59 18	58
	Moon I. L.	-	20 12 14	05	152° 11	70° 59	18 20 2	3	-129	8	16 4	36	58 59	34
σ Capricorni		5.5	20 15 2				19 21							
	o Capricorni	5.6	20 25 34				18 50							
3	Moon I. U.	6 5	20 42 17	02	148° 34	69° 68	S. 17 12 5	2	-1379	7	15 58	94	58 39	46
	Moon I. L.	-	21 11 33	65	144° 42	68° 71	15 48 50	3	+451	0	15 53	45	58 19	31
	0 Capricorni	4.2	21 1 43				17 32							
	ι Capricorni	4.3	21 18 3				17 9							
4	Moon I. U.	7.5	21 40 3	20	140° 53	67° 74	S. 14 12 24	2	+511	6	15 47	99	57 59	24
	Moon I. L.	-	22 7 47	03	136° 82	66° 79	12 24 54	3	+561	7	15 42	60	57 39	49
	ι Aquarii	4.4	22 2 22				14 14							
	45 Aquarii	6.1	22 14 58				13 41							
5	Moon I. U.	8.5	22 34 48	09	133° 42	65° 91	S. 10 28 24	8	+601	6	15 37	36	57 20	25
	Moon I. L.	-	23 1 10	60	130° 40	65° 10	8 24 53	9	+632	0	15 32	30	57 1	65
	78 Aquarii	6.3	22 50 39				7 36							
	φ Aquarii	4.4	23 10 26				6 27							
6	Moon I. U.	9.6	23 26 59	51	127° 83	64° 41	S. 6 16 14	0	+653	2	15 27	43	56 43	78
	Moon I. L.	-	23 52 20	24	125° 71	63° 83	4 4 10	6	+666	0	15 22	77	56 26	69
20 Piscium	5.6	23 44 5				3 11								
29 Piscium	5.1	23 57 58				3 27								

456 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent Right Ascension.			Var. of C's R.A. in 1 hour of Long.	Sid. Time of Semid. pass ^W Merid.	Apparent Declination.	Var. of C's Dec. in 1 hour of Long.	Semi-diameter.	Hor. Par.
			h	m	s						
Nov. 7	Moon I. U.	10.6	0 17 18.42	124.06	63.37	S. 1 50 22.9	+670.7	15 18.33	56 10.40		
	Moon I. L.	-	0 41 59.60	122.88	63.02	N. 0 23 35.3	-667.8	15 14.11	55 54.92		
	14 Ceti	5.4	0 31 42			S. 0 55					
	26 Ceti	6.0	0 59 57			N. 0 58					
8	Moon I. U.	11.6	1 6 29.17	122.13	62.80	N. 2 36 14.7	+657.6	15 10.11	55 40.25		
	Moon I. L.	-	1 30 52.24	121.78	62.68	4 46 10.3	+640.5	15 6.33	55 26.37		
	117 G. Piscium	6.5	1 23 1			S. 0 55					
	2 Piscium	4.7	1 37 32			5 6					
9	Moon I. U.	12.7	1 55 13.39	121.80	62.67	N. 6 52 0.4	+616.7	15 2.78	55 13.31		
	Moon I. L.	-	2 19 36.81	122.15	62.75	8 52 26.6	+586.6	14 59.44	55 1.09		
	ξ ¹ Ceti	4.5	2 9 1			8 30					
	ξ ² Ceti	4.3	2 24 10			8 7					
10	Moon I. U.	13.7	2 44 5.98	122.75	62.90	N. 10 46 13.6	+550.3	14 56.35	54 49.74		
	Moon II. L.	-	3 10 49.98	123.61	63.12	12 32 9.3	+508.1	14 53.51	54 39.32		
	147 B. Arietis	5.8	3 2 17			12 54					
	8 B. Tauri	6.2	3 20 2			12 22					
11	Moon II. U.	14.7	3 35 38.96	124.57	63.38	N. 14 9 5.9	+460.4	14 50.95	54 29.91		
	λ Tauri	3.3	3 56 32			12 17					
	193 B. Tauri	6.2	4 8 13			17 5					
12	Moon II. L.	-	4 0 40.00	125.61	63.66	N. 15 35 59.7	+407.7	14 48.68	54 21.60		
	Moon II. U.	15.8	4 25 53.53	126.64	63.95	16 51 52.9	+350.4	14 46.75	54 14.51		
	z Tauri	5.1	4 46 59			18 43					
	m Tauri	5.0	5 3 1			18 33					
13	Moon II. L.	-	4 51 19.18	127.62	64.23	N. 17 55 53.4	+289.1	14 45.19	54 8.79		
	Moon II. U.	16.8	5 16 55.82	128.47	64.48	18 47 16.9	+224.3	14 44.04	54 4.56		
	120 Tauri	5.6	5 29 8			18 29					
	B.D. +19°11'10"	6.0	5 47 57			19 51					
14	Moon II. L.	-	5 42 41.66	129.14	64.69	N. 19 25 27.1	+157.0	14 43.35	54 2.00		
	Moon II. U.	17.8	6 8 34.40	129.61	64.84	19 49 56.8	+87.7	14 43.14	54 1.26		
	2 Geminorum	4.1	6 24 30			20 16					
	74 B. Geminor.	6.2	6 43 0			18 17					
15	Moon II. L.	-	6 34 31.42	129.85	64.94	N. 20 0 27.6	+17.3	14 43.48	54 2.49		
	Moon II. U.	18.9	7 0 29.98	129.87	64.99	19 56 51.0	-53.4	14 44.39	54 5.85		
	56 Geminorum	5.2	7 17 31			20 35					
	f Geminorum	5.3	7 35 8			17 51					
16	Moon II. L.	-	7 26 27.52	129.69	64.98	N. 19 39 7.1	-123.8	14 45.93	54 11.47		
	Moon II. U.	19.9	7 52 21.83	129.34	64.92	19 7 25.1	-193.0	14 48.11	54 19.48		
	ζ Can. (mean)	4.7	8 7 54			17 52					
	θ Caneri	5.5	8 27 18			18 21					
17	Moon II. L.	-	8 18 11.24	128.88	64.83	N. 18 22 1.5	-260.6	14 50.97	54 29.98		
	Moon II. U.	20.9	8 43 54.80	128.38	64.72	17 23 20.3	-325.9	14 54.52	54 43.02		
	0 ³ Caneri	5.7	8 53 23			15 52					
	227 B. Caneri	6.4	9 17 6			N. 15 41					

MOON-CULMINATING STARS, 1924. 457

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent				Sid. Time of Semid. pass. Merid.	Apparent Declination.	Var. of Dec. in 1 hour of Long.	Semi-diameter.	Hor. Par.
			Right Ascension.	h	m	s					
Nov. 18	Moon II. L.	-	9	32	46	127.91	64.62	N. 16 11 51.2	-388.5	14 58.78	54 58.65
	Moon II. U.	22.0	9	35	4.97	127.54	64.53	14 48 9.6	-447.9	15 3.74	55 16.85
	ν Leonis	5.0	9	54	10			12 48			
	34 Leonis	6.4	10	7	35			13 44			
19	Moon II. L.	-	10	03	01	127.34	64.48	N. 13 12 56.4	-503.7	15 9.38	55 37.54
	Moon II. U.	23.0	10	26	2 18	127.40	64 49	11 26 57 5	-555.4	15 15 66	56 0 61
	ζ Leonis	5.3	10	45	18			10 57			
	χ Leonis	4.7	11	1	7			7 45			
20	Moon II. L.	-	10	51	32.90	127.78	64.58	N. 9 31 4.9	-602.5	15 22.54	56 25 84
	Moon II. U.	24.0	11	17	10 38	128.54	64.76	7 26 17.8	-644.4	15 29.92	56 52 94
21	Moon II. L.	-	11	42	59 46	129.72	65.04	N. 5 13 44.0	-680.2	15 37.72	57 21.56
	Moon II. U.	25.1	12	9	5.61	131.39	65.44	2 54 41.7	-709.0	15 45.80	57 51.23
22	Moon II. L.	-	12	35	34.69	133.55	65.96	N. 0 30 42.1	-729.5	15 54.02	58 21.37
	Moon II. U.	26.1	13	2	32 79	136.22	66.61	S. 1 56 28.4	-740.5	16 2.19	58 51.36
23	Moon II. L.	-	13	30	6.01	139.40	67.38	S. 4 24 46.5	-740.5	16 10.11	59 20.45
	Moon II. U.	27.1	13	58	20.07	143.02	68.25	6 51 50.5	-727.9	16 17.59	59 47 88
24	Moon II. L.	-	14	27	19 87	147.00	69.21	S. 9 15 0.1	-701.2	16 24.38	60 12.81
	Moon II. U.	28.2	14	57	8.96	151.21	70.21	11 31 19.0	-659.3	16 30.28	60 34 47
25	Moon II. L.	-	15	27	48 89	155.44	71.21	S. 13 37 38.7	-601.3	16 35.09	60 52.14
	Moon II. U.	29.2	15	59	18.49	159.44	72.15	15 30 46.4	-527.3	16 38 65	61 5.19
26	Moon I. L.	-	16	29	7.38	162.80	72.98	S. 17 7 35.4	-438.4	16 40 82	61 13.16
27	Moon I. U.	0.8	17	1	58.21	165.51	73.61	S. 18 25 17 8	-336.7	16 41.54	61 15 81
	Moon I. L.	-	17	35	15.37	167.15	74.01	19 21 38.2	-225.4	16 40.81	61 13.11
28	Moon I. U.	1.9	18	8	44.74	167.52	74.11	S. 19 55 5.5	-108.6	16 38.67	61 5 26
	Moon I. L.	-	18	42	10 68	166.57	73.92	20 5 0 9	+ 9.1	16 35.23	60 52.65
29	Moon I. U.	2.9	19	15	17 52	164.36	73.43	S. 19 51 40 0	+123.3	16 30.66	60 35 86
	Moon I. L.	-	19	47	51.14	161.08	72 69	19 16 8 2	+230.3	16 25.14	60 15 59
30	Moon I. U.	3.9	20	19	40.14	156.98	71.77	S. 18 20 11.8	+327.1	16 18.87	59 52.58
	Moon I. L.	-	20	50	36.71	152.39	70 67	17 6 5.2	+411.8	16 12 06	59 27 59
Dec. 1	Moon I. U.	5.0	21	20	36.56	147.58	69.53	S. 15 36 18.3	+483.8	16 4.91	59 1.36
	Moon I. L.	-	21	49	38.83	142.82	68.37	13 53 26.0	+542.8	15 57.61	58 34.55
	45 Capricorni	5.8	21	39	54			15 6			
	ϵ Aquarii	4.4	22	2	22			14 14			
2	Moon I. U.	6.0	22	17	45.31	138.32	67.26	S. 11 59 59.1	+589.7	15 50 31	58 7.77
	Moon I. L.	-	22	44	59 99	134 21	66.23	9 58 19.4	+625.1	15 43.15	57 41 51
	213 B. Aquarii	6.5	22	39	7			8 42			
	78 Aquarii	6.3	22	50	39			7 36			
3	Moon I. U.	7.1	23	11	28 27	130.59	65.29	S. 7 50 37 0	+650.3	15 36 25	57 16.15
	Moon I. L.	-	23	37	16.37	127.52	64 49	5 38 49.9	+666.1	15 29 67	56 52.01
	342 B. Aquarii	6.5	23	27	38			4 30			
	20 Piscium	5.6	23	44	5			S. 3 11			

458 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Var. of C's R.A. in 1 hour of Long.	Sld. Time of Semid. pass [#] Merid.	Apparent			Var. of C's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			Right Ascension.	h	m			s	Declination.	°			
Dec. 4	Moon I. U.	8.1	0 23 05	125.02	63.82	S.	3 24 44.1	+673.6	15 23.48	56 29.31			
	Moon I. L.	-	0 27 19.14	123.09	63.29		1 9 55.1	+673.4	15 17.73	56 8.19			
	54 B. Ceti	6.3	0 20 39				2 38						
	14 Ceti	5.4	0 31 41			S.	0 55						
5	Moon I. U.	9.1	0 51 47.39	121.71	62.90	N.	1 4 9.6	+666.3	15 12.43	55 48.75			
	Moon I. L.	-	1 16 2.24	120.85	62.64		3 16 9.4	+652.6	15 7.60	55 31.02			
	33 Ceti	6.1	1 6 42				2 3						
	117 G. Piscium	6.5	1 23 1				3 9						
6	Moon I. U.	10.1	1 40 9.72	120.47	62.51	N.	5 24 48.3	+632.9	15 3.23	55 14.98			
	Moon I. L.	-	2 4 15.35	120.53	62.50		7 28 54.2	+607.2	14 59.32	55 0.63			
	39 B. Arietis	6.5	2 0 54				7 22						
	ξ ¹ Ceti	4.5	2 9 1				8 30						
7	Moon I. U.	11.2	2 28 24.01	120.97	62.58	N.	9 27 17.1	+575.7	14 55.85	54 47.89			
	Moon I. L.	-	2 52 39.90	121.73	62.75		11 18 49.0	+538.7	14 52.80	54 36.70			
	μ Ceti	4.4	2 40 53				9 48						
	147 B. Arietis	5.8	3 2 17				12 54						
8	Moon I. U.	12.2	3 17 6.43	122.73	62.99	N.	13 2 23.2	+496.1	14 50.16	54 27.00			
	Moon I. L.	-	3 41 46.13	123.91	63.28		14 36 55.0	+448.3	14 47.91	54 18.74			
	f Tauri	4.3	3 26 44				12 41						
	30 B. Tauri	6.4	3 33 35				15 11						
9	Moon I. U.	13.2	4 6 40.58	125.18	63.59	N.	16 1 22.4	+395.4	14 46.03	54 11.85			
	Moon I. L.	-	4 31 50.35	126.45	63.92		17 14 46.5	+337.9	14 44.52	54 6.30			
	75 Tauri	5.2	4 24 9				16 11						
	302 B. Tauri	6.1	4 41 54				18 36						
10	Moon I. U.	14.3	4 57 15.00	127.64	64.22	N.	18 16 14.1	+276.1	14 43.36	54 2.06			
	353 B. Tauri	6.5	5 16 31				19 44						
	120 Tauri	5.6	5 29 8				18 29						
11	Moon II. L.	-	5 25 2.10	128.72	64.49	N.	19 4 58.0	+210.7	14 42.56	53 59.13			
	Moon II. U.	15.3	5 50 51.81	129.53	64.70		19 40 19.5	+142.5	14 42.13	53 57.54			
	68 Orionis	5.7	6 7 35				19 48						
	16 Geminorum	6.2	6 23 29				20 32						
12	Moon II. L.	-	6 16 49.54	130.05	64.85	N.	20 1 49.1	+ 72.2	14 42.07	53 57.32			
	Moon II. U.	16.3	6 42 51.78	130.27	64.94		20 9 8.4	+ 0.9	14 42.40	53 58.54			
	ζ Gem. (var.)	3.7	6 59 40				20 41						
	56 Geminorum	5.2	7 17 32				20 35						
13	Moon II. L.	-	7 8 54.83	130.19	64.94	N.	20 2 10.2	- 70.6	14 43.15	54 1.27			
	Moon II. U.	17.4	7 34 55.12	129.82	64.87		19 40 58.0	-141.3	14 44.32	54 5.59			
	85 Geminorum	5.2	7 51 18				20 5						
	ζ Can. (mean)	4.7	8 7 55				17 52						
14	Moon II. L.	-	8 0 49.45	129.20	64.75	N.	19 5 46.7	-210.3	14 45.97	54 11.62			
	Moon II. U.	18.4	8 26 35.32	128.42	64.58		18 17 0.7	-276.9	14 48.11	54 19.46			
	54 Cancri	6.3	8 46 51				15 38						
	0 ^a Cancri	5.7	8 53 24			N.	15 52						

MOON-CULMINATING STARS, 1924. 459

AT TRANSIT AT GREENWICH.

Date.	Name.	Mag.	Apparent			Std. Time of Semid. pass. Merid.	Apparent			Semi-diameter.	Hor. Par.
			Right Ascension.	Var. of C's R.A. in 1 hour of Long.	Declination.		Var. of C's Dec. in 1 hour of Long.	Declination.			
			h m s	s	s	° ' "	"	' "	' "	' "	' "
Dec. 15	Moon II. L.	-	8 52 11	06	127.53	64.39	N. 17 15 12	7	-340.5	14 50.76	54 29.21
	Moon II. U.	19.4	9 17 36	03	126.64	64.19	16 1 2 6		-400.5	14 53.96	54 40.97
	11 Leonis	6.5	9 33 56				14 41				
	γ Leonis	5.0	9 54 11				12 48				
16	Moon II. L.	-	9 42 50	63	125.82	64.01	N. 14 35 15	5	-456.6	14 57 74	54 54.82
	Moon II. U.	20.4	10 7 56	36	125.17	63.87	12 58 41	4	-508.3	15 2.10	55 10.82
	45 Leonis	5.8	10 23 41				10 9				
	l Leonis	5.3	10 45 18				10 57				
17	Moon II. L.	-	10 32 55	75	124.78	63.78	N. 11 12 13	7	-555.5	15 7.05	55 29.01
	Moon II. U.	21.5	10 57 52	32	124.71	63.79	9 16 49	2	-597.7	15 12 60	55 49.37
	σ Leonis	4.1	11 17 15				6 26				
	451 B. Leonis	7.0	11 38 34				2 47				
18	Moon II. L.	-	11 22 50	49	125.05	63.89	N. 7 13 28	9	-634.7	15 18.72	56 11.84
	Moon II. U.	22.5	11 47 55	46	125.86	64.10	5 3 18	2	-666.1	15 25.39	56 36.29
	10 Virginis	6.2	12 5 50				2 19				
	190 B. Virginis	7.4	12 26 44				3 56				
19	Moon II. L.	-	12 13 13	13	127.18	64.44	N. 2 47 28	9	-691.1	15 32.54	57 2.54
	Moon II. U.	23.6	12 38 49	97	129.06	64.92	N. 0 27 21	0	-709.0	15 40.10	57 30.30
	48 Virginis	6.5	13 0 1				S. 3 15				
	65 Virginis	6.0	13 19 24				4 32				
20	Moon II. L.	-	13 4 52	87	131.53	65.55	S. 1 55 35	2	-718.9	15 47 97	57 59.19
	Moon II. U.	24.6	13 31 28	97	134.59	66.31	4 19 36	4	-719.6	15 56 02	58 28.74
21	Moon II. L.	-	13 58 45	29	138.23	67.20	S. 6 42 43	6	-709.7	16 4.10	58 58.38
	Moon II. U.	25.6	14 26 48	49	142.39	68.21	9 2 40	9	-687.7	16 12.02	59 27.43
22	Moon II. L.	-	14 55 44	23	146.96	69.31	S. 11 16 54	2	-652.1	16 19.57	59 55.15
	Moon II. U.	26.7	15 25 36	61	151.79	70.46	13 22 32	2	-601.6	16 26.53	60 20.69
23	Moon II. L.	-	15 56 27	35	156.65	71.59	S. 15 16 31	0	-535.5	16 32.67	60 43.24
	Moon II. U.	27.7	16 28 15	01	161.23	72.65	16 55 41	6	-453.6	16 37 77	61 1.97
24	Moon II. L.	-	17 0 54	29	165.19	73.56	S. 18 16 59	6	-357.0	16 41.64	61 16.15
	Moon II. U.	28.8	17 34 15	67	168.18	74.24	19 17 41	3	-248.1	16 44.10	61 25.19
25	Moon II. L.	-	18 8 5	73	169.92	74.64	S. 19 55 38	4	-130.3	16 45.05	61 28.68
26	Moon I. U.	0.4	18 30 38	54	170.21	74.71	S. 20 9 31	7	- 8.3	16 44.44	61 26.44
	Moon I. L.	-	19 13 35	52	169.03	74.44	19 59 0	7	+112.9	16 42.29	61 18.56
27	Moon I. U.	1.4	19 47 9	77	166.46	73.87	S. 19 24 45	4	+228.3	16 38 70	61 5.35
	Moon I. L.	-	20 20 5	97	162.74	73.01	18 28 20	4	+333.9	16 33.79	60 47.36
28	Moon I. U.	2.4	20 52 12	17	158.19	71.96	S. 17 12 3	2	+426.6	16 27.78	60 25.29
	Moon I. L.	-	21 23 20	63	153.17	70.80	15 38 38	7	+504.9	16 20 87	59 59.94
29	Moon I. U.	3.5	21 53 27	75	148.02	69.58	S. 13 51 4	4	+568.3	16 13.30	59 32.16
	Moon I. L.	-	22 22 33	53	142.99	68.38	S. 11 52 17	7	+617.1	16 5.31	59 2.82

460 MOON-CULMINATING STARS, 1924.

AT TRANSIT AT GREENWICH.

Date.	Name.	Magn.	Apparent Right Ascension.	Var. of (λ 's R.A. in 1 hour of Long.	Sid. Time of Semid. pass st Merid.	Apparent Declination.	Var. of (λ 's Dec. in 1 hour of Long.	Semi- diameter.	Hor. Par.
			h m s	"	s	° ' "	"	' " "	' "
Dec. 30	Moon I. U.	4.5	22 50 40.85	138.30	67.23	S. 9 45 7.1	+652.5	15 57.10	58 32.68
	Moon I. L.	-	23 17 54.62	134.09	66.19	7 32 6.1	+675.8	15 48.87	58 2.49
	φ Aquarii	4.4	23 10 25			6 27			
	337 B. Aquarii	6.4	23 25 38			4 57			
31	Moon I. U.	5.6	23 44 21.10	130.43	65.27	S. 5 15 31.9	+688.3	15 40.80	57 32.87
	Moon I. L.	-	0 10 7.30	127.38	64.49	2 57 24.6	+691.5	15 33.02	57 4.32
	4 Ceti	6.3	0 3 53			2 58			
	54 B. Ceti	6.3	0 20 39			S. 2 38			

Note.—The Mean Places of Moon-Culminating Stars are given in the section headed "Mean Places of Occultation Stars" on pages 470-474, with the exception of six stars whose positions are given below:—

Name of Star.	Magni- tude.	Right Ascension for 1924.0	Annual Proper Motion.	Declination for 1924.0	Annual Proper Motion.
		h m s	s	° ' "	"
λ Ceti	4.7	2 55 38.330	0.0000	+ 8 36 20.41	-0.002
λ Tauri	3.3	3 56 28.057	+0.0002	+12 16 36.22	-0.011
451 B. Leonis	7.0	11 38 31.684	-0.0068	+ 2 47 2.92	-0.051
190 B. Virginis	7.4	12 26 41.953	-0.0003	+ 3 55 41.60	-0.015
8 B. Libræ	6.0	14 34 55.154	+0.0001	-10 13 37.75	+0.019
158 G. Ophiuchi	6.7	17 34 10.853	-0.0009	-21 52 8.62	-0.025

In the year 1924 there will be five eclipses, three of the Sun and two of the Moon.

1.—*A Total Eclipse of the Moon*, February 20, 1924, partly visible at Greenwich; the beginning visible generally in the extreme northwestern part of North America, the Pacific Ocean, Australia, Asia, and the Indian Ocean; the ending visible generally in the western part of the Pacific Ocean, Asia, Australia, the Indian Ocean, Europe, and Africa except the extreme northwestern part.

ELEMENTS OF THE ECLIPSE.

Greenwich Mean Time of δ in Right Ascension, February 20^d 4^h 12^m 25^s.7.

	h	m	s
Sun's Right Ascension	22	11	18.18
Hourly Motion			9.61
Moon's Right Ascension	10	11	18.18
Hourly Motion			133.55
Sun's Declination	-11	12	13.7
Hourly Motion			+0 53.5
Moon's Declination	+11	4	12.1
Hourly Motion			- 9 3.2
Sun's Equatorial Horizontal Parallax			8.9
Sun's True Semidiameter			16 10.4
Moon's Equatorial Horizontal Parallax			57 50.9
Moon's True Semidiameter			15 45.0

CIRCUMSTANCES OF THE ECLIPSE.

	d	h	m	
Moon enters Penumbra	20	1	14.9	}
Moon enters Umbra	20	2	18.3	
Total Eclipse begins	20	3	19.6	
Middle of the Eclipse	20	4	8.5	
Total Eclipse ends	20	4	57.4	
Moon leaves Umbra	20	5	58.5	
Moon leaves Penumbra	20	7	1.5	

Greenwich Mean Time.

Contacts of Umbra with Moon's Lumb.	Angles of Position from the North Point.	The Moon being in the Zenith in Longitude from Greenwich.	and in Latitude.
First	97° to E.	147° 56' E.	11° 21' N.
Last	67 to W.	94 47 E.	10 48 N.

Magnitude of the Eclipse = 1.605 (Moon's diameter = 1.0).

II.—*A Partial Eclipse of the Sun, March 5, 1924, invisible at Greenwich.*

ELEMENTS OF THE ECLIPSE.

Greenwich Mean Time of ϕ in Right Ascension, March 5^d 3^h 1^m 28^s.1.

									h	m	s
Sun and Moon's Right Ascension	-	-	-	-	-	-	-	-	23	3	57.23
Hourly Motions	-	-	-	-	-	-	-	-	9 ^s .29	and	124 ^s .87
Sun's Declination	-	-	-	-	-	-	-	-	5	59	40.6
Hourly Motion	-	-	-	-	-	-	-	-	+	0	58.0
Moon's Declination	-	-	-	-	-	-	-	-	7	11	50.4
Hourly Motion	-	-	-	-	-	-	-	-	+	9	48.1
Sun's Equatorial Horizontal Parallax	-	-	-	-	-	-	-	-			8.9
Sun's True Semidiameter	-	-	-	-	-	-	-	-	16		7.1
Moon's Equatorial Horizontal Parallax	-	-	-	-	-	-	-	-	56		32.2
Moon's True Semidiameter	-	-	-	-	-	-	-	-	15		23.6

CIRCUMSTANCES OF THE ECLIPSE.

		Greenwich Mean Time.	Longitude from Greenwich.	Latitude.
		d h m		
Eclipse begins	-	March 5 1 55.4	131° 14' W.	68° 14' S.
Greatest Eclipse	-	„ 5 3 43.9	55 47 E.	72 2 S.
Eclipse ends	-	„ 5 5 32.8	13 50 E.	34 36 S.

Magnitude of Greatest Eclipse = 0.582 (Sun's diameter = 1.0).

At CAPE OF GOOD HOPE, a Partial Eclipse is partly visible, Magnitude 0.19.

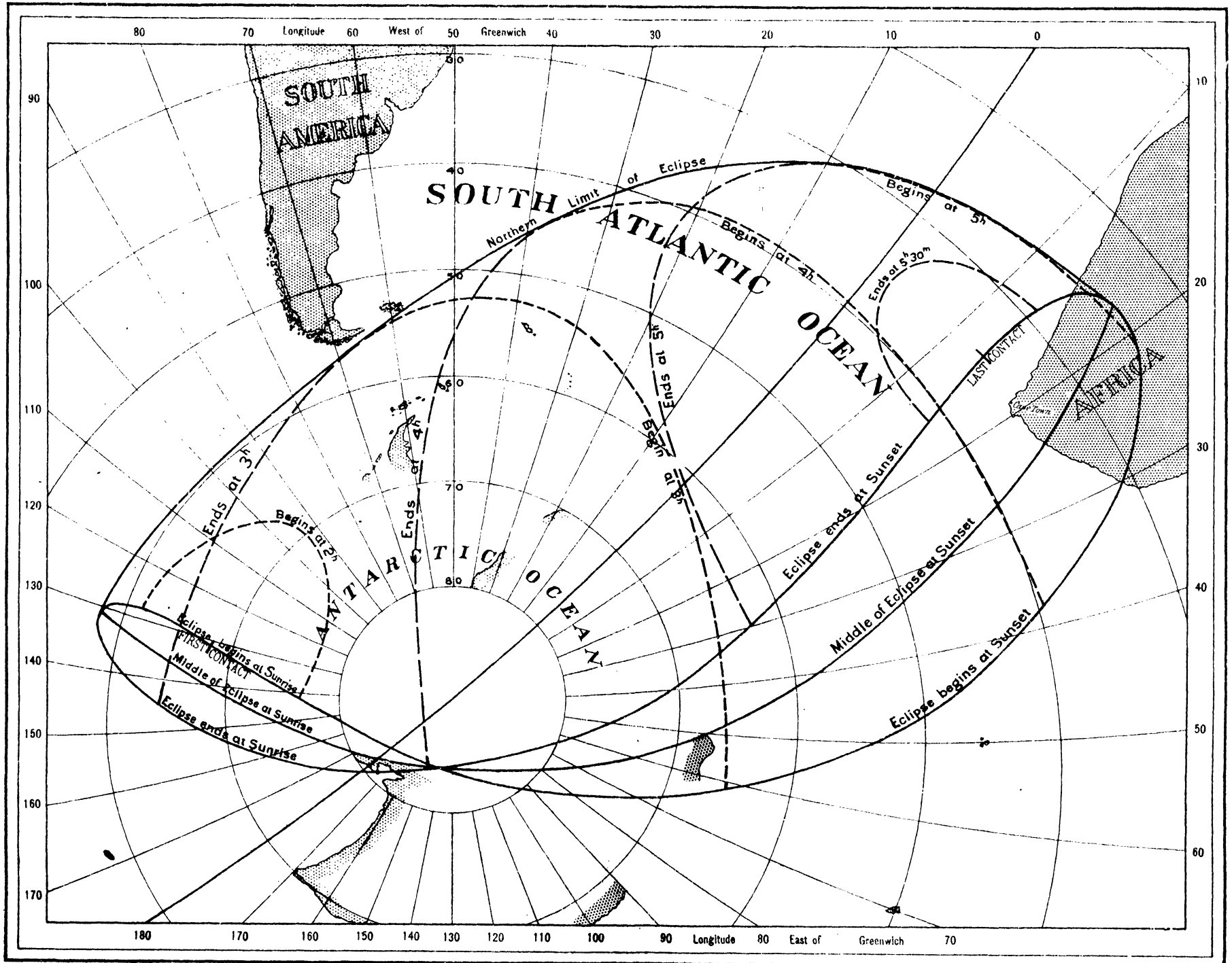
			d	h	m	
Begins	-	-	March	5	4	20
Greatest Phase	-	-	„	5	4	57

} Greenwich Mean Time.

Angle from North Point of First Contact - - - - - 196°.

Angle from Vertex of First Contact - - - - - 73°.

PARTIAL ECLIPSE OF MARCH 5, 1924.



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Note:- The hours of beginning and ending are expressed in Greenwich Mean Time.

ECLIPSES, 1924.

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BESSELIAN ELEMENTS OF THE PARTIAL ECLIPSE OF THE SUN, MARCH 5, 1924.

Greenwich Mean Time.	Co-ordinates of Centre of Shadow on Fundamental Plane.		Direction of Axis of Shadow.			Radius of Penumbra on Fundamental Plane.
	<i>x</i>	<i>y</i>	Log. sin <i>d</i>	Log. cos <i>d</i>	μ	<i>l</i> ₁
h m 1 50	-0.60565	-1.46561	-9.01997	+9.99761	24 35.2	+0.55863
2 0	-0.52091	-1.43962	-9.01978	+9.99761	27 5.2	+0.55865
10	0.43616	1.41362	9.01959	9.99761	29 35.3	0.55868
20	0.35141	1.38762	9.01940	9.99761	32 5.3	0.55870
30	0.26667	1.36161	9.01921	9.99761	34 35.3	0.55873
40	0.18193	1.33559	9.01902	9.99762	37 5.4	0.55875
50	0.09719	1.30958	9.01883	9.99762	39 35.4	0.55877
3 0	-0.01245	-1.28355	-9.01864	+9.99762	42 5.4	+0.55879
10	+0.07229	1.25753	9.01846	9.99762	44 35.5	0.55881
20	0.15703	1.23149	9.01827	9.99762	47 5.5	0.55883
30	0.24176	1.20546	9.01808	9.99763	49 35.5	0.55885
40	0.32649	1.17942	9.01789	9.99763	52 5.6	0.55887
50	0.41122	1.15337	9.01770	9.99763	54 35.6	0.55889
4 0	+0.49595	-1.12732	-9.01751	+9.99763	57 5.7	+0.55891
10	0.58068	1.10127	9.01732	9.99763	59 35.7	0.55893
20	0.66540	1.07521	9.01713	9.99764	62 5.7	0.55895
30	0.75012	1.04915	9.01694	9.99764	64 35.8	0.55896
40	0.83484	1.02308	9.01675	9.99764	67 5.8	0.55898
50	0.91955	0.99701	9.01656	9.99764	69 35.8	0.55899
5 0	+1.00426	-0.97094	-9.01637	+9.99765	72 5.9	+0.55901
10	1.08897	0.94486	9.01618	9.99765	74 35.9	0.55902
20	1.17367	0.91878	9.01599	9.99765	77 5.9	0.55903
30	1.25837	0.89269	9.01580	9.99765	79 36.0	0.55905
40	+1.34307	-0.86660	-9.01561	+9.99765	82 6.0	+0.55906

Greenwich Mean Time.	Log <i>x'</i> for 1 Minute.	Log <i>y'</i> for 1 Minute.	Log μ' for 1 Minute.	Log. Tangent of Angle of Cone.
				Penumbra.
h m				
1 0	+7.9281	+7.4144	+1.1762	+7.67329
2 0	7.9281	7.4149	1.1762	7.67329
3 0	7.9281	7.4154	1.1762	7.67328
4 0	7.9280	7.4158	1.1762	7.67328
5 0	7.9279	7.4162	1.1762	7.67328
6 0	+7.9278	+7.4166	+1.1762	+7.67327

ECLIPSES, 1924.

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BESSELIAN ELEMENTS OF THE PARTIAL ECLIPSE OF THE SUN, JULY 31, 1924.

Greenwich Mean Time.	Co-ordinates of Centre of Shadow on Fundamental Plane.		Direction of Axis of Shadow.			Radius of Penumbra on Fundamental Plane.
	<i>x</i>	<i>y</i>	Log. sin <i>d</i>	Log. cos <i>d</i>	μ	<i>l</i> ₁
h m 6 50	-0.81943	-1.32941	+9.49495	+9.97767	100° 56.8	+0.55822
7 0	-0.73378	-1.34368	+9.49491	+9.97768	103 26.8	+0.55821
10	0.64812	1.35795	9.49487	9.97768	105 56.9	0.55820
20	0.56247	1.37223	9.49483	9.97769	108 26.9	0.55819
30	0.47681	1.38651	9.49480	9.97769	110 56.9	0.55817
40	0.39116	1.40080	9.49476	9.97770	113 26.9	0.55816
50	0.30550	1.41508	9.49472	9.97770	115 56.9	0.55814
8 0	-0.21984	-1.42937	+9.49468	+9.97770	118 27.0	+0.55813
10	0.13419	1.44367	9.49464	9.97771	120 57.0	0.55811
20	-0.04853	1.45796	9.49460	9.97771	123 27.0	0.55809
30	+0.03712	1.47226	9.49456	9.97772	125 57.0	0.55807
40	0.12278	1.48656	9.49452	9.97772	128 27.0	0.55806
50	0.20843	1.50086	9.49448	9.97773	130 57.0	0.55804
9 0	+0.29408	-1.51517	+9.49444	+9.97773	133 27.1	+0.55802
10	+0.37973	-1.52947	+9.49441	+9.97773	135 57.1	+0.55800

Greenwich Mean Time.	Log. <i>x'</i> for 1 Minute.	Log. <i>y'</i> for 1 Minute.	Log. μ' for 1 Minute.	Log. Tangent of Angle of Cone.
				Penumbra.
h m 6 0	+7.9327	-7.1537	+1.1761	+7.66344
7 0	7.9327	7.1545	1.1761	7.66344
8 0	7.9328	7.1551	1.1761	7.66345
9 0	7.9327	7.1555	1.1761	7.66345
10 0	+7.9327	-7.1559	+1.1761	+7.66345

IV.—*A Total Eclipse of the Moon, August 14, 1924, partly visible at Greenwich; the beginning visible generally in the western part of the Pacific Ocean, Australia, Asia, the Indian Ocean, eastern and central Europe and Africa, except the northwestern part; the ending visible generally in central and western Asia, western Australia, the Indian Ocean, Europe, Africa, the Atlantic Ocean, and eastern and central South America.*

ELEMENTS OF THE ECLIPSE.

Greenwich Mean Time of \oslash in Right Ascension, August 14^d 8^h 22^m 59^s.1.

	h	m	s
Sun's Right Ascension - - - - -	9	36	23.50
Hourly Motion - - - - -			9.38
Moon's Right Ascension - - - - -	21	36	23.50
Hourly Motion - - - - -			142.18
Sun's Declination - - - - -	+14	16	10.3
Hourly Motion - - - - -		— 0	46.4
Moon's Declination - - - - -	— 14	9	2.8
Hourly Motion - - - - -		+ 8	17.2
Sun's Equatorial Horizontal Parallax - - - - -			8.7
Sun's True Semidiameter - - - - -			15 47.6
Moon's Equatorial Horizontal Parallax - - - - -			59 6.3
Moon's True Semidiameter - - - - -			16 5.5

CIRCUMSTANCES OF THE ECLIPSE.

	d	h	m	
Moon enters Penumbra - - - Aug.	14	5	32.5	} Greenwich Mean Time.
Moon enters Umbra - - - - -	14	6	31.3	
Total Eclipse begins - - - - -	14	7	30.6	
Middle of the Eclipse - - - - -	14	8	20.1	
Total Eclipse ends - - - - -	14	9	9.4	
Moon leaves Umbra - - - - -	14	10	8.6	
Moon leaves Penumbra - - - - -	14	11	7.3	

Contacts of Umbra
with Moon's Lumb.

Angles of Position from
the North Point.

The Moon being in the Zenith
in Longitude
from Greenwich. and in Latitude.

First

84° to E.

82° 16' E.

14° 24' S.

Last

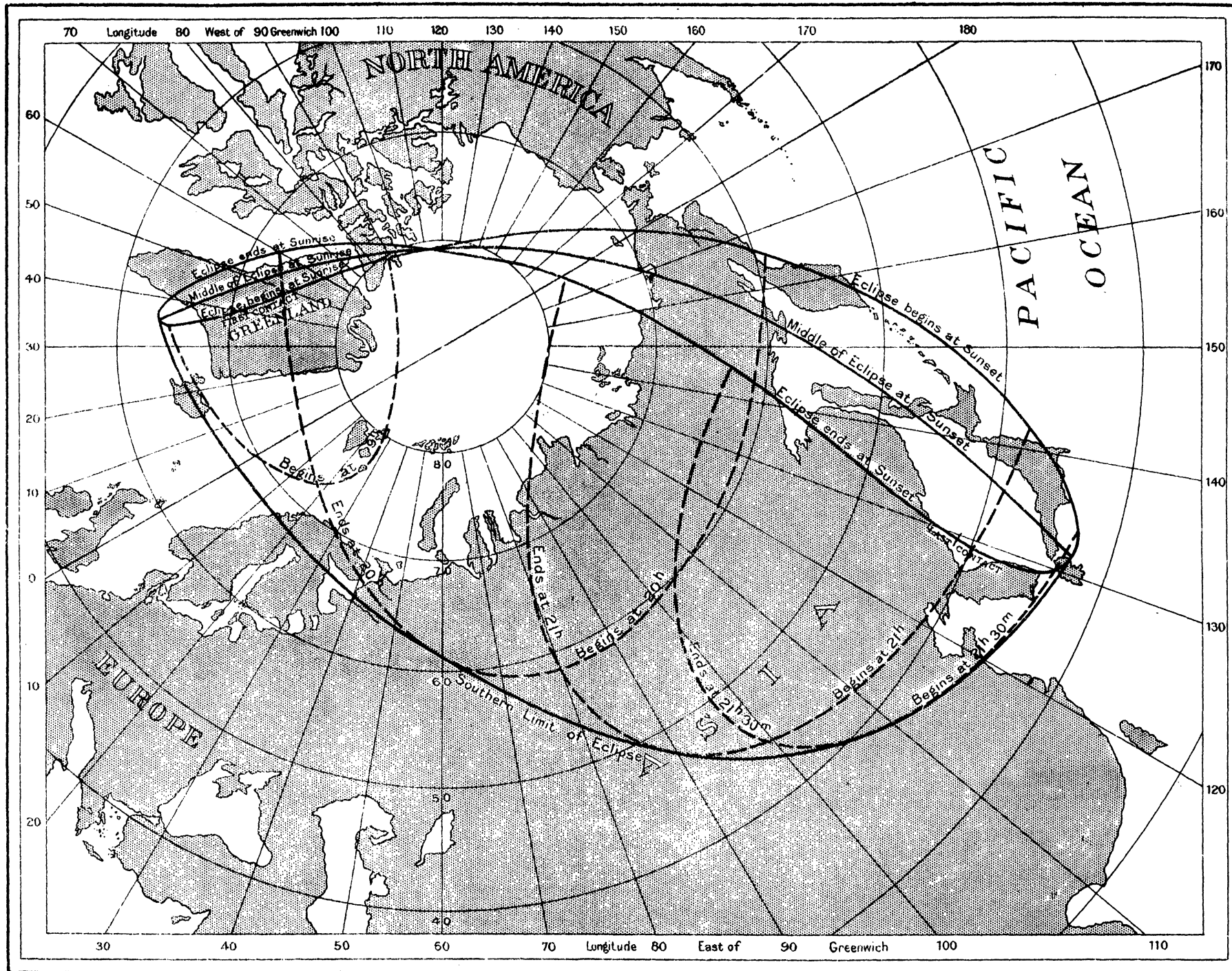
110 to W.

29 56 E.

13 54 S.

Magnitude of the Eclipse = 1.659 (Moon's diameter = 1.0).

PARTIAL ECLIPSE OF AUGUST 29, 1924.



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Note - The hours of beginning and ending are expressed in Greenwich Mean Time.

V.—*A Partial Eclipse of the Sun, August 29, 1924, invisible at Greenwich.*

ELEMENTS OF THE ECLIPSE.

Greenwich Mean Time of \odot in Right Ascension, August 29^d 19^h 39^m 48^s.8

Sun and Moon's R.A.	-	-	-	-	-	-	-	10 ^h 33 ^m 31 ^s .08
Hourly Motions	-	-	-	-	-	-	-	9 ^s .10 and 127 ^s .93
Sun's Declination	-	-	-	-	-	-	-	+ 9° 4' 45".9
Hourly Motion	-	-	-	-	-	-	-	-0 53.7
Moon's Declination	-	-	-	-	-	-	-	+10 22 15.0
Hourly Motion	-	-	-	-	-	-	-	-9 22.2
Sun's Equatorial Horizontal Parallax	-	-	-	-	-	-	-	8.7
Sun's True Semidiameter	-	-	-	-	-	-	-	15 50.6
Moon's Equatorial Horizontal Parallax	-	-	-	-	-	-	-	56 50.6
Moon's True Semidiameter	-	-	-	-	-	-	-	15 28.6

CIRCUMSTANCES OF THE ECLIPSE.

	Greenwich Mean Time.	Longitude from Greenwich.	Latitude.
	d h m		
Eclipse begins	- Aug. 29 18 50.4	41° 35' W.	71° 49' N.
Greatest Eclipse	- „ 29 20 22.5	173 5 E.	71 32 N.
Eclipse ends	- „ 29 21 55.0	129 23 E.	41 5 N.

Magnitude of Greatest Eclipse=0.426 (Sun's diameter=1.0).

BESSELIAN ELEMENTS OF THE PARTIAL ECLIPSE OF THE SUN,
AUGUST 29, 1924.

Greenwich Mean Time.	Co-ordinates of Centre of Shadow on Fundamental Plane.		Direction of Axis of Shadow.			Radius of Penumbra on Fundamental Plane.
	x	y	Log. sin d .	Log. cos d .	μ	l_1
h m 18 50	-0.42791	+1.49104	+9.19853	+9.99451	282° 20' 3	+0.55244
19 0	-0.34201	+1.46607	+9.19842	+9.99452	284 50.3	+0.55243
10	0.25611	1.44109	9.19830	9.99452	287 20.4	0.55241
20	0.17021	1.41610	9.19819	9.99452	289 50.4	0.55240
30	-0.08430	1.39111	9.19807	9.99452	292 20.5	0.55238
40	+0.00160	1.36610	9.19796	9.99453	294 50.5	0.55237
50	0.08751	1.34109	9.19784	9.99453	297 20.6	0.55235
20 0	+0.17341	+1.31608	+9.19773	+9.99453	299 50.6	+0.55233
10	0.25932	1.29106	9.19761	9.99454	302 20.7	0.55231
20	0.34522	1.26603	9.19750	9.99454	304 50.7	0.55229
30	0.43113	1.24099	9.19738	9.99454	307 20.7	0.55227
40	0.51703	1.21594	9.19727	9.99455	309 50.8	0.55225
50	0.60293	1.19089	9.19715	9.99455	312 20.8	0.55223
21 0	+0.68883	+1.16583	+9.19704	+9.99455	314 50.9	+0.55221
10	0.77473	1.14077	9.19692	9.99456	317 20.9	0.55219
20	0.86063	1.11569	9.19681	9.99456	319 51.0	0.55217
30	0.94652	1.09061	9.19669	9.99456	322 21.0	0.55215
40	1.03241	1.06552	9.19658	9.99456	324 51.1	0.55212
50	1.11830	1.04043	9.19646	9.99457	327 21.1	0.55210
22 0	+1.20419	+1.01533	+9.19634	+9.99457	329 51.1	+0.55207

Greenwich Mean Time.	Log. x' for 1 Minute.	Log. y' for 1 Minute.	Log. μ' for 1 Minute.	Log. Tangent of Angle of Cone.
				Penumbra.
h m				
18 0	+7.9339	-7.3968	+1.1762	+7.66578
19 0	7.9340	7.3975	1.1762	7.66578
20 0	7.9340	7.3983	1.1762	7.66579
21 0	7.9340	7.3991	1.1762	7.66579
22 0	+7.9339	-7.3998	+1.1762	+7.66579

TRANSIT OF MERCURY, 1924. 469

A Transit of Mercury over the Sun's Disk, May 7, 1924, partly visible at Greenwich. The ingress visible generally in the western part of the Atlantic Ocean, North America, the northern and western parts of South America, the Pacific Ocean, eastern Asia, and eastern Australia; the egress visible generally in the extreme northwestern part of North America, the central and western parts of the Pacific Ocean, Asia, Australia, the Indian Ocean, Europe, and Africa except the extreme northwestern part.

ELEMENTS OF THE TRANSIT.

Greenwich Mean Time of \odot in Right Ascension, May 7^d 13^h 30^m 47^s.0

Sun and Mercury's Right Ascension	2 ^h 58 ^m 51 ^s .35
Hourly Motions	+9 ^s .70 and -5 ^s .28
Sun's Declination	+16° 58' 9".4
Hourly Motion	+0 41.0
Mercury's Declination	+16 59 44.4
Hourly Motion	-1 7.7
Sun's Equatorial Horizontal Parallax	8.72
Sun's True Semidiameter	15 50.52
Mercury's Equatorial Horizontal Parallax	15.78
Mercury's True Semidiameter	5.99

GREENWICH MEAN TIME OF THE GEOCENTRIC PHASES.

	d	h	m	s
Ingress, exterior contact	May 7	9	44	4.4
Ingress, interior contact		7	9	47 3.9
Least distance of centers, 1' 24".8		7	13	41 27.7
Egress, interior contact		7	17	35 41.2
Egress, exterior contact		7	17	38 40.9

CIRCUMSTANCES OF THE TRANSIT.

	Angles of Position from the North Point.	Mercury being in the Zenith in Longitude from Greenwich.	and in Latitude.
Ingress, exterior contact	- 58° 5' to E.	146° 40' W.	17° 4' N.
Ingress, interior contact	- 58 1 to E.	147 25 W.	17 4 N.
Least distance of centers	-	153 44 E.	17 0 N.
Egress, interior contact	- 111 41 to W.	94 56 E.	16 55 N.
Egress, exterior contact	- 111 44 to W.	94 11 E.	16 55 N.

The Greenwich Mean Times of the four contacts for any point on the surface of the Earth may be computed from the four following formulæ, respectively, in which ρ denotes the radius of the earth at that point, ϕ' the geocentric latitude, and λ the longitude west from Greenwich. The numbers in brackets are the logarithms of seconds of time.

	h	m	s
For first external contact, T =	9	44	4.4 - [1.7264] $\rho \sin \phi'$ - [1.9612] $\rho \cos \phi' \cos (45^\circ 58' 1 - \lambda)$
For first internal contact, T =	9	47	3.9 - [1.7272] $\rho \sin \phi'$ - [1.9610] $\rho \cos \phi' \cos (46^\circ 41' 9 - \lambda)$
For last internal contact, T =	17	35	41.2 - [1.5764] $\rho \sin \phi'$ + [1.9961] $\rho \cos \phi' \cos (348^\circ 47' 3 - \lambda)$
For last external contact, T =	17	38	40.9 - [1.5776] $\rho \sin \phi'$ + [1.9958] $\rho \cos \phi' \cos (349^\circ 31' 4 - \lambda)$

470 MEAN PLACES OF OCCULTATION STARS, 1924.

Name of Star.		Magni- tude.	Right Ascension for 1924.0.	Annual Proper Motion.	Declination for 1924.0.	Annual Proper Motion.
			h m s	s		
4	Ceti . . .	6.3	0 3 50.500	+0.0018	- 2 58 17.97	+0.009
5	Ceti . . .	6.3	0 4 18.592	+0.0003	2 52 13.08	+0.014
54 B.	Ceti . . .	6.3	0 20 36.625	-0.0024	2 38 22.10	-0.051
10	Ceti . . .	6.4	0 22 43.562	+0.0056	0 28 12.62	+0.011
14	Ceti . . .	5.4	0 31 38.693	+0.0098	- 0 55 22.63	-0.059
26	Ceti . . .	6.0	0 59 54.279	+0.0081	+ 0 57 35.51	-0.037
33	Ceti . . .	6.1	1 6 38.788	-0.0010	2 2 29.84	-0.006
f	Piscium . . .	5.3	1 13 52.639	-0.0033	3 12 52.60	-0.025
117 G.	Piscium . . .	6.5	1 22 57.749	..	3 8 30.21	..
μ	Piscium . . .	5.0	1 26 12.072	+0.0199	5 45 10.38	-0.027
ν	Piscium . . .	4.7	1 37 28.459	-0.0015	+ 5 6 12.84	+0.003
39 B.	Arietis . . .	6.5	2 0 50.386	+0.0025	7 22 17.30	-0.032
64	Ceti . . .	5.8	2 7 20.203	-0.0092	8 12 53.19	-0.107
ξ ¹	Ceti . . .	4.5	2 8 58.153	-0.0012	8 29 26.72	-0.016
ξ	Arietis . . .	5.5	2 20 44.405	+0.0006	10 16 1.40	-0.022
25	Arietis . . .	6.5	2 23 20.698	-0.0195	+ 9 51 42.44	-0.200
ξ ²	Ceti . . .	4.3	2 24 6.927	+0.0025	8 7 12.69	-0.007
389 B.	Ceti . . .	6.3	2 25 31.692	-0.0003	9 13 37.40	-0.003
85	Ceti . . .	6.3	2 38 23.202	-0.0026	10 25 7.07	-0.012
μ	Ceti . . .	4.4	2 40 49.834	+0.0188	9 47 39.15	-0.025
147 B.	Arietis . . .	5.8	3 2 13.239	+0.0016	+12 53 41.86	-0.072
8 B.	Tauri . . .	6.2	3 19 59.001	..	12 21 39.98	..
f	Tauri . . .	4.3	3 26 40.472	+0.0016	12 40 38.24	+0.002
30 B.	Tauri . . .	6.4	3 33 31.693	+0.0015	15 10 56.28	-0.003
179 B.	Tauri . . .	5.9	4 3 23.780	+0.0104	14 57 37.12	-0.044
193 B.	Tauri . . .	6.2	4 8 9.496	+0.0005	+17 4 59.29	-0.014
48	Tauri . . .	6.3	4 11 27.278	+0.0085	15 12 42.13	-0.024
γ	Tauri . . .	3.9	4 15 27.963	+0.0083	15 26 43.05	-0.026
58	Tauri . . .	5.4	4 16 17.535	+0.0071	14 54 52.20	-0.017
δ	Tauri . . .	3.9	4 18 32.958	+0.0075	17 21 55.71	-0.030
63	Tauri . . .	5.7	4 19 3.262	+0.0074	+16 36 3.87	-0.027
64	Tauri . . .	4.9	4 19 42.767	+0.0084	17 16 8.94	-0.040
68	Tauri . . .	4.3	4 21 5.379	+0.0078	17 45 18.94	-0.031
70	Tauri . . .	6.4	4 21 16.849	+0.0073	15 46 6.59	-0.026
71	Tauri . . .	4.6	4 22 0.761	+0.0075	15 26 49.25	-0.020
75	Tauri . . .	5.2	4 24 5.549	+0.0002	+16 11 27.21	+0.020
θ ¹	Tauri . . .	4.2	4 24 13.811	+0.0071	15 47 41.10	-0.023
θ ²	Tauri . . .	3.6	4 24 19.270	+0.0078	15 42 13.03	-0.020
80	Tauri . . .	5.8	4 25 48.386	+0.0059	15 28 23.98	-0.011
264 B.	Tauri . . .	4.8	4 26 12.534	+0.0084	16 1 47.56	-0.026
81	Tauri . . .	5.5	4 26 18.629	+0.0069	+15 31 39.71	-0.032
85	Tauri . . .	6.0	4 27 31.162	+0.0070	15 41 23.45	-0.020
119 H ¹ .	Tauri . . .	6.2	4 29 8.915	+0.0025	17 51 26.68	-0.031
275 B.	Tauri . . .	6.5	4 29 17.026	+0.0010	16 9 53.95	+0.019
α	Tauri (<i>Aldebaran</i>)	1.1	4 31 33.442	+0.0047	16 21 27.91	-0.189
89	Tauri . . .	5.8	4 33 48.317	+0.0072	+15 52 56.09	-0.023
σ ¹	Tauri . . .	5.2	4 34 48.654	+0.0019	15 39 5.54	-0.065
σ ²	Tauri . . .	4.9	4 34 55.552	+0.0062	15 46 7.05	-0.019
302 B.	Tauri . . .	6.1	4 41 50.451	+0.0053	+18 35 54.74	-0.067

MEAN PLACES OF OCCULTATION STARS, 1924. 471

Name of Star.		Magni- tude.	Right Ascension for 1924.0.	Annual Proper Motion.	Declination for 1924.0.	Annual Proper Motion.
			h m s	s		
i	Tauri . . .	5.1	4 46 55.567	+0.0059	+18° 42' 42".47	-0.035
318	B. Tauri . . .	5.7	4 52 58.841	-0.0008	17 2 8.60	-0.011
m	Tauri . . .	5.0	5 2 57.394	+0.0380	18 32 39.97	+0.025
353	B. Tauri . . .	6.5	5 16 27.266	+0.0025	19 44 19.34	-0.024
111	Tauri . . .	5.1	5 19 59.240	+0.0168	17 18 51.01	-0.010
115	Tauri . . .	5.3	5 22 44.068	+0.0016	+17 53 53.95	-0.021
117	Tauri . . .	6.0	5 23 36.873	+0.0017	17 10 36.31	-0.078
119	Tauri . . .	4.9	5 27 45.390	+0.0007	18 32 20.58	-0.004
120	Tauri . . .	5.6	5 29 4.376	+0.0011	18 29 14.62	+0.001
130	Tauri . . .	5.6	5 43 0.319	+0.0004	17 42 6.90	-0.009
	B. D. +19° 1110 .	6.0	5 47 53.205	-0.0008	+19 50 57.74	-0.031
χ ¹	Orionis . . .	4.5	5 49 52.925	-0.0126	20 15 48.31	-0.085
57	Orionis . . .	5.8	5 50 26.708	+0.0003	19 44 9.81	-0.013
64	Orionis . . .	5.1	5 58 57.459	+0.0014	19 41 35.21	-0.021
χ ²	Orionis . . .	4.7	5 59 24.401	+0.0011	20 8 29.73	-0.003
68	Orionis . . .	5.7	6 7 31.303	+0.0012	+19 48 31.71	-0.013
19	B. Geminorum . . .	6.2	6 9 5.411	+0.0027	18 42 5.00	-0.042
124	H. Orionis . . .	5.7	6 10 2.291	+0.0010	17 55 44.03	-0.045
71	Orionis . . .	5.1	6 10 22.599	-0.0062	19 11 0.64	-0.194
292	B. Orionis . . .	6.5	6 16 59.705	+0.0006	17 48 1.38	..
15	Geminorum . . .	6.5	6 23 14.868	-0.0015	+20 50 14.25	-0.054
16	Geminorum . . .	6.2	6 23 25.513	-0.0019	20 32 35.18	-0.005
ν	Geminorum . . .	4.1	6 24 27.045	-0.0005	20 15 41.83	-0.016
74	B. Geminorum . . .	6.2	6 42 57.036	+0.0002	18 16 37.23	-0.056
110	B. Geminorum . . .	6.2	6 58 0.318	..	17 51 52.26	..
ζ	Geminorum (<i>var.</i>) . . .	3.7	6 59 36.170	-0.0002	+20 40 59.04	-0.007
56	Geminorum . . .	5.2	7 17 27.865	-0.0044	20 35 18.29	-0.025
61	Geminorum . . .	5.8	7 22 27.645	-0.0002	20 24 38.03	-0.023
162	B. Geminorum . . .	5.7	7 27 25.534	+0.0018	17 14 57.60	-0.064
f	Geminorum . . .	5.3	7 35 5.337	-0.0002	17 50 56.22	+0.004
79	Geminorum . . .	6.3	7 40 41.738	-0.0013	+20 29 58.78	-0.012
g	Geminorum . . .	5.0	7 41 43.583	-0.0048	18 41 47.99	-0.063
209	B. Geminorum . . .	6.2	7 47 31.707	-0.0029	19 31 15.30	-0.030
85	Geminorum . . .	5.2	7 51 13.922	-0.0011	20 5 8.78	-0.043
2	B. Cancri . . .	6.0	7 54 11.470	+0.0003	16 43 28.90	+0.004
217	B. Geminorum . . .	6.3	7 56 22.354	-0.0018	+20 1 32.67	-0.007
3	Cancri . . .	5.7	7 56 26.168	-0.0001	17 31 4.90	-0.010
5	Cancri . . .	5.9	7 57 10.524	+0.0004	16 39 57.88	0.000
10	H. Cancri . . .	6.1	8 0 21.876	-0.0020	19 3 28.04	-0.046
ζ	Cancri (<i>mean</i>) . . .	4.7	8 7 51.349	+0.0051	17 52 41.67	-0.129
d ¹	Cancri . . .	5.9	8 19 0.885	-0.0038	+18 34 38.20	-0.031
d ²	Cancri . . .	6.2	8 21 31.934	-0.0132	17 17 52.12	-0.153
θ	Cancri . . .	5.5	8 27 15.910	-0.0039	18 21 7.74	-0.068
90	B. Cancri . . .	6.3	8 31 52.143	+0.0006	15 34 38.65	-0.027
δ	Cancri . . .	4.2	8 40 22.148	-0.0009	18 26 4.51	-0.240
54	Cancri . . .	6.3	8 46 47.663	-0.0075	+15 38 0.75	+0.076
X	Cancri (<i>var.</i>) . . .	6.2	8 51 6.232	+0.0009	17 31 17.62	+0.013
o ¹	Cancri . . .	5.1	8 53 0.770	+0.0041	15 36 54.69	+0.022
o ²	Cancri . . .	5.7	8 53 20.693	+0.0043	+15 52 26.81	+0.023

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Name of Star.		Magni- tude.	Right Ascension for 1924.0.			Annual Proper Motion.	Declination for 1924.0.	Annual Proper Motion.	
			h	m	s	s	°	′	″
81	Canceri . . .	6.4	9 8	8.2	12	-0.0359	+15 18	11.60	+0.244
π	Canceri . . .	5.6	9 11	2.308		-0.0022	15 15	27.64	-0.008
227 B.	Canceri . . .	6.4	9 17	3.880		..	15 41	40.62	..
12 B.	Leonis . . .	6.3	9 21	20.204		-0.0042	16 54	51.91	-0.014
7	Leonis . . .	6.2	9 31	43.886		-0.0021	14 43	10.30	-0.002
11	Leonis . . .	6.5	9 33	52.595		-0.0047	+14 41	29.67	-0.079
ψ	Leonis . . .	5.6	9 39	35.717		-0.0002	14 22	12.00	-0.009
18	Leonis . . .	5.8	9 42	17.844		-0.0006	12 9	38.68	+0.008
19	Leonis . . .	6.4	9 43	20.848		-0.0049	11 55	13.69	+0.008
R	Leonis (<i>var.</i>) . . .	4.6	9 43	28.360		-0.0005	11 46	55.79	-0.040
ν	Leonis . . .	5.0	9 54	8.136		-0.0028	+12 48	28.14	-0.027
A	Leonis . . .	4.6	10 3	52.401		-0.0057	10 22	14.34	-0.067
a	Leonis (<i>Regulus</i>) . . .	1.3	10 4	19.604		-0.0169	12 20	21.22	-0.002
34	Leonis . . .	6.4	10 7	33.201		+0.0037	13 43	51.49	-0.036
44	Leonis . . .	5.9	10 21	15.073		+0.0018	9 10	18.14	-0.041
45	Leonis . . .	5.8	10 23	38.271		+0.0011	+10 9	1.45	-0.003
q	Leonis . . .	3.8	10 28	48.687		-0.0004	9 41	53.60	-0.003
49	Leonis . . .	5.7	10 31	3.059		-0.0030	9 2	36.56	-0.010
l	Leonis . . .	5.3	10 45	15.878		+0.0001	10 56	51.55	-0.033
c	Leonis . . .	5.1	10 56	48.511		-0.0035	6 30	36.58	-0.025
χ	Leonis . . .	4.7	11 1	5.876		-0.0234	+ 7 44	50.42	-0.040
308 B.	Leonis . . .	5.8	11 10	4.965		+0.0032	8 28	36.21	-0.125
σ	Leonis . . .	4.1	11 17	13.124		-0.0062	6 26	46.15	-0.013
b	Virginis . . .	5.2	11 56	3.396		-0.0008	4 4	42.79	-0.012
10	Virginis . . .	6.2	12 5	47.672		+0.0034	+ 2 19	28.77	-0.181
γ	Virginis (<i>mean</i>) . . .	2.9	12 37	48.570		-0.0365	- 1 1	58.02	+0.004
k	Virginis . . .	5.7	12 55	44.531		-0.0027	3 24	8.50	-0.004
46	Virginis . . .	6.1	12 56	41.001		-0.0026	2 57	36.37	+0.046
48	Virginis . . .	6.5	12 59	59.351		-0.0033	3 15	15.96	-0.028
65	Virginis . . .	6.0	13 19	22.477		-0.0016	4 31	38.07	-0.016
66	Virginis . . .	5.7	13 20	35.734		+0.0105	- 4 46	1.93	-0.030
72	Virginis . . .	6.1	13 26	27.669		+0.0023	6 4	42.21	+0.014
l	Virginis . . .	4.8	13 28	0.602		-0.0069	5 51	49.77	-0.045
80	Virginis . . .	5.6	13 31	33.935		+0.0010	5 0	34.28	+0.075
566 B.	Virginis . . .	6.4	13 39	56.786		-0.0049	5 6	59.77	-0.025
88	Virginis . . .	6.5	13 44	19.265		-0.0032	- 6 27	31.71	-0.033
508 B.	Virginis . . .	6.1	13 50	58.853		-0.0121	7 41	7.88	-0.049
623 B.	Virginis . . .	6.5	14 0	19.879		-0.0026	8 53	34.53	+0.006
95	Virginis . . .	5.4	14 2	41.479		-0.0098	8 57	4.81	+0.011
235 G.	Virginis . . .	6.5	14 13	58.211		+0.0117	7 11	11.41	-0.232
13	Libræ . . .	5.7	14 50	15.079		-0.0048	- 11 35	20.88	-0.020
ξ^2	Libræ . . .	5.6	14 52	38.439		-0.0006	11 6	13.96	-0.001
17	Libræ . . .	6.4	14 54	6.095		-0.0019	10 51	1.48	-0.021
18	Libræ . . .	5.9	14 54	46.764		-0.0079	10 50	22.46	-0.077
130 B.	Libræ . . .	5.9	15 19	41.778		-0.0043	12 5	56.91	-0.038
γ	Libræ . . .	4.0	15 31	16.328		+0.0047	- 14 32	13.16	+0.007
190 B.	Libræ . . .	6.5	15 39	8.973		-0.0009	14 48	2.18	-0.115
η	Libræ . . .	5.5	15 39	47.669		-0.0028	15 25	54.70	-0.079
195 B.	Libræ . . .	6.2	15 47	23.582		-0.0010	- 13 54	18.16	+0.001

MEAN PLACES OF OCCULTATION STARS, 1924. 473

Name of Star.	Magni- tude.	Right Ascension for 1924.0.	Annual Proper Motion.	Declination for 1924.0.	Annual Proper Motion.
		h m s	s	° ′ ″	″
202 B. Libræ . . .	6.4	15 51 58.493	+0.0012	-14 10 37.57	-0.094
203 B. Libræ . . .	6.2	15 52 16.023	+0.0047	14 36 27.70	..
48 Libræ . . .	4.6	15 53 55.854	-0.0004	14 3 40.22	-0.026
49 Libræ . . .	5.4	15 56 3.574	-0.0434	16 18 37.61	-0.391
91 B. Scorpii . . .	6.1	16 11 33.926	..	14 39 35.09	..
98 B. Scorpii . . .	6.1	16 14 42.994	+0.0032	-14 41 20.79	-0.018
φ Ophiuchi . . .	4.4	16 26 47.164	-0.0039	16 26 52.86	-0.029
24 Scorpii . . .	5.0	16 37 10.489	-0.0017	17 35 46.56	-0.004
78 B. Ophiuchi . . .	6.5	16 51 38.544	+0.0062	16 41 11.25	+0.024
90 B. Ophiuchi . . .	6.5	16 55 18.531	-0.0047	18 7 53.37	-0.156
29 Ophiuchi . . .	6.4	16 57 24.380	-0.0024	-18 46 29.74	-0.020
125 B. Ophiuchi . . .	6.2	17 3 49.911	-0.0007	17 30 34.79	-0.049
164 B. Ophiuchi . . .	6.0	17 15 27.832	-0.0003	17 40 40.41	+0.001
192 B. Ophiuchi . . .	6.3	17 20 10.014	+0.0016	18 22 34.14	+0.009
305 B. Ophiuchi . . .	6.3	17 51 26.781	+0.0019	18 47 23.26	-0.003
16 G. Sagittarii . . .	6.4	17 55 28.872	+0.0016	-20 20 5.97	-0.025
39 G. Sagittarii . . .	6.3	18 6 44.410	-0.0027	19 51 29.26	-0.040
15 Sagittarii . . .	5.3	18 10 40.805	+0.0003	20 45 7.20	+0.006
16 Sagittarii . . .	5.9	18 10 41.664	+0.0005	20 24 42.81	-0.002
64 B. Sagittarii . . .	6.1	18 11 2.827	..	18 41 9.70	..
52 G. Sagittarii . . .	6.4	18 13 1.158	+0.0004	-18 29 31.43	-0.036
17 H. Sagittarii . . .	6.4	18 14 15.427	..	18 39 0.07	..
Y Sagittarii (var.) . . .	5.4	18 16 54.716	..	18 53 42.04	-0.001
21 Sagittarii . . .	5.0	18 20 49.435	0.0000	20 35 0.89	-0.024
85 B. Sagittarii . . .	6.0	18 23 30.398	-0.0006	17 50 51.35	+0.006
95 B. Sagittarii . . .	5.7	18 25 43.926	+0.0041	-18 46 40.73	-0.072
100 B. Sagittarii . . .	5.0	18 26 59.086	-0.0012	18 27 21.70	-0.026
121 B. Sagittarii . . .	5.9	18 34 21.543	-0.0056	21 6 56.99	-0.138
128 B. Sagittarii . . .	6.3	18 40 46.489	+0.0019	21 4 48.31	-0.039
29 Sagittarii . . .	5.3	18 45 9.588	+0.0005	20 24 44.67	+0.030
36 Sagittarii . . .	5.1	18 52 49.484	-0.0010	-20 45 25.28	-0.011
ξ Sagittarii . . .	3.7	18 53 11.781	+0.0023	21 12 28.47	-0.023
171 B. Sagittarii . . .	6.1	18 58 35.812	0.0000	19 21 25.25	-0.035
173 B. Sagittarii . . .	6.4	18 58 39.319	+0.0020	19 12 49.65	..
187 B. Sagittarii . . .	6.4	19 2 41.649	+0.0036	18 51 23.94	-0.056
190 B. Sagittarii . . .	5.4	19 3 48.839	+0.0001	-19 24 38.04	-0.003
π Sagittarii . . .	3.0	19 5 14.692	-0.0005	21 8 44.58	-0.036
195 B. Sagittarii . . .	6.3	19 5 19.295	+0.0019	19 55 27.89	-0.050
d Sagittarii . . .	5.0	19 13 11.332	-0.0015	19 5 22.06	-0.017
226 B. Sagittarii . . .	6.4	19 17 9.983	+0.0002	19 22 39.22	+0.009
ρ Sagittarii . . .	4.0	19 17 15.960	-0.0020	-17 59 29.70	+0.015
45 Sagittarii . . .	6.0	19 17 24.950	+0.0064	18 27 0.92	-0.082
266 B. Sagittarii . . .	6.1	19 32 0.285	+0.0003	19 1 18.74	-0.009
267 B. Sagittarii . . .	5.8	19 32 38.877	+0.0011	18 24 3.58	-0.002
f Sagittarii . . .	5.1	19 41 55.802	-0.0099	19 56 41.92	-0.088
57 Sagittarii . . .	6.0	19 47 47.124	+0.0001	-19 14 20.86	-0.057
σ Capricorni . . .	5.5	20 15 0.626	-0.0002	19 21 24.36	-0.006
π Capricorni . . .	5.2	20 22 58.364	+0.0004	-18 27 42.44	-0.002

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Name of Star.	Magni- tude.	Right Ascension for 1924.0.	Annual Proper Motion.	Declination for 1924.0.	Annual Proper Motion
		h m s	s	° ' "	"
31 B. Capricorni . . .	6.4	20 24 26.751	+0.0013	-15 59 37.91	+0.019
ρ Capricorni . . .	5.0	20 24 31.658	-0.0013	18 3 57.52	-0.020
o Capricorni . . .	5.6	20 25 32.621	+0.0012	18 50 8.73	-0.081
47 B. Capricorni . . .	6.2	20 31 14.334	+0.0055	16 47 16.77	-0.033
τ Capricorni . . .	5.2	20 35 1.503	+0.0006	15 13 20.20	-0.015
υ Capricorni . . .	5.3	20 35 43.527	-0.0018	-18 24 25.42	-0.007
61 B. Capricorni . . .	5.9	20 36 16.502	-0.0032	16 23 43.59	+0.082
81 B. Capricorni . . .	6.4	20 45 2.017	-0.0004	18 19 1.45	-0.019
19 Capricorni . . .	5.7	20 50 30.320	-0.0041	18 12 43.16	-0.013
94 B. Capricorni . . .	5.7	20 53 25.541	+0.0046	16 19 28.47	+0.030
95 B. Capricorni . . .	5.9	20 54 29.582	..	-14 46 38.60	..
21 Capricorni . . .	6.5	20 56 35.283	-0.0025	17 49 40.85	-0.002
θ Capricorni . . .	4.2	21 1 40.624	+0.0051	17 32 9.15	-0.066
114 B. Capricorni . . .	6.1	21 10 51.617	-0.0011	17 39 36.23	..
29 Capricorni . . .	5.5	21 11 32.590	+0.0016	15 29 17.46	+0.004
53 B. Aquarii . . .	6.5	21 11 49.950	+0.0004	-13 31 4.97	-0.039
ι Capricorni . . .	4.3	21 18 1.055	+0.0022	17 9 32.67	+0.004
18 Aquarii . . .	5.5	21 20 2.400	+0.0054	13 12 18.53	+0.007
42 Capricorni . . .	5.1	21 37 25.065	-0.0084	14 23 13.80	-0.302
44 Capricorni . . .	6.0	21 38 55.745	-0.0005	14 44 52.39	+0.024
45 Capricorni . . .	5.8	21 39 52.159	-0.0013	-15 5 54.71	-0.002
λ Capricorni . . .	5.5	21 42 26.742	+0.0015	11 43 1.60	-0.004
151 B. Capricorni . . .	6.1	21 45 34.711	-0.0009	13 4 39.64	+0.031
μ Capricorni . . .	5.2	21 49 9.248	+0.0204	13 54 37.42	+0.001
ι Aquarii . . .	4.4	22 2 20.056	+0.0022	14 14 20.66	-0.062
e Aquarii . . .	5.4	22 6 33.802	+0.0019	-11 56 21.05	+0.020
42 Aquarii . . .	5.5	22 12 44.046	+0.0010	13 12 39.62	+0.009
45 Aquarii . . .	6.1	22 14 56.136	+0.0051	13 41 9.53	-0.002
σ Aquarii . . .	4.9	22 26 37.627	0.0000	11 4 2.26	-0.026
58 Aquarii . . .	6.4	22 27 39.682	+0.0050	11 17 43.43	-0.032
167 G. Aquarii . . .	6.3	22 34 22.784	+0.0010	- 8 17 33.66	+0.012
213 B. Aquarii . . .	6.5	22 39 4.588	+0.0014	8 42 33.84	+0.031
70 Aquarii . . .	6.1	22 44 30.432	+0.0035	10 57 25.82	+0.010
λ Aquarii . . .	3.8	22 48 39.027	+0.0002	7 59 3.92	+0.035
78 Aquarii . . .	6.3	22 50 36.701	-0.0017	7 36 32.18	-0.029
81 Aquarii . . .	6.4	22 57 26.706	-0.0015	- 7 28 10.30	-0.001
82 Aquarii . . .	6.4	22 58 35.941	0.0000	6 58 56.81	-0.034
h Aquarii . . .	5.4	23 1 12.046	+0.0081	8 6 15.09	+0.016
φ Aquarii . . .	4.4	23 10 23.198	+0.0015	6 27 32.41	-0.194
χ Aquarii . . .	5.3	23 12 54.626	-0.0015	8 8 28.49	-0.014
96 Aquarii . . .	5.7	23 15 27.547	+0.0128	- 5 32 23.10	-0.010
317 B. Aquarii . . .	6.3	23 16 45.833	-0.0099	6 19 23.75	-0.065
337 B. Aquarii . . .	6.4	23 25 36.362	+0.0121	4 56 48.15	-0.218
342 B. Aquarii . . .	6.5	23 27 36.028	+0.0124	4 30 9.64	-0.172
20 Piscium . . .	5.6	23 44 2.148	+0.0064	3 11 3.30	+0.002
24 Piscium . . .	6.1	23 49 1.343	+0.0051	- 3 34 39.44	-0.048
27 Piscium . . .	5.1	23 54 46.935	-0.0034	3 58 39.24	-0.066
29 Piscium . . .	5.1	23 57 55.737	+0.0009	- 3 27 2.00	-0.012

ELEMENTS OF OCCULTATIONS, 1924. 475

JANUARY.

THE STAR'S				AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	P	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
95 Virginis	5.4	-0.87	+8.6	-8 56.9	1 0 33.9	+ 5 10.8	+1.0782	0.5732	-0.1789	+82	+29
13 Libræ	5.7	1.10	10.0	11 35.2	20 54.3	+ 0 47.0	+0.2576	0.5836	0.1603	+45	-22
ξ ² Libræ	5.6	1.12	9.9	11 6.1	21 54.5	+ 1 45.0	-0.3879	0.5841	0.1591	+ 9	-60
17 Libræ	6.4	1.13	9.8	10 50.9	22 31.3	+ 2 20.4	-0.7385	0.5845	0.1583	-10	-90
18 Libræ	5.9	1.13	9.8	10 50.2	22 48.3	+ 2 36.7	-0.7942	0.5846	0.1581	-14	-90
130 B. Libræ	5.9	-1.25	+10.3	-12 5.8	2 9 8.7	-11 26.1	-1.1018	0.5901	-0.1448	-37	-90
γ Libræ	4.0	1.30	11.0	14 32.0	13 53.2	- 6 52.4	+0.6574	0.5926	0.1380	+72	+ 1
190 B. Libræ	6.5	1.34	11.0	14 47.9	17 5.6	- 3 47.3	+0.4847	0.5943	0.1332	+58	- 9
η Libræ	5.5	1.34	11.2	15 25.7	17 21.3	- 3 32.2	+1.0783	0.5944	0.1328	+75	+30
195 B. Libræ	6.2	1.38	10.7	13 54.1	20 25.8	- 0 34.8	-0.8423	0.5960	0.1279	-20	-90
202 B. Libræ	6.4	-1.39	+10.8	-14 10.4	22 16.6	+ 1 11.7	-0.8050	0.5968	-0.1250	-18	-90
203 B. Libræ	6.2	1.40	10.9	14 36.3	22 23.9	+ 1 18.7	-0.3919	0.5969	0.1248	+ 6	-61
48 Libræ	4.6	1.40	10.7	14 3.5	23 3.8	+ 1 57.1	-1.0180	0.5972	0.1237	-33	-90
49 Libræ	5.4	1.42	11.2	16 18.4	23 55.1	+ 2 46.4	+1.1138	0.5977	0.1223	+74	+34
91 B. Scorpii	6.1	1.48	10.7	14 39.4	3 6 6.8	+ 8 43.7	-1.2518	0.6005	0.1116	-58	-89
φ Ophiuchi	4.4	-1.55	+10.8	-16 26.7	12 8.6	- 9 28.8	-0.1147	0.6030	-0.1005	+18	-43
24 Scorpii	5.0	1.59	10.8	17 35.6	16 14.0	- 5 33.0	+0.6304	0.6046	0.0927	+66	0
78 B. Ophiuchi	6.5	1.64	10.4	16 41.0	21 53.8	- 0 6.8	-0.7663	0.6065	0.0815	-20	-90
90 B. Ophiuchi	6.5	1.66	10.5	18 7.7	23 19.6	+ 1 15.5	+0.5539	0.6070	0.0785	+57	- 4
29 Ophiuchi	6.4	1.68	+10.6	18 46.3	4 0 8.7	+ 2 2.6	+1.1293	0.6072	-0.0769	+72	+37
<i>NEW MOON.</i>											
29 Capricorni	5.5	-1.70	- 1.0	-15 29.3	8 5 9.5	+ 3 5.9	+0.8779	0.5774	+0.1254	+75	+15
53 B. Aquarii	6.5	1.67	0.7	13 31.1	5 17.0	+ 3 13.2	-1.1324	0.5774	0.1256	-42	-90
18 Aquarii	5.5	1.64	1.0	13 12.3	8 50.1	+ 6 38.7	-1.0021	0.5749	0.1304	-30	-90
42 Capricorni	5.1	-1.60	- 2.2	-14 23.3	16 27.4	-10 0.2	+1.2507	0.5694	+0.1399	+76	+50
λ Capricorni	5.5	1.54	1.9	11 43.1	18 41.3	- 7 50.9	-1.2007	0.5678	0.1425	-47	-90
151 B. Capricorni	6.1	1.55	2.4	13 7.4	20 5.1	- 6 30.1	+0.4105	0.5668	0.1441	+54	-13
e Aquarii	5.4	1.45	3.2	11 56.4	9 533.8	+ 2 39.2	+0.6416	0.5602	0.1538	+73	0
σ Aquarii	4.9	1.35	4.1	11 4.1	14 49.8	+11 36.5	+1.1969	0.5540	0.1617	+79	+41
167 G. Aquarii	6.3	-1.28	- 3.7	- 8 17.6	18 27.8	- 8 52.6	-1.1274	0.5517	+0.1644	-36	-90
213 B. Aquarii	6.5	1.27	4.1	8 42.6	20 40.7	- 6 44.0	-0.3234	0.5502	0.1659	+15	-56
λ Aquarii	3.8	1.21	4.3	7 59.1	10 13.7	- 2 19.7	-0.3277	0.5475	0.1688	+15	-56
78 Aquarii	6.3	1.20	4.3	7 36.6	2 10.0	- 1 25.2	-0.5663	0.5469	0.1694	+ 2	-74
81 Aquarii	6.4	1.17	4.6	7 28.2	5 26.9	+ 1 45.4	-0.1557	0.5450	0.1712	+24	-45
82 Aquarii	6.4	-1.15	- 4.5	- 6 59.0	6 0.3	+ 2 17.7	-0.5767	0.5446	+0.1715	+ 1	-75
h Aquarii	5.4	1.16	5.0	8 6.3	7 15.6	+ 3 30.6	+0.8289	0.5439	0.1722	+82	+11
URANUS	6.2	..	..	6 45.9	8 48.5	+ 5 0.5	-0.3271	0.5415	0.1723	+16	-55
φ Aquarii	4.4	1.09	4.8	6 27.6	11 43.4	+ 7 49.9	-0.1447	0.5414	0.1743	+26	-44
96 Aquarii	5.7	1.05	4.8	5 32.5	14 12.2	+10 14.1	-0.6902	0.5401	0.1753	- 4	-88
317 B. Aquarii	6.3	-1.06	- 5.1	- 6 19.5	14 50.6	+10 51.3	+0.2568	0.5398	+0.1755	+49	-22
337 B. Aquarii	6.4	1.00	5.1	4 56.9	19 12.1	- 8 55.3	-0.4438	0.5375	0.1771	+10	-64
342 B. Aquarii	6.5	0.98	5.1	4 30.2	20 11.3	- 7 58.0	-0.7436	0.5371	0.1774	- 7	-90
20 Piscium	5.6	0.88	5.4	3 11.1	11 4 23.4	- 0 1.0	-0.6953	0.5333	0.1795	- 3	-88
24 Piscium	6.1	0.86	5.7	3 34.8	6 53.9	+ 2 24.9	+0.1781	0.5322	0.1799	+45	-26
27 Piscium	5.1	-0.83	- 6.1	- 3 58.8	9 48.6	+ 5 14.3	+1.1340	0.5310	+0.1804	+87	+33
29 Piscium	5.1	0.81	6.0	3 27.1	11 24.3	+ 6 47.2	+0.8548	0.5305	0.1805	+87	+12
4 Ceti	6.3	0.77	6.1	2 58.4	14 24.7	+ 9 42.2	-0.8828	0.5293	0.1808	+88	+14
5 Ceti	6.3	0.77	6.1	2 52.3	14 39.0	+ 9 56.0	+0.8167	0.5292	0.1808	+88	+10
10 Ceti	6.4	0.64	6.0	0 28.3	12 0 5.4	- 4 54.3	-0.0711	0.5262	0.1808	+31	-40
14 Ceti	5.4	-0.60	- 6.5	- 0 55.5	4 41.8	- 0 26.1	+1.2542	0.5250	+0.1805	+90	+46

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JANUARY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, <i>H</i>	<i>Y</i>	<i>x'</i>	<i>y'</i>	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
33 Ceti	6.1	-0.38	-6.8	+ 2 2.4	12 22 56.4	- 6 43.5	+1.2921	0.5217	+0.1766	+89	+52
<i>f</i> Piscium	5.3	0.33	6.6	3 12.8	13 2 43.9	- 3 2.7	+0.6755	0.5213	0.1754	+86	+ 2
μ Piscium	5.0	0.23	6.1	5 45.1	9 12.2	+ 3 14.3	-0.9837	0.5209	0.1729	-21	-85
ν Piscium	4.7	0.18	6.7	5 6.1	15 7.8	+ 8 59.6	+0.7470	0.5208	0.1702	+90	+ 7
39 B. Arietis	6.5	-0.03	6.7	7 22.2	14 3 24.2	- 3 5.3	+0.2987	0.5211	0.1636	+54	-17
64 Ceti	5.8	1.0.01	- 6.6	8 12.8	6 48.6	+ 0 13.1	-0.0788	0.5217	+0.1614	1 31	-37
ξ^1 Ceti	4.5	0.02	6.6	8 29.3	7 39.9	+ 1 2.9	-0.2459	0.5218	0.1609	1 22	-47
ξ Arietis	5.5	0.00	6.3	10 15.9	13 49.4	+ 7 1.7	-1.2319	0.5226	0.1567	-45	-80
25 Arctis	6.5	0.10	6.6	9 51.6	15 11.0	+ 8 20.9	-0.5714	0.5228	0.1557	+ 4	-70
389 B. Ceti	6.3	0.11	6.8	9 13.5	16 19.3	+ 9 27.2	+0.3075	0.5230	0.1519	+55	-15
85 Ceti	6.3	1.0.10	- 6.8	10 25.0	23 0.8	- 8 3.1	+0.0086	0.5212	+0.1497	1 30	-31
μ Ceti	1.4	0.20	7.1	9 17.5	15 0 16.9	- 6 49.2	+0.8891	0.5245	0.1487	1 90	1 19
147 B. Arctis	5.8	0.32	6.7	12 53.6	11 19.7	+ 3 54.1	-0.9541	0.5272	0.1391	-19	-78
8 B. Tauri	6.2	0.40	7.4	12 21.5	20 21.9	-11 17.0	+0.8622	0.5297	0.1303	1 90	1 19
<i>f</i> Tauri	1.3	0.44	7.4	12 40.5	23 49.0	- 7 59.1	+0.9490	0.5308	0.1268	+90	+26
179 B. Tauri	5.9	1.0.61	- 7.7	+14 57.5	16 18 14.7	+ 9 52.9	+0.5677	0.5371	+0.1057	+75	+ 5
48 Tauri	6.3	0.61	7.9	15 12.6	22 14.0	-10 15.1	+0.7011	0.5386	0.1007	+90	+13
γ Tauri	3.9	0.60	7.9	15 26.6	17 0 12.7	- 8 20.2	+0.6391	0.5393	0.0982	1 84	1 10
58 Tauri	5.1	0.66	8.1	14 54.7	0 37.1	- 7 56.5	+1.2658	0.5394	0.0976	1 85	1 62
63 Tauri	5.7	0.68	7.7	16 35.9	1 58.6	- 6 37.6	-0.4666	0.5399	0.0959	1 9	-54
64 Tauri	4.9	+0.60	- 7.5	+17 16.0	2 18.1	- 6 18.6	-1.1738	0.5401	0.0951	-41	-73
70 Tauri	6.4	0.68	8.0	15 46.0	3 4.2	- 5 34.0	+0.5573	0.5404	0.0944	+75	+ 5
71 Tauri	4.6	0.68	8.1	15 26.7	3 25.8	- 5 13.0	+0.9462	0.5405	0.0940	+90	+29
75 Tauri	5.2	0.70	7.9	16 11.3	4 26.9	- 4 13.9	+0.2196	0.5408	0.0926	+49	-13
θ^1 Tauri	4.2	0.70	8.0	15 47.6	4 31.0	- 4 9.9	+0.6633	0.5409	0.0925	1 87	+11
θ^2 Tauri	3.6	+0.70	- 8.0	15 42.1	4 33.7	- 4 7.2	+0.7681	0.5409	+0.0925	1 90	1 18
80 Tauri	5.8	0.70	8.2	15 28.3	5 17.3	- 3 25.0	+1.0892	0.5412	0.0915	1 90	1 41
264 B. Tauri	4.8	0.70	8.0	16 1.7	5 29.1	- 3 13.6	+0.1925	0.5412	0.0912	1 69	1 2
81 Tauri	5.5	0.70	8.2	+15 31.5	5 32.1	- 3 10.7	+1.0516	0.5412	0.0912	+90	+38
85 Tauri	6.0	0.71	8.1	15 41.3	6 7.5	- 2 36.4	+0.9262	0.5415	0.0904	+90	+29
275 B. Tauri	6.5	+0.72	- 8.0	+16 9.8	6 50.2	- 1 46.4	+0.4788	0.5418	+0.0892	+68	+ 2
<i>a</i> Tauri (<i>Ald.</i>)	1.1	0.73	8.1	16 21.3	8 5.8	- 0 41.9	+0.3641	0.5423	0.0877	+59	- 4
89 Tauri	5.8	0.73	8.2	15 52.8	9 11.5	+ 0 21.8	+0.9839	0.5426	0.0862	+90	+33
σ^1 Tauri	5.2	0.73	8.3	15 39.0	9 40.9	+ 0 50.3	+1.2804	0.5428	0.0855	+79	+67
σ^2 Tauri	4.9	0.73	8.3	15 46.0	9 44.2	+ 0 53.5	+1.1560	0.5428	0.0854	+90	+48
318 B. Tauri	5.7	+0.80	- 8.4	+17 2.0	18 28.2	+ 9 20.8	+0.4502	0.5461	+0.0730	+65	+ 1
<i>m</i> Tauri	5.0	0.81	8.3	18 32.5	23 15.3	-10 1.3	-0.8776	0.5479	0.0660	-16	-72
111 Tauri	5.1	0.88	9.0	17 18.7	18 7 21.1	- 2 10.9	+0.9591	0.5507	0.0536	1 90	+34
115 Tauri	5.3	0.89	8.9	17 53.8	8 39.4	- 0 55.4	+0.3860	0.5513	0.0515	1 61	+ 1
117 Tauri	6.0	0.89	9.1	17 10.5	9 4.3	- 0 31.3	+1.1991	0.5514	0.0509	1 90	+57
119 Tauri	4.9	+0.91	- 8.8	+18 32.2	11 1.6	+ 1 22.1	-0.1993	0.5520	+0.0478	+24	-32
120 Tauri	5.6	0.91	8.9	18 29.1	11 38.8	+ 1 58.1	-0.1132	0.5522	0.0468	+29	-26
130 Tauri	5.6	0.94	9.3	17 42.0	18 11.2	+ 8 17.7	+1.0182	0.5544	0.0363	+90	+41
B. D. +19° 11.0	6.0	0.96	9.0	19 50.8	20 28.0	+10 30.0	-1.2527	0.5552	0.0325	-57	-71
57 Orionis	5.8	0.97	9.1	19 44.0	21 39.5	+11 39.1	-1.0907	0.5555	0.0305	-34	-71
64 Orionis	5.1	+0.98	- 9.3	+19 41.4	19 1 37.0	- 8 31.2	-0.9346	0.5567	+0.0240	-21	-71
68 Orionis	5.7	1.00	9.4	19 48.4	5 35.0	- 4 41.1	-0.9778	0.5579	0.0173	-24	-71
19 B. Geminorum	6.2	1.00	9.6	18 41.9	6 18.6	- 3 59.0	+0.2419	0.5581	0.0160	+51	- 4
124 H ¹ Orionis	5.7	0.99	9.8	17 55.6	6 44.8	- 3 33.7	+1.0908	0.5582	0.0153	+90	+49
71 Orionis	5.1	1.00	9.6	19 10.9	6 54.2	- 3 24.6	-0.2745	0.5582	0.0150	+20	-33
292 B. Orionis	6.5	+1.00	- 9.9	+17 47.9	9 57.4	- 0 27.5	+1.2698	0.5590	+0.0098	+77	+70

ELEMENTS OF OCCULTATIONS, 1924. 477

JANUARY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
74 B. Geminorum	6.2	s	"	°	d h m	h m				°	°
110 B. Geminorum	6.2	1.04	-10.2	18 10.5	19 21 51.2	+11 2.3	+0.7125	0.5618	-0.0108	1 90	1 25
162 B. Geminorum	5.7	1.05	10.4	17 51.7	20 4 42.6	- 6 20.2	+1.0722	0.5630	0.0228	+ 90	+ 47
f Geminorum	5.3	1.06	10.7	17 14.8	18 2.5	+ 6 32.4	+1.2711	0.5647	0.0460	+ 78	+ 69
g Geminorum	5.0	1.06	10.7	17 50.8	21 30.3	+ 9 53.1	+0.4551	0.5649	0.0521	+ 66	+ 5
2 B. Cancri	6.0	1.06	10.7	18 41.6	21 0 30.1	-11 13.2	-0.6191	0.5652	0.0572	0	-62
3 Cancri	5.7	+1.05	-10.8	+16 43.3	6 7.5	- 5 47.4	+1.1464	0.5654	-0.0668	+ 90	+ 49
5 Cancri	5.9	1.05	10.8	17 30.9	7 8.3	- 4 48.7	+0.2279	0.5654	0.0685	+ 50	-10
ζ Can. (mean)	4.7	1.05	10.8	16 39.8	7 28.3	- 4 29.4	+1.1171	0.5654	0.0691	+ 90	+ 46
δ ² Cancri	6.2	1.03	10.8	17 52.5	12 17.2	+ 0 9.6	-0.5323	0.5655	0.0771	1 0	-57
90 B. Cancri	6.3	+1.02	-10.8	+15 34.5	18 27.3	+ 6 7.1	-0.4187	0.5654	0.0872	1 12	-49
54 Cancri	6.3	1.00	10.7	15 37.8	23 7.2	+10 37.4	+0.9890	0.5652	-0.0947	+ 90	+ 33
0 ¹ Cancri	5.1	1.00	10.7	15 36.7	22 5 51.6	- 6 51.9	+0.2537	0.5648	0.1052	+ 51	-12
0 ² Cancri	5.7	1.00	10.7	15 52.3	8 40.3	- 4 9.0	-0.0288	0.5645	0.1091	+ 34	-28
81 Cancri	6.4	0.97	10.5	15 18.0	8 49.4	- 4 0.3	-0.3198	0.5645	0.1090	+ 18	-45
π Cancri	5.6	+0.96	-10.5	+15 15.3	15 31.2	+ 2 27.8	-0.4818	0.5639	0.1195	1 9	-57
7 Leonis	6.2	0.92	10.2	14 43.0	16 50.1	+ 3 14.1	-0.5917	0.5638	-0.1213	+ 3	-65
18 Leonis	5.8	0.91	9.8	12 9.5	23 2 14.1	-11 11.0	-1.2220	0.5627	0.1341	-40	-76
19 Leonis	6.4	0.91	9.7	11 55.1	7 2.8	- 6 32.1	+0.8114	0.5621	0.1403	+ 90	+ 16
R Leonis (var.)	4.6	0.91	9.7	11 46.8	7 31.6	- 6 4.4	+0.9966	0.5620	0.1408	1 90	+ 29
ν Leonis	5.0	+0.87	- 9.7	+12 48.3	7 35.0	- 6 1.1	+1.1339	0.5620	0.1409	+ 90	+ 40
A Leonis	4.6	0.86	9.2	10 22.1	12 27.0	- 1 19.0	-0.6439	0.5614	-0.1467	0	-73
a Leonis (Reg.)	1.3	0.85	9.4	12 20.2	16 54.2	+ 2 59.3	+1.2467	0.5608	0.1518	+ 90	+ 52
44 Leonis	5.9	0.82	8.6	9 10.2	17 6.7	+ 3 11.4	-0.8478	0.5608	0.1521	-13	-78
45 Leonis	5.8	0.81	8.7	10 8.9	24 0 52.2	+10 41.2	+1.2512	0.5597	0.1603	+ 90	+ 51
ρ Leonis	3.8	+0.79	- 8.5	+ 9 41.8	1 58.0	+11 44.8	+0.0551	0.5596	0.1613	+ 39	-29
49 Leonis	5.7	0.79	8.3	9 2.5	4 20.6	- 9 57.3	+0.1411	0.5593	-0.1636	1 44	-24
c Leonis	5.1	0.72	7.1	6 30.5	5 22.4	- 8 57.6	+0.6553	0.5592	0.1645	1 84	+ 4
χ Leonis	4.7	0.70	7.3	7 44.7	17 14.4	+ 2 30.6	+1.2755	0.5580	0.1746	+ 90	1 53
σ Leonis	4.1	0.65	6.5	6 26.7	19 13.2	+ 4 25.1	-0.3574	0.5578	0.1760	+ 16	-55
b Virginis	5.2	+0.51	- 4.8	+ 4 4.6	25 2 40.0	+11 37.3	-0.3360	0.5573	0.1809	+ 17	-54
10 Virginis	6.2	0.48	4.0	+ 2 19.1	20 37.5	+ 4 58.9	-1.2144	0.5570	-0.1890	-41	-86
γ Virg. (mean)	2.9	0.37	1.9	- 1 2.0	28 1 7.4	+ 9 19.9	-0.2595	0.5572	0.1902	+ 22	-50
k Virginis	5.7	0.30	0.5	3 24.2	15 52.2	- 0 24.9	+0.3703	0.5584	0.1916	+ 58	-16
46 Virginis	6.1	0.30	0.6	2 57.6	27 0 5.0	+ 7 31.3	+1.2246	0.5597	0.1908	+ 87	+ 42
48 Virginis	6.5	1.028	- 0.4	- 3 15.3	0 30.8	+ 7 56.2	+0.6898	0.5598	0.1907	+ 88	+ 2
65 Virginis	6.0	0.20	1.0	4 31.6	2 1.3	+ 9 23.6	+0.7031	0.5600	-0.1904	+ 87	+ 3
66 Virginis	5.7	0.20	0.8	4 46.0	10 50.2	- 6 5.1	+0.3338	0.5619	0.1880	+ 54	-18
72 Virginis	6.1	0.18	1.4	6 4.7	11 23.4	- 5 33.4	+0.4748	0.5620	0.1878	1 64	-10
l Virginis	4.8	0.17	1.3	5 51.8	14 2.5	- 2 59.7	+1.3155	0.5627	0.1867	+ 80	1 58
80 Virginis	5.6	+0.14	+ 1.2	- 5 0.6	14 44.5	- 2 19.1	+0.9658	0.5629	0.1864	+ 85	+ 20
566 B. Virginis	6.4	0.10	1.4	5 7.0	16 20.7	- 0 46.2	-0.2038	0.5632	-0.1857	+ 23	-48
88 Virginis	6.5	0.09	2.0	6 27.5	20 6.9	+ 2 52.3	-0.7909	0.5643	0.1838	-10	-90
598 B. Virginis	6.1	+0.06	2.7	7 41.1	22 4.6	+ 4 45.9	+0.2167	0.5649	0.1827	+ 46	-24
95 Virginis	5.4	0.00	3.4	8 57.0	28 1 3.4	+ 7 38.5	+0.9233	0.5658	0.1810	+ 83	+ 17
13 Libræ	5.7	-0.24	1.5	-11 35.3	28 16.2	-11 19.6	+1.2749	0.5675	0.1775	+ 82	+ 51
ζ ² Libræ	5.6	0.26	5.3	11 6.1	29 3 5.9	+ 8 46.1	+0.4339	0.5753	-0.1586	+ 57	-12
17 Libræ	6.4	0.27	5.3	10 50.9	4 7.8	+ 9 45.8	-0.2260	0.5757	0.1575	+ 19	-49
18 Libræ	5.9	0.27	5.3	10 50.3	4 45.5	+10 22.1	-0.5762	0.5760	0.1568	- 1	-76
130 B. Libræ	5.9	0.40	6.1	12 5.8	5 3.1	+10 39.0	-0.6328	0.5761	0.1564	- 4	-82
γ Libræ	4.0	-0.46	+ 7.1	-14 32.1	15 42.0	- 3 5.2	-0.9553	0.5806	0.1433	-26	-90
					20 35.5	+ 1 37.5	+0.8236	0.5827	-0.1367	+ 76	+ 12

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JANUARY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		Δα	Δδ								
190 B. Libræ	6.5	-0.50	+ 7.3	-14 47.9	29 23 54.1	+ 4 48.8	+0.6451	0.5841	-0.1319	+71	0
η Libræ	5.5	0.50	7.5	15 25.8	30 0 10.3	+ 5 4.3	+1.2470	0.5842	0.1315	+75	+50
195 B. Libræ	6.2	0.55	7.0	13 54.2	3 21.0	+ 8 8.0	-0.7052	0.5855	0.1268	-12	-90
202 B. Libræ	6.4	0.58	7.2	14 10.5	5 15.5	+ 9 58.2	-0.6695	0.5863	0.1238	-10	-88
203 B. Libræ	6.2	0.58	7.3	14 36.3	5 23.0	+10 5.4	-0.2504	0.5864	0.1236	+14	-51
48 Libræ	4.6	-0.59	+ 7.1	-14 3.6	6 4.3	+10 45.2	-0.8867	0.5867	-0.1225	-23	-90
49 Libræ	5.4	0.60	7.9	16 18.5	6 57.3	+11 36.2	+1.2760	0.5870	0.1212	+74	+57
91 B. Scorpii	6.1	0.68	7.4	14 39.5	13 21.9	- 6 13.7	-1.1331	0.5897	0.1107	-44	-90
98 B. Scorpii	6.1	0.70	7.4	14 41.2	14 39.6	- 4 58.9	-1.2453	0.5902	0.1085	-58	-89
φ Ophiuchi	4.4	0.77	7.9	16 26.7	19 36.3	- 0 13.5	-0.0137	0.5920	0.0998	+26	-35
24 Scorpii	5.0	-0.82	+ 8.2	-17 35.6	23 50.3	+ 3 50.8	+0.7649	0.5935	-0.0922	+73	+ 8
78 B. Ophiuchi	6.5	0.90	7.9	16 41.1	31 5 42.1	+ 9 29.2	-0.6611	0.5955	0.0812	-13	-87
90 B. Ophiuchi	6.5	0.92	8.2	18 7.8	7 10.9	+10 54.6	+0.6775	0.5959	0.0784	+68	+ 3
29 B. Ophiuchi	6.4	0.93	8.4	18 46.4	8 1.7	+11 43.4	+1.2605	0.5962	0.0768	+72	+57
125 B. Ophiuchi	6.2	0.96	8.0	17 30.4	10 36.9	- 9 47.4	-0.2072	0.5969	0.0717	+11	-48
164 B. Ophiuchi	6.0	-1.02	+ 7.9	-17 40.5	15 17.1	- 5 18.0	-0.3510	0.5981	-0.0625	+ 2	-58
192 B. Ophiuchi	6.3	-1.05	+ 8.0	-18 22.4	17 10.1	- 3 29.4	+0.2390	0.5986	-0.0587	+35	-22

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305 B. Ophiuchi	6.3	-1.19	+ 7.5	-18 47.3	1 5 38.5	+ 8 29.7	+0.0850	0.6007	-0.0328	+23	-31
39 G. Sagittarii	6.3	1.27	7.3	19 51.4	11 43.2	- 9 39.9	+1.0034	0.6012	0.0199	+71	+26
64 B. Sagittarii	6.1	1.28	6.9	18 41.0	13 25.9	- 8 1.2	-0.2108	0.6012	0.0162	+ 6	-49
52 G. Sagittarii	6.4	1.28	6.8	18 29.4	14 12.9	- 7 16.1	-0.4187	0.6013	0.0146	- 7	-63
17 H ¹ . Sagittarii	6.4	1.29	6.8	18 38.9	14 42.4	- 6 47.7	-0.2662	0.6013	0.0135	+ 2	-52
Y Sagit. (var.)	5.4	-1.30	+ 6.8	-18 53.6	15 45.7	- 5 46.9	-0.0318	0.6013	-0.0113	+15	-38
85 B. Sagittarii	6.0	1.32	6.4	17 50.8	18 22.8	- 3 16.0	-1.1122	0.6013	0.0056	-52	-90
95 B. Sagittarii	5.7	1.33	6.5	18 46.6	19 15.9	- 2 24.9	-0.1763	0.6013	0.0038	+ 6	-47
100 B. Sagittarii	5.0	1.34	6.4	18 27.3	19 45.8	- 1 56.3	-0.5032	0.6013	-0.0027	-12	-70
171 B. Sagittarii	6.1	1.46	5.5	19 21.3	2 8 21.0	+10 9.6	+0.5439	0.6000	+0.0241	+52	- 5
173 B. Sagittarii	6.4	-1.46	+ 5.4	-19 12.7	8 22.5	+10 11.0	+0.3994	0.6000	+0.0242	+41	-13
187 B. Sagittarii	6.4	1.46	5.2	18 51.3	9 59.3	+11 43.9	+0.0796	0.5997	0.0276	+23	-31
190 B. Sagittarii	5.4	1.47	5.2	19 24.5	10 26.2	-11 50.2	+0.6534	0.5997	0.0285	+03	+ 2
195 B. Sagittarii	6.3	1.48	+ 5.3	19 55.4	11 2.4	-11 15.5	+1.1918	0.5995	0.0298	+71	+46
NEW MOON.											
81 Aquarii	6.4	-1.31	- 5.6	- 7 28.3	6 15 7.6	-10 45.9	-0.2536	0.5502	+0.1719	+19	-51
82 Aquarii	6.4	1.30	5.5	6 59.0	15 40.5	-10 14.1	-0.6735	0.5500	0.1723	- 4	-86
h Aquarii	5.4	1.31	5.8	8 6.3	16 54.8	- 9 2.2	+0.7250	0.5493	0.1729	+82	+ 4
URANUS	6.3	..	..	6 16.1	20 39.6	- 5 24.6	-0.5661	0.5453	0.1740	+ 3	-73
φ Aquarii	4.4	-1.26	- 6.0	- 6 27.6	21 18.6	- 4 46.9	-0.2488	0.5470	+0.1752	+20	-51
96 Aquarii	5.7	1.24	6.0	5 32.5	23 45.2	- 2 24.9	-0.7940	0.5458	0.1763	-10	-90
317 B. Aquarii	6.3	1.24	6.2	6 19.5	7 0 23.0	+ 1 48.2	+0.1478	0.5455	0.1766	+42	-28
337 B. Aquarii	6.4	1.20	6.4	4 56.9	4 40.3	+ 2 20.9	+0.5531	0.5434	0.1782	+ 4	-73
342 B. Aquarii	6.5	1.18	6.4	4 30.3	5 38.6	+ 3 17.3	-0.8522	0.5429	0.1785	-14	-90
VENUS	-3.5	..	..	- 3 24.1	10 55.6	+ 8 24.4	-1.0844	0.4930	+0.1573	-31	-90
20 Piscium	5.6	-1.11	- 6.8	3 11.2	13 42.5	+11 6.2	-0.8104	0.5393	0.1808	-10	-90
24 Piscium	6.1	1.10	7.0	3 34.8	16 10.5	-10 30.4	+0.0561	0.5383	0.1813	+38	-33
27 Piscium	5.1	1.08	7.4	3 58.8	19 2.1	- 7 44.2	+1.0041	0.5371	0.1818	+87	+23
29 Piscium	5.1	1.06	7.4	3 27.2	20 36.2	- 6 12.9	+0.7255	0.5365	0.1820	+87	+ 4
4 Ceti	6.3	-1.04	- 7.5	- 2 58.4	23 33.4	- 3 21.0	+0.7514	0.5354	+0.1823	+88	+ 6

ELEMENTS OF OCCULTATIONS, 1924. 479

FEBRUARY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	r	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
5 Ceti	6.3	-1.04	-7.5	-2 52.3	7 23 47.5	-3 7.5	+0.6854	0.5353	+0.1823	+88	+2
10 Ceti	6.4	0.94	7.6	0 28.3	8 9 4.1	+5 52.2	-0.2024	0.5321	0.1824	+24	-48
14 Ceti	5.4	0.90	8.1	-0 55.5	13 35.7	+10 15.6	+1.1124	0.5370	0.1820	+90	+31
33 Ceti	6.1	0.72	8.4	+2 2.4	9 7 32.5	+3 40.4	+1.1438	0.5266	0.1781	+90	+34
f Piscium	5.3	0.68	8.3	3 12.7	11 16.6	+7 17.9	+0.5302	0.5260	0.1768	+70	-6
μ Piscium	5.0	-0.60	-7.9	+5 45.0	17 39.4	-10 30.6	-1.1207	0.5253	+0.1742	-32	-85
ν Piscium	4.7	0.55	8.5	5 6.1	23 30.3	-4 50.0	+0.6001	0.5247	0.1715	+77	-1
39 B. Arietis	6.5	0.42	8.4	7 22.1	10 11 38.5	+6 56.8	+0.1545	0.5244	0.1646	+45	-24
64 Ceti	5.8	0.38	8.3	8 12.7	15 1.0	+10 13.4	-0.2210	0.5244	0.1624	+24	-45
ξ^1 Ceti	4.5	0.37	8.2	8 29.3	15 51.8	+11 2.6	-0.3873	0.5244	0.1618	+15	-56
25 Arietis	6.5	-0.30	-8.2	+9 51.6	23 19.3	-5 43.0	-0.7106	0.5248	+0.1565	-4	-80
ξ^2 Ceti	4.3	0.30	8.8	8 7.1	23 43.2	-5 19.8	+1.2712	0.5248	0.1562	+90	+52
389 B. Ceti	6.3	0.29	8.4	9 13.5	11 0 27.1	-4 37.2	+0.1655	0.5249	0.1557	+46	-24
85 Ceti	6.3	0.21	8.3	10 25.0	7 6.2	+1 50.1	-0.1307	0.5256	0.1504	+29	-39
μ Ceti	4.4	0.20	8.6	9 47.5	8 21.9	+3 3.6	+0.7477	0.5258	0.1493	+90	+10
147 B. Arietis	5.8	-0.08	-8.0	+12 53.6	19 22.4	-10 15.6	-1.0874	0.5274	+0.1395	-30	-78
8 B. Tauri	6.2	+0.01	8.6	12 21.5	12 4 27.0	-1 27.2	+0.7294	0.5293	0.1306	+90	+11
f Tauri	4.3	0.04	8.6	12 40.5	7 51.1	+1 50.8	+0.8180	0.5300	0.1270	+90	+18
179 B. Tauri	5.9	0.24	8.6	14 57.5	13 2 19.6	-4 14.4	+0.4479	0.5350	0.1058	+65	-2
48 Tauri	6.3	0.28	8.7	15 12.6	6 20.1	-0 21.4	+0.5838	0.5363	0.1009	+77	+6
γ Tauri	3.9	+0.30	-8.7	+15 26.6	8 19.4	+1 34.3	+0.5234	0.5369	+0.0984	+72	+3
58 Tauri	5.4	0.30	8.9	14 54.7	8 43.9	+1 58.0	+1.1503	0.5370	0.0978	+90	+47
63 Tauri	5.7	0.32	8.4	16 35.9	10 5.8	+3 17.4	-0.5818	0.5375	0.0960	+3	-63
64 Tauri	4.9	0.33	8.1	17 16.0	10 25.4	+3 36.4	-1.2890	0.5376	0.0956	-65	-71
70 Tauri	6.4	0.33	8.7	15 46.0	11 11.8	+4 21.3	+0.4433	0.5378	0.0946	+65	-1
71 Tauri	4.6	+0.33	-8.8	+15 26.7	11 33.4	+4 42.4	+0.8326	0.5379	+0.0941	+90	+22
75 Tauri	5.2	0.34	8.6	16 11.3	12 35.0	+5 42.0	+0.1063	0.5382	0.0928	+42	-19
θ^1 Tauri	4.2	0.34	8.7	15 47.5	12 39.0	+5 45.9	+0.5503	0.5382	0.0927	+74	+5
θ^2 Tauri	3.6	0.34	8.8	15 42.1	12 41.7	+5 48.5	+0.6551	0.5383	0.0926	+86	+11
80 Tauri	5.8	0.35	8.9	15 28.3	13 25.6	+6 31.0	+0.9769	0.5385	0.0916	+90	+32
264 B. Tauri	4.8	+0.35	-8.7	+16 1.6	13 37.5	+6 42.5	+0.3801	0.5385	+0.0914	+60	-5
81 Tauri	5.5	0.35	8.9	15 31.5	13 40.5	+6 45.4	+0.9394	0.5386	0.0914	+90	+29
85 Tauri	6.0	0.36	8.8	15 41.2	14 16.2	+7 20.0	+0.8143	0.5388	0.0905	+90	+21
275 B. Tauri	6.5	0.37	8.7	16 9.8	15 8.2	+8 10.4	+0.3674	0.5390	0.0893	+59	-4
a Tauri(Alde.)	1.1	0.38	8.7	16 21.3	16 15.2	+9 15.2	+0.2533	0.5394	0.0878	+51	-10
89 Tauri	5.8	+0.39	-8.9	+15 52.8	17 21.3	+10 19.4	+0.8743	0.5397	+0.0863	+90	+26
σ^1 Tauri	5.2	0.39	9.0	15 38.9	17 50.8	+10 47.9	+1.1714	0.5399	0.0857	+90	+50
σ^2 Tauri	4.9	0.39	8.9	15 46.0	17 54.2	+10 51.2	+1.0468	0.5400	0.0856	+90	+38
318 B. Tauri	5.7	0.48	8.8	17 2.0	14 2 41.8	-4 37.8	+0.3469	0.5429	0.0733	+58	-4
m Tauri	5.0	0.54	8.5	18 32.5	7 31.0	+0 2.2	-0.9787	0.5446	0.0662	-24	-72
111 Tauri	5.1	+0.60	-9.2	+17 18.7	15 40.9	+7 56.5	+0.8660	0.5473	+0.0540	+90	+28
115 Tauri	5.3	0.62	9.1	17 53.7	16 59.5	+9 12.6	+0.2932	0.5478	0.0519	+54	-4
117 Tauri	6.0	0.61	9.3	17 10.4	17 24.6	+9 36.9	+1.1075	0.5479	0.0513	+90	+48
119 Tauri	4.9	0.64	9.0	18 32.2	19 22.8	+11 31.2	-0.2908	0.5486	0.0482	+19	-37
120 Tauri	5.6	0.64	9.0	18 29.1	20 0.4	-11 52.4	-0.2042	0.5488	0.0472	+24	-32
130 Tauri	5.6	+0.70	-9.5	+17 42.0	15 2 35.7	-5 30.0	+0.9334	0.5511	+0.0368	+90	+35
57 Orionis	5.8	0.74	9.0	19 44.0	6 5.7	-2 6.9	-1.1746	0.5521	0.0311	-43	-71
64 Orionis	5.1	0.77	9.1	19 41.4	10 4.9	+1 44.5	-1.0151	0.5534	0.0246	-27	-71
68 Orionis	5.7	0.80	9.2	19 48.4	14 4.6	+5 36.3	-1.0550	0.5546	0.0180	-31	-71
19 B. Geminorum	6.2	0.80	9.6	18 41.9	14 48.4	+6 18.6	+0.1660	0.5548	0.0167	+46	-8
124 H ¹ .Orionis	5.7	+0.80	-9.8	+17 55.6	15 14.8	+6 44.1	+1.0158	0.5550	+0.0160	+90	+43

480 ELEMENTS OF OCCULTATIONS, 1924.

FEBRUARY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, <i>H</i>	<i>Y</i>	<i>z'</i>	<i>y'</i>	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
71 Orionis	5.1	+0.81	-9.4	+19 10.9	15 15 24.3	+ 6 53.3	-0.3501	0.5550	+0.0157	+16	-38
292 B. Orionis	6.5	0.82	9.9	17 47.9	18 28.6	+ 9 51.5	+1.1974	0.5559	+0.0105	+90	+60
74 B. Geminorum	6.2	0.91	10.1	18 16.5	16 6 26.4	- 2 34.6	+0.6792	0.5592	-0.0099	+90	+21
110 B. Geminorum	6.2	0.95	10.4	17 51.7	13 19.5	+ 4 4.6	+1.0140	0.5609	0.0218	+90	+42
162 B. Geminorum	5.7	1.03	10.8	17 14.8	17 2 41.0	- 7 1.2	+1.2225	0.5636	-0.0451	+90	+60
<i>f</i> Geminorum	5.3	+1.05	-10.7	+17 50.8	6 8.8	- 3 40.5	+0.4108	0.5641	-0.0511	+63	+ 2
<i>g</i> Geminorum	5.0	1.07	10.6	18 41.6	9 8.4	- 0 47.0	-0.6585	0.5646	0.0503	- 2	-66
2 B. Cancri	6.0	1.09	11.0	16 43.3	14 45.2	+ 4 38.2	+1.1067	0.5653	0.0660	+90	+45
3 Cancri	5.7	1.10	10.9	17 30.9	15 45.8	+ 5 36.7	+0.1918	0.5655	0.0677	+47	-12
5 Cancri	5.9	1.10	11.0	16 39.8	16 5.7	+ 5 55.9	+1.0786	0.5655	0.0683	+90	+43
ζ Can. (<i>mean</i>)	4.7	+1.12	-10.9	+17 52.5	20 53.6	+10 33.9	-0.5615	0.5660	-0.0764	+ 4	-59
δ^2 Cancri	6.2	1.14	11.0	17 17.7	18 3 1.7	- 7 30.7	-0.4430	0.5665	0.0866	+11	-51
90 B. Cancri	6.3	1.15	11.3	15 34.5	7 39.7	- 3 2.2	+0.9020	0.5668	0.0942	+90	+32
54 Cancri	6.3	1.17	11.2	15 37.8	14 20.7	+ 3 25.0	+0.2353	0.5671	0.1048	+50	-12
σ^1 Cancri	5.1	1.18	11.2	15 30.7	17 7.8	+ 6 6.3	-0.0434	0.5672	-0.1091	+33	-29
σ^2 Cancri	5.7	+1.18	-11.2	+15 52.3	17 16.7	+ 6 14.8	-0.3326	0.5672	-0.1094	+17	-46
81 Cancri	6.4	1.18	11.2	15 18.0	23 54.0	-11 21.6	-0.4880	0.5673	0.1194	+ 9	-57
π Cancri	5.6	1.19	11.2	15 15.3	19 1 11.9	-10 6.3	-0.5962	0.5672	0.1213	+ 2	-66
7 Leonis	6.2	1.20	11.1	14 43.0	10 28.0	- 1 9.4	-1.2141	0.5671	0.1344	-45	-76
18 Leonis	5.8	1.21	11.2	12 9.5	15 12.1	+ 3 25.0	+0.8071	0.5669	0.1407	+90	+16
19 Leonis	6.4	+1.21	-11.2	+11 55.0	15 40.4	+ 3 52.3	+0.9912	0.5669	-0.1414	+90	+28
<i>R</i> Leonis (<i>var.</i>)	4.6	1.21	11.2	11 46.7	15 43.8	+ 3 55.5	+1.1275	0.5669	0.1414	+90	+40
<i>v</i> Leonis	5.0	1.20	11.0	12 48.3	20 30.7	+ 8 32.6	+0.6325	0.5667	0.1474	+ 1	-72
<i>A</i> Leonis	4.6	1.21	11.0	10 22.1	20 0 53.0	-11 14.2	+1.2447	0.5665	0.1527	+90	+52
<i>a</i> Leonis (<i>Reg.</i>)	1.3	1.20	10.9	12 20.2	1 5.2	-11 2.3	-0.8311	0.5665	0.1530	-12	-78
44 Leonis	5.9	+1.21	-10.7	+ 9 10.1	8 41.4	- 3 41.9	+1.2567	0.5662	-0.1614	+90	+52
45 Leonis	5.8	1.20	10.6	10 8.8	9 45.8	- 2 39.7	+0.0698	0.5661	0.1625	+40	-28
<i>q</i> Leonis	3.8	1.20	10.5	9 41.7	12 5.4	- 0 24.8	+0.1564	0.5660	0.1649	+45	-23
49 Leonis	5.7	1.20	10.5	9 2.4	13 5.9	+ 0 33.6	+0.6662	0.5660	0.1659	+86	+ 5
<i>c</i> Leonis	5.1	1.19	9.8	6 30.4	21 0 41.8	+11 45.7	+1.2867	0.5655	0.1763	+88	+55
χ Leonis	4.7	+1.17	- 9.8	+ 7 44.7	2 37.8	-10 22.3	-0.3281	0.5654	-0.1778	+18	-52
σ Leonis	4.1	1.16	9.3	6 26.6	9 53.9	- 3 21.1	-0.3030	0.5651	0.1829	+19	-52
<i>b</i> Virginis	5.2	1.10	8.0	4 4.6	22 3 24.6	-10 26.4	-1.1636	0.5651	0.1913	-36	-86
10 Virginis	6.2	1.09	7.5	+ 2 19.4	7 47.8	- 6 12.2	-0.2171	0.5653	0.1926	+24	-48
γ Virg. (<i>mean</i>)	2.9	1.02	5.9	- 1 2.1	22 11.1	+ 7 41.4	+0.4113	0.5662	0.1940	+60	-13
<i>k</i> Virginis	5.7	+0.99	- 4.8	- 3 24.2	23 6 12.8	- 8 33.5	+1.2599	0.5670	-0.1931	+87	+47
46 Virginis	6.1	0.98	4.8	2 57.7	6 38.0	- 8 9.1	+0.7302	0.5670	0.1930	+88	+ 4
48 Virginis	6.5	0.98	4.6	3 15.3	8 6.6	- 6 43.6	+0.7437	0.5672	0.1927	+87	+ 5
65 Virginis	6.0	0.92	3.7	4 31.7	16 44.5	+ 1 36.3	+0.3797	0.5685	0.1900	+57	-15
66 Virginis	5.7	0.92	3.6	4 46.1	17 17.1	+ 2 7.8	+0.5196	0.5686	0.1898	+67	- 7
<i>l</i> Virginis	4.8	+0.90	- 3.0	- 5 51.9	20 34.4	+ 5 18.3	+1.0075	0.5691	-0.1883	+85	+23
80 Virginis	5.6	0.88	3.1	5 0.6	22 8.8	+ 6 49.4	-0.1529	0.5694	0.1876	+26	-45
566 B. Virginis	6.4	0.84	2.8	5 7.0	24 1 51.1	+10 23.8	-0.7356	0.5700	0.1856	- 7	-90
88 Virginis	6.5	0.84	2.3	6 27.6	3 46.8	-11 44.5	+0.2650	0.5704	0.1844	+49	-21
598 B. Virginis	6.1	0.82	1.7	7 41.2	6 42.7	- 8 54.8	+0.9675	0.5711	0.1826	+83	+20
95 Virginis	5.4	+0.78	- 0.9	- 8 57.1	11 51.0	- 3 57.4	+1.3179	0.5721	-0.1789	+77	+61
13 Libræ	5.7	0.58	+ 1.4	11 35.3	25 8 28.5	- 8 4.1	+0.4824	0.5773	0.1592	+60	- 9
ξ^2 Libræ	5.6	0.57	1.3	11 6.2	9 30.0	- 7 4.8	-0.1707	0.5776	0.1581	+21	-46
17 Libræ	6.4	0.56	1.3	10 51.0	10 7.6	- 6 28.5	-0.5257	0.5778	0.1573	+ 2	-71
18 Libræ	5.9	0.55	1.3	10 50.4	10 25.0	- 6 11.8	-0.5822	0.5779	0.1570	- 1	-76
130 B. Libræ	5.9	+0.43	+ 2.4	-12 5.9	21 2.3	+ 4 2.4	-0.9072	0.5808	-0.1435	-22	-90

ELEMENTS OF OCCULTATIONS, 1924. 481

FEBRUARY.

THE STAR'S				AT CONJUNCTION IN R.A.					Limiting Parallels.		
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
γ Libræ	4.0	+0.39	+ 3.5	-14 32.2	28 1 56.0	+ 8 45.3	+0.8713	0.5822	-0.1367	+76	+15
190 B. Libræ	6.5	0.35	3.8	14 48.0	5 15.1	+11 57.1	+0.6925	0.5832	0.1318	+74	+ 3
η Libræ	5.5	0.35	4.0	15 25.8	5 31.4	-11 47.2	+1.2953	0.5832	0.1314	+74	+61
195 B. Libræ	6.2	0.30	3.6	13 54.2	8 42.7	- 8 43.0	-0.6607	0.5841	0.1266	- 9	-86
202 B. Libræ	6.4	0.27	3.8	14 10.6	10 37.8	- 6 52.2	-0.6255	0.5846	0.1236	- 7	-82
203 B. Libræ	6.2	+0.27	+ 4.0	-14 36.4	10 45.4	- 6 44.8	-0.2055	0.5847	-0.1234	+16	-48
48 Libræ	4.6	0.26	3.8	14 3.6	11 26.9	- 6 4.8	-0.8435	0.5848	0.1223	-20	-90
91 B. Scorpïi	6.1	0.16	4.3	14 39.5	18 47.7	+ 0 59.5	-1.0935	0.5867	0.1104	-40	-90
98 B. Scorpïi	6.1	0.14	4.4	14 41.3	20 6.2	+ 2 15.1	-1.2968	0.5870	0.1081	-53	-90
φ Ophiuchi	4.4	0.08	5.2	16 26.8	27 1 6.0	+ 7 3.6	+0.0560	0.5883	0.0995	+28	-33
24 Scorpïi	5.0	+0.02	+ 5.7	-17 35.7	5 23.1	+11 11.0	+0.8102	0.5892	-0.0918	+73	+11
78 B. Ophiuchi	6.5	-0.06	5.5	16 41.1	11 19.8	- 7 5.7	-0.6258	0.5904	0.0808	-11	-83
90 B. Ophiuchi	6.5	0.08	6.0	18 7.8	12 50.0	- 5 39.0	+0.7211	0.5907	0.0780	+72	+ 6
125 B. Ophiuchi	6.2	0.13	5.9	17 30.5	16 19.4	- 2 17.6	-0.1704	0.5912	0.0713	+13	-46
164 B. Ophiuchi	6.0	0.20	6.0	17 40.6	21 4.5	+ 2 16.7	-0.3168	0.5919	0.0621	+ 4	-56
192 B. Ophiuchi	6.3	-0.23	+ 6.2	-18 22.5	22 59.6	+ 4 7.4	+0.2772	0.5921	-0.0583	+37	-20
305 B. Ophiuchi	6.3	0.41	6.2	18 47.3	28 11 43.6	- 7 37.7	+0.1184	0.5931	0.0327	+25	-29
39 G. Sagittarii	6.3	0.50	6.5	19 51.4	17 56.8	- 1 38.8	+1.0442	0.5932	0.0199	+71	+30
64 B. Sagittarii	6.1	0.52	6.0	18 41.1	19 41.9	+ 0 2.3	-0.1827	0.5932	0.0163	+ 7	-47
52 G. Sagittarii	6.4	0.53	6.0	18 29.4	20 30.0	+ 0 48.6	-0.3930	0.5932	0.0147	- 5	-61
17 H ¹ . Sagittarii	6.4	-0.54	+ 6.0	-18 38.0	21 0.3	+ 1 17.8	-0.2390	0.5931	-0.0136	+ 3	-50
Y Sagit. (var.)	5.4	0.55	6.0	18 53.6	22 5.1	+ 2 20.0	-0.0025	0.5931	0.0114	+16	-36
85 B. Sagittarii	6.0	0.58	5.6	17 50.8	29 0 46.2	+ 4 54.9	-1.0952	0.5931	0.0058	-49	-90
95 B. Sagittarii	5.7	0.60	5.9	18 46.6	1 40.5	+ 5 47.2	-0.1497	0.5929	0.0040	+ 7	-45
100 B. Sagittarii	5.0	0.60	5.8	18 27.3	2 11.2	+ 6 16.7	-0.4803	0.5928	-0.0029	-10	-68
171 B. Sagittarii	6.1	-0.78	+ 5.4	-19 21.3	15 6.1	- 5 17.9	+0.5746	0.5912	+0.0235	+55	- 3
173 B. Sagittarii	6.4	0.78	5.4	19 12.7	15 7.5	- 5 16.5	+0.4285	0.5912	0.0235	+43	-12
187 B. Sagittarii	6.4	0.79	5.2	18 51.3	16 46.9	- 3 40.9	+0.1046	0.5909	0.0269	+24	-30
190 B. Sagittarii	5.4	0.80	5.3	19 24.5	17 14.5	- 3 14.4	+0.6848	0.5908	0.0278	+66	+ 4
195 B. Sagittarii	6.3	0.81	5.4	19 55.4	17 51.6	- 2 38.7	+1.2292	0.5907	0.0291	+71	+52
d Sagittarii	5.0	-0.84	+ 5.0	-19 5.3	21 5.8	+ 0 28.2	+0.4783	0.5901	+0.0356	+48	- 9
226 B. Sagittarii	6.4	0.87	5.0	19 22.6	22 44.2	+ 2 2.8	+0.8350	0.5897	0.0388	+71	+13
g Sagittarii	4.0	0.86	4.6	17 59.4	22 46.6	+ 2 5.1	-0.5855	0.5897	0.0389	-13	-78
45 Sagittarii	6.0	-0.86	+ 4.7	-18 26.9	22 50.3	+ 2 8.8	-0.1125	0.5897	+0.0390	+13	-43

MARCH.

266 B. Sagittarii	6.1	-0.94	+ 4.4	-19 1.2	1 4 52.3	+ 7 57.1	+0.7461	0.5882	+0.0508	+71	+ 7
267 B. Sagittarii	5.8	0.93	4.3	18 24.0	5 8.3	+ 8 12.5	+0.1216	0.5881	0.0513	+27	-29
31 B. Capricorni	6.4	1.11	1.9	15 59.6	2 2 54.2	+ 5 10.3	-0.8041	0.5806	0.0910	-21	-90
47 B. Capricorni	6.2	-1.14	+ 1.9	-16 47.2	5 48.3	+ 7 58.1	+0.2883	0.5795	+0.0958	+42	-20
τ Capricorni	5.2	1.14	1.4	15 13.3	7 25.7	+ 9 31.9	-1.1750	0.5788	0.0985	-49	-90
61 B. Capricorni	5.9	1.15	1.6	16 23.7	7 57.9	+10 2.9	+0.0929	0.5786	0.0994	+30	-31
94 B. Capricorni	5.7	1.20	0.9	16 19.5	15 22.4	- 6 48.5	+0.8006	0.5754	0.1110	+74	+10
95 B. Capricorni	5.9	1.19	+ 0.6	14 46.6	15 50.2	- 6 21.7	-0.7539	0.5752	0.1118	-16	-90
29 Capricorni	5.5	-1.24	0.0	-15 29.3	23 17.8	+ 0 50.1	+0.8602	0.5718	+0.1227	+75	+14
53 B. Aquarii	6.5	1.22	- 0.3	13 31.1	23 25.5	+ 0 57.5	-1.1747	0.5717	0.1228	-47	-90
18 Aquarii	5.5	1.23	0.7	-13 12.3	3 3 3.0	+ 4 27.4	-1.0475	0.5701	0.1278	-34	-90

NEW MOON.

33 Ceti	6.1	-0.98	- 0.2	+ 2 2.3	7 16 12.2	- 9 52.0	+1.1535	0.5299	+0.1794	+90	+35
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482 ELEMENTS OF OCCULTATIONS, 1924.

MARCH.

THE STAR'S					AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x	y	N.	S.	
		$\Delta\alpha$	$\Delta\delta$									
<i>f</i> Piscium	5.3	-0.95	-9.3	+ 3 12.7	7 19 54.5	- 6 16.4	+0.5411	0.5294	+0.1781	+71	- 6	
μ Piscium	5.0	0.89	9.1	5 45.0	8 2 14.3	- 0 7.9	-1.1061	0.5288	0.1756	-31	-85	
ν Piscium	4.7	0.87	9.5	5 6.1	8 2.4	+ 5 29.8	+0.6132	0.5282	0.1728	+79	0	
39 B. Arietis	6.5	0.78	9.6	7 22.1	20 4.6	- 6 49.3	+0.1710	0.5278	0.1658	+46	-23	
64 Ceti	5.8	0.75	9.5	8 12.7	23 25.4	- 3 34.5	-0.2032	0.5278	0.1636	+25	-44	
ξ^1 Ceti	4.5	-0.74	-9.5	+ 8 29.3	9 0 15.9	- 2 45.5	-0.3690	0.5278	+0.1630	+16	-55	
25 Arietis	6.5	0.69	9.5	9 51.6	7 39.9	+ 4 25.5	-0.6901	0.5279	0.1577	- 3	-79	
ξ^2 Ceti	4.3	0.69	9.9	8 7.0	8 3.7	+ 4 48.5	+1.2890	0.5279	0.1573	+88	+56	
389 B. Ceti	6.3	0.68	9.6	9 13.5	8 47.2	+ 5 30.7	+0.1849	0.5280	0.1568	+47	-23	
85 Ceti	6.3	0.63	9.6	10 25.0	15 23.6	+11 55.3	-0.1092	0.5284	0.1514	+30	-38	
μ Ceti	4.4	-0.62	-9.8	+ 9 47.5	16 38.8	-10 51.7	+0.7684	0.5285	+0.1503	+90	+11	
147 B. Arietis	5.8	0.52	9.3	12 53.5	10 3 35.5	- 0 14.6	-1.0624	0.5296	0.1404	-28	-78	
8 B. Tauri	6.2	0.45	9.7	12 21.5	12 37.9	+ 8 31.5	+0.7556	0.5308	0.1312	+90	+13	
<i>f</i> Tauri	4.3	0.42	9.7	12 40.5	16 1.4	+11 48.8	+0.8450	0.5314	0.1276	+90	+19	
179 B. Tauri	5.9	0.25	9.5	14 57.5	11 10 29.2	+ 5 43.0	+0.4794	0.5350	0.1060	+68	0	
48 Tauri	6.3	-0.21	-9.5	+15 12.5	14 30.0	+ 9 36.4	+0.6165	0.5358	+0.1009	+81	+ 8	
γ Tauri	3.9	0.19	9.5	15 26.6	16 29.6	+11 32.3	+0.5504	0.5363	0.0984	+75	+ 5	
58 Tauri	5.4	0.19	9.6	14 54.7	16 54.2	+11 56.2	+1.1844	0.5364	0.0979	+90	+50	
63 Tauri	5.7	0.17	9.1	16 35.9	18 16.4	-10 44.2	-0.5502	0.5367	0.0961	+ 5	-60	
64 Tauri	4.9	0.16	8.9	17 16.0	18 36.0	-10 25.1	-1.2587	0.5367	0.0957	-55	-73	
70 Tauri	6.4	-0.17	-9.4	+15 46.0	19 22.6	- 9 40.1	+0.4767	0.5369	+0.0946	+67	+ 1	
71 Tauri	4.6	0.16	9.5	15 26.7	19 44.3	- 9 19.0	+0.8669	0.5370	0.0942	+90	+24	
75 Tauri	5.2	0.15	9.3	16 11.3	20 46.0	- 8 19.2	+0.1395	0.5373	0.0928	+44	-18	
θ^1 Tauri	4.2	0.15	9.4	15 47.5	20 50.1	- 8 15.2	+0.5843	0.5373	0.0927	+77	+ 7	
θ^2 Tauri	3.6	0.15	9.5	15 42.1	20 52.8	- 8 12.6	+0.6894	0.5373	0.0926	+90	+13	
80 Tauri	5.8	-0.15	-9.6	+15 28.2	21 36.8	- 7 29.9	+1.0119	0.5375	+0.0917	+90	+34	
264 B. Tauri	4.8	0.14	9.4	16 1.6	21 48.8	- 7 18.3	+0.4140	0.5375	0.0914	+63	- 3	
81 Tauri	5.5	0.14	9.6	15 31.5	21 51.8	- 7 15.4	+0.9745	0.5375	0.0913	+90	+31	
85 Tauri	6.0	0.14	9.5	15 41.2	22 27.6	- 6 40.7	+0.8493	0.5377	0.0905	+90	+23	
275 B. Tauri	6.5	0.13	9.4	16 9.7	23 19.8	- 5 50.2	+0.4016	0.5379	0.0893	+62	- 2	
α Tauri (<i>Alde.</i>)	1.1	-0.12	-9.4	+16 21.3	12 0 27.1	- 4 45.0	+0.2875	0.5382	+0.0878	+54	- 8	
89 Tauri	5.8	0.11	9.5	15 52.8	1 33.5	- 3 40.6	+0.9101	0.5384	0.0863	+90	+28	
σ^1 Tauri	5.2	0.10	9.6	15 38.9	2 3.2	- 3 11.9	+1.2079	0.5386	0.0856	+90	+54	
σ^2 Tauri	4.9	0.10	9.6	15 46.0	2 6.6	- 3 8.6	+1.0832	0.5386	0.0856	+90	+41	
318 B. Tauri	5.7	-0.02	9.3	17 2.0	10 57.2	+ 5 25.4	+0.3833	0.5408	0.0731	+60	- 2	
<i>m</i> Tauri	5.0	+0.04	-8.9	+18 32.5	15 48.5	+10 7.5	-0.9458	0.5420	+0.0661	-21	-72	
111 Tauri	5.1	0.12	9.4	17 18.7	13 0 2.5	- 5 54.1	+0.9061	0.5442	0.0538	+90	+31	
115 Tauri	5.3	0.13	9.2	17 53.7	1 21.8	- 4 37.3	+0.3315	0.5445	0.0518	+57	- 2	
117 Tauri	6.0	0.13	9.5	17 10.4	1 47.2	- 4 12.7	+1.1488	0.5446	0.0511	+90	+52	
119 Tauri	4.9	0.15	9.1	18 32.2	3 46.6	- 2 17.2	-0.2546	0.5452	0.0480	+21	-35	
120 Tauri	5.6	+0.16	-9.1	+18 29.1	4 24.5	- 1 40.5	-0.1676	0.5453	+0.0471	+26	-30	
130 Tauri	5.6	0.22	9.5	17 42.0	11 4.0	+ 4 46.2	+0.9754	0.5471	0.0366	+90	+38	
57 Orionis	5.8	0.26	8.8	19 44.0	14 36.4	+ 8 11.8	-1.1416	0.5480	0.0310	-39	-71	
64 Orionis	5.1	0.30	8.9	19 41.4	18 38.5	-11 54.0	-0.9813	0.5490	0.0244	-24	-71	
68 Orionis	5.7	0.34	8.9	19 48.4	22 41.2	- 7 59.2	-1.0214	0.5500	0.0178	-27	-71	
19 B. Geminorum	6.2	+0.34	-9.3	+18 41.9	23 25.6	- 7 16.3	+0.2054	0.5502	+0.0166	+48	- 6	
124 H ¹ . Orionis	5.7	0.34	9.6	17 55.6	23 52.4	- 6 50.3	+1.0591	0.5503	0.0159	+90	+46	
71 Orionis	5.1	0.35	9.2	19 10.9	14 0 1.9	- 6 41.2	-0.3132	0.5504	0.0156	+18	-36	
292 B. Orionis	6.5	0.38	9.7	17 47.9	3 8.7	- 3 40.5	+1.2417	0.5511	+0.0105	+86	+65	
74 B. Geminorum	6.2	0.50	9.6	18 16.5	15 16.4	+ 8 3.2	+0.7210	0.5540	-0.0099	+90	+24	
110 B. Geminorum	6.2	+0.56	-9.8	+17 51.7	22 15.4	- 9 11.6	+1.0570	0.5555	-0.0217	+90	+46	

ELEMENTS OF OCCULTATIONS, 1924. 483

MARCH.

THE STAR'S				AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, <i>H</i>	<i>Y</i>	<i>x'</i>	<i>y'</i>	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
162 B. Geminorum	5.7	+0.68	-10.1	+17 14.8	15 11 48.3	+ 3 54.0	+1.2648	0.5582	-0.0448	+81	+68
<i>f</i> Geminorum	5.3	0.72	9.9	17 50.8	15 19.0	+ 7 17.6	+0.4487	0.5588	0.0508	+66	+ 4
<i>g</i> Geminorum	5.0	0.74	9.7	18 41.6	18 21.1	+10 13.6	-0.6258	0.5594	0.0560	0	-63
2 B. Cancri	6.0	0.79	10.3	16 43.3	16 0 2.4	- 8 16.6	+1.1458	0.5602	0.0656	+90	+49
3 Cancri	5.7	0.80	10.1	17 30.9	1 3.8	- 7 17.2	+0.2269	0.5604	0.0673	+50	-10
5 Cancri	5.9	+0.80	-10.3	+16 39.8	1 24.0	- 6 57.8	+1.1171	0.5604	-0.0678	+90	+46
ζ Can. (mean)	4.7	0.84	10.0	17 52.5	6 15.5	- 2 16.2	-0.5303	0.5612	0.0759	+ 6	-56
d^2 Cancri	6.2	0.89	10.1	17 17.7	12 27.9	+ 3 43.6	-0.4127	0.5620	0.0862	+13	-49
90 B. Cancri	6.3	0.93	10.6	15 34.5	17 8.8	+ 8 14.9	+0.9950	0.5625	0.0938	+90	+34
54 Cancri	6.3	0.98	10.5	15 37.8	23 53.7	- 9 14.0	+0.2641	0.5633	0.1044	+52	-11
o^1 Cancri	5.1	+1.00	-10.5	+15 36.7	17 2 42.1	- 6 31.4	-0.0161	0.5636	-0.1087	+35	-27
o^2 Cancri	5.7	1.00	10.4	15 52.3	2 51.1	- 6 22.7	-0.3058	0.5636	0.1090	+19	-44
81 Cancri	6.4	1.04	10.4	15 18.0	9 31.3	+ 0 3.8	-0.4637	0.5642	0.1191	+10	-56
π Cancri	5.6	1.05	10.4	15 15.3	10 49.7	+ 1 19.5	-0.5724	0.5643	0.1211	+ 4	-64
7 Leonis	6.2	1.11	10.5	14 43.0	20 8.3	+10 18.9	-1.1932	0.5651	0.1344	-42	-76
11 Leonis	6.5	+1.12	-10.5	+14 41.3	21 6.1	+11 14.8	-1.2934	0.5651	-0.1357	-60	-74
18 Leonis	5.6	1.13	10.5	14 22.0	23 40.3	-10 16.3	-1.3090	0.5654	0.1392	-65	-72
18 Leonis	5.8	1.14	10.9	12 9.5	18 0 53.1	- 9 6.0	+0.8246	0.5654	0.1408	+90	+17
19 Leonis	6.4	1.15	10.9	11 55.0	1 21.4	- 8 38.7	+1.0082	0.5654	0.1415	+90	+30
<i>R</i> Leonis (var.)	4.6	1.15	11.0	11 46.7	1 24.8	- 8 35.4	+1.1443	0.5655	0.1416	+90	+41
ν Leonis	5.0	+1.17	-10.6	+12 48.3	6 12.0	- 3 58.1	-0.6157	0.5658	-0.1477	+ 2	-71
<i>A</i> Leonis	4.6	1.20	11.0	10 22.1	10 34.0	+ 0 14.9	+1.2552	0.5661	0.1531	+90	+53
α Leonis (Reg.)	1.3	1.19	10.6	12 20.2	10 46.2	+ 0 26.8	-0.8157	0.5661	0.1533	-11	-78
44 Leonis	5.9	1.24	10.9	9 10.1	18 21.0	+ 7 45.8	+1.2616	0.5667	0.1621	+90	+52
45 Leonis	5.8	1.24	10.7	10 8.8	19 25.1	+ 8 47.7	+0.0780	0.5668	0.1632	+40	-27
ρ Leonis	3.8	+1.25	-10.7	+ 9 41.7	21 44.0	+11 1.9	+0.1629	0.5669	-0.1658	+45	-23
49 Leonis	5.7	1.26	10.7	9 2.4	22 44.1	+11 59.7	+0.6699	0.5670	0.1668	+86	+ 5
<i>c</i> Leonis	5.1	1.31	10.5	6 30.4	19 10 14.4	- 0 53.7	+1.2784	0.5679	0.1777	+90	+54
χ Leonis	4.7	1.30	10.3	7 44.7	12 9.1	+ 0 57.0	-0.3278	0.5681	0.1793	+18	-53
σ Leonis	4.1	1.33	10.0	6 26.6	19 19.8	+ 7 52.8	-0.3073	0.5688	0.1848	+19	-52
<i>b</i> Virginis	5.2	+1.37	- 9.2	+ 4 4.6	20 12 33.0	+ 0 30.0	-1.1710	0.5708	-0.1940	-37	-86
10 Virginis	6.2	1.39	9.0	+ 2 19.3	16 50.9	+ 4 38.9	-0.2369	0.5714	0.1954	+23	-49
γ Virg. (mean)	2.9	1.40	7.9	- 1 2.1	21 6 54.3	- 5 47.5	+0.3737	0.5737	0.1973	+58	-15
<i>k</i> Virginis	5.7	1.41	7.1	3 24.3	14 43.5	+ 1 45.0	+1.2054	0.5752	0.1966	+87	+40
46 Virginis	6.1	1.40	7.1	2 57.7	15 8.0	+ 2 8.7	+0.6821	0.5753	0.1965	+83	+ 2
48 Virginis	6.5	+1.40	- 6.9	- 3 15.4	16 34.2	+ 3 31.8	+0.6943	0.5755	-0.1963	+86	+ 2
65 Virginis	6.0	1.39	6.1	4 31.7	22 0 57.7	+11 37.3	+0.3284	0.5774	0.1937	+55	-18
66 Virginis	5.7	1.39	6.0	4 46.1	1 29.3	-11 52.3	+0.4661	0.5775	0.1935	+64	-10
72 Virginis	6.1	1.40	5.6	6 4.8	4 0.9	- 9 26.1	+1.2875	0.5781	0.1924	+84	+52
<i>l</i> Virginis	4.8	1.39	5.6	5 51.9	4 40.9	- 8 47.5	+0.9449	0.5782	0.1921	+85	+19
80 Virginis	5.6	+1.38	- 5.5	- 5 0.7	6 12.6	- 7 19.2	-0.2008	0.5785	-0.1914	+23	-48
566 B. Virginis	6.4	1.36	5.2	5 7.1	9 48.2	- 5 51.4	-0.7780	0.5794	0.1893	+ 9	-90
88 Virginis	6.5	1.37	4.9	6 27.6	11 40.5	- 2 3.1	+0.2075	0.5798	0.1882	+46	-24
598 B. Virginis	6.1	1.36	4.4	7 41.2	14 31.1	+ 0 41.3	+0.8981	0.5805	0.1863	+83	+15
95 Virginis	5.4	1.35	3.8	8 57.1	19 30.0	+ 5 29.3	+1.2401	0.5818	0.1826	+81	+46
13 Libræ	5.7	+1.24	- 1.3	-11 35.4	23 15 29.8	+ 0 44.8	+0.4038	0.5868	-0.1625	+55	-14
ξ^2 Libræ	5.6	1.23	1.3	11 6.3	16 29.5	+ 1 42.3	-0.2409	0.5870	0.1613	+17	-50
17 Libræ	6.4	1.22	1.3	10 51.0	17 6.0	+ 2 17.5	-0.5914	0.5872	0.1605	- 2	-77
18 Libræ	5.9	1.22	1.4	10 50.4	17 22.9	+ 2 33.8	-0.6474	0.5873	0.1602	- 5	-84
130 B. Libræ	5.9	1.14	- 0.1	12 6.0	24 3 41.7	-11 30.7	-0.9740	0.5898	0.1463	-27	-90
γ Libræ	4.0	+1.12	+ 1.0	-14 32.2	8 27.3	- 6 55.9	+0.7790	0.5909	-0.1392	+76	+ 9

484 ELEMENTS OF OCCULTATIONS, 1924.

MARCH.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		Δα	Δδ								
190 B. Libræ	6.5	+1.09	+1.3	-14 46.0	24 11 41.0	- 3 49.6	+0.6017	0.5915	-0.1342	+67	- 2
η Libræ	5.5	1.09	1.5	15 25.9	11 56.9	- 3 34.2	+1.1971	0.5916	0.1338	+75	+43
195 B. Libræ	6.2	1.04	1.4	13 54.3	15 3.2	- 0 35.0	-0.7367	0.5922	0.1288	-14	-90
202 B. Libræ	6.4	1.03	1.6	14 10.6	16 55.4	+ 1 12.9	-0.7029	0.5926	0.1257	-12	-90
203 B. Libræ	6.2	1.03	1.7	14 36.4	17 2.8	+ 1 20.0	-0.2878	0.5926	0.1255	+12	-53
48 Libræ	4.6	+1.02	+1.6	-14 3.6	17 43.2	+ 1 58.9	-0.9188	0.5927	-0.1244	-25	-90
49 Libræ	5.4	1.02	2.3	16 18.6	18 35.3	+ 2 49.0	+1.2239	0.5928	0.1229	+74	+47
91 B. Scorp̄ii	6.1	0.94	2.3	14 39.5	25 0 53.4	+ 8 52.6	-1.1666	0.5939	0.1120	-47	-90
98 B. Scorp̄ii	6.1	0.93	2.4	14 41.3	2 10.1	+10 6.5	-1.2823	0.5941	0.1097	-65	-81
φ Ophiuchi	4.4	0.88	3.3	16 26.8	7 3.3	- 9 11.6	-0.0344	0.5948	0.1009	+23	-38
24 Scorp̄ii	5.0	+0.84	+4.0	-17 35.7	11 15.2	- 5 9.5	+0.7115	0.5952	-0.0930	+72	+ 5
78 B. Ophiuchi	6.5	0.75	4.0	16 41.1	17 5.2	+ 0 27.0	-0.7132	0.5956	0.0818	-16	-90
90 B. Ophiuchi	6.5	0.74	4.6	18 7.8	18 33.9	+ 1 52.3	+0.6222	0.5957	0.0789	+64	0
29 Ophiuchi	6.4	0.73	4.9	18 46.4	19 24.6	+ 2 41.0	+1.2042	0.5958	0.0772	+72	+46
125 B. Ophiuchi	6.2	0.69	4.6	17 30.5	22 0.0	+ 5 10.3	-0.2629	0.5959	0.0721	+ 8	-52
164 B. Ophiuchi	6.0	+0.62	+4.9	-17 40.6	26 2 40.6	+ 9 40.1	-0.4093	0.5959	-0.0627	- 1	-62
192 B. Ophiuchi	6.3	0.60	5.2	18 22.5	4 34.2	+11 29.4	+0.1805	0.5959	0.0588	+31	-26
305 B. Ophiuchi	6.3	0.42	5.8	18 47.3	17 9.9	- 0 24.2	+0.0216	0.5951	0.0328	+19	-35
39 G. Sagittarii	6.3	0.33	6.3	19 51.4	23 20.5	+ 5 32.2	+0.9441	0.5943	0.0199	+71	+21
64 B. Sagittarii	6.1	0.30	5.9	18 41.1	27 1 5.0	+ 7 12.7	-0.2786	0.5941	0.0163	+ 2	-53
52 G. Sagittarii	6.4	+0.29	+5.8	-18 29.4	1 52.9	+ 7 58.8	-0.4884	0.5939	-0.0146	-10	-69
17 H ¹ . Sagittarii	6.4	0.28	5.9	18 38.9	2 23.0	+ 8 27.7	-0.3348	0.5938	0.0136	- 2	-57
Y Sagit. (var.)	5.4	0.27	6.0	18 53.6	3 27.5	+ 9 29.8	-0.0991	0.5936	0.0114	+11	-42
85 B. Sagittarii	6.0	0.23	5.7	17 50.8	6 8.0	-11 55.9	-1.1801	0.5931	0.0058	-59	-90
95 B. Sagittarii	5.7	0.22	6.0	18 46.6	7 2.2	-11 3.7	-0.2457	0.5929	0.0039	+ 2	-51
100 B. Sagittarii	5.0	+0.21	+5.9	-18 27.3	7 32.8	-10 34.4	-0.5756	0.5928	-0.0028	-16	-77
171 B. Sagittarii	6.1	0.02	6.1	19 21.3	20 27.7	+ 1 51.1	+0.4798	0.5895	+0.0237	+47	- 9
173 B. Sagittarii	6.4	+0.02	6.1	19 12.7	20 29.1	+ 1 52.4	+0.3337	0.5895	0.0237	+37	-17
187 B. Sagittarii	6.4	0.00	5.9	18 51.3	22 8.8	+ 3 28.3	+0.0099	0.5890	0.0270	+19	-35
190 B. Sagittarii	5.4	-0.01	6.1	19 24.5	22 36.5	+ 3 55.0	+0.5905	0.5888	0.0280	+57	- 2
195 B. Sagittarii	6.3	-0.02	+6.3	-19 55.4	23 13.8	+ 4 30.9	+1.1353	0.5886	+0.0292	+71	+38
d Sagittarii	5.0	0.07	6.0	19 5.3	28 2 28.7	+ 7 38.4	+0.3849	0.5876	0.0356	+41	-14
226 B. Sagittarii	6.4	0.10	6.0	19 22.6	4 7.6	+ 9 13.6	+0.7426	0.5870	0.0389	+71	+ 7
g Sagittarii	4.0	0.09	5.5	17 59.4	4 10.0	+ 9 15.9	-0.6797	0.5870	0.0390	-18	-90
45 Sagittarii	6.0	0.09	5.7	18 26.9	4 13.8	+ 9 19.6	-0.2060	0.5870	0.0391	+ 8	-48
266 B. Sagittarii	6.1	-0.18	+5.7	-19 1.2	10 18.1	- 8 49.7	+0.6558	0.5847	+0.0509	+65	+ 2
267 B. Sagittarii	5.8	0.18	5.5	18 24.0	10 34.2	- 8 34.2	+0.0301	0.5847	0.0514	+22	-34
57 Sagittarii	6.0	0.27	5.5	19 14.3	16 55.5	- 2 27.0	+1.2606	0.5822	0.0632	+71	+58
31 B. Capricorni	6.4	0.45	3.7	15 59.6	29 8 34.2	-11 22.4	-0.8915	0.5754	0.0907	-27	-90
g Capricorni	5.0	0.47	4.4	18 3.9	8 36.3	-11 20.4	+1.2648	0.5753	0.0908	+72	+57
47 B. Capricorni	6.2	-0.49	+3.8	-16 47.2	11 30.7	- 8 32.2	+0.2077	0.5740	+0.0955	+36	-24
τ Capricorni	5.2	0.50	3.2	15 13.3	13 9.5	- 6 56.9	-1.2624	0.5732	0.0982	- 61	-86
61 B. Capricorni	5.9	0.52	3.6	16 23.7	13 42.1	- 6 25.5	+0.0124	0.5730	0.0990	+26	-35
94 B. Capricorni	5.7	0.60	3.1	16 19.4	21 13.5	+ 0 50.0	+0.7287	0.5694	0.1106	+74	+ 6
95 B. Capricorni	5.9	0.59	2.6	14 46.6	21 41.8	+ 1 17.3	-0.8348	0.5692	0.1113	-21	-90
29 Capricorni	5.5	-0.68	+2.3	-15 29.3	30 5 16.9	+ 8 36.7	+0.7941	0.5655	+0.1220	+75	+10
53 B. Aquarii	6.5	0.66	1.7	13 31.1	5 24.7	+ 8 44.2	-1.2539	0.5655	0.1222	-57	-89
18 Aquarii	5.5	0.69	1.3	13 12.3	9 6.0	-11 42.1	-1.1236	0.5637	0.1272	-40	-90
42 Capricorni	5.1	0.78	1.0	14 23.2	16 59.5	- 4 4.7	+1.1614	0.5600	0.1370	+76	+38
151 B. Capricorni	6.1	0.80	+0.5	13 4.7	20 44.1	- 0 27.7	+0.3047	0.5582	0.1414	+47	-19
e Aquarii	5.4	-0.86	-0.6	-11 56.4	31 6 28.6	+ 8 57.5	+0.5326	0.5537	+0.1517	+64	- 6

ELEMENTS OF OCCULTATIONS, 1924. 485

MARCH.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, <i>H</i>	<i>F</i>	<i>x'</i>	<i>y'</i>	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
σ Aquarii	4.9	-0.92	-1.5	-11 4.1	31 15 56.5	- 5 53.2	+1.0891	0.5496	+0.1603	+79	+30
167 G. Aquarii	6.3	0.91	2.4	8 17.6	19 38.3	- 2 18.6	-1.2602	0.5481	0.1632	-51	-90
213 B. Aquarii	6.5	-0.93	-2.5	- 8 42.6	21 53.3	- 0 7.9	-0.4485	0.5472	+0.1650	+ 8	-64

APRIL.

λ Aquarii	3.8	-0.95	-3.0	- 7 59.1	1 23 0.0	+ 4 20.1	-0.4529	0.5454	+0.1682	+ 8	-65
78 Aquarii	6.3	0.95	3.1	7 36.6	3 26.9	+ 5 15.2	-0.6934	0.5450	0.1689	- 5	-89
81 Aquarii	6.4	0.96	3.4	7 28.2	6 45.8	+ 8 27.8	-0.2793	0.5438	0.1710	+18	-53
82 Aquarii	6.4	0.96	3.5	6 59.0	7 19.4	+ 9 0.3	-0.7034	0.5437	0.1713	- 5	-90
<i>h</i> Aquarii	5.4	-0.98	-3.4	- 8 6.3	8 35.4	+10 14.0	+0.7121	0.5432	+0.1721	+82	+ 4
φ Aquarii	4.4	0.98	4.1	6 27.6	13 5.0	- 9 24.9	-0.2674	0.5416	0.1745	+19	-52
96 Aquarii	5.7	0.98	4.4	5 32.5	15 34.5	- 7 0.0	-0.8152	0.5407	0.1758	-12	-90
317 B. Aquarii	6.3	1.00	4.3	6 19.5	16 13.0	- 6 22.7	+0.1368	0.5405	0.1761	+42	-28
URANUS	6.3	..	..	- 5 4.4	17 59.1	- 4 39.9	-0.8928	0.5378	0.1760	-17	-90
NEW MOON.											
85 Ceti	6.3	-0.87	-10.1	+10 25.0	5 23 1.3	- 2 39.3	-0.0021	0.5299	+0.1530	+36	-32
μ Ceti	4.4	0.87	10.2	9 47.5	6 0 16.4	- 1 26.4	+0.8781	0.5300	0.1519	+90	+18
147 B. Arietis	5.8	0.82	10.0	12 53.5	11 11.6	+ 9 9.2	-0.9434	0.5313	0.1419	-19	-78
8 B. Tauri	6.2	-0.78	-10.3	+12 21.5	20 12.7	- 6 6.0	+0.8859	0.5325	+0.1326	+90	+21
<i>f</i> Tauri	4.3	0.76	10.3	12 40.5	23 35.8	- 2 49.0	+0.9786	0.5330	0.1290	+90	+27
179 B. Tauri	5.9	0.65	10.1	14 57.4	7 18 1.6	- 8 56.9	+0.6288	0.5362	0.1071	+82	+ 8
48 Tauri	6.3	0.62	10.1	15 12.5	22 2.2	- 5 3.7	+0.7694	0.5369	0.1020	+90	+17
γ Tauri	3.9	0.61	10.0	15 26.6	8 0 1.8	- 3 7.9	+0.7107	0.5373	0.0994	+90	+14
63 Tauri	5.7	-0.60	- 9.8	+16 35.9	1 48.5	- 1 24.3	-0.3972	0.5376	+0.0970	+14	-49
64 Tauri	4.9	0.60	9.6	17 16.0	2 8.1	- 1 5.3	-1.1071	0.5377	0.0966	-34	-73
70 Tauri	6.4	0.59	10.0	15 45.9	2 54.7	- 0 20.2	+0.6330	0.5378	0.0956	+83	+10
71 Tauri	4.6	0.59	10.1	15 26.7	3 16.4	+ 0 0.8	+1.0243	0.5379	0.0951	+90	+35
75 Tauri	5.2	0.58	9.9	16 11.3	4 18.1	+ 1 0.6	1.02958	0.5381	0.0938	+54	- 9
θ^1 Tauri	4.2	-0.58	-10.0	+15 47.5	4 22.2	+ 1 4.6	+0.7419	0.5381	+0.0936	+90	+16
θ^2 Tauri	3.6	0.58	10.0	15 42.0	4 24.9	+ 1 7.2	+0.8473	0.5381	0.0935	+90	+23
80 Tauri	5.8	0.58	10.1	15 28.2	5 9.0	+ 1 49.9	+1.1712	0.5382	0.0925	+90	+49
264 B. Tauri	4.8	0.57	9.9	16 1.6	5 20.9	+ 2 1.5	+0.5719	0.5383	0.0923	+76	+ 6
81 Tauri	5.5	0.57	10.1	15 31.5	5 23.9	+ 2 4.4	+1.1339	0.5383	0.0922	+90	+45
85 Tauri	6.0	-0.57	-10.0	+15 41.2	5 59.7	+ 2 39.1	+1.0087	0.5384	+0.0914	+90	+34
275 B. Tauri	6.5	0.57	9.9	16 9.7	6 52.0	+ 3 29.7	+0.5605	0.5386	0.0902	+75	+ 5
<i>a</i> Tauri (<i>Ald.</i>)	1.1	0.56	9.9	16 21.3	7 59.3	+ 4 35.0	+0.4469	0.5388	0.0887	+65	0
89 Tauri	5.8	0.55	10.0	15 52.8	9 5.8	+ 5 39.4	+1.0719	0.5390	0.0871	+90	+40
σ^2 Tauri	4.9	0.54	10.0	15 46.0	9 38.9	+ 6 11.5	+1.2459	0.5391	0.0864	+89	+60
318 B. Tauri	5.7	-0.48	- 9.7	+17 2.0	18 30.4	- 9 13.6	+0.5497	0.5408	+0.0738	+74	+ 7
<i>m</i> Tauri	5.0	0.43	9.3	18 32.5	23 22.6	- 4 30.6	-0.7814	0.5417	0.0667	-10	-72
111 Tauri	5.1	0.37	9.7	17 18.7	9 7 38.7	+ 3 29.8	+1.0819	0.5433	0.0542	+90	+44
115 Tauri	5.3	0.36	9.5	17 53.7	8 58.5	+ 4 47.1	+0.5054	0.5435	0.0522	+70	+ 7
119 Tauri	4.9	0.34	9.3	18 32.2	11 24.0	+ 7 7.9	-0.0822	0.5439	0.0484	+31	-25
120 Tauri	5.6	-0.34	- 9.3	+18 29.1	12 2.2	+ 7 44.9	+0.0055	0.5441	+0.0474	+36	-20
130 Tauri	5.6	0.28	9.5	17 42.0	18 44.5	- 9 45.6	+1.1567	0.5452	0.0369	+90	+53
B. D. + 19 ^o 1110	6.0	0.26	8.8	19 50.8	21 5.0	- 7 29.6	-1.1353	0.5457	0.0332	-38	-71
57 Orionis	5.8	0.25	8.8	19 44.0	22 18.5	- 6 18.4	-0.9704	0.5459	0.0312	-23	-71
64 Orionis	5.1	0.22	8.8	19 41.4	10 2 22.8	- 2 22.0	-0.8084	0.5466	0.0247	-12	-71
68 Orionis	5.7	-0.18	- 8.8	+19 48.4	6 27.8	+ 1 35.2	-0.8479	0.5472	+0.0180	-14	-71

486 ELEMENTS OF OCCULTATIONS, 1924.

APRIL.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
19 B. Geminorum	6.2	-0.17	-9.1	+18 41.9	10 7 12.6	+ 2 18.5	+0.3864	0.5474	+0.0168	+01	+ 4
124 H ¹ . Orionis	5.7	0.17	9.4	17 55.6	7 39.7	+ 2 44.8	+1.2455	0.5474	0.0161	+86	+66
71 Orionis	5.1	0.17	9.0	19 10.9	7 49.4	+ 2 54.1	-0.1352	0.5474	0.0158	+28	-25
v Geminorum	4.1	0.10	8.6	20 15.6	14 30.4	+ 9 22.2	-1.2524	0.5485	+0.0048	-57	-70
74 B. Geminorum	6.2	-0.02	9.2	18 16.5	23 15.1	+ 6 10.3	-0.9082	0.5498	-0.0097	+90	+36
110 B. Geminorum	6.2	+0.05	-9.2	+17 51.7	11 6 20.3	+ 0 41.0	+1.2472	0.5507	-0.0215	+85	+66
f Geminorum	5.3	0.23	9.0	17 50.8	23 41.7	- 6 31.8	+0.6323	0.5527	0.0505	+84	+15
g Geminorum	5.0	0.26	8.6	18 41.7	12 2 47.3	- 3 32.3	-0.4525	0.5531	0.0550	+10	-49
3 Cancri	5.7	0.33	8.9	17 30.9	9 37.9	+ 3 4.7	+0.4056	0.5537	0.0668	+62	0
ζ Can. (mean)	4.7	0.38	8.8	17 52.5	14 56.1	+ 8 12.2	-0.3607	0.5543	0.0754	+15	-45
d ² Cancri	6.2	+0.44	-8.8	+17 17.7	21 16.4	- 9 40.0	-0.2450	0.5548	-0.0855	+22	-38
90 B. Cancri	6.3	0.50	9.3	15 34.5	18 2 3.4	- 5 2.6	+1.1732	0.5552	0.0931	+90	+49
54 Cancri	6.3	0.57	9.1	15 37.9	8 57.1	+ 1 37.4	+0.4311	0.5559	0.1037	+64	- 3
o ¹ Cancri	5.1	0.60	9.0	15 36.8	11 49.3	+ 4 23.8	+0.1463	0.5560	0.1080	+45	-18
o ² Cancri	5.7	0.60	9.0	15 52.3	11 58.5	+ 4 32.7	-0.1462	0.5560	0.1082	+28	-34
81 Cancri	6.4	+0.66	-9.0	+15 18.0	18 47.4	+11 8.0	-0.3107	0.5567	-0.1183	+18	-45
π Cancri	5.6	0.68	9.0	15 15.3	20 7.6	-11 34.5	-0.4214	0.5568	0.1203	+12	-53
7 Leonis	6.2	0.78	8.9	14 43.0	14 5 38.2	- 2 23.1	-1.0558	0.5576	0.1336	-28	-76
11 Leonis	6.5	0.79	8.9	14 41.3	6 37.3	+ 1 26.0	-1.1578	0.5577	0.1349	-38	-76
ψ Leonis	5.6	0.82	8.9	14 22.1	9 14.7	+ 1 6.1	-1.1759	0.5580	0.1384	-40	-76
18 Leonis	5.8	+0.84	-9.5	+12 9.5	10 29.0	+ 2 17.9	+0.9738	0.5581	-0.1401	+90	+27
19 Leonis	6.4	0.84	9.6	11 55.1	10 57.9	+ 2 45.8	+1.1583	0.5582	0.1406	+90	+43
R Leonis (var.)	4.6	0.84	9.6	11 46.8	11 1.4	+ 2 49.2	+1.2954	0.5582	0.1407	+82	+63
v Leonis	5.0	0.88	9.2	12 48.3	15 54.3	+ 7 32.2	-0.4838	0.5587	0.1470	+ 9	-60
α Leonis (Reg.)	1.3	0.92	9.1	12 20.2	20 33.9	-11 57.5	-0.6904	0.5593	0.1526	- 3	-76
45 Leonis	5.8	+1.02	-9.4	+10 8.9	15 5 22.3	- 3 27.0	+0.1987	0.5604	-0.1628	+48	-21
ρ Leonis	3.8	1.04	9.4	9 41.7	7 43.6	- 1 10.4	+0.2808	0.5607	0.1653	+53	-16
49 Leonis	5.7	1.05	9.6	9 2.4	8 44.6	- 0 11.6	1.07894	0.5609	0.1663	+90	+11
χ Leonis	4.7	1.16	9.3	7 44.7	22 21.4	-11 25.5	-0.2335	0.5632	0.1793	+23	-48
σ Leonis	4.1	1.23	9.2	6 26.6	16 5 37.0	- 4 1.9	-0.2242	0.5646	0.1850	+23	-47
b Virginis	5.2	+1.36	-8.6	+ 4 4.6	22 57.2	-11 17.6	-1.1170	0.5688	-0.1951	-32	-86
10 Virginis	6.2	1.40	8.7	+ 2 19.3	17 3 15.7	- 7 8.3	-0.1908	0.5700	0.1967	+25	-46
γ Virg. (mean)	2.9	1.49	8.0	- 1 2.1	17 17.9	+ 6 24.2	+0.3914	0.5742	0.1995	+59	-15
k Virginis	5.7	1.56	7.6	3 24.3	18 1 4.1	-10 6.2	+1.2030	0.5768	0.1992	+87	+40
46 Virginis	6.1	1.56	7.5	2 57.7	1 28.4	+ 9 42.8	+0.6815	0.5770	0.1992	+83	+ 2
48 Virginis	6.5	+1.57	-7.4	- 3 15.4	2 53.9	- 8 20.3	+0.6907	0.5776	-0.1989	+87	+ 2
65 Virginis	6.0	1.60	6.7	4 31.7	11 12.0	- 0 20.3	+0.3098	0.5805	0.1967	+54	-19
66 Virginis	5.7	1.61	6.7	4 46.1	11 43.2	+ 0 9.8	+0.4454	0.5808	0.1966	+63	-12
72 Virginis	6.1	1.63	6.5	6 4.8	14 12.8	+ 2 33.9	+1.2554	0.5817	0.1956	+84	+46
l Virginis	4.8	1.63	6.4	5 51.9	14 52.2	+ 3 11.9	+0.9140	0.5819	0.1953	+85	+16
80 Virginis	5.6	+1.62	-6.2	- 5 0.7	16 22.5	+ 4 38.9	-0.2258	0.5825	-0.1946	+22	-49
566 B. Virginis	6.4	1.63	5.9	5 7.1	19 54.8	+ 8 3.4	-0.8050	0.5839	0.1928	-11	-90
88 Virginis	6.5	1.65	5.7	6 27.6	21 45.2	+ 9 49.8	+0.1684	0.5846	0.1917	+44	-27
598 B. Virginis	6.1	1.66	5.4	7 41.2	19 0 32.8	-11 28.9	+0.8468	0.5857	0.1900	+83	+12
623 B. Virginis	6.5	1.68	5.0	8 53.7	4 27.1	+ 7 43.4	+1.3013	0.5872	0.1872	+82	+55
95 Virginis	5.4	+1.68	-4.9	- 8 57.2	5 26.0	- 6 46.6	+1.1752	0.5876	-0.1864	+82	+38
13 Libræ	5.7	1.70	2.6	11 35.4	20 0 57.3	-11 59.6	+0.3096	0.5951	0.1666	+50	-19
ξ ² Libræ	5.6	1.69	2.5	11 6.3	1 55.3	-11 3.9	-0.3284	0.5955	0.1654	+14	-56
17 Libræ	6.4	1.68	2.4	10 51.1	2 30.8	-10 29.7	-0.6752	0.5957	0.1646	- 7	-87
18 Libræ	5.9	1.68	2.4	10 50.4	2 47.2	-10 13.9	-0.7309	0.5958	0.1643	-10	-90
130 B. Libræ	5.9	+1.66	-1.1	-12 6.0	12 48.0	- 0 36.4	-1.0695	0.5992	-0.1503	-34	-90

ELEMENTS OF OCCULTATIONS, 1924. 487

APRIL.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924 ^o		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
γ Libræ	4.0	+1.68	-0.3	-14 32.2	20 17 24.8	+ 3 49.6	+0.6509	0.6007	-0.1432	+71	+ 0
190 B. Libræ	6.5	1.66	+0.1	14 48.0	20 32.3	+ 6 49.7	+0.4705	0.6016	0.1381	+57	-10
η Libræ	5.5	1.67	0.2	15 25.9	20 47.7	+ 7 4.5	+1.0564	0.6017	0.1377	+75	+28
195 B. Libræ	6.2	1.63	0.4	13 54.3	23 48.0	+ 9 57.7	-0.8526	0.6025	0.1326	-21	-90
202 B. Libræ	6.4	1.62	0.6	14 10.6	21 1 36.5	+11 41.9	-0.8221	0.6029	0.1295	-19	-90
203 B. Libræ	6.2	+1.63	+0.7	-14 36.4	1 43.6	+11 48.7	-0.4136	0.6030	-0.1293	+ 5	-62
48 Libræ	4.6	1.62	0.7	14 3.7	2 22.8	-11 33.7	-1.0357	0.6031	0.1281	-34	-90
49 Libræ	5.4	1.63	1.0	16 18.6	3 13.1	-10 45.4	+1.0726	0.6034	0.1267	+74	+30
91 B. Scorpïi	6.1	1.58	1.5	14 39.6	9 18.5	- 4 54.5	-1.2925	0.6046	0.1155	-69	-77
φ Ophiuchi	4.4	1.55	2.5	16 26.8	15 15.8	+ 0 48.6	-0.1834	0.6056	0.1041	+15	-47
24 Scorpïi	5.0	+1.53	+3.2	-17 35.7	19 18.9	+ 4 42.0	+0.5453	0.6062	-0.0960	+59	- 5
78 B. Ophiuchi	6.5	1.46	3.6	16 41.1	22 0 56.9	+10 6.5	-0.8636	0.6066	0.0845	-26	-90
90 B. Ophiuchi	6.5	1.46	4.0	18 7.8	2 22.4	+11 28.6	+0.4488	0.6067	0.0815	+50	-11
29 Ophiuchi	6.4	1.46	4.3	18 46.4	3 11.4	-11 44.4	+1.0205	0.6067	0.0798	+72	+27
125 B. Ophiuchi	6.2	1.42	4.2	17 30.5	5 41.2	- 9 20.7	-0.4260	0.6067	0.0745	- 1	-64
164 B. Ophiuchi	6.0	+1.37	+4.7	-17 40.6	10 12.5	- 5 0.2	-0.5751	0.6067	-0.0649	-10	-77
192 B. Ophiuchi	6.3	1.36	5.0	18 22.5	12 2.1	- 3 15.0	+0.0034	0.6066	0.0609	+21	-36
305 B. Ophiuchi	6.3	1.22	6.1	18 47.3	23 0 12.8	+ 8 26.3	-0.1646	0.6051	0.0342	+ 9	-46
39 G. Sagittarii	6.3	1.14	6.8	19 51.4	6 11.5	- 9 49.3	+0.7397	0.6039	0.0209	+71	+ 7
16 Sagittarii	5.9	1.13	7.1	20 24.6	7 44.5	- 8 19.9	+1.2654	0.6035	0.0175	+70	+62
64 B. Sagittarii	6.1	+1.12	+6.6	-18 41.1	7 52.8	- 8 12.0	-0.4666	0.6034	-0.0172	- 8	-67
52 G. Sagittarii	6.4	1.10	6.5	18 29.4	8 39.2	- 7 27.4	-0.6739	0.6032	0.0155	-21	-90
17 H ¹ . Sagittarii	6.4	1.10	6.6	18 38.9	9 8.4	- 6 59.4	-0.5230	0.6031	0.0145	-12	-72
Y Sagit. (var.)	5.4	1.08	6.8	18 53.6	10 10.9	- 5 59.3	-0.2913	0.6028	0.0121	0	-54
95 B. Sagittarii	5.7	1.04	6.9	18 46.6	13 39.2	- 2 39.3	-0.4383	0.6018	0.0045	- 9	-65
100 B. Sagittarii	5.0	+1.03	+6.8	-18 27.2	14 8.9	- 2 10.8	-0.7641	0.6016	-0.0034	-27	-90
29 Sagittarii	5.3	0.93	7.8	20 24.6	21 20.7	+ 4 44.0	+1.2386	0.5991	0.0122	+70	+54
171 B. Sagittarii	6.1	0.85	7.6	19 21.3	24 2 42.4	+ 9 53.1	+0.2705	0.5969	0.0236	+33	-20
173 B. Sagittarii	6.4	0.85	7.6	19 12.7	2 43.8	+ 9 54.4	+0.1261	0.5969	0.0237	+24	-29
187 B. Sagittarii	6.4	0.83	7.5	18 51.3	4 20.9	+11 27.8	-0.1943	0.5962	0.0271	+ 8	-48
190 B. Sagittarii	5.4	+0.82	+7.7	-19 24.5	4 47.9	+11 53.8	+0.3791	0.5960	+0.0280	+41	-14
195 B. Sagittarii	6.3	0.82	7.9	19 55.3	5 24.2	-11 31.3	+0.9171	0.5957	0.0293	+71	+19
d Sagittarii	5.0	0.77	7.7	19 5.2	8 34.4	- 8 28.5	+0.1747	0.5942	0.0358	+28	-26
226 B. Sagittarii	6.4	0.74	7.8	19 22.5	10 10.9	- 6 55.7	+0.5278	0.5936	0.0392	+53	- 6
q Sagittarii	4.0	0.74	7.3	17 59.4	10 13.4	- 6 53.3	-0.8784	0.5935	0.0392	-31	-90
45 Sagittarii	6.0	+0.74	+7.5	-18 26.9	10 17.0	- 6 49.8	-0.4102	0.5935	+0.0394	- 3	-63
266 B. Sagittarii	6.1	0.65	7.8	19 1.2	16 13.2	- 1 7.2	+0.4407	0.5905	0.0513	+47	-11
267 B. Sagittarii	5.8	0.65	7.6	18 23.9	16 29.0	- 0 52.1	+0.1785	0.5904	0.0518	+10	-47
57 Sagittarii	6.0	0.56	7.9	19 14.2	22 42.6	+ 5 7.4	+1.0391	0.5870	0.0638	+71	+29
31 B. Capricorni	6.4	0.34	6.6	15 59.5	25 14 6.2	- 4 3.1	-1.0947	0.5782	0.0914	-42	-90
q Capricorni	5.0	+0.33	+7.3	-18 3.8	14 8.3	- 4 1.0	+1.0460	0.5781	+0.0915	+72	+29
47 B. Capricorni	6.2	0.30	6.8	16 47.2	17 0.6	- 1 14.9	-0.0029	0.5764	0.0963	+24	-36
61 B. Capricorni	5.9	0.27	6.6	16 23.6	19 10.5	+ 0 50.3	-0.1965	0.5751	0.0998	+14	-48
94 B. Capricorni	5.7	0.17	6.3	16 19.4	26 2 37.5	+ 8 1.3	+0.5179	0.5705	0.1114	+59	- 7
95 B. Capricorni	5.9	0.17	5.8	14 46.5	3 5.6	+ 8 28.4	-1.0372	0.5703	0.1120	-35	-90
29 Capricorni	5.5	+0.07	+5.7	-15 29.2	10 37.6	- 8 15.4	+0.5872	0.5657	+0.1227	+65	- 3
42 Capricorni	5.1	-0.07	4.7	14 23.2	22 17.9	+ 3 1.0	+0.9617	0.5588	0.1376	+76	+21
151 B. Capricorni	6.1	0.11	4.1	13 4.6	27 2 2.4	+ 6 37.9	+0.1098	0.5567	0.1419	+36	-30
μ Capricorni	5.2	0.13	4.3	13 54.6	3 41.3	+ 8 13.5	+1.2222	0.5558	0.1437	+77	+45
e Aquarii	5.4	0.21	3.2	11 56.3	11 47.7	- 7 56.2	+0.3461	0.5514	0.1521	+51	-17
σ Aquarii	4.9	-0.30	+2.3	-11 4.0	21 18.1	+ 1 15.8	+0.9129	0.5465	+0.1606	+79	+17

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APRIL.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
58 Aquarii	6.4	-0.31	+ 2.3	-11 17.7	27 21 47.8	+ 1 44.5	+1.2349	0.5463	+0.1610	+79	+46
213 B. Aquarii	6.5	0.34	1.2	8 42.5	28 3 17.1	+ 7 3.2	-0.6188	0.5437	0.1652	- 1	-80
λ Aquarii	3.8	0.38	0.6	7 59.1	7 55.8	+11 33.2	-0.6177	0.5417	0.1685	- 1	-79
78 Aquarii	6.3	0.38	0.4	7 36.5	8 53.2	-11 31.2	-0.8574	0.5412	0.1691	-15	-90
81 Aquarii	6.4	0.41	0.2	7 28.2	12 13.7	- 8 17.0	-0.4384	0.5398	0.1712	+10	-63
82 Aquarii	6.4	-0.41	0.0	- 6 58.9	12 47.7	- 7 44.1	-0.8625	0.5396	+0.1716	-15	-90
h Aquarii	5.4	0.43	+ 0.3	8 6.2	14 4.4	- 6 29.8	+0.5573	0.5392	0.1723	+70	- 5
φ Aquarii	4.4	0.46	- 0.6	6 27.6	18 36.5	- 2 6.1	-0.4178	0.5374	0.1748	+11	-62
96 Aquarii	5.7	0.47	0.9	5 32.4	21 7.5	+ 0 20.2	-0.9633	0.5365	0.1760	-21	-90
317 B. Aquarii	6.3	0.49	0.8	6 19.4	21 46.4	+ 0 57.9	-0.0081	0.5362	0.1763	+34	-36
URANUS	6.2	..	..	- 4 33.6	29 2 0.3	+ 5 4.1	-1.1537	0.5331	+0.1774	-36	-90
337 B. Aquarii	6.4	-0.50	- 1.5	4 56.8	2 11.1	+ 5 14.6	-0.7058	0.5347	0.1781	- 5	-90
342 B. Aquarii	6.5	0.51	1.7	4 30.2	3 11.1	+ 6 12.7	-1.0057	0.5344	0.1785	-25	-90
20 Piscium	5.6	0.56	2.5	3 11.1	11 27.7	- 9 45.7	-0.9395	0.5319	0.1813	-19	-90
24 Piscium	6.1	0.58	2.6	3 34.7	13 59.4	- 7 18.6	-0.0561	0.5313	0.1820	+32	-39
27 Piscium	5.1	-0.61	- 2.7	- 3 58.7	16 55.0	- 4 28.3	+0.9106	0.5305	+0.1826	+87	+16
29 Piscium	5.1	0.61	2.9	3 27.1	18 31.2	- 2 55.0	+0.6337	0.5302	0.1829	+79	- 1
4 Ceti	6.3	0.62	3.2	2 58.4	21 32.3	+ 0 0.7	+0.6688	0.5295	0.1834	+82	+ 1
5 Ceti	6.3	0.63	3.3	2 52.3	21 46.6	+ 0 14.6	+0.6029	0.5295	0.1834	+76	- 3
10 Ceti	6.4	0.66	4.4	0 28.3	30 7 13.8	+ 9 25.0	-0.2635	0.5277	0.1841	+21	-51
14 Ceti	5.4	-0.69	- 4.6	- 0 55.5	11 49.9	-10 7.2	+1.0770	0.5270	+0.1841	+90	+28

MAY.

33 Ceti	6.1	-0.75	- 6.2	+ 2 2.4	1 5 59.0	+ 7 29.9	+1.1678	0.5256	+0.1812	+90	+37
f Piscium	5.3	-0.76	- 6.6	+ 3 12.8	9 44.7	+11 8.9	+0.5634	0.5255	+0.1801	+73	- 4
NEW MOON.											
θ ^a Tauri	3.6	-0.76	- 9.9	+15 42.1	5 11 2.4	+ 9 32.1	+1.0041	0.5392	+0.0955	+90	+34
264 B. Tauri	4.8	0.76	9.9	16 1.6	11 58.3	+10 26.4	+0.7297	0.5393	0.0942	+90	+15
85 Tauri	6.0	-0.76	-10.0	+15 41.2	12 37.1	+11 4.0	+1.1685	0.5395	+0.0933	+90	+48
119 H ¹ Tauri	6.2	0.75	9.6	17 51.3	13 25.3	+11 50.7	-1.1673	0.5397	0.0922	-40	-73
275 B. Tauri	6.5	0.76	9.9	16 9.7	13 29.3	+11 54.5	+0.7209	0.5397	0.0921	+90	+15
α Tauri (Ald.)	1.1	0.75	9.9	16 21.3	14 36.6	-11 0.2	+0.6089	0.5399	0.0906	+80	+ 8
89 Tauri	5.8	0.75	9.9	15 52.8	15 43.0	- 9 55.9	+1.2370	0.5401	0.0890	+90	+58
318 B. Tauri	5.7	-0.72	- 9.8	+17 2.0	6 1 7.2	- 0 49.3	+0.7287	0.5419	+0.0756	+90	+17
m Tauri	5.0	0.68	9.4	18 32.5	5 59.2	+ 3 53.6	-0.5983	0.5428	0.0683	+ 2	-61
115 Tauri	5.3	0.65	9.5	17 53.7	15 35.0	-10 48.8	+0.7056	0.5443	0.0537	+90	+18
119 Tauri	4.9	0.64	9.3	18 32.2	18 0.6	- 8 27.8	+0.1195	0.5448	0.0499	+43	-14
120 Tauri	5.6	0.64	9.3	18 29.1	18 38.7	- 7 51.1	+0.2083	0.5449	0.0489	+48	- 9
B.D. +19° 11.0	6.0	-0.59	- 9.0	+19 50.8	7 3 42.1	+ 0 55.0	-0.9249	0.5461	+0.0345	-20	-71
57 Orionis	5.8	0.58	8.9	19 44.0	4 55.7	+ 2 6.3	-0.7580	0.5463	0.0325	- 8	-71
64 Orionis	5.1	0.56	8.8	19 41.4	9 0.5	+ 6 3.3	-0.5907	0.5468	0.0259	+ 2	-57
χ ² Orionis	4.7	0.56	8.7	20 8.4	9 13.4	+ 6 15.7	-1.0822	0.5468	0.0256	-33	-70
68 Orionis	5.7	0.53	8.7	19 48.4	13 6.2	+10 1.1	-0.6260	0.5473	0.0192	0	-59
19 B. Geminorum	6.2	-0.53	- 9.0	+18 41.9	13 51.1	+10 44.5	+0.6144	0.5474	+0.0180	+82	+16
71 Orionis	5.1	0.53	8.9	19 10.9	14 28.0	+11 20.2	+0.0913	0.5474	0.0170	+41	-12
γ Geminorum	4.1	0.48	8.4	20 15.6	21 10.5	- 6 10.2	-1.0244	0.5481	+0.0059	-28	-70
74 B. Geminorum	6.2	0.41	8.8	18 16.5	8 5 58.0	+ 2 20.2	+1.1558	0.5487	-0.0087	+90	+56
f Geminorum	5.3	0.20	8.2	17 50.8	9 6 38.0	+ 2 12.1	+0.8977	0.5496	0.0496	+90	+31
g Geminorum	5.0	-0.18	- 7.8	+18 41.7	9 45.9	+ 5 13.9	-0.1943	0.5497	-0.0547	+25	-32

ELEMENTS OF OCCULTATIONS, 1924. 489

MAY.

THE STAR'S				AT CONJUNCTION IN R.A.					Limiting Parallels.		
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	r	s'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
209 B. Geminorum	6.2	-0.16	-7.5	+19 31.1	9 12 30.2	+ 7 52.9	-1.2508	0.5497	-0.0592	-56	-71
3 Cancri	5.7	0.11	8.0	17 30.9	16 42.3	+11 56.7	+0.6743	0.5497	0.0659	+89	+15
10 H. Cancri	6.1	0.10	7.4	19 3.3	18 33.5	-10 15.8	-1.1301	0.5497	0.0689	-37	-71
ζ Can. (mean)	4.7	0.05	7.7	17 52.6	22 5.4	- 6 50.8	-0.0972	0.5497	0.0745	+30	-28
d ¹ Cancri	5.9	-0.01	7.2	18 34.5	10 3 21.1	- 1 45.3	-1.2696	0.5496	0.0827	-58	-72
d ² Cancri	6.2	+0.01	-7.6	+17 17.7	4 32.3	- 0 36.5	+0.0210	0.5496	-0.0846	+37	-23
54 Cancri	6.3	0.14	7.7	15 37.9	16 26.8	+10 54.7	+0.7052	0.5496	0.1026	+90	+13
o ¹ Cancri	5.1	0.18	7.6	15 36.8	19 22.6	-10 15.2	+0.4172	0.5496	0.1069	+63	-4
o ² Cancri	5.7	0.18	7.5	15 52.3	19 32.0	-10 6.1	+0.1214	0.5496	0.1071	+43	-20
81 Cancri	6.4	0.24	7.3	15 18.1	11 2 30.3	- 3 21.4	-0.0462	0.5496	0.1170	+33	-30
π Cancri	5.6	+0.27	-7.4	+15 15.3	3 52.3	- 2 2.1	-0.1586	0.5496	-0.1189	+27	-36
227 B. Cancri	6.4	0.30	7.1	15 41.6	6 42.6	+ 0 42.6	-0.9694	0.5497	0.1229	-22	-75
NEPTUNE	7.7	..	..	15 48.3	8 24.5	+ 2 21.2	-1.2992	0.5494	0.1251	-63	-73
7 Leonis	6.2	0.38	7.1	14 43.1	13 37.1	+ 7 23.6	-0.8045	0.5498	0.1321	-10	-76
11 Leonis	6.5	0.39	7.2	14 41.4	14 37.7	+ 8 22.2	-0.9082	0.5498	0.1334	-17	-76
ψ Leonis	5.6	+0.42	-7.1	+14 22.1	17 19.2	+10 58.4	-0.9279	0.5499	-0.1369	-18	-76
18 Leonis	5.8	0.44	7.8	12 9.5	18 35.5	-11 47.7	+1.2480	0.5500	0.1385	+90	+53
ν Leonis	5.0	0.50	7.4	12 48.3	12 0 9.6	- 6 24.6	-0.2315	0.5503	0.1454	+23	-44
a Leonis (Reg.)	1.3	0.55	7.3	12 20.2	4 56.9	- 1 46.7	-0.4443	0.5505	0.1510	+11	-58
45 Leonis	5.8	0.67	7.6	10 8.9	14 0.4	+ 6 59.0	+0.4482	0.5513	0.1611	+64	-7
ρ Leonis	3.8	+0.70	-7.6	+ 9 41.8	16 25.7	+ 9 19.5	+0.5290	0.5516	-0.1636	+71	-4
49 Leonis	5.7	0.72	7.8	9 2.5	17 28.6	+10 20.3	+1.0431	0.5517	0.1646	+90	+29
χ Leonis	4.7	0.87	7.5	7 44.7	13 7 29.1	- 0 6.9	-0.0101	0.5539	0.1776	+35	-35
σ Leonis	4.1	0.97	7.4	6 26.6	14 57.2	+ 7 6.4	-0.0115	0.5554	0.1835	+35	-35
b Virginis	5.2	1.18	7.0	4 4.6	14 8 46.1	+ 0 19.2	-0.9444	0.5601	0.1940	-18	-86
10 Virginis	6.2	+1.24	-7.2	+ 2 19.4	13 11.2	+ 4 35.4	-0.0170	0.5616	-0.1958	+35	-36
γ Vir. (mean)	2.9	1.39	6.9	- 1 2.1	15 3 32.9	- 5 32.6	+0.5396	0.5670	0.1991	+70	-6
k Virginis	5.7	1.50	6.7	3 24.3	11 28.3	+ 2 6.1	+1.3378	0.5704	0.1993	+77	+63
46 Virginis	6.1	1.50	6.6	2 57.7	11 53.1	+ 2 30.1	+0.8117	0.5706	0.1992	+88	+10
48 Virginis	6.5	1.52	6.5	3 15.4	13 20.1	+ 3 54.0	+0.8174	0.5713	0.1991	+87	+10
65 Virginis	6.0	+1.60	-6.0	- 4 31.7	21 46.1	-11 58.0	+0.4126	0.5754	-0.1974	+60	-13
66 Virginis	5.7	1.62	6.0	4 46.1	22 17.8	-11 27.4	+0.5475	0.5756	0.1973	+71	-6
l Virginis	4.8	1.65	5.9	5 51.9	16 1 29.3	- 8 22.8	+1.0099	0.5772	0.1962	+85	+23
80 Virginis	5.6	1.65	5.5	5 0.7	3 0.8	- 6 54.6	-0.1389	0.5780	0.1956	+27	-44
566 B. Virginis	6.4	1.68	5.2	5 7.1	6 35.5	- 3 27.7	-0.7290	0.5798	0.1940	-5	-90
88 Virginis	6.5	+1.71	-5.2	- 6 27.6	8 27.0	- 1 40.2	+0.2427	0.5808	-0.1931	+48	-22
598 B. Virginis	6.1	1.74	5.1	7 41.2	11 16.1	+ 1 2.7	+0.9153	0.5824	0.1914	+83	+17
95 Virginis	5.4	1.79	4.7	8 57.2	16 11.4	+ 5 47.1	+1.2302	0.5850	0.1882	+82	+44
13 Libræ	5.7	1.93	2.6	11 35.4	17 11 44.0	+ 0 35.2	+0.3098	0.5958	0.1694	+50	-19
ξ^a Libræ	5.6	1.93	2.4	11 6.3	12 41.9	+ 1 30.9	-0.3290	0.5962	0.1683	+14	-56
17 Libræ	6.4	+1.93	-2.3	-10 51.1	13 17.2	+ 2 4.9	-0.6762	0.5965	-0.1675	-6	-87
18 Libræ	5.9	1.93	2.3	10 50.4	13 33.4	+ 2 20.4	-0.7325	0.5967	0.1672	-9	-90
130 B. Libræ	5.9	1.97	1.2	12 6.0	23 30.0	+11 53.8	-1.0943	0.6018	0.1536	-37	-90
γ Libræ	4.0	2.02	0.5	14 32.2	18 4 3.8	- 7 43.2	+0.6047	0.6041	0.1466	+69	-2
190 B. Libræ	6.5	2.03	-0.1	14 48.0	7 9.0	- 4 45.4	+0.4172	0.6055	0.1416	+53	-13
η Libræ	5.5	+2.04	0.0	-15 25.9	7 24.2	- 4 30.8	+0.9984	0.6056	-0.1412	+75	+24
195 B. Libræ	6.2	2.02	+0.4	13 54.3	10 21.9	- 1 40.2	-0.9047	0.6069	0.1362	-23	-90
202 B. Libræ	6.4	2.02	0.6	14 10.6	12 8.8	+ 0 2.4	-0.8787	0.6076	0.1331	-23	-90
203 B. Libræ	6.2	2.03	0.7	14 36.4	12 15.8	+ 0 9.1	-0.4736	0.6077	0.1329	+1	-67
48 Libræ	4.6	2.02	0.7	14 3.7	12 54.3	+ 0 46.0	-1.0925	0.6080	0.1317	-39	-90
49 Libræ	5.4	+2.04	+0.7	-16 18.6	13 43.8	+ 1 33.6	+0.9970	0.6083	-0.1303	+74	+24

490 ELEMENTS OF OCCULTATIONS, 1924.

MAY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, <i>H</i>	<i>Y</i>	<i>x'</i>	<i>y'</i>	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
<i>φ</i> Ophiuchi	4.4	+2.04	+2.5	-16 26.8	19 1 32.7	-11 6.3	-0.2776	0.6124	-0.1077	+10	-53
24 Scorpii	5.0	2.04	3.2	17 35.7	5 30.4	-7 18.4	+0.4339	0.6135	0.0996	+50	-11
78 B. Ophiuchi	6.5	2.01	3.9	16 41.1	11 0.1	-2 2.3	-0.9717	0.6147	0.0879	-33	-90
90 B. Ophiuchi	6.5	2.02	4.1	18 7.8	12 23.4	-0 42.3	+0.3220	0.6149	0.0849	+42	-18
29 Ophiuchi	6.4	2.03	4.3	18 46.4	13 11.1	+0 3.4	+0.8850	0.6151	0.0832	+72	+16
125 B. Ophiuchi	6.2	+2.00	+4.5	-17 30.5	15 37.0	+2 23.2	-0.5494	0.6154	-0.0778	-8	-74
164 B. Ophiuchi	6.0	1.98	5.1	17 40.6	20 0.7	+6 36.0	-0.7059	0.6159	0.0680	-18	-90
192 B. Ophiuchi	6.3	1.98	5.4	18 22.5	21 47.2	+8 18.1	-0.1387	0.6159	0.0640	+14	-44
305 B. Ophiuchi	6.3	1.90	6.9	18 47.3	20 9.35.4	-4 23.0	-0.3286	0.6155	0.0367	0	-56
16 G. Sagittarii	6.4	1.90	7.3	20 20.0	11 6.9	-2 55.3	+1.1395	0.6153	0.0331	+70	+39
39 G. Sagittarii	6.3	+1.86	+7.7	-19 51.4	15 22.4	+1 9.6	+0.5510	0.6146	-0.0232	+53	-4
16 Sagittarii	5.9	1.85	8.0	20 24.6	16 52.3	+2 35.9	+1.0659	0.6143	0.0196	+70	+32
64 B. Sagittarii	6.1	1.83	7.7	18 41.0	17 0.3	+2 43.5	-0.6402	0.6143	0.0193	-18	-85
52 G. Sagittarii	6.4	1.82	7.7	18 29.4	17 45.2	+3 26.6	-0.8457	0.6141	0.0176	-31	-90
17 H ¹ Sagittarii	6.4	1.82	7.8	18 38.9	18 13.3	+3 53.5	-0.6978	0.6140	0.0165	-21	-90
<i>Y</i> Sagit. (var.)	5.4	+1.81	+7.9	-18 53.6	19 13.8	+4 51.6	-0.4715	0.6137	-0.0141	-9	-68
21 Sagittarii	5.0	1.81	8.4	20 34.9	20 42.9	+6 16.9	+1.1790	0.6133	0.0106	+70	+44
95 B. Sagittarii	5.7	1.78	8.2	18 46.5	22 34.9	+8 3.1	-0.6223	0.6128	0.0063	-18	-83
100 B. Sagittarii	5.0	1.77	8.2	18 27.2	23 3.6	+8 43.9	-0.9438	0.6126	-0.0052	-39	-90
29 Sagittarii	5.3	1.71	9.3	20 24.6	21 6 0.3	-8 48.5	+1.0155	0.6103	+0.0109	+70	+27
171 B. Sagittarii	6.1	+1.64	+9.4	-19 21.3	11 10.6	-3 50.8	+0.0544	0.6081	+0.0227	+20	-33
173 B. Sagittarii	6.4	1.64	9.4	19 12.7	11 12.0	-3 49.5	-0.0876	0.6081	0.0227	+12	-41
187 B. Sagittarii	6.4	1.62	9.4	18 51.2	12 45.7	-2 19.5	-0.4053	0.6074	0.0262	-5	-62
190 B. Sagittarii	5.4	1.62	9.6	19 24.5	13 11.7	-1 54.5	+0.1581	0.6073	0.0272	+27	-27
195 B. Sagittarii	6.3	1.61	9.7	19 55.3	13 46.8	-1 20.8	+0.6867	0.6070	0.0285	+66	+4
<i>d</i> Sagittarii	5.0	+1.57	+9.7	-19 5.2	16 50.2	+1 35.2	-0.0484	0.6055	+0.0353	+16	-39
226 B. Sagittarii	6.4	1.55	9.9	19 22.5	18 23.3	+3 4.5	+0.2968	0.6046	0.0387	+37	-19
<i>q</i> Sagittarii	4.0	1.54	9.6	17 59.3	18 25.6	+3 6.7	-1.0870	0.6046	0.0387	-47	-90
45 Sagittarii	6.0	1.54	9.7	18 26.9	18 29.1	+3 10.1	-0.6262	0.6046	0.0389	-15	-83
266 B. Sagittarii	6.1	1.47	10.2	19 1.1	22 0 12.7	+8 40.0	+0.2030	0.6015	0.0511	+32	-24
267 B. Sagittarii	5.8	+1.47	+10.0	-18 23.9	0 27.9	+8 54.6	-0.4066	0.6013	+0.0517	-2	-62
57 Sagittarii	6.0	1.39	10.5	19 14.2	6 28.5	-9 18.9	+0.7841	0.5977	0.0640	+71	+10
<i>π</i> Capricorni	5.2	1.19	10.7	18 27.5	20 44.6	+4 24.3	+1.1184	0.5882	0.0913	+72	+36
<i>ρ</i> Capricorni	5.0	1.18	10.6	18 3.8	21 23.0	+5 1.3	+0.7755	0.5877	0.0924	+72	+9
47 B. Capricorni	6.2	1.14	10.2	16 47.1	23 0 9.7	+7 41.7	-0.2601	0.5858	0.0973	+10	-52
61 B. Capricorni	5.9	+1.11	+10.2	-16 23.6	2 15.6	+9 42.9	-0.4526	0.5842	+0.1009	0	-66
94 B. Capricorni	5.7	1.02	10.1	16 19.3	9 28.9	-7 19.6	+0.2463	0.5790	0.1127	+40	-22
95 B. Capricorni	5.9	1.01	9.6	14 46.5	9 56.1	-6 53.5	-1.2873	0.5787	0.1133	-66	-80
29 Capricorni	5.5	0.91	9.8	15 29.1	17 15.2	+0 9.7	+0.3104	0.5733	0.1243	+45	-19
42 Capricorni	5.1	0.76	9.0	14 23.1	24 4 37.4	+11 8.0	+0.6767	0.5651	0.1393	+74	+2
44 Capricorni	6.0	+0.75	+9.3	-14 44.7	5 17.8	+11 46.9	+1.1455	0.5646	+0.1401	+76	+36
151 B. Capricorni	6.1	0.72	8.6	13 4.5	8 16.6	-9 20.4	-0.1656	0.5625	0.1436	+20	-46
<i>μ</i> Capricorni	5.2	0.70	8.8	13 54.5	9 53.3	-7 47.1	+0.9339	0.5614	0.1454	+77	+18
<i>e</i> Aquarii	5.4	0.60	7.8	11 56.2	17 49.5	-0 7.0	+0.0679	0.5561	0.1538	+34	-32
<i>σ</i> Aquarii	4.9	0.49	7.1	11 3.9	25 3 9.6	+8 54.7	+0.6314	0.5501	0.1622	+73	-1
58 Aquarii	6.4	+0.48	+7.2	-11 17.6	3 38.8	+9 22.9	+0.9507	0.5498	+0.1626	+79	+19
213 B. Aquarii	6.5	0.44	6.0	8 42.5	9 3.1	-9 23.3	-0.8847	0.5466	0.1668	-17	-90
<i>λ</i> Aquarii	3.8	0.39	5.5	7 59.0	13 38.0	-4 57.3	-0.8818	0.5440	0.1700	-17	-90
78 Aquarii	6.3	0.38	5.3	7 36.4	14 34.7	-4 2.3	-1.1193	0.5435	0.1706	-35	-90
81 Aquarii	6.4	0.35	5.0	7 28.1	17 52.8	-0 50.6	-0.7018	0.5417	0.1726	-5	-90
82 Aquarii	6.4	+0.34	+4.8	-6 58.9	18 26.4	-0 18.0	-1.1225	0.5414	+0.1730	-34	-90

ELEMENTS OF OCCULTATIONS, 1924. 49 I

MAY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		Δα	Δδ								
<i>h</i> Aquarii	5.4	+0.32	+ 5.2	- 8 6.2	25 19 42.3	+ 0 55.5	+0.2880	0.5408	+0.1737	+5.1	-2.0
<i>φ</i> Aquarii	4.4	0.28	4.2	6 27.5	26 0 11.7	+ 5 16.4	-0.6774	0.5385	0.1761	- 3	-86
<i>χ</i> Aquarii	5.3	0.26	4.8	8 8.4	1 26.1	+ 6 28.5	+1.3343	0.5380	0.1767	+75	+65
96 Aquarii	5.7	0.27	3.9	5 32.3	2 41.4	+ 7 41.4	-1.2177	0.5374	0.1773	-44	-90
317 B. Aquarii	6.3	0.25	4.1	6 19.3	3 20.0	+ 8 18.8	-0.2678	0.5370	0.1776	+19	-52
337 B. Aquarii	6.4	+0.22	+ 3.3	- 4 56.7	7 42.8	-11 26.4	-0.9579	0.5352	+0.1794	-20	-90
342 B. Aquarii	6.5	0.22	3.1	4 30.1	8 42.3	-10 28.8	-1.2552	0.5347	0.1798	-47	-90
20 Piscium	5.6	0.14	2.2	3 11.0	16 56.4	- 2 29.7	-1.1818	0.5315	0.1825	-38	-90
24 Piscium	6.1	0.11	2.1	3 34.6	19 27.6	- 0 3.2	-0.2993	0.5306	0.1831	+19	-54
27 Piscium	5.1	0.08	2.0	3 58.6	22 22.7	+ 2 46.7	+0.6672	0.5297	0.1837	+82	+ 1
29 Piscium	5.1	+0.07	+ 1.8	- 3 27.0	23 58.7	+ 4 19.8	+0.3935	0.5292	+0.1840	+59	-14
4 Ceti	6.3	0.05	1.4	2 58.3	27 2 59.5	+ 7 15.3	+0.4325	0.5283	0.1844	+62	-12
5 Ceti	6.3	+0.04	+ 1.4	2 52.2	3 13.8	+ 7 29.1	+0.3672	0.5282	0.1845	+57	-16
10 Ceti	6.4	-0.02	0.0	0 28.2	12 41.0	- 7 20.5	-0.4831	0.5258	0.1851	+ 9	-67
14 Ceti	5.4	0.06	- 0.2	- 0 55.4	17 17.5	- 2 52.2	+0.8618	0.5249	0.1850	+90	+13
33 Ceti	6.1	-0.19	- 2.2	+ 2 2.5	28 11 30.7	- 9 11.0	+0.9858	0.5228	+0.1821	+90	+22
<i>f</i> Piscium	5.3	0.21	2.8	3 12.8	15 17.5	- 5 30.9	+0.3889	0.5226	0.1810	+60	-14
117 G. Piscium	6.5	0.24	3.1	3 8.5	20 2.9	- 0 53.8	+1.3275	0.5225	0.1793	+81	+60
<i>μ</i> Piscium	5.0	0.22	3.8	5 45.1	21 44.6	+ 0 45.0	-1.2350	0.5224	0.1788	-44	-85
<i>ν</i> Piscium	4.7	0.28	4.0	5 6.1	29 3 38.8	+ 6 28.9	+0.5266	0.5226	0.1763	+70	- 6
39 B. Arietis	6.5	-0.34	- 5.2	+ 7 22.2	15 52.3	- 5 39.0	+0.1477	0.5235	+0.1700	+44	-26
64 Ceti	5.8	0.36	5.6	8 12.8	19 15.9	- 2 21.3	-0.2101	0.5239	0.1678	+24	-46
<i>ξ</i> ¹ Ceti	4.5	0.36	5.7	8 29.4	20 7.0	- 1 31.8	-0.3721	0.5239	0.1673	+15	-56
<i>ξ</i> Arietis	5.5	0.38	6.3	10 15.9	30 2 14.9	+ 4 25.5	-1.3224	0.5247	0.1632	-63	-75
25 Arietis	6.5	0.40	6.4	9 51.6	3 36.2	+ 5 44.4	-0.6540	0.5250	0.1622	0	-77
389 B. Ceti	6.3	-0.40	- 6.2	+ 9 13.5	4 44.3	+ 6 50.5	+0.2317	0.5252	+0.1614	+50	-20
85 Ceti	6.3	0.44	6.8	10 25.0	11 24.4	-10 41.2	-0.0276	0.5263	0.1563	+34	-34
<i>μ</i> Ceti	4.4	0.44	6.7	9 47.5	12 40.2	- 9 27.6	+0.8612	0.5266	0.1552	+90	+17
147 B. Arietis	5.8	-0.48	- 7.6	+12 53.6	23 41.4	+ 1 14.0	-0.9191	0.5289	+0.1455	-17	-78

JUNE.

					NEW MOON.						
16 Geminorum	6.2	-0.59	- 8.2	+20 32.4	4 2 35.7	+ 1 3.3	-1.1795	0.5497	+0.0086	-44	-70
<i>ν</i> Geminorum	4.1	-0.58	- 8.2	+20 15.6	3 4.9	+ 1 31.6	-0.8637	0.5498	+0.0078	-15	-70
<i>f</i> Geminorum	5.3	0.42	7.5	17 50.8	5 12 29.6	+ 9 51.1	+1.1174	0.5505	-0.0482	+90	+48
<i>g</i> Geminorum	5.0	0.41	7.2	18 41.7	15 37.8	-11 6.8	+0.0262	0.5504	0.0533	+37	-20
209 B. Geminorum	6.2	0.39	6.9	19 31.1	18 22.3	- 8 27.7	-1.0309	0.5502	0.0578	-28	-71
3 Cancri	5.7	0.35	7.2	17 31.0	22 34.9	- 4 23.3	+0.9077	0.5500	0.0647	+90	+30
10 H. Cancri	6.1	-0.35	- 6.8	+19 3.4	6 0 26.4	- 2 35.4	-0.9022	0.5499	-0.0676	-18	-71
<i>ζ</i> ¹ Can. (mean)	4.7	0.31	6.9	17 52.6	3 59.1	+ 0 50.4	-0.1398	0.5496	0.0733	+44	-15
<i>δ</i> ¹ Cancri	5.9	0.28	6.4	18 34.5	9 16.1	+ 5 57.1	-1.0326	0.5492	0.0815	-28	-72
<i>δ</i> ² Cancri	6.2	0.27	6.8	17 17.8	10 27.7	+ 7 6.4	+0.2662	0.5491	0.0834	+52	-10
<i>θ</i> Cancri	5.5	0.25	6.3	18 21.0	13 10.8	+ 9 44.1	-1.1161	0.5489	0.0875	-35	-72
54 Cancri	6.3	-0.16	- 6.5	+15 37.9	22 27.0	- 5 17.6	+0.9677	0.5480	-0.1014	+90	+31
<i>X</i> Can. (var.)	6.2	0.15	5.9	17 31.2	7 0 30.0	- 3 18.7	-1.2940	0.5479	0.1043	-66	-71
<i>o</i> ¹ Cancri	5.1	0.13	6.4	15 36.8	1 24.4	- 2 26.0	+0.6805	0.5478	0.1056	+90	+11
<i>o</i> ² Cancri	5.7	0.13	6.4	15 52.3	1 33.9	- 2 16.7	+0.3828	0.5478	0.1059	+60	- 5
81 Cancri	6.4	0.08	6.1	15 18.1	8 36.5	+ 4 32.2	+0.2199	0.5471	0.1157	+49	-15
<i>π</i> Cancri	5.6	-0.05	- 6.1	+15 15.4	9 59.5	+ 5 52.5	+0.1077	0.5470	-0.1177	+42	-21

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JUNE.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	r	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
227 B. Canceri	6.4	-0.03	-5.8	+15 41.6	7 12 51.9	+ 8 39.3	-0.7080	0.5467	-0.1215	- 4	-75
NEPTUNE	7.8	..	..	15 41.1	15 19.6	+11 2.3	-1.0027	0.5457	0.1245	-24	-74
7 Leonis	6.2	+0.05	5.7	14 43.1	19 52.0	- 8 34.0	-0.5379	0.5462	0.1307	+ 6	-62
11 Leonis	6.5	0.06	5.7	14 41.4	20 53.5	- 7 34.6	-0.6421	0.5461	0.1320	0	-72
ψ Leonis	5.6	0.09	5.6	14 22.1	23 37.5	- 4 55.8	-0.6610	0.5460	0.1354	- 1	-73
ν Leonis	5.0	+0.17	- 5.8	+12 48.4	8 6 34.9	+ 1 48.3	+0.0450	0.5455	-0.1437	+38	-28
α Leonis (Reg.)	1.3	0.22	5.6	12 20.3	11 27.7	+ 6 31.7	-0.1688	0.5454	0.1494	+26	-40
45 Leonis	5.8	0.34	5.8	10 8.9	20 42.6	- 8 31.2	+0.7354	0.5452	0.1592	+90	+ 9
ρ Leonis	3.8	0.37	5.8	9 41.8	23 11.3	- 6 7.3	+0.8172	0.5452	0.1617	+90	+ 3
χ Leonis	4.7	0.55	5.5	7 44.7	9 14 37.6	+ 8 49.2	+0.2684	0.5460	0.1754	+52	-19
308 B. Leonis	5.8	+0.61	- 5.0	+ 8 28.5	18 54.7	-11 2.0	-1.2561	0.5465	-0.1787	-47	-82
σ Leonis	4.1	0.66	5.5	6 26.7	22 18.6	- 7 44.6	+0.2633	0.5469	0.1811	+51	-20
6 Virginis	5.2	0.90	5.0	4 4.6	10 16 40.7	+10 1.5	-0.6986	0.5505	0.1915	- 3	-86
10 Virginis	6.2	0.97	5.3	+ 2 19.4	21 14.6	- 9 33.6	+0.2379	0.5517	0.1933	+50	-22
γ Vir. (mean)	2.9	1.16	5.2	- 1 2.1	11 12 5.4	+ 4 47.7	+0.7832	0.5567	0.1969	+89	+ 8
46 Virginis	6.1	+1.30	- 5.0	- 2 57.7	20 42.7	-10 52.4	+1.0454	0.5602	-0.1972	+88	+26
48 Virginis	6.5	1.32	5.0	3 15.3	22 12.6	- 9 25.5	+1.0484	0.5609	0.1971	+87	+26
65 Virginis	6.0	1.44	4.5	4 31.7	12 6 55.6	- 1 0.6	+0.6216	0.5651	0.1956	+78	- 2
66 Virginis	5.7	1.46	4.5	4 46.1	7 28.3	- 0 29.0	+0.7574	0.5654	0.1955	+86	+ 6
l Virginis	4.8	1.50	4.5	5 51.9	10 46.2	+ 2 42.1	+1.2195	0.5670	0.1945	+85	+42
80 Virginis	5.6	+1.51	- 4.0	- 5 0.6	12 20.6	+ 4 13.1	+0.0516	0.5679	-0.1940	+38	-33
566 B. Virginis	6.4	1.55	3.7	5 7.1	16 2.1	+ 7 46.8	-0.5540	0.5699	0.1926	+ 5	-73
88 Virginis	6.5	1.59	3.9	6 27.6	17 57.2	+ 9 37.9	+0.4267	0.5710	0.1917	+61	-13
598 B. Virginis	6.1	1.63	4.0	7 41.2	20 51.5	-11 34.0	+1.1019	0.5726	0.1903	+83	+31
235 G. Virginis	6.5	1.75	2.8	7 11.2	13 6 45.7	- 2 1.1	-1.2515	0.5785	0.1839	-48	-90
13 Librae	5.7	+1.95	- 1.8	-11 35.4	21 59.3	-11 21.3	+0.4285	0.5882	-0.1696	+58	-12
ξ^a Librae	5.6	1.96	1.6	11 6.3	22 58.5	-10 24.3	-0.2188	0.5888	0.1686	+20	-49
17 Librae	6.4	1.96	1.5	10 51.0	23 34.6	- 9 49.5	-0.5708	0.5892	0.1679	0	-75
18 Librae	5.9	1.96	1.4	10 50.4	23 51.3	- 9 33.5	-0.6283	0.5894	0.1676	- 3	-81
130 B. Librae	5.9	2.06	0.3	12 6.0	14 9 59.8	+ 0 11.7	-1.0170	0.5958	0.1546	-29	-90
γ Librae	4.0	+2.14	- 0.1	-14 32.2	14 38.3	+ 4 39.4	+0.6821	0.5987	-0.1479	+74	+ 2
190 B. Librae	6.5	2.17	+ 0.3	14 48.0	17 46.3	+ 7 40.0	+0.4849	0.6006	0.1430	+58	- 9
η Librae	5.5	2.18	0.2	15 25.9	18 1.7	+ 7 54.9	+1.0689	0.6007	0.1427	+75	+29
195 B. Librae	6.2	2.18	1.0	13 54.3	21 1.8	+10 47.9	-0.8528	0.6025	0.1377	-20	-90
202 B. Librae	6.4	2.19	1.2	14 10.6	22 50.0	-11 28.2	-0.8309	0.6035	0.1348	-18	-90
203 B. Librae	6.2	+2.20	+ 1.2	-14 36.4	22 57.2	-11 21.3	-0.4241	0.6036	-0.1346	+ 5	-63
48 Librae	4.6	2.19	1.3	14 3.6	23 36.1	-10 44.0	-1.0476	0.6040	0.1335	-35	-90
49 Librae	5.4	2.22	1.0	16 18.6	15 0 26.2	- 9 55.8	+1.0494	0.6044	0.1320	+74	+28
ϕ Ophiuchi	4.4	2.30	2.9	16 26.8	12 20.9	+ 1 30.1	-0.2613	0.6105	0.1100	+11	-52
24 Scorpii	5.0	2.33	3.5	17 35.7	16 19.6	+ 5 19.1	+0.4409	0.6124	0.1020	+51	-11
78 B. Ophiuchi	6.5	+2.33	+ 4.4	-16 41.1	21 49.9	+10 35.8	-0.9794	0.6145	-0.0905	-34	-90
90 B. Ophiuchi	6.5	2.36	4.4	18 7.8	23 13.2	+11 55.7	+0.3106	0.6150	0.0875	+41	-18
29 Ophiuchi	6.4	2.37	4.6	18 46.4	16 0 0.9	-11 18.6	+0.8713	0.6152	0.0858	+72	+15
125 B. Ophiuchi	6.2	2.35	5.0	17 30.5	2 26.5	- 8 59.1	-0.5684	0.6160	0.0805	- 9	-76
164 B. Ophiuchi	6.0	2.36	5.7	17 40.6	6 49.4	- 4 47.2	-0.7352	0.6172	0.0707	-19	-90
192 B. Ophiuchi	6.3	+2.38	+ 5.9	-18 22.5	8 35.4	- 3 5.5	-0.1735	0.6177	-0.0667	+12	-46
305 B. Ophiuchi	6.3	2.37	7.7	18 47.3	20 17.8	+ 8 7.4	-0.3911	0.6192	0.0394	- 2	-61
16 G. Sagittarii	6.4	2.39	7.9	20 20.0	21 48.2	+ 9 34.2	+1.0661	0.6193	0.0358	+70	+32
39 G. Sagittarii	6.3	2.37	8.5	19 51.3	17 2 0.4	-10 24.3	+0.4699	0.6193	0.0257	+47	- 9
16 Sagittarii	5.9	2.38	8.7	20 24.6	3 29.0	- 8 59.3	+0.9779	0.6192	0.0221	+70	+24
64 B. Sagittarii	6.1	+2.35	+ 8.7	-18 41.0	3 36.9	- 8 51.8	-0.7179	0.6192	-0.0218	-23	-90

ELEMENTS OF OCCULTATIONS, 1924. 493

JUNE.

THE STAR'S				AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
52 G. Sagittarii	6.4	+2.34	+ 8.7	-18 29.4	17 4 21.1	- 8 9.5	-0.9238	0.6191	-0.0200	-36	-90
17 H. Sagittarii	6.4	2.34	8.8	18 38.9	4 48.9	- 7 42.8	-0.7779	0.6191	0.0190	-26	-90
Y Sagit. (var.)	5.4	2.34	9.0	18 53.6	5 48.4	- 6 45.9	-0.5554	0.6190	0.0166	-13	-75
21 Sagittarii	5.0	2.36	9.2	20 34.9	7 16.2	- 5 21.8	+1.0806	0.6188	0.0130	+70	+33
95 B. Sagittarii	5.7	2.33	9.4	18 46.5	9 6.3	- 3 36.2	-0.7124	0.6186	0.0086	-23	+90
100 B. Sagittarii	5.0	+2.32	+ 9.4	-18 27.2	9 34.4	- 3 9.3	-1.0327	0.6185	-0.0075	-45	-90
29 Sagittarii	5.3	2.31	10.4	20 24.6	16 23.4	+ 3 22.7	+0.8956	0.6171	+0.0088	+70	+18
36 Sagittarii	5.1	2.30	10.8	20 45.2	19 16.5	+ 6 8.6	+1.2714	0.6163	0.0157	+70	+66
171 B. Sagittarii	6.1	2.26	10.9	19 21.2	21 27.2	+ 8 13.9	-0.0686	0.6156	0.0208	+13	-40
173 B. Sagittarii	6.4	2.26	10.9	19 12.6	21 28.5	+ 8 15.1	-0.2094	0.6156	0.0209	+ 6	-49
187 B. Sagittarii	6.4	+2.25	+11.0	-18 51.2	23 0.1	+ 9 43.0	-0.5274	0.6150	+0.0244	-12	-72
190 B. Sagittarii	5.4	2.25	11.1	19 24.4	23 25.6	+10 7.4	+0.0298	0.6149	0.0254	+19	-34
195 B. Sagittarii	6.3	2.26	11.2	19 55.3	23 59.8	+10 40.1	+0.5519	0.6147	0.0268	+53	- 4
d Sagittarii	5.0	2.22	11.5	19 5.2	18 2 58.9	-10 28.0	-0.1825	0.6135	0.0337	+ 8	-47
226 B. Sagittarii	6.4	2.21	11.7	19 22.5	4 29.8	- 9 0.9	+0.1559	0.6129	0.0371	+27	-27
g Sagittarii	4.0	+2.20	+11.5	-17 59.3	4 32.0	- 8 58.8	-1.2136	0.6129	+0.0372	-61	-90
45 Sagittarii	6.0	2.20	11.5	18 26.8	4 35.5	- 8 55.4	-0.7578	0.6128	0.0374	-24	-90
266 B. Sagittarii	6.1	2.16	12.2	19 1.1	10 10.3	- 3 34.2	+0.0512	0.6102	0.0500	+23	-33
267 B. Sagittarii	5.8	2.16	12.1	18 23.9	10 25.1	- 3 20.1	-0.5521	0.6101	0.0505	-10	-75
f Sagittarii	5.1	2.13	12.6	19 56.5	13 59.8	+ 0 5.9	+1.1756	0.6082	0.0583	+71	+43
57 Sagittarii	6.0	+2.11	+12.7	-19 14.1	16 15.9	+ 2 16.6	+0.6128	0.6070	+0.0632	+62	- 1
π Capricorni	5.2	1.96	13.5	18 27.5	19 6 6.7	- 8 25.6	+0.9157	0.5982	0.0913	+72	+18
q Capricorni	5.0	1.95	13.4	18 3.7	6 44.0	- 7 49.8	+0.5763	0.5978	0.0925	+61	- 3
47 B. Capricorni	6.2	1.92	13.3	16 47.1	9 25.5	- 5 14.6	-0.4502	0.5959	0.0975	0	-65
61 B. Capricorni	5.9	1.89	13.4	16 23.5	11 27.4	- 3 17.3	-0.6435	0.5944	0.1012	-10	-84
94 B. Capricorni	5.7	+1.82	+13.6	-16 19.2	18 26.9	+ 3 26.1	+0.0344	0.5893	+0.1133	+28	-34
29 Capricorni	5.5	1.72	13.5	15 29.1	20 1 58.1	+10 40.5	+0.0862	0.5835	0.1253	+32	-31
42 Capricorni	5.1	1.59	13.2	14 23.0	12 58.1	- 2 43.5	+0.4327	0.5750	0.1408	+56	-12
44 Capricorni	6.0	1.58	13.4	14 44.6	13 37.3	- 2 5.8	+0.8939	0.5745	0.1417	+76	+16
45 Capricorni	5.8	1.58	13.5	15 5.7	14 1.7	- 1 42.2	+1.3105	0.5742	0.1421	+71	+67
151 B. Capricorni	6.1	+1.55	+12.9	-13 4.4	16 30.3	+ 0 41.1	-0.4016	0.5723	+0.1452	+ 8	-61
μ Capricorni	5.2	1.54	13.2	13 54.4	18 3.9	+ 2 11.4	+0.6802	0.5710	0.1471	+74	+ 2
ϵ Aquarii	5.4	1.44	12.5	11 56.1	21 1 45.0	+ 9 36.3	-0.1812	0.5652	0.1557	+21	-47
σ Aquarii	4.9	1.34	12.0	11 3.8	10 48.1	- 5 39.1	+0.3668	0.5586	0.1644	+54	-16
58 Aquarii	6.4	1.33	12.0	11 17.5	11 16.4	- 5 11.9	+0.6814	0.5583	0.1647	+77	+ 2
213 B. Aquarii	6.5	+1.28	+11.0	- 8 42.4	16 31.3	- 0 7.5	-1.1325	0.5546	+0.1690	-36	-90
λ Aquarii	3.8	1.23	10.6	7 58.9	20 58.6	+ 4 10.9	-1.1325	0.5517	0.1722	-36	-90
81 Aquarii	6.4	1.19	10.3	7 28.0	22 1 6.5	+ 8 10.8	-0.9571	0.5490	0.1748	-21	-90
h Aquarii	5.4	1.17	10.4	8 6.1	2 53.0	+ 9 53.9	-0.0194	0.5479	0.1759	+35	-35
φ Aquarii	4.4	1.13	9.5	6 27.4	7 15.5	- 9 52.1	-0.9354	0.5453	0.1783	-19	-90
χ Aquarii	5.3	+1.10	+10.1	- 8 8.3	8 28.0	- 8 41.9	+1.0512	0.5446	+0.1788	+82	+26
317 B. Aquarii	6.3	1.08	9.4	6 19.2	10 19.2	- 6 54.4	-0.5317	0.5435	0.1798	+ 5	-71
337 B. Aquarii	6.4	1.06	8.6	4 56.7	14 35.7	- 2 45.9	-1.2145	0.5412	0.1817	-42	-90
24 Piscium	6.1	0.94	7.5	3 34.5	23 2 5.3	+ 8 22.1	-0.5638	0.5355	0.1851	+ 4	-74
27 Piscium	5.1	0.90	7.5	3 58.5	4 57.1	+11 8.6	+0.3932	0.5342	0.1857	+59	-14
29 Piscium	5.1	+0.89	+ 7.2	- 3 26.9	6 31.3	-11 20.0	+0.1228	0.5336	+0.1860	+42	-29
4 Ceti	6.3	0.87	6.9	2 58.2	9 28.9	- 8 28.0	+0.1623	0.5324	0.1864	+44	-27
5 Ceti	6.3	0.86	6.8	2 52.1	9 43.0	- 8 14.2	+0.0977	0.5323	0.1864	+41	-30
10 Ceti	6.4	0.79	5.4	0 28.1	19 1.0	+ 0 46.9	-0.7409	0.5290	0.1869	- 6	-90
14 Ceti	5.4	0.74	5.2	0 55.3	23 33.6	+ 5 11.3	+0.5955	0.5276	0.1867	+76	- 3
26 Ceti	6.0	+0.61	+ 3.6	+ 0 57.7	24 14 5.6	- 4 42.6	+1.2658	0.5243	+0.1845	+90	+48

494 ELEMENTS OF OCCULTATIONS, 1924.

JUNE.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		Δα	Δδ								
		s	"	°	d h m	h m				°	'
33 Ceti	6.1	+0.58	+ 3.0	+ 2 2.5	24 17 35.1	- 1 19.3	+0.7346	0.5238	+0.1835	+90	+ 5
f Piscium	5.3	0.56	2.3	3 12.9	21 20.3	+ 2 19.3	+0.1455	0.5233	0.1824	+44	-27
117 G. Piscium	6.5	0.52	2.0	3 8.5	25 2 3.7	+ 6 54.4	+1.0842	0.5229	0.1807	+90	+29
v Piscium	4.7	0.46	+ 0.8	5 6.2	9 37.4	- 9 45.1	+0.2971	0.5225	0.1775	+54	-19
39 B. Arietis	6.5	0.38	- 0.8	7 22.3	21 48.8	+ 2 5.0	-0.0635	0.5226	0.1711	+32	-38
64 Ceti	5.8	+0.35	- 1.3	+ 8 12.9	26 1 12.0	+ 5 22.2	-0.4150	0.5228	+0.1690	+13	-59
ξ ¹ Ceti	4.5	0.35	1.4	8 29.4	2 3.1	+ 6 11.7	-0.5753	0.5228	0.1685	+ 4	-72
25 Arietis	6.5	0.29	2.4	9 51.7	9 32.2	-10 32.2	-0.8451	0.5236	0.1634	-12	-81
ξ ² Ceti	4.3	0.28	1.8	8 7.2	9 56.2	-10 9.0	+1.1412	0.5237	0.1631	+90	+37
389 B. Ceti	6.3	0.28	2.2	9 13.6	10 40.3	- 9 26.2	+0.0399	0.5237	0.1625	+38	-31
85 Ceti	6.3	+0.23	- 3.0	+10 25.1	17 20.7	- 2 57.6	-0.2080	0.5247	+0.1574	+24	-45
μ Ceti	4.4	0.23	2.9	9 47.6	18 36.6	- 1 43.8	+0.6808	0.5249	0.1564	+87	+ 5
147 B. Arietis	5.8	0.16	4.4	12 53.6	27 5 38.9	+ 8 58.9	-1.0765	0.5270	0.1467	-29	-78
8 B. Tauri	6.2	0.08	4.7	12 21.6	14 45.0	- 6 11.3	+0.8105	0.5290	0.1378	+90	+15
f Tauri	4.3	+0.06	5.0	12 40.6	18 9.6	- 2 52.8	+0.9242	0.5299	0.1343	+90	+23
179 B. Tauri	5.9	-0.06	- 6.3	+14 57.5	28 12 41.7	- 8 54.4	+0.6855	0.5349	+0.1129	+90	+11
48 Tauri	6.3	0.08	6.5	15 12.6	16 43.1	- 5 0.5	+0.8503	0.5361	0.1077	+90	+22
γ Tauri	3.9	0.10	6.6	15 26.6	18 42.9	- 3 4.3	+0.8034	0.5366	0.1052	+90	+19
δ Tauri	3.9	0.10	7.0	17 21.8	20 14.8	- 1 35.2	-1.1710	0.5371	0.1032	-40	-73
63 Tauri	5.7	0.10	6.9	16 36.0	20 29.9	- 1 20.6	-0.2956	0.5372	0.1029	+19	-43
64 Tauri	4.9	-0.10	- 7.1	+17 16.0	20 49.5	- 1 1.6	-1.0046	0.5373	+0.1025	-25	-73
70 Tauri	6.4	0.11	6.8	15 46.0	21 36.1	- 0 16.4	+0.7426	0.5375	0.1014	+90	+15
71 Tauri	4.6	0.12	6.7	15 26.7	21 57.9	+ 0 4.7	+1.1367	0.5376	0.1009	+90	+44
75 Tauri	5.2	0.12	6.9	16 11.3	22 59.7	+ 1 4.6	+0.4132	0.5379	0.0996	+62	- 3
θ ¹ Tauri	4.2	0.12	6.8	15 47.6	23 3.8	+ 1 8.6	+0.8603	0.5379	0.0995	+90	+24
θ ² Tauri	3.6	-0.12	- 6.8	+15 42.1	23 6.5	+ 1 11.2	+0.9660	0.5379	+0.0994	+90	+31
264 B. Tauri	4.8	0.13	6.9	16 1.7	29 0 2.6	+ 2 5.6	+0.6958	0.5382	0.0982	+90	+13
81 Tauri	5.5	0.13	6.8	15 31.5	0 5.6	+ 2 8.5	+1.2588	0.5382	0.0981	+87	+61
85 Tauri	6.0	0.13	6.9	15 41.3	0 41.4	+ 2 43.2	+1.1370	0.5384	0.0973	+90	+45
119 H ¹ Tauri	6.2	0.13	7.3	17 51.3	1 29.8	+ 3 30.1	-1.1943	0.5385	0.0962	-44	-73
275 B. Tauri	6.5	-0.14	- 7.0	+16 9.8	1 33.8	+ 3 34.0	+0.6932	0.5386	+0.0961	+90	+13
α Tauri (Alde.)	1.1	0.14	7.1	16 21.3	2 41.1	+ 4 39.1	+0.5860	0.5390	0.0946	+78	+ 7
89 Tauri	5.8	0.15	7.0	15 52.8	3 47.6	+ 5 43.6	+1.2185	0.5393	0.0930	+90	+54
318 B. Tauri	5.7	-0.20	- 7.4	+17 2.0	13 11.9	- 9 9.7	+0.7494	0.5419	+0.0796	+90	+19

JULY.

					NEW	MOON.							
θ	Canceri	5.5	-0.32	- 5.9	+18 21.0	3	18 46.2	- 6 53.1	-0.9839	0.5518	-0.0865	-24	-72
54	Canceri	6.3	-0.26	- 5.8	+15 37.9	4	3 59.2	+ 2 2.0	+1.1131	0.5507	-0.1004	+90	+43
X	Canceri (var.)	6.2	0.26	5.4	17 31.2	6	1.4	+ 4 0.3	-1.1462	0.5505	0.1034	-38	-73
o ¹	Canceri	5.1	0.24	5.7	15 36.8	6	55.6	+ 4 52.6	+0.8304	0.5504	0.1048	+90	+21
o ²	Canceri	5.7	0.24	5.6	15 52.4	7	5.1	+ 5 1.9	+0.5327	0.5504	0.1050	+72	+ 3
81	Canceri	6.4	0.22	5.2	15 18.1	14	5.7	+11 48.8	+0.3794	0.5494	0.1149	+60	- 7
π	Canceri	5.6	-0.19	- 5.3	+15 15.4	15	28.4	-10 51.2	+0.2689	0.5492	-0.1169	+52	-13
227 B.	Canceri	6.4	0.17	5.0	15 41.6	18	20.2	- 8 5.0	-0.5441	0.5489	0.1208	+ 5	-62
	NEPTUNE	7.8	...	...	15 27.8	22	9.3	+ 4 23.3	-0.7664	0.5470	0.1254	- 8	-75
7	Leonis	6.2	0.12	4.8	14 43.1	5	1 19.2	- 1 19.5	-0.3654	0.5479	0.1299	+16	-50
11	Leonis	6.5	0.12	4.8	14 41.4	2	20.6	- 0 20.1	-0.4687	0.5478	0.1312	+10	-57
ψ	Leonis	5.6	-0.09	- 4.7	+14 22.1	5	4.4	+ 2 18.4	-0.4846	0.5474	-0.1346	+ 9	-59

ELEMENTS OF OCCULTATIONS, 1924. 495

JULY.

THE STAR'S				AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
ν Leonis	5.0	-0.03	-4.6	+12 48.4	5 12 1.6	+ 9 2.3	+0.2307	0.5465	-0.1430	+50	-18
α Leonis (<i>Reg.</i>)	1.3	0.00	4.4	12 20.3	16 54.7	-10 14.0	+0.0212	0.5400	0.1486	+37	-29
45 Leonis	5.8	+0.11	4.4	10 9.0	6 2 11.4	- 1 15.0	+0.9378	0.5450	0.1583	+90	+22
ρ Leonis	3.8	0.13	4.4	9 41.8	4 40.8	+ 1 9.6	+1.0224	0.5448	0.1608	+90	+28
χ Leonis	4.7	0.28	3.9	7 44.8	20 14.3	- 7 46.7	+0.4819	0.5440	0.1743	+67	- 8
308 B. Leonis	5.8	+0.33	- 3.4	+ 8 28.5	7 0 34.2	- 3 35.1	-1.0519	0.5440	-0.1774	-27	-82
σ Leonis	4.1	0.38	3.8	6 26.7	4 0.6	- 0 15.2	+0.4806	0.5441	0.1798	+67	- 8
b Virginis	5.2	0.61	3.1	4 4.7	22 40.6	- 6 11.1	-0.4868	0.5455	0.1897	+ 8	-66
10 Virginis	6.2	0.68	3.4	+ 2 19.4	8 3 20.0	- 1 40.7	+0.4597	0.5462	0.1914	+65	-10
γ Virg. (<i>mean</i>)	2.9	0.87	3.3	- 1 2.0	18 31.8	-10 58.4	+1.0090	0.5496	0.1946	+89	+23
46 Virginis	6.1	+1.02	- 3.2	- 2 57.7	9 3 23.2	- 2 24.3	+1.2714	0.5522	-0.1948	+88	+48
48 Virginis	6.5	1.04	3.2	3 15.3	4 55.8	- 0 54.8	+1.2738	0.5528	0.1946	+87	+49
65 Virginis	6.0	1.17	2.8	4 31.7	13 54.5	+ 7 46.0	+0.8355	0.5562	0.1932	+86	+11
66 Virginis	5.7	1.18	2.8	4 46.1	14 28.2	+ 8 18.6	+0.9729	0.5564	0.1930	+86	+20
80 Virginis	5.6	1.25	2.3	5 0.6	19 29.8	-10 50.0	+0.2526	0.5585	0.1916	+50	-22
566 B. Virginis	6.4	+1.29	- 2.0	- 5 7.0	23 18.6	- 7 9.0	-0.3658	0.5603	-0.1901	+15	-58
88 Virginis	6.5	1.33	2.3	6 27.6	10 1 17.5	- 5 14.1	+0.6282	0.5612	0.1893	+78	- 1
598 B. Virginis	6.1	1.38	2.4	7 41.2	4 17.7	- 2 20.1	+1.3110	0.5627	0.1878	+80	+57
235 G. Virginis	6.5	1.52	1.2	7 11.2	14 32.4	+ 7 33.3	-1.0908	0.5681	0.1816	-31	-90
13 Libræ	5.7	1.77	0.7	11 35.4	11 6 18.3	- 1 14.5	+0.5952	0.5773	0.1678	+70	- 3
ξ^a Libræ	5.6	+1.78	- 0.4	-11 6.2	7 19.5	- 0 15.5	-0.0639	0.5780	-0.1667	+28	-40
17 Libræ	6.4	1.78	0.3	10 51.0	7 56.9	+ 0 20.6	-0.4224	0.5784	0.1661	+ 9	-62
18 Libræ	5.9	1.78	- 0.3	10 50.4	8 14.2	+ 0 37.3	-0.4811	0.5785	0.1658	+ 5	-67
130 B. Libræ	5.9	1.93	+ 0.7	12 5.9	18 44.0	+10 43.9	-0.8915	0.5851	0.1533	-20	-90
γ Libræ	4.0	2.02	0.7	14 32.2	23 31.9	- 8 39.0	+0.8257	0.5881	0.1468	+76	+11
190 B. Libræ	6.5	+2.06	+ 1.0	-14 48.0	12 2 46.2	- 5 32.2	+0.6201	0.5902	-0.1421	+70	- 1
η Libræ	5.5	2.08	0.9	15 25.9	3 2.1	- 5 16.8	+1.2122	0.5904	0.1417	+75	+45
195 B. Libræ	6.2	2.08	1.8	13 54.3	6 8.2	- 2 17.8	-0.7426	0.5923	0.1370	-13	-90
202 B. Libræ	6.4	2.11	2.0	14 10.6	7 59.9	- 0 30.4	-0.7235	0.5934	0.1341	-12	-90
203 B. Libræ	6.2	2.12	1.9	14 36.4	8 7.2	- 0 23.4	-0.3110	0.5936	0.1339	+11	-55
48 Libræ	4.6	+2.12	+ 2.1	-14 3.6	8 47.4	+ 0 15.2	-0.9444	0.5939	-0.1327	-26	-90
49 Libræ	5.4	2.14	1.4	16 18.6	9 39.1	+ 1 5.0	+1.1808	0.5944	0.1314	+74	+41
91 B. Scorpïi	6.1	2.20	3.0	14 39.5	15 52.7	+ 7 4.1	-1.2470	0.5981	0.1209	-57	-90
ϕ Ophiuchi	4.4	2.28	3.4	16 26.8	21 55.3	-11 7.5	-0.1696	0.6015	0.1100	+16	-46
24 Scorpïi	5.0	2.34	3.8	17 35.7	13 2 0.7	- 7 11.8	+0.5339	0.6037	0.1023	+59	- 6
78 B. Ophiuchi	6.5	+2.38	+ 4.9	-16 41.1	7 39.6	- 1 46.4	-0.9131	0.6065	-0.0911	-28	-90
90 B. Ophiuchi	6.5	2.41	4.7	18 7.8	9 5.0	- 0 24.4	+0.3889	0.6071	0.0882	+46	-14
29 Ophiuchi	6.4	2.43	4.8	18 46.4	9 53.8	+ 0 22.4	+0.9541	0.6075	0.0865	+72	+21
125 B. Ophiuchi	6.2	2.43	5.4	17 30.5	12 22.9	+ 2 45.4	-0.5056	0.6086	0.0813	- 5	-70
164 B. Ophiuchi	6.0	2.46	6.1	17 40.6	16 51.7	+ 7 3.4	-0.6820	0.6104	0.0717	-16	-90
192 B. Ophiuchi	6.3	+2.49	+ 6.3	-18 22.5	18 40.0	+ 8 47.3	-0.1181	0.6110	-0.0678	+15	-43
305 B. Ophiuchi	6.3	2.56	8.1	18 47.3	14 6 35.2	- 3 46.9	-0.3592	0.6143	0.0409	0	-59
16 G. Sagittarii	6.4	2.59	8.1	20 20.0	8 7.0	- 2 18.9	+1.1057	0.6146	0.0374	+70	+35
39 G. Sagittarii	6.3	2.60	8.8	19 51.3	12 22.8	+ 1 46.3	+0.4970	0.6153	0.0274	+49	- 8
16 Sagittarii	5.9	2.61	9.0	20 24.6	13 52.5	+ 3 12.4	+1.0050	0.6154	0.0239	+70	+26
64 B. Sagittarii	6.1	+2.58	+ 9.2	-18 41.0	14 0.5	+ 3 20.0	-0.7012	0.6155	-0.0236	-22	-90
52 G. Sagittarii	6.4	2.58	9.3	18 29.4	14 45.2	+ 4 2.8	-0.9096	0.6155	0.0218	-35	-90
17 H ¹ . Sagittarii	6.4	2.58	9.4	18 38.8	15 13.3	+ 4 29.8	-0.7637	0.6156	0.0207	-25	-90
Y Sagit. (<i>var.</i>)	5.4	2.59	9.5	18 53.5	16 13.5	+ 5 27.5	-0.5416	0.6156	0.0184	-12	-74
21 Sagittarii	5.0	2.62	9.5	20 34.9	17 42.2	+ 6 52.5	+1.1005	0.6157	0.0148	+70	+35
95 B. Sagittarii	5.7	+2.60	+10.0	-18 46.5	19 33.5	+ 8 39.2	-0.7052	0.6158	-0.0104	-23	-90

496 ELEMENTS OF OCCULTATIONS, 1924.

JULY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924 ^o		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
100 B. Sagittarii	5.0	+2.59	+10.1	-18 27.2	14 20 1.9	+ 9 6.5	-1.0278	0.6158	-0.0093	-44	-90
29 Sagittarii	5.3	2.63	10.9	20 24.6	15 2 54.0	+ 8 18.5	+0.8957	0.6155	+0.0070	+70	+18
36 Sagittarii	5.1	2.63	11.3	20 45.2	5 48.0	- 5 31.7	+1.2668	0.6152	0.0138	+70	+63
171 B. Sagittarii	6.1	2.61	11.7	19 21.2	7 59.3	+ 3 25.8	-0.0811	0.6148	0.0190	+13	-41
173 B. Sagittarii	6.4	2.61	11.7	19 12.6	8 0.6	- 3 24.6	-0.2223	0.6148	0.0190	+ 5	-49
187 B. Sagittarii	6.4	+2.61	+11.9	-18 51.2	9 32.5	- 1 56.4	-0.5437	0.6146	+0.0226	-12	-74
190 B. Sagittarii	5.4	2.62	11.9	19 24.4	9 58.0	- 1 32.1	+0.0139	0.6144	0.0236	+17	-35
195 B. Sagittarii	6.3	2.62	12.0	19 55.3	10 32.3	+ 0 59.2	+0.5360	0.6143	0.0249	+52	- 5
d Sagittarii	5.0	2.61	12.4	19 5.2	13 31.8	+ 1 53.0	-0.2051	0.6137	0.0319	+ 7	-48
226 B. Sagittarii	6.4	2.61	12.6	19 22.4	15 2.6	+ 3 20.1	+0.1309	0.6133	0.0354	+26	-28
ρ Sagittarii	4.0	+2.59	+12.6	-17 59.3	15 4.9	+ 3 22.3	-1.2399	0.6133	+0.0355	-64	-87
45 Sagittarii	6.0	2.60	12.6	18 26.8	15 8.3	+ 3 25.5	-0.7838	0.6133	0.0356	-26	-90
266 B. Sagittarii	6.1	2.60	13.3	19 1.1	20 42.8	+ 8 46.4	+0.0158	0.6115	0.0483	+21	-35
267 B. Sagittarii	5.8	2.59	13.3	18 23.8	20 57.6	+ 9 0.5	-0.5879	0.6115	0.0489	-12	-78
f Sagittarii	5.1	2.59	13.6	19 50.5	16 0 31.5	-11 34.2	+1.1324	0.6101	0.0568	+71	+38
57 Sagittarii	6.0	+2.58	+13.9	-19 14.1	2 47.0	- 9 24.1	+0.5659	0.6092	+0.0617	+58	- 4
π Capricorni	5.2	2.50	15.2	18 27.5	16 30.9	+ 3 46.8	+0.8424	0.6025	0.0903	+72	+13
ρ Capricorni	5.0	2.50	15.2	18 3.7	17 7.7	+ 4 22.1	+0.5032	0.6021	0.0915	+55	- 7
47 B. Capricorni	6.2	2.47	15.4	16 47.0	19 47.3	+ 6 55.4	-0.5234	0.6006	0.0967	- 4	-72
v Capricorni	5.3	2.47	15.6	18 24.2	21 34.4	+ 8 38.3	+1.2717	0.5994	0.1001	+72	+59
61 B. Capricorni	5.9	+2.45	+15.5	-16 23.5	21 47.6	+ 8 51.1	-0.7190	0.5993	+0.1005	-15	-90
94 B. Capricorni	5.7	2.41	15.9	16 19.2	17 4 41.0	- 8 31.6	-0.0555	0.5950	0.1129	+23	-39
29 Capricorni	5.5	2.36	16.2	15 29.0	12 4.5	- 1 25.0	-0.0156	0.5900	0.1253	+26	-37
42 Capricorni	5.1	2.26	16.2	14 23.0	22 51.4	+ 8 57.8	-0.3121	0.5823	0.1414	+48	-19
44 Capricorni	6.0	2.26	16.5	14 44.6	23 29.7	+ 9 34.7	+0.7685	0.5819	0.1422	+76	+ 8
45 Capricorni	5.8	+2.26	+16.6	-15 5.6	23 53.5	+ 9 57.6	+1.1809	0.5815	+0.1428	+75	+40
151 B. Capricorni	6.1	2.23	16.3	13 4.4	18 2 18.9	-11 42.2	-0.5199	0.5798	0.1460	+ 1	-71
μ Capricorni	5.2	2.23	16.4	13 54.4	3 50.4	-10 14.1	+0.5503	0.5787	0.1479	+64	- 5
e Aquarii	5.4	2.15	16.2	11 56.1	11 20.8	- 2 59.8	-0.3131	0.5733	0.1568	+14	-55
σ Aquarii	4.9	2.07	15.9	11 3.8	20 10.5	+ 5 31.2	+0.2188	0.5669	0.1658	+44	-24
58 Aquarii	6.4	+2.07	+16.0	-11 17.5	20 38.1	+ 5 57.9	+0.5296	0.5666	+0.1662	+65	- 7
213 B. Aquarii	6.5	2.03	15.3	8 42.3	19 1 44.9	+10 54.1	-1.2707	0.5630	0.1706	-52	-90
λ Aquarii	3.8	1.99	15.1	7 58.8	6 5.2	- 8 54.5	-1.2750	0.5600	0.1740	-53	-90
81 Aquarii	6.4	1.95	14.8	7 27.9	10 6.6	- 5 1.2	-1.1052	0.5574	0.1768	-32	-90
h Aquarii	5.4	1.94	14.9	8 6.0	11 50.3	- 3 21.0	-0.1411	0.5563	0.1778	+26	-44
φ Aquarii	4.4	+1.90	+14.2	- 6 27.3	16 5.8	+ 0 46.0	-1.0888	0.5536	+0.1803	-31	-90
χ Aquarii	5.3	1.88	14.7	8 8.2	17 16.5	+ 1 54.4	+0.8743	0.5528	0.1809	+82	+14
317 B. Aquarii	6.3	1.87	14.1	6 19.2	19 4.6	+ 3 39.0	-0.6922	0.5517	0.1819	- 4	-88
24 Piscium	6.1	1.74	12.6	3 34.4	20 10 26.2	- 5 29.2	-0.7341	0.5431	0.1874	- 5	-90
27 Piscium	5.1	1.71	12.6	3 58.4	13 13.6	- 2 47.0	+0.2106	0.5417	0.1879	+47	-24
29 Piscium	5.1	+1.70	+12.4	- 3 26.8	14 45.5	- 1 18.1	-0.0575	0.5410	+0.1882	+32	-39
4 Ceti	6.3	1.68	12.0	2 58.1	17 38.6	+ 1 29.6	-0.0106	0.5396	0.1887	+34	-37
5 Ceti	6.3	1.68	12.0	2 52.0	17 52.4	+ 1 43.0	-0.0836	0.5395	0.1887	+30	-41
54 B. Ceti	6.3	1.60	11.4	2 38.2	21 1 54.2	+ 9 29.8	+1.1919	0.5360	0.1891	+88	+39
10 Ceti	6.4	1.61	10.6	0 28.0	2 57.1	+10 30.7	-0.9162	0.5356	0.1891	-17	-90
14 Ceti	5.4	+1.56	+10.5	- 0 55.2	7 23.5	- 9 11.1	+0.4047	0.5340	+0.1889	+60	-14
26 Ceti	6.0	1.44	8.8	+ 0 57.7	21 37.2	+ 4 36.8	+1.0679	0.5296	0.1864	+90	+28
33 Ceti	6.1	1.42	8.2	2 2.6	22 1 2.7	+ 7 56.0	+0.5422	0.5287	0.1855	+72	- 6
f Piscium	5.3	1.39	7.5	3 13.0	4 43.8	+11 30.5	-0.0409	0.5280	0.1842	+34	-37
117 G. Piscium	6.5	1.34	7.2	3 8.6	9 22.4	- 7 59.3	+0.8903	0.5271	0.1825	+90	+15
v Piscium	4.7	+1.29	+ 5.9	+ 5 6.3	16 49.0	- 0 45.9	+0.1123	0.5260	+0.1791	+42	-29

ELEMENTS OF OCCULTATIONS, 1924. 497

JULY.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924 ^o		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
		^s	["]	^o	^d ^h ^m	^h ^m					
39 B. Arietis	6.5	+1.20	+4.1	+7 22.4	23 4 50.6	+10 54.3	-0.2407	0.5252	+0.1724	+23	-48
64 Ceti	5.8	1.18	3.5	8 12.9	8 11.6	-9 50.7	-0.5881	0.5252	0.1702	+4	-73
ξ ¹ Ceti	4.5	1.17	3.4	8 29.5	9 2.1	-9 1.6	-0.7469	0.5251	0.1697	-6	-82
25 Arietis	6.5	1.10	2.2	9 51.7	16 26.7	-1 50.2	-1.0113	0.5253	0.1644	-24	-81
ξ ^a Ceti	4.3	1.09	2.9	8 7.3	16 50.5	-1 27.0	+0.9630	0.5253	0.1642	+90	+23
389 B. Ceti	6.3	+1.10	+2.5	+9 13.7	17 34.2	-0 44.6	-0.1311	0.5253	+0.1636	+29	-40
85 Ceti	6.3	1.04	1.5	10 25.1	24 0 11.4	+5 40.7	-0.3733	0.5258	0.1584	+15	-55
μ Ceti	4.4	1.04	+1.6	9 47.7	1 26.8	+6 54.0	+0.5115	0.5259	0.1573	+69	-5
147 B. Arietis	5.8	0.90	-0.3	12 53.7	12 25.3	-6 27.2	-1.2287	0.5272	0.1475	-45	-78
8 B. Tauri	6.2	0.86	0.8	12 21.7	21 29.3	+2 20.5	+0.6577	0.5288	0.1386	+85	+6
f Tauri	4.3	+0.83	-1.2	+12 40.6	25 0 53.4	+5 38.5	+0.7741	0.5294	+0.1350	+90	+14
179 B. Tauri	5.9	0.68	3.2	14 57.6	19 24.1	-0 24.4	+0.5551	0.5338	0.1136	+74	+3
48 Tauri	6.3	0.64	3.5	15 12.6	23 25.5	+3 29.5	+0.7236	0.5349	0.1085	+90	+14
γ Tauri	3.9	0.62	3.7	15 26.7	26 1 25.4	+5 25.7	+0.6791	0.5354	0.1059	+89	+11
δ Tauri	3.9	0.62	4.4	17 21.9	2 57.3	+6 54.8	-1.2887	0.5358	0.1040	-63	-73
63 Tauri	5.7	+0.62	-4.2	+16 36.0	3 12.4	+7 9.4	-0.4152	0.5359	+0.1036	+13	-51
64 Tauri	4.9	0.62	4.4	17 16.1	3 32.0	+7 28.5	-1.1221	0.5360	0.1032	-35	-73
70 Tauri	6.4	0.60	4.0	15 46.0	4 18.7	+8 13.7	+0.6215	0.5362	0.1022	+81	+8
71 Tauri	4.6	0.59	3.9	15 26.8	4 40.5	+8 34.9	+1.0150	0.5363	0.1017	+90	+34
75 Tauri	5.2	0.58	4.2	16 11.4	5 42.3	+9 34.7	+0.2944	0.5365	0.1003	+54	-10
θ ¹ Tauri	4.2	+0.58	-4.0	+15 47.6	5 46.4	+9 38.7	+0.7405	0.5366	+0.1002	+90	+14
θ ^a Tauri	3.6	0.58	4.0	15 42.2	5 49.1	+9 41.4	+0.8460	0.5366	0.1002	+90	+22
80 Tauri	5.8	0.57	4.0	15 28.3	6 33.2	+10 24.1	+1.1747	0.5368	0.0992	+90	+49
264 B. Tauri	4.8	0.58	4.2	16 1.7	6 45.2	+10 35.7	+0.5774	0.5368	0.0989	+77	+6
81 Tauri	5.5	0.57	4.0	15 31.6	6 48.2	+10 38.6	+1.1392	0.5368	0.0989	+90	+45
85 Tauri	6.0	+0.57	-4.1	+15 41.3	7 24.1	+11 13.4	+1.0183	0.5370	+0.0981	+90	+35
275 B. Tauri	6.5	0.56	4.3	16 9.8	8 16.4	-11 55.9	+0.5765	0.5373	0.0969	+76	+6
α Tauri (Ald.)	1.1	0.55	4.5	16 21.4	9 23.8	-10 50.7	+0.4708	0.5376	0.0954	+67	+1
89 Tauri	5.8	0.54	4.4	15 52.9	10 30.4	-9 46.1	+1.1030	0.5379	0.0938	+90	+42
σ ^a Tauri	4.9	0.54	4.4	15 46.0	11 3.5	-9 14.0	+1.2806	0.5380	0.0931	+81	+66
318 B. Tauri	5.7	+0.46	-5.2	+17 2.1	19 55.2	-0 38.9	+0.6457	0.5406	+0.0806	+85	+12
m Tauri	5.0	0.45	5.8	18 32.6	27 0 47.1	+4 3.8	-0.6523	0.5419	0.0734	-1	-67
111 Tauri	5.1	0.36	5.8	17 18.8	9 2.2	-11 56.7	+1.2656	0.5442	0.0609	+81	+67
115 Tauri	5.3	0.34	6.0	17 53.8	10 21.8	-10 39.7	+0.6978	0.5445	0.0589	+90	+17
119 Tauri	4.9	0.32	6.2	18 32.2	12 46.9	-8 19.2	+0.1259	0.5452	0.0551	+43	-14
120 Tauri	5.6	+0.32	-6.2	+18 29.1	13 24.9	-7 42.4	+0.2176	0.5453	+0.0541	+49	-9
B. D. +19° 1110	6.0	0.25	6.8	19 50.8	22 25.6	+1 1.0	-0.8663	0.5476	0.0397	-15	-71
57 Orionis	5.8	0.24	6.8	19 44.0	23 38.8	+2 11.9	-0.6936	0.5479	0.0377	+4	-68
64 Orionis	5.1	0.20	6.9	19 41.5	28 3 42.0	+6 7.1	-0.5064	0.5489	0.0310	+7	-50
χ ^s Orionis	4.7	0.20	7.0	20 8.4	3 54.8	+6 19.5	-0.9955	0.5490	0.0307	-25	-70
68 Orionis	5.7	+0.17	-7.0	+19 48.4	7 45.8	+10 3.1	-0.5214	0.5498	+0.0243	+6	-51
19 B. Geminorum	6.2	0.17	6.8	18 42.0	8 30.4	+10 46.2	+0.7192	0.5500	0.0231	+90	+23
71 Orionis	5.1	0.16	7.0	19 10.9	9 7.0	+11 21.6	+0.2006	0.5500	0.0220	+48	-6
16 Geminorum	6.2	0.12	7.2	20 32.5	15 16.9	-6 40.5	-1.1952	0.5513	0.0117	-46	-70
γ Geminorum	4.1	+0.12	-7.2	+20 15.6	15 45.9	-6 12.5	-0.8792	0.5514	+0.0109	-17	-70

NEW MOON.

AUGUST.

45 Leonis	5.8	+0.02	-3.6	+10 9.0	2 7 54.0	+6 14.9	+1.0027	0.5493	-0.1588	+90	+27
32-24	(NAUTICAL ALMANAC, 1924.)										2 K

498 ELEMENTS OF OCCULTATIONS, 1924.

AUGUST.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
		s	"	"	d h m	h m					
MERCURY	0.2			+ 0 59.0	2 9 9.4	+ 7 27.8	+0.9808	0.4947	-0.1314	+0	+27
ϑ Leonis	3.8	+0.03	- 3.6	9 41.8	10 21.7	+ 8 37.8	+1.0891	0.5491	0.1612	+90	+34
χ Leonis	4.7	0.12	2.9	7 44.8	3 1 45.6	- 0 28.1	+0.5621	0.5478	0.1748	+74	- 3
308 B. Leonis	5.8	0.15	2.5	8 28.6	6 3.3	+ 3 41.3	-0.9660	0.5475	0.1779	-20	-82
σ Leonis	4.1	0.19	2.6	6 26.7	9 28.0	+ 6 59.5	+0.5660	0.5473	0.1803	+74	- 3
b Virginis	5.2	+0.36	- 1.8	+ 4 4.7	4 4 1.9	+ 0 57.6	-0.3915	0.5474	-0.1900	+14	-59
10 Virginis	6.2	0.42	2.0	+ 2 19.4	8 40.6	+ 5 27.4	+0.5576	0.5477	0.1915	+73	- 5
γ Virg. (mean)	2.9	0.57	1.6	- 1 2.0	23 53.2	- 3 49.6	+1.1142	0.5495	0.1943	+89	+31
65 Virginis	6.0	0.84	1.1	4 31.7	5 19 23.8	- 8 57.4	+0.9445	0.5539	0.1924	+86	+18
66 Virginis	5.7	0.86	1.2	4 46.1	19 57.8	- 8 24.5	+1.0828	0.5540	0.1922	+86	+29
80 Virginis	5.6	+0.91	- 0.7	- 5 0.6	6 1 2.9	- 3 29.5	+0.3581	0.5556	-0.1905	+57	-16
566 B. Virginis	6.4	0.95	0.4	5 7.0	4 54.7	+ 0 14.5	-0.2650	0.5569	0.1890	+21	-52
88 Virginis	6.5	0.99	- 0.7	6 27.5	6 55.3	+ 2 11.1	+0.7364	0.5576	0.1881	+84	+ 5
235 G. Virginis	6.5	1.17	+ 0.3	7 11.2	20 23.7	- 4 56.7	-1.0006	0.5628	0.1801	-24	-90
13 Libræ	5.7	1.42	0.6	11 35.3	7 12 30.5	+ 6 45.2	+0.6977	0.5703	0.1661	+78	+ 3
ξ ^a Libræ	5.6	+1.43	+ 0.9	-11 6.2	13 33.3	+ 7 45.7	+0.0306	0.5708	-0.1650	+33	-34
17 Libræ	6.4	1.44	1.0	10 51.0	14 11.6	+ 8 22.7	-0.3325	0.5711	0.1643	+14	-56
18 Libræ	5.9	1.44	1.0	10 50.4	14 29.4	+ 8 39.9	-0.3920	0.5713	0.1640	+10	-60
130 B. Libræ	5.9	1.60	1.8	12 5.9	8 1 16.0	- 4 56.7	-0.8131	0.5768	0.1515	-15	-90
γ Libræ	4.0	1.70	1.6	14 32.2	6 12.1	- 0 11.3	+0.9245	0.5794	0.1450	+76	+18
190 B. Libræ	6.5	+1.74	+ 1.9	-14 48.0	9 32.2	+ 3 1.5	+0.7145	0.5812	-0.1404	+76	+ 4
195 B. Libræ	6.2	1.77	2.7	13 54.3	13 0.2	+ 6 21.8	-0.6690	0.5830	0.1353	- 9	-87
202 B. Libræ	6.4	1.80	2.8	14 10.6	14 55.3	+ 8 12.7	-0.6508	0.5840	0.1325	- 8	-85
203 B. Libræ	6.2	1.81	2.7	14 36.4	15 2.5	+ 8 20.0	-0.2327	0.5841	0.1323	+16	-50
48 Libræ	4.6	1.81	3.0	14 3.6	15 44.3	+ 8 59.8	-0.8754	0.5845	0.1312	-21	-90
49 Libræ	5.4	+1.83	+ 2.1	-16 18.6	16 37.6	+ 9 51.1	+1.2796	0.5849	-0.1299	+74	+57
91 B. Scorpii	6.1	1.91	3.8	14 39.5	23 3.0	- 7 57.8	-1.1871	0.5883	0.1195	-49	-90
φ Ophiuchi	4.4	2.02	4.0	16 26.8	9 5 17.4	+ 1 57.7	-0.0980	0.5914	0.1088	+20	-42
24 Scorpii	5.0	2.09	4.2	17 35.7	9 30.7	+ 2 5.9	+0.6133	0.5934	0.1011	+65	- 1
78 B. Ophiuchi	6.5	2.15	5.3	16 41.1	15 20.8	+ 7 42.3	-0.8592	0.5961	0.0902	-25	-90
90 B. Ophiuchi	6.5	+2.18	+ 5.0	-18 7.8	16 49.0	+ 9 7.3	+0.4613	0.5968	-0.0873	+51	-10
29 Ophiuchi	6.4	2.20	5.0	18 46.4	17 39.4	+ 9 55.7	+1.0344	0.5972	0.0856	+72	+28
125 B. Ophiuchi	6.2	2.21	5.7	17 30.5	20 13.4	-11 36.4	-0.4490	0.5982	0.0806	- 1	-65
164 B. Ophiuchi	6.0	2.26	6.4	17 40.6	10 051.0	- 7 9.7	-0.6311	0.6001	0.0712	-13	-83
192 B. Ophiuchi	6.3	2.30	6.4	18 22.5	2 42.8	- 5 22.3	-0.0602	0.6008	0.0673	+18	-39
305 B. Ophiuchi	6.3	+2.42	+ 8.1	-18 47.3	15 0.8	+ 6 26.5	-0.3134	0.6045	-0.0409	+ 2	-55
16 G. Sagittarii	6.4	2.47	7.9	20 20.0	16 35.5	+ 7 57.4	+1.1710	0.6048	0.0375	+70	+43
39 G. Sagittarii	6.3	2.49	8.6	19 51.3	20 59.0	-11 49.7	+0.5503	0.6057	0.0277	+54	- 4
16 Sagittarii	5.9	2.52	8.7	20 24.6	22 31.4	+ 10 29.9	+1.0641	0.6060	0.0242	+70	+31
64 B. Sagittarii	6.1	2.49	9.2	18 41.0	22 39.7	-10 13.0	-0.6656	0.6060	0.0239	-20	-89
52 G. Sagittarii	6.4	+2.49	+ 9.4	-18 29.4	23 25.7	- 9 28.9	-0.8773	0.6061	-0.0222	-33	-90
17 H. Sagittarii	6.4	2.50	9.4	18 38.8	23 54.6	- 9 1.1	-0.7297	0.6062	0.0211	-23	-90
Y Sagit. (var.)	5.4	2.51	9.5	18 53.5	11 056.6	- 8 1.5	-0.5053	0.6063	0.0188	-10	-70
21 Sagittarii	5.0	2.55	9.3	20 34.9	2 27.9	- 6 33.9	+1.1573	0.6066	0.0154	+70	+41
95 B. Sagittarii	5.7	2.54	10.0	18 46.5	4 22.3	- 4 44.1	-0.6736	0.6068	0.0110	-21	-90
100 B. Sagittarii	5.0	+2.53	+10.1	-18 27.2	4 51.5	- 4 16.0	-1.0007	0.6068	-0.0099	-42	-90
29 Sagittarii	5.3	2.61	10.7	20 24.6	11 55.0	+ 2 30.5	+0.9422	0.6072	+0.0061	+70	+21
171 B. Sagittarii	6.1	2.63	11.6	19 21.2	17 8.1	+ 7 31.0	-0.0507	0.6070	0.0180	+14	-39
173 B. Sagittarii	6.4	2.63	11.6	19 12.6	17 9.5	+ 7 32.3	-0.1935	0.6070	0.0180	+7	-48
187 B. Sagittarii	6.4	2.63	11.9	18 51.2	18 43.7	+ 9 2.8	-0.5198	0.6069	0.0216	-11	-72
190 B. Sagittarii	5.4	+2.64	+11.9	-19 24.4	19 9.8	+ 9 27.7	+0.0439	0.6068	+0.0225	+20	-33

ELEMENTS OF OCCULTATIONS, 1924. 499

AUGUST.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name,	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
195 B. Sagittarii	6.3	+2.65	+11.8	-19 55.3	11 19 45.0	+10 1.5	+0.5716	0.6068	+0.0239	+55	- 0
d Sagittarii	5.0	2.65	12.4	19 5.2	22 48.6	-11 2.2	-0.1803	0.6065	0.0308	+ 8	-47
226 B. Sagittarii	6.4	2.66	12.6	19 22.4	12 0 21.6	- 9 32.9	+0.1583	0.6062	0.0342	+27	-27
e Sagittarii	4.0	2.64	12.8	17 59.3	0 23.9	- 9 30.7	-1.2275	0.6062	0.0343	-63	-89
45 Sagittarii	6.0	2.66	12.7	18 26.8	0 27.4	- 9 27.4	-0.7664	0.6062	0.0344	-25	-90
266 B. Sagittarii	6.1	+2.68	+13.3	-19 1.1	6 9.2	- 3 59.2	+0.0376	0.6053	+0.0470	+21	-34
267 B. Sagittarii	5.8	2.68	13.5	18 23.8	6 24.2	- 3 44.7	-0.5723	0.6052	0.0476	-11	-77
f Sagittarii	5.1	2.70	13.6	19 56.5	10 2.5	- 0 15.3	+1.1619	0.6043	0.0555	+71	+41
57 Sagittarii	6.0	2.70	14.0	19 14.1	12 20.5	+ 1 57.3	+0.5881	0.6037	0.0604	+59	- 2
π Capricorni	5.2	2.72	15.6	18 27.4	13 2 17.4	- 8 38.6	+0.8550	0.5988	0.0890	+72	+14
q Capricorni	5.0	+2.71	+15.7	-18 3.7	2 54.7	- 8 2.8	+0.5130	0.5985	+0.0903	+56	- 7
47 B. Capricorni	6.2	2.70	16.0	16 47.0	5 36.3	- 5 27.5	-0.5223	0.5974	0.0955	- 4	-72
v Capricorni	5.3	2.72	16.0	18 24.2	7 24.6	- 3 43.4	+1.2826	0.5966	0.0988	+72	+63
61 B. Capricorni	5.9	2.70	16.3	16 23.5	7 37.9	- 3 30.5	-0.7203	0.5964	0.0993	-16	-90
94 B. Capricorni	5.7	2.70	16.8	16 19.2	14 35.2	+ 3 10.7	-0.0577	0.5930	0.1119	+23	-39
29 Capricorni	5.5	+2.68	+17.3	-15 29.0	22 1.6	+10 20.2	-0.0226	0.5891	+0.1245	+26	-37
42 Capricorni	5.1	2.64	17.7	14 22.9	14 8 50.3	- 3 15.2	+0.2987	0.5829	0.1408	+47	-19
44 Capricorni	6.0	2.65	17.9	14 44.6	9 28.6	- 2 38.3	+0.7553	0.5825	0.1417	+76	+ 7
45 Capricorni	5.8	2.65	17.9	15 5.6	9 52.5	- 2 15.3	+1.1681	0.5823	0.1423	+75	+39
151 B. Capricorni	6.1	2.63	18.0	13 4.4	12 17.9	+ 0 4.8	-0.5366	0.5808	0.1456	0	-72
μ Capricorni	5.2	+2.64	+18.1	-13 54.3	13 49.3	+ 1 32.9	+0.5337	0.5799	+0.1476	+63	- 6
e Aquarii	5.4	2.60	18.2	11 56.0	21 18.5	+ 8 45.9	-0.3346	0.5753	0.1568	+12	-56
σ Aquarii	4.9	2.56	18.2	11 3.7	15 6 5.2	- 6 46.0	+0.1920	0.5700	0.1662	+43	-25
58 Aquarii	6.4	2.56	18.2	11 17.4	6 32.6	- 6 19.5	+0.5019	0.5697	0.1666	+63	- 8
213 B. Aquarii	6.5	2.53	18.1	8 42.3	11 37.0	- 1 25.7	-1.2971	0.5666	0.1713	-57	-86
λ Aquarii	3.8	+2.51	+18.0	- 7 58.8	15 54.7	+ 2 43.1	-1.3026	0.5640	+0.1748	-58	-85
81 Aquarii	6.4	2.49	17.8	7 27.9	19 53.5	+ 6 33.8	-1.1347	0.5617	0.1777	-35	-90
h Aquarii	5.4	2.49	17.9	8 6.0	21 36.1	+ 8 12.9	-0.1749	0.5608	0.1789	+24	-46
φ Aquarii	4.4	2.46	17.5	6 27.2	16 1 48.5	-11 43.2	-1.1204	0.5583	0.1815	-34	-90
χ Aquarii	5.3	2.45	17.7	8 8.2	2 58.2	-10 35.9	+0.8339	0.5577	0.1822	+82	+11
317 B. Aquarii	6.3	+2.44	+17.4	- 6 19.1	4 44.9	- 8 52.7	-0.7263	0.5567	+0.1832	- 6	-90
24 Piscium	6.1	2.37	16.4	3 34.4	19 52.6	+ 5 45.2	-0.7726	0.5488	0.1891	- 9	-90
27 Piscium	5.1	2.35	16.2	3 58.4	22 37.2	+ 8 24.5	+0.1656	0.5476	0.1897	+45	-27
29 Piscium	5.1	2.34	16.1	3 26.8	17 0 7.5	+ 9 51.8	-0.1013	0.5469	0.1900	+30	-42
4 Ceti	6.3	2.33	15.9	2 58.0	2 57.6	-11 23.5	-0.0645	0.5456	0.1905	+32	-40
5 Ceti	6.3	+2.33	+15.9	- 2 52.0	3 11.2	-11 10.3	-0.1281	0.5455	+0.1905	+28	-43
54 B. Ceti	6.3	2.27	15.2	2 38.1	11 4.3	- 3 32.2	+1.1366	0.5422	0.1911	+88	+33
10 Ceti	6.4	2.29	14.8	0 28.0	12 6.2	- 2 32.4	-0.9570	0.5418	0.1911	-20	-90
14 Ceti	5.4	2.25	14.5	- 0 55.1	16 27.6	+ 1 40.9	+0.3537	0.5401	0.1909	+56	-17
26 Ceti	6.0	2.16	13.1	+ 0 57.8	18 6 25.4	- 8 47.1	+1.0098	0.5356	0.1885	+90	+24
33 Ceti	6.1	+2.14	+12.6	+ 2 2.7	9 47.1	- 5 31.7	+0.4877	0.5347	+0.1875	+67	- 9
f Piscium	5.3	2.13	11.9	3 13.1	13 24.0	- 2 1.4	-0.0912	0.5338	0.1862	+31	-40
117 G. Piscium	6.5	2.09	11.6	3 8.7	17 57.5	+ 2 23.8	+0.8328	0.5328	0.1844	+90	+12
y Piscium	4.7	2.06	10.4	5 6.4	19 1 16.1	+ 9 29.0	+0.0606	0.5315	0.1810	+39	-32
39 B. Arietis	6.5	1.99	8.6	7 22.4	13 5.7	- 3 2.8	-0.2893	0.5300	0.1741	+20	-51
64 Ceti	5.8	+1.96	+ 7.9	+ 8 13.0	16 23.5	+ 0 9.0	-0.6342	0.5297	+0.1719	+ 1	-77
ξ^1 Ceti	4.5	1.96	7.8	8 29.6	17 13.2	+ 0 57.2	-0.7918	0.5297	0.1713	- 9	-82
25 Arietis	6.5	1.91	6.5	9 51.8	20 0 31.3	+ 8 2.2	-1.0539	0.5294	0.1659	-27	-81
ξ^2 Ceti	4.3	1.90	7.2	8 7.3	0 54.8	+ 8 25.0	+0.9075	0.5294	0.1656	+90	+19
389 B. Ceti	6.3	1.90	6.8	9 13.7	1 37.8	+ 9 6.7	-0.1793	0.5294	0.1650	+26	-43
85 Ceti	6.3	+1.86	+ 5.7	+10 25.2	8 9.8	- 8 33.1	-0.4192	0.5294	+0.1596	+13	-58

500 ELEMENTS OF OCCULTATIONS, 1924.

AUGUST.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
μ Ceti	4.4	+1.85	+ 5.8	+ 9 47.8	20 9 24.2	- 7 21.0	+0.4604	0.5294	+0.1585	+05	- 8
147 B. Arietis	5.8	1.78	3.6	12 53.8	20 15.2	+ 3 10.4	-1.2682	0.5299	0.1485	-51	-78
8 B. Tauri	6.2	1.68	3.0	12 21.7	21 5 14.1	+11 53.1	+0.6102	0.5308	0.1393	+79	+ 3
f Tauri	4.3	1.65	+ 2.6	12 40.7	8 36.5	- 8 50.7	+0.7270	0.5312	0.1357	+90	+11
179 B. Tauri	5.9	1.50	0.0	14 57.6	22 3 0.7	+ 8 59.9	+0.5141	0.5343	0.1139	+70	+ 1
48 Tauri	6.3	+1.46	- 0.4	+15 12.7	7 1.2	-11 6.9	+0.6834	0.5351	+0.1088	+90	+12
γ Tauri	3.9	1.44	0.7	15 26.7	9 0.7	- 9 11.2	+0.6395	0.5354	0.1062	+84	+ 9
58 Tauri	5.4	1.42	0.6	14 54.9	9 25.3	- 8 47.4	+1.2696	0.5356	0.1057	+85	+62
63 Tauri	5.7	1.43	1.3	16 36.0	10 47.4	- 7 27.8	-0.4511	0.5358	0.1039	+11	-54
64 Tauri	4.9	1.44	1.6	17 16.1	11 7.0	- 7 8.8	-1.1558	0.5359	0.1034	-39	-73
70 Tauri	6.4	+1.41	- 1.1	+15 46.1	11 53.6	- 6 23.6	+0.5831	0.5360	+0.1024	+77	+ 6
71 Tauri	4.6	1.40	1.0	15 26.8	12 15.3	- 6 2.6	+0.9755	0.5361	0.1019	+90	+31
75 Tauri	5.2	1.40	1.3	16 11.4	13 17.0	- 5 2.8	+0.2573	0.5364	0.1006	+51	-12
θ^1 Tauri	4.2	1.40	1.2	15 47.7	13 21.1	- 4 58.9	+0.7021	0.5364	0.1005	+90	+13
θ^2 Tauri	3.6	1.39	1.2	15 42.2	13 23.8	- 4 56.2	+0.8074	0.5364	0.1004	+90	+19
80 Tauri	5.8	+1.38	- 1.2	+15 28.4	14 7.8	- 4 13.6	+1.1355	0.5365	+0.0994	+90	+45
264 B. Tauri	4.8	1.39	1.4	16 1.8	14 19.8	- 4 1.9	+0.5398	0.5366	0.0991	+73	+ 4
81 Tauri	5.5	1.38	1.2	15 31.6	14 22.8	- 3 59.0	+1.1001	0.5366	0.0991	+90	+42
85 Tauri	6.0	1.38	1.3	15 41.4	14 58.6	- 3 24.3	+0.9798	0.5367	0.0983	+90	+32
275 B. Tauri	6.5	1.37	1.6	16 9.9	15 50.8	- 2 33.7	+0.5394	0.5369	0.0971	+73	+ 4
α Tauri (<i>Ald.</i>)	1.1	+1.36	- 1.8	+16 21.4	16 58.1	- 1 28.6	+0.4343	0.5372	+0.0955	+64	- 2
89 Tauri	5.8	1.35	1.7	15 52.9	18 4.6	- 0 24.1	+1.0653	0.5374	0.0940	+90	+39
σ^2 Tauri	4.9	1.34	1.7	15 46.1	18 37.7	+ 0 8.0	+1.2427	0.5375	0.0932	+90	+58
318 B. Tauri	5.7	1.25	2.8	17 2.1	23 3 29.0	+ 8 42.6	+0.6119	0.5396	0.0807	+81	+ 9
m Tauri	5.0	1.24	3.7	18 32.6	8 21.0	-10 34.6	-0.6822	0.5407	0.0735	- 3	-69
111 Tauri	5.1	+1.12	- 3.9	+17 18.8	16 36.7	- 2 34.6	+1.2348	0.5426	+0.0610	+89	+61
115 Tauri	5.3	1.10	4.2	17 53.8	17 56.4	- 1 17.5	+0.6683	0.5430	0.0589	+89	+16
119 Tauri	4.9	1.08	4.6	18 32.3	20 21.8	+ 1 3.3	+0.0979	0.5435	0.0552	+42	-16
120 Tauri	5.6	1.07	4.6	18 29.2	20 59.8	+ 1 40.1	+0.1868	0.5436	0.0542	+47	-11
B. D. +19° 1110	6.0	0.98	5.6	19 50.9	24 6 1.8	+10 24.8	-0.8906	0.5458	0.0398	-17	-71
57 Orionis	5.8	+0.97	- 5.6	+19 44.1	7 15.2	+11 35.8	-0.7177	0.5460	+0.0378	- 6	-70
64 Orionis	5.1	0.92	5.8	19 41.5	11 18.9	- 8 28.3	-0.5297	0.5469	0.0312	+ 6	-52
γ^2 Orionis	4.7	0.93	6.0	20 8.4	11 31.8	- 8 15.8	-1.0182	0.5470	0.0308	-27	-70
68 Orionis	5.7	0.88	6.1	19 48.4	15 23.4	- 4 31.7	-0.5436	0.5478	0.0245	+ 5	-53
19 B. Geminorum	6.2	0.86	5.8	18 42.0	16 8.1	- 3 48.4	+0.6958	0.5479	0.0232	+90	+21
71 Orionis	5.1	+0.86	- 6.1	+19 10.9	16 44.8	- 3 12.9	+0.1779	0.5481	+0.0222	+47	- 8
16 Geminorum	6.2	0.80	6.6	20 32.5	22 55.7	+ 2 46.0	-1.2148	0.5493	0.0118	-49	-70
ν Geminorum	4.1	0.80	6.6	20 15.6	23 24.8	+ 3 14.0	-0.8991	0.5494	+0.0110	-18	-70
VENUS	-4.1	..	..	18 24.6	25 23 27.7	+ 2 29.8	+0.9097	0.5179	-0.0295	+90	+34
f Geminorum	5.3	0.46	6.7	17 50.8	26 8 31.5	+11 15.6	+1.1749	0.5542	0.0455	+90	+54
g Geminorum	5.0	+0.43	- 7.0	+18 41.7	11 36.9	- 9 45.1	+0.1005	0.5544	-0.0508	+41	-15
209 B. Geminorum	6.2	0.41	7.1	19 31.1	14 18.9	- 7 8.4	-0.9407	0.5546	0.0553	-21	-71
3 Cancri	5.7	0.38	6.7	17 31.0	18 27.5	- 3 8.1	+0.9958	0.5549	0.0623	+90	+37
10 H. Cancri	6.1	0.36	7.0	19 3.4	20 17.1	- 1 22.2	-0.7952	0.5550	0.0654	-10	-71
ζ Can. (mean)	4.7	0.34	6.8	17 52.6	23 46.0	+ 1 59.8	+0.2489	0.5552	0.0712	+51	- 9
d ¹ Cancri	5.9	+0.30	- 6.8	+18 34.5	27 4 57.0	+ 7 0.6	-0.8997	0.5554	-0.0797	-17	-72
d ² Cancri	6.2	0.28	6.7	17 17.8	6 7.2	+ 8 8.5	+0.3922	0.5554	0.0816	+61	- 2
θ Cancri	5.5	0.27	6.8	18 21.0	8 47.0	+10 42.9	-0.9718	0.5555	0.0859	-23	-72
54 Cancri	6.3	0.22	6.0	15 37.9	17 51.4	- 4 30.7	+1.1195	0.5555	0.1002	+90	+44
X Can. (<i>var.</i>)	6.2	+0.20	- 6.3	+17 31.2	19 51.6	- 2 34.4	-1.1188	0.5555	-0.1032	-35	-73

NEW MOON.

ELEMENTS OF OCCULTATIONS, 1924. 501

SEPTEMBER.

THE STAR'S				AT CONJUNCTION IN R.A.					Limiting Parallels.		
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	s'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
γ Vir. (<i>mean.</i>)	2.9	+0.35	-0.7	-1 2.0	1 5 55.3	+4 0.0	+1.0901	0.5552	-0.1966	+89	+29
65 Virginis	6.0	0.55	+0.1	4 31.6	2 1 7.6	-1 26.2	+0.9191	0.5587	0.1942	+86	+17
66 Virginis	5.7	0.56	0.0	4 46.0	1 41.2	-0 53.6	+1.0566	0.5588	0.1941	+86	+27
80 Virginis	5.6	0.60	0.5	5 0.6	6 42.3	+3 57.2	+0.3348	0.5600	0.1923	+55	-18
566 B. Virginis	6.4	0.63	0.7	5 7.0	10 31.3	+7 38.4	-0.2864	0.5610	0.1906	+20	-53
88 Virginis	6.5	+0.66	+0.6	-6 27.5	12 30.5	+9 33.7	+0.7106	0.5616	-0.1897	+84	+3
235 G. Virginis	6.5	0.80	1.4	7 11.2	3 1 51.4	-1 32.9	-1.0240	0.5656	0.1812	-26	-90
13 Libræ	5.7	1.02	1.8	11 35.3	17 53.8	-10 4.2	+0.6692	0.5713	0.1666	+76	+1
ξ^a Libræ	5.6	1.02	2.1	11 6.2	18 56.4	-9 3.8	+0.0019	0.5717	0.1655	+32	-36
17 Libræ	6.4	1.03	2.2	10 51.0	19 34.7	-8 26.8	-0.3613	0.5719	0.1648	+12	-58
18 Libræ	5.9	+1.02	+2.2	-10 50.3	19 52.4	-8 9.7	-0.4210	0.5720	-0.1644	+9	-62
130 B. Libræ	5.9	1.17	2.9	12 5.9	4 6 39.5	+2 14.2	-0.8453	0.5763	0.1515	-17	-90
γ Libræ	4.0	1.26	2.7	14 32.2	11 36.8	+7 0.7	+0.8960	0.5783	0.1449	+76	+16
190 B. Libræ	6.5	1.30	2.8	14 48.0	14 58.0	+10 14.6	+0.6854	0.5796	0.1401	+75	+3
η Libræ	5.5	1.31	2.7	15 25.9	15 14.4	+10 30.4	+1.2876	0.5797	0.1397	+75	+57
195 B. Libræ	6.2	+1.33	+3.6	-13 54.2	18 27.4	-10 23.7	-0.7037	0.5810	-0.1350	-11	-90
202 B. Libræ	6.4	1.36	3.7	14 10.6	20 23.4	-8 32.0	-0.6858	0.5817	0.1321	-10	-90
203 B. Libræ	6.2	1.37	3.6	14 36.4	20 31.0	-8 24.6	-0.2659	0.5818	0.1318	+14	-52
48 Libræ	4.6	1.37	3.8	14 3.6	21 12.8	-7 44.4	-0.9115	0.5820	0.1308	-24	-90
49 Libræ	5.4	1.38	2.9	16 18.6	22 6.5	-6 52.7	+1.2529	0.5824	0.1294	+74	+51
91 B. Scorpii	6.1	+1.47	+4.5	-14 39.5	5 4 35.8	-0 37.7	-1.2266	0.5850	-0.1189	-54	-90
ϕ Ophiuchi	4.4	1.57	4.6	16 26.8	10 54.7	+5 27.0	-0.1319	0.5873	0.1081	+18	-44
24 Scorpii	5.0	1.64	4.7	17 35.7	15 11.6	+9 34.2	+0.5842	0.5888	0.1004	+63	-3
78 B. Ophiuchi	6.5	1.71	5.8	16 41.1	21 7.2	-8 43.7	-0.8997	0.5908	0.0894	-27	-90
90 B. Ophiuchi	6.5	1.74	5.3	18 7.8	22 36.9	-7 17.4	+0.4312	0.5913	0.0865	+49	-12
29 Ophiuchi	6.4	+1.76	+5.3	-18 46.4	23 28.2	-6 28.0	+1.0091	0.5916	-0.0849	+72	+26
125 B. Ophiuchi	6.2	1.78	6.0	17 30.5	6 2 5.0	-3 57.4	-0.4866	0.5923	0.0798	-3	-68
164 B. Ophiuchi	6.0	1.84	6.6	17 40.6	6 47.9	+0 34.7	-0.6706	0.5936	0.0704	-15	-89
192 B. Ophiuchi	6.3	1.88	6.6	18 22.5	8 41.9	+2 24.3	-0.0944	0.5941	0.0666	+16	-41
305 B. Ophiuchi	6.3	2.03	8.0	18 47.3	21 16.2	-9 30.6	-0.3500	0.5967	0.0404	0	-58
16 G. Sagittarii	6.4	+2.07	+7.6	-20 20.0	22 53.1	-7 57.4	+1.1506	0.5970	-0.0369	+70	+40
39 G. Sagittarii	6.3	2.11	8.3	19 51.3	7 3 23.1	-3 38.0	+0.5238	0.5976	0.0272	+51	-6
16 Sagittarii	5.9	2.14	8.4	20 24.6	4 57.9	-2 6.9	+1.0437	0.5977	0.0238	+70	+30
64 B. Sagittarii	6.1	2.12	9.0	18 41.0	5 6.3	-1 58.9	-0.7056	0.5978	0.0235	-22	-90
52 G. Sagittarii	6.4	2.13	9.1	18 29.4	5 53.5	-1 13.5	-0.9198	0.5978	0.0218	-36	-90
17 H ¹ . Sagittarii	6.4	+2.13	+9.1	-18 38.8	6 23.2	-0 45.1	-0.7705	0.5979	-0.0207	-26	-90
Y Sagit. (<i>var.</i>)	5.4	2.15	9.2	18 53.5	7 26.7	+0 16.1	-0.5434	0.5979	0.0184	-12	-74
21 Sagittarii	5.0	2.19	8.8	20 34.9	9 0.3	+1 46.0	+1.1389	0.5981	0.0150	+70	+39
95 B. Sagittarii	5.7	2.19	9.6	18 46.5	10 57.8	+3 38.8	-0.7133	0.5982	0.0108	-23	-90
100 B. Sagittarii	5.0	2.18	9.8	18 27.2	11 27.7	+4 7.7	-1.0442	0.5982	-0.0097	-46	-90
29 Sagittarii	5.3	+2.29	+10.1	-20 24.6	18 42.5	+11 5.5	+0.9230	0.5982	+0.0062	+70	+20
171 B. Sagittarii	6.1	2.33	11.0	19 21.2	8 0 4.1	-7 45.4	-0.0810	0.5980	0.0179	+13	-41
173 B. Sagittarii	6.4	2.33	11.0	19 12.6	0 5.5	-7 44.1	-0.2256	0.5980	0.0179	+5	-50
187 B. Sagittarii	6.4	2.34	11.3	18 51.2	1 42.3	-6 11.0	-0.5557	0.5978	0.0214	-13	-75
190 B. Sagittarii	5.4	2.35	11.2	19 24.4	2 9.2	-5 45.2	+0.0152	0.5978	0.0224	+18	-35
195 B. Sagittarii	6.3	+2.36	+11.1	-19 55.3	2 45.3	-5 10.5	+0.5495	0.5977	+0.0237	+53	-4
d Sagittarii	5.0	2.38	11.8	19 5.2	5 54.1	-2 9.0	-0.2111	0.5974	0.0305	+7	-49
226 B. Sagittarii	6.4	2.40	11.9	19 22.5	7 29.6	-0 37.3	+0.1321	0.5971	0.0339	+26	-28
e Sagittarii	4.0	2.38	12.3	17 59.3	7 32.0	-0 35.0	-1.2710	0.5971	0.0340	-70	-77
45 Sagittarii	6.0	2.39	12.1	18 26.8	7 35.6	-0 31.6	-0.8042	0.5971	0.0341	-27	-90
266 B. Sagittarii	6.1	+2.44	+12.6	-19 1.1	13 26.9	+5 6.2	+0.0113	0.5961	+0.0466	+20	-35

502 ELEMENTS OF OCCULTATIONS, 1924.

SEPTEMBER.

THE STAR'S				AT CONJUNCTION IN R.A.						Limiting Parallels.		
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.		Hour Angle, H	Y	x'	y'	N	S.
		Δα	Δδ		d	h							m	h	m
267 B. Sagittarii	5.8	+2.44	+12.8	-18 23.8	8	13 42.4	+ 5 21.1	-0.6062	0.5960	+0.0472	-13	-81
f Sagittarii	5.1	2.48	12.7	19 56.5		17 26.7	+ 8 56.7	+1.1508	0.5953	0.0549	+71	+40
57 Sagittarii	6.0	2.50	13.2	19 14.1		19 48.5	+11 13.1	+0.5705	0.5947	0.0598	+58	- 3
π Capricorni	5.2	2.59	14.8	18 27.5	9	10 8.1	+ 0 59.8	+0.8448	0.5904	0.0882	+72	+14
ρ Capricorni	5.0	2.59	15.0	18 3.7		10 46.4	+ 1 36.6	+0.4989	0.5902	0.0894	+55	- 8
47 B. Capricorni	6.2	+2.59	+15.5	-16 47.0		13 32.2	+ 4 16.1	-0.5477	0.5892	+0.0945	- 6	-74
v Capricorni	5.3	2.61	15.2	18 24.2		15 23.3	+ 6 3.0	+1.2791	0.5884	0.0979	+72	+61
61 B. Capricorni	5.9	2.59	15.8	16 23.5		15 37.0	+ 6 16.3	-0.7472	0.5883	0.0983	-17	-90
94 B. Capricorni	5.7	2.64	16.3	16 19.2		22 44.6	-10 52.1	-0.0739	0.5855	0.1109	+22	-40
29 Capricorni	5.5	2.66	16.9	15 29.0	10	6 21.5	- 3 32.1	-0.0351	0.5821	0.1235	+25	-38
42 Capricorni	5.1	+2.68	+17.5	-14 22.9		17 24.0	+ 7 6.4	+0.2945	0.5769	+0.1399	+46	-20
44 Capricorni	6.0	2.69	17.7	14 44.6		18 3.1	+ 7 44.1	+0.7558	0.5767	0.1408	+76	+ 7
45 Capricorni	5.8	2.70	17.6	15 5.6		18 27.4	+ 8 7.5	+1.1727	0.5765	0.1414	+76	+39
151 B. Capricorni	6.1	2.69	18.1	13 4.4		20 55.5	+10 30.3	-0.5466	0.5753	0.1447	0	-73
μ Capricorni	5.2	2.71	18.0	13 54.3		22 28.6	-11 59.9	+0.5342	0.5745	0.1468	+63	- 6
e Aquarii	5.4	+2.71	+18.5	-11 56.0	11	6 5.6	- 4 39.1	-0.3374	0.5707	+0.1561	+12	-57
σ Aquarii	4.9	2.72	18.7	11 3.7		15 0.1	+ 3 56.8	+0.1983	0.5663	0.1657	+43	-25
58 Aquarii	6.4	2.72	18.7	11 17.4		15 27.9	+ 4 23.6	+0.5107	0.5661	0.1662	+64	- 8
213 B. Aquarii	6.5	2.72	19.0	8 42.2		20 36.0	+ 9 21.2	-1.2967	0.5636	0.1710	-57	-86
λ Aquarii	3.8	2.73	19.0	7 58.7	12	0 56.6	-10 27.0	-1.2988	0.5615	0.1746	-58	-86
81 Aquarii	6.4	+2.73	+19.0	- 7 27.9		4 57.7	- 6 34.1	-1.1267	0.5596	+0.1777	-34	-90
h Aquarii	5.4	2.73	19.0	8 5.9		6 41.1	- 4 54.1	-0.1608	0.5588	0.1789	+25	-45
φ Aquarii	4.4	2.73	18.8	6 27.2		10 55.4	- 0 48.3	-1.1075	0.5569	0.1817	-33	-90
χ Aquarii	5.3	2.72	18.8	8 8.2		12 5.6	+ 0 19.5	+0.8559	0.5564	0.1824	+82	+13
317 B. Aquarii	6.3	2.72	18.8	6 19.1		13 53.0	+ 2 3.4	-0.7094	0.5556	0.1835	- 5	-90
24 Piscium	6.1	+2.73	+18.2	- 3 34.4	13	5 3.9	- 7 15.6	-0.7440	0.5493	+0.1899	- 6	-90
27 Piscium	5.1	2.72	18.1	3 58.4		7 48.7	- 4 36.0	+0.1979	0.5483	0.1907	+47	-25
29 Piscium	5.1	2.72	18.1	3 26.7		9 19.0	- 3 8.7	-0.0683	0.5477	0.1910	+31	-40
4 Ceti	6.3	2.72	17.9	2 58.0		12 9.1	+ 0 24.0	-0.0294	0.5466	0.1915	+33	-38
5 Ceti	6.3	2.72	17.9	2 51.9		12 22.6	+ 0 11.0	-0.0929	0.5466	0.1916	+30	-41
54 B. Ceti	6.3	+2.70	+17.4	- 2 38.1		20 14.9	+ 7 26.3	+1.1778	0.5439	+0.1924	+88	+37
10 Ceti	6.4	2.72	17.2	0 27.9		21 16.5	+ 8 26.0	-0.9155	0.5436	0.1924	-17	-90
14 Ceti	5.4	2.70	16.9	- 0 55.1	14	1 37.0	-11 21.7	+0.3983	0.5423	0.1924	+61	-14
26 Ceti	6.0	2.67	15.7	+ 0 57.9		15 29.9	+ 2 5.2	+1.0626	0.5387	0.1902	+90	+28
33 Ceti	6.1	2.67	15.3	2 2.8		18 50.0	+ 5 19.1	+0.5435	0.5379	0.1893	+72	- 5
f Piscium	5.3	+2.66	+14.8	+ 3 13.1		22 25.2	+ 8 47.7	-0.0319	0.5372	+0.1881	+34	-37
117 G. Piscium	6.5	2.65	14.4	3 8.7	15	2 56.3	-10 49.5	+0.8930	0.5364	0.1863	+90	+15
v Piscium	4.7	2.64	13.4	5 6.4		10 10.8	- 3 48.3	+0.1273	0.5353	0.1829	+43	-28
39 B. Arietis	6.5	2.61	11.7	7 22.5		21 52.9	+ 1 32.3	-0.2142	0.5340	0.1760	+24	-46
64 Ceti	5.8	2.60	11.1	8 13.1	16	1 8.5	+10 41.9	-0.5560	0.5338	0.1737	+ 5	-70
ξ ¹ Ceti	4.5	+2.60	+11.1	+ 8 29.6		1 57.7	+11 29.6	-0.7126	0.5337	+0.1731	- 4	-82
25 Arietis	6.5	2.57	9.8	9 51.9		9 10.9	- 5 30.4	-0.9695	0.5334	0.1677	-21	-81
ξ ² Ceti	4.3	2.56	10.3	8 7.4		9 34.1	- 5 7.9	+0.9853	0.5334	0.1674	+90	+23
389 B. Ceti	6.3	2.57	10.0	9 13.8		10 16.7	- 4 26.6	-0.0974	0.5334	0.1668	+30	-38
85 Ceti	6.3	2.54	8.9	10 25.3		16 44.3	+ 1 49.2	-0.3329	0.5333	0.1613	+18	-53
μ Ceti	4.4	+2.54	+ 8.9	+ 9 47.8		17 57.9	+ 3 0.6	+0.5442	0.5333	+0.1602	+72	- 3
147 B. Arietis	5.8	2.50	6.8	12 53.8	17	4 41.9	-10 35.0	-1.1734	0.5335	0.1500	-38	-78
8 B. Tauri	6.2	2.42	5.9	12 21.8		13 35.4	- 1 57.8	+0.7028	0.5341	0.1406	+90	+ 8
f Tauri	4.3	2.40	5.4	12 40.7		16 56.0	+ 1 16.7	+0.8207	0.5343	0.1368	+90	+17
179 B. Tauri	5.9	2.29	2.5	14 57.7	18	11 11.5	- 5 1.6	+0.6149	0.5363	0.1147	+80	+ 6
48 Tauri	6.3	+2.25	+ 1.9	+15 12.7		15 10.5	- 1 10.0	+0.7849	0.5368	+0.1095	+90	+17

ELEMENTS OF OCCULTATIONS, 1924. 503

SEPTEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
γ Tauri	3.9	+2.24	+ 1.6	+15 26.7	18 17 9.3	+ 0.45.1	+0.7418	0.5371	+0.1068	+90	+0
δ Tauri	3.9	2.26	0.8	17 21.9	18 40.6	+ 2 13.6	-1.2159	0.5373	0.1048	-46	-73
63 Tauri	5.7	2.24	1.0	16 36.1	18 55.5	+ 2 28.0	-0.3465	0.5373	0.1044	+16	-47
64 Tauri	4.9	2.25	0.7	17 16.2	19 15.0	+ 2 46.9	-1.0499	0.5374	0.1040	-29	-73
70 Tauri	6.4	2.21	1.1	15 46.1	20 1.3	+ 3 31.8	+0.6862	0.5375	0.1029	+90	+12
71 Tauri	4.6	+2.20	+ 1.2	+15 26.8	20 22.9	+ 3 52.7	+1.0781	0.5376	+0.1025	+90	+38
75 Tauri	5.2	2.20	0.9	16 11.5	21 24.3	+ 4 52.2	+0.3612	0.5377	0.1011	+59	- 7
θ^1 Tauri	4.2	2.20	1.0	15 47.7	21 28.4	+ 4 56.1	+0.8054	0.5377	0.1010	+90	+19
θ^2 Tauri	3.6	2.20	1.0	15 42.2	21 31.1	+ 4 58.7	+0.9105	0.5377	0.1009	+90	+26
80 Tauri	5.8	2.18	1.0	15 28.4	22 14.9	+ 5 41.3	+1.2380	0.5378	0.0999	+90	+56
264 B. Tauri	4.8	+2.20	+ 0.8	+16 1.8	22 26.8	+ 5 52.8	+0.6436	0.5379	+0.0996	+84	+10
81 Tauri	5.5	2.18	1.0	15 31.7	22 29.8	+ 5 55.7	+1.2030	0.5378	0.0995	+90	+52
85 Tauri	6.0	2.18	0.8	15 41.4	23 5.5	+ 6 30.2	+1.0830	0.5380	0.0987	+90	+40
119 H ¹ . Tauri	6.2	2.21	0.0	17 51.4	23 53.5	+ 7 16.7	-1.2318	0.5381	0.0976	-49	-73
275 B. Tauri	6.5	2.18	0.6	16 9.9	23 57.5	+ 7 20.6	+0.6436	0.5381	0.0975	+84	+10
α Tauri (Alde.)	1.1	+2.17	+ 0.2	+16 21.5	19 1 4.5	+ 8 25.5	+0.5388	0.5382	+0.0959	+73	+ 4
89 Tauri	5.8	2.15	+ 0.4	15 52.9	2 10.7	+ 9 29.7	+1.1691	0.5384	0.0944	+90	+48
318 B. Tauri	5.7	2.07	- 1.1	17 2.1	11 33.6	- 5 25.2	+0.7181	0.5399	0.0809	+90	+16
m Tauri	5.0	2.06	2.0	18 32.6	16 25.1	- 0 42.8	-0.5747	0.5407	0.0736	+ 3	-60
115 Tauri	5.3	1.92	2.9	17 53.8	20 2 0.4	+ 8 34.3	+0.7761	0.5422	0.0589	+90	+22
119 Tauri	4.9	+1.90	- 3.4	+18 32.3	4 26.0	+10 55.3	+0.2057	0.5426	+0.0551	+48	-10
120 Tauri	5.6	1.90	3.4	18 29.2	5 4.1	+11 32.2	+0.2975	0.5427	0.0541	+54	- 5
B. D. +19° 1110	6.0	1.80	4.8	19 50.9	14 7.3	- 3 41.9	-0.7837	0.5442	0.0396	-10	-71
χ^1 Orionis	4.5	1.79	5.1	20 15.7	15 4.7	- 2 46.3	-1.2041	0.5443	0.0381	-47	-70
57 Orionis	5.8	1.79	4.9	19 44.1	15 20.9	- 2 30.7	-0.6109	0.5444	0.0376	+ 1	-60
64 Orionis	5.1	+1.74	- 5.3	+19 41.5	19 25.5	+ 1 26.1	-0.4232	0.5450	+0.0310	+12	-44
γ^2 Orionis	4.7	1.74	5.4	20 8.4	19 38.4	+ 1 38.6	-0.9121	0.5450	0.0306	-19	-70
68 Orionis	5.7	1.69	5.6	19 48.4	23 31.1	+ 5 23.9	-0.4377	0.5456	0.0242	+11	-45
19 B. Geminorum	6.2	1.67	5.3	18 42.0	21 0 16.0	+ 6 7.2	+0.8032	0.5457	0.0230	+90	+28
71 Orionis	5.1	1.66	5.7	19 10.9	0 52.8	+ 6 42.8	+0.2846	0.5458	0.0220	+53	- 2
16 Geminorum	6.2	+1.60	- 6.5	+20 32.5	7 5.7	-11 16.3	-1.1112	0.5467	+0.0116	-36	-70
ν Geminorum	4.1	1.59	6.5	20 15.6	7 35.0	-10 48.0	-0.7952	0.5468	+0.0108	-11	-70
f Geminorum	5.3	1.16	7.6	17 50.8	22 16 56.3	- 2 31.7	+1.2722	0.5505	-0.0457	+78	+69
g Geminorum	5.0	1.12	8.1	18 41.7	20 3.3	+ 0 29.2	+0.1942	0.5507	0.0509	+48	-10
209 B. Geminorum	6.2	1.09	8.4	19 31.1	22 46.6	+ 3 7.1	-0.8505	0.5510	0.0555	-14	-71
3 Cancri	5.7	+1.04	- 7.9	+17 31.0	23 2 57.2	+ 7 9.4	+1.0878	0.5512	-0.0624	+90	+45
10 H. Cancri	6.1	1.02	8.4	19 3.3	4 47.7	+ 8 56.3	+0.7076	0.5513	0.0655	- 5	-71
ζ Can. (mean)	4.7	0.98	8.2	17 52.6	8 18.2	-11 40.1	+0.3364	0.5515	0.0713	+57	- 4
d^1 Cancri	5.9	0.91	8.5	18 34.5	13 31.7	- 6 36.9	-0.8171	0.5518	0.0798	-12	-72
d^2 Cancri	6.2	0.89	8.2	17 17.7	14 42.4	- 5 28.5	+0.4761	0.5519	0.0817	+68	+ 3
θ Cancri	5.5	+0.87	- 8.5	+18 21.0	17 23.4	- 2 52.8	-0.8915	0.5520	-0.0860	-17	-72
54 Cancri	6.3	0.77	7.6	15 37.9	24 2 31.5	+ 5 57.3	+1.1956	0.5523	0.1003	+90	+52
X Cancri (var.)	6.2	0.75	8.2	17 31.2	4 32.4	+ 7 54.2	-1.0458	0.5524	0.1034	-28	-73
o^1 Cancri	5.1	0.75	7.7	15 36.8	5 26.0	+ 8 46.1	+0.9157	0.5524	0.1048	+90	+26
o^2 Cancri	5.7	0.74	7.8	15 52.3	5 35.3	+ 8 55.0	+0.6204	0.5524	0.1050	+81	+ 8
81 Cancri	6.4	+0.65	- 7.4	+15 18.1	12 30.2	- 8 23.6	+0.4702	0.5527	-0.1154	+67	- 2
π Cancri	5.6	0.66	7.6	15 15.3	13 51.6	- 7 4.8	+0.3609	0.5527	0.1173	+58	- 8
VENUS	-3.8	..	..	14 54.5	15 23.1	- 5 36.5	+0.5548	0.5080	0.1095	+74	+ 3
227 B. Cancri	6.4	0.64	7.6	15 41.6	16 40.7	+ 4 21.5	-0.4439	0.5527	0.1214	+11	-54
7 Leonis	6.2	0.58	7.3	14 43.0	23 32.1	+ 2 16.5	-0.2656	0.5529	0.1311	+21	-44
11 Leonis	6.5	+0.56	- 7.3	+14 41.4	25 0 32.3	+ 3 14.6	-0.3677	0.5529	-0.1324	+15	-50

504 ELEMENTS OF OCCULTATIONS, 1924.

SEPTEMBER.

THE STAR'S				AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	x'	y'	N.	S.
		Δα	Δδ								
		s	"	° ' "	d h m	h m				°	°
ψ NEPTUNE	7.8	..	..	+14 34.4	25 1 41.5	+ 4 21.5	-0.3966	0.5518	-0.1336	+14	-53
Leonis	5.6	+0.55	- 7.1	14 22.1	3 12.6	+ 5 49.6	-0.3831	0.5530	0.1360	+15	-52
γ Leonis	5.0	0.50	6.6	12 48.4	10 0.5	-11 35.9	+0.3239	0.5532	0.1449	+56	-13
α Leon. (Reg.)	1.3	0.45	6.3	12 20.2	14 46.2	- 6 59.5	+0.1161	0.5533	0.1508	+43	-24
45 Leonis	5.8	0.42	5.6	10 8.9	23 47.6	+ 1 44.0	+1.0181	0.5537	0.1612	+90	+28
ρ Leonis	3.8	+0.40	- 5.4	+ 9 41.8	26 2 12.6	+ 4 4.2	+1.1004	0.5538	-0.1638	+90	+35
				NEW MOON.							
235 G. Virginis	6.5	+0.55	+ 1.8	- 7 11.2	30 8 49.4	+ 7 12.6	-1.1104	0.5735	-0.1849	-33	-90

OCTOBER.

13 Libræ	5.7	+0.69	+ 2.6	-11 35.3	1 0 27.9	- 1 42.5	+0.5478	0.5790	-0.1698	+66	- 6
5 ^a Libræ	5.6	0.69	2.8	11 6.2	1 29.0	- 0 43.7	-0.1134	0.5794	0.1687	+25	-42
17 Libræ	6.4	0.69	2.9	10 51.0	2 6.4	- 0 7.6	-0.4733	0.5796	0.1680	+ 6	-66
18 Libræ	5.9	+0.69	+ 2.9	-10 50.3	2 23.7	+ 0 9.1	-0.5326	0.5797	-0.1677	+ 3	-71
130 B. Libræ	5.9	0.79	3.6	12 5.9	12 55.6	+10 17.8	-0.9624	0.5835	0.1543	-25	-90
γ Libræ	4.0	0.87	3.5	14 32.2	17 46.4	- 9 2.2	+0.7580	0.5852	0.1474	+76	+ 7
190 B. Libræ	6.5	0.90	3.7	14 48.0	21 3.2	- 5 52.8	+0.5472	0.5863	0.1426	+64	- 5
η Libræ	5.5	0.90	3.6	15 25.9	21 19.2	- 5 37.3	+1.1438	0.5804	0.1422	+75	+36
195 B. Libræ	6.2	+0.92	+ 4.3	-13 54.2	2 0 28.3	- 2 35.3	-0.8319	0.5874	-0.1373	-18	-90
202 B. Libræ	6.4	0.94	4.4	14 10.6	2 21.9	- 0 46.0	-0.8155	0.5880	0.1343	-17	-90
203 B. Libræ	6.2	0.95	4.3	14 36.4	2 29.4	- 0 38.8	-0.3993	0.5881	0.1341	+ 7	-61
48 Libræ	4.6	0.95	4.5	14 3.6	3 10.4	+ 0 0.7	-1.0400	0.5883	0.1329	-33	-90
49 Libræ	5.4	0.95	3.7	16 18.6	4 3.0	+ 0 51.3	+1.1057	0.5886	0.1315	+74	+33
φ Ophiuchi	4.4	+1.11	+ 5.2	-16 26.8	16 37.6	-11 2.8	-0.2752	0.5923	-0.1096	+10	-53
24 Scorpii	5.0	1.17	5.3	17 35.7	20 50.6	- 6 59.5	+0.4344	0.5933	0.1017	+51	-11
78 B. Ophiuchi	6.5	1.23	6.2	16 41.1	3 2 41.4	- 1 22.3	-1.0435	0.5946	0.0904	-38	-90
90 B. Ophiuchi	6.5	1.25	5.7	18 7.8	4 10.0	+ 0 3.0	+0.2799	0.5949	0.0875	+39	-19
29 Ophiuchi	6.4	1.27	5.7	18 46.4	5 0.7	+ 0 51.7	+0.8546	0.5951	0.0858	+72	+14
125 B. Ophiuchi	6.2	+1.29	+ 6.3	-17 30.5	7 35.7	+ 3 20.6	-0.6347	0.5955	-0.0806	-12	-84
164 B. Ophiuchi	6.0	1.35	6.8	17 40.6	12 15.8	+ 7 49.9	-0.8198	0.5963	0.0710	-24	-90
192 B. Ophiuchi	6.3	1.38	6.8	18 22.5	14 8.8	+ 9 38.5	-0.2463	0.5965	0.0671	+ 8	-51
305 B. Ophiuchi	6.3	1.53	7.9	18 47.3	4 2 38.6	- 2 21.0	-0.5038	0.5975	0.0405	- 8	-70
16 G. Sagittarii	6.4	1.56	7.5	20 20.0	4 15.1	- 0 48.1	+0.9948	0.5975	0.0370	+70	+25
39 G. Sagittarii	6.3	+1.61	+ 8.1	-19 51.4	8 44.5	+ 3 30.7	+0.3689	0.5975	-0.0272	+40	-15
15 Sagittarii	5.3	1.64	8.0	20 45.0	10 18.8	+ 5 1.4	+1.2329	0.5974	0.0238	+70	+53
16 Sagittarii	5.9	1.64	8.1	20 24.6	10 19.2	+ 5 1.8	+0.8888	0.5974	0.0238	+70	+17
64 B. Sagittarii	6.1	1.62	8.7	18 41.0	10 27.6	+ 5 9.8	-0.8601	0.5974	0.0235	-32	-90
52 G. Sagittarii	6.4	1.62	8.8	18 29.4	11 14.8	+ 5 55.2	-1.0743	0.5974	0.0218	-47	-90
17 H. Sagittarii	6.4	+1.63	+ 8.8	-18 38.9	11 44.4	+ 6 23.6	-0.9251	0.5974	-0.0207	-36	-90
Y Sagit. (var.)	5.4	1.65	8.9	18 53.6	12 48.0	+ 7 24.8	-0.6980	0.5973	0.0184	-21	-90
21 Sagittarii	5.0	1.68	8.4	20 34.9	14 21.7	+ 8 54.8	+0.9849	0.5972	0.0149	+70	+25
95 B. Sagittarii	5.7	1.69	9.2	18 46.5	16 19.2	+10 47.7	-0.8682	0.5970	0.0106	-33	-90
100 B. Sagittarii	5.0	1.69	9.4	18 27.2	16 49.3	+11 16.7	-1.1995	0.5970	-0.0095	-61	-90
29 Sagittarii	5.3	+1.80	+ 9.4	-20 24.6	5 0 5.4	- 5 44.3	+0.7714	0.5960	+0.0064	+70	+ 9
36 Sagittarii	5.1	1.83	9.6	20 45.3	3 9.9	- 2 47.0	+1.1515	0.5955	0.0131	+70	+40
171 B. Sagittarii	6.1	1.85	10.3	19 21.2	5 29.0	- 0 33.2	-0.2336	0.5951	0.0181	+ 4	-50
173 B. Sagittarii	6.4	1.85	10.4	19 12.7	5 30.4	- 0 31.9	-0.3786	0.5951	0.0181	- 3	-60
187 B. Sagittarii	6.4	1.86	10.6	18 51.2	7 7.8	+ 1 1.8	-0.7093	0.5948	0.0217	-22	-90
190 B. Sagittarii	5.4	+1.87	+10.5	-19 24.5	7 34.9	+ 1 27.8	-0.1366	0.5947	+0.0226	+10	-44

ELEMENTS OF OCCULTATIONS, 1924. 505

OCTOBER.

THE STAR'S				AT CONJUNCTION IN R.A.					Limiting Parallels.		
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, <i>H</i>	<i>Y</i>	<i>x'</i>	<i>y'</i>	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
195 B. Sagittarii	6.3	+1.88	+10.3	-19 55.3	5 8 11.3	+ 2 2.7	+0.3996	0.5946	+0.0239	+42	-13
<i>d</i> Sagittarii	5.0	1.91	10.9	19 5.2	11 21.6	+ 5 5.8	-0.3626	0.5938	0.0307	- 2	-59
226 B. Sagittarii	6.4	1.93	11.0	19 22.5	12 58.0	+ 6 38.4	-0.0176	0.5934	0.0341	+17	-37
45 Sagittarii	6.0	1.93	11.3	18 26.8	13 4.1	+ 6 44.3	-0.9576	0.5933	0.0343	-37	-90
266 B. Sagittarii	6.1	1.99	11.6	19 1.1	18 59.0	-11 34.4	-0.1366	0.5917	0.0468	+13	-44
267 B. Sagittarii	5.8	+1.99	+11.9	-18 23.9	19 14.7	-11 19.3	-0.7570	0.5916	+0.0473	-22	-90
<i>f</i> Sagittarii	5.1	2.04	11.6	19 56.5	23 1.7	- 7 41.0	+1.0107	0.5904	0.0551	+71	+27
57 Sagittarii	6.0	2.06	12.0	19 14.1	6 1 25.4	- 5 22.7	+0.4286	0.5896	0.0599	+47	-12
π Capricorni	5.2	2.20	13.4	18 27.5	15 58.2	+ 8 37.3	+0.7145	0.5841	0.0880	+72	+ 5
<i>q</i> Capricorni	5.0	2.20	13.6	18 3.7	16 37.2	+ 9 14.8	+0.3664	0.5838	0.0892	+46	-15
<i>o</i> Capricorni	5.6	+2.22	+13.3	-18 49.9	17 2.7	+ 9 39.4	+1.1936	0.5836	+0.0900	+72	+44
47 B. Capricorni	6.2	2.22	14.2	16 47.0	19 25.9	+11 57.3	-0.6858	0.5826	0.0943	-14	-90
<i>v</i> Capricorni	5.3	2.25	13.8	18 24.2	21 19.1	-10 13.7	+1.1563	0.5818	0.0977	+72	+39
61 B. Capricorni	5.9	2.23	14.6	16 23.5	21 33.0	-10 0.3	+0.8854	0.5817	0.0981	-25	-90
94 B. Capricorni	5.7	2.30	15.0	16 19.2	7 44.8-9	- 3 0.4	-0.2011	0.5784	0.1105	+15	-48
29 Capricorni	5.5	+2.36	+15.6	-15 29.0	12 35.1	+ 4 29.0	-0.1549	0.5749	+0.1229	+19	-45
42 Capricorni	5.1	2.44	16.2	14 23.0	23 51.8	- 8 38.4	+0.1894	0.5695	0.1393	+40	-25
44 Capricorni	6.0	2.45	16.4	14 44.6	8 0 31.8	- 7 59.7	+0.6556	0.5691	0.1403	+73	+ 1
45 Capricorni	5.8	2.45	16.2	15 5.6	0 56.7	- 7 35.6	+1.0768	0.5689	0.1408	+75	+30
151 B. Capricorni	6.1	2.47	16.9	13 4.4	3 28.1	- 5 9.5	-0.6556	0.5678	0.1441	- 7	-85
μ Capricorni	5.2	+2.50	+16.7	-13 54.3	5 3.3	- 3 37.7	+0.4372	0.5670	+0.1461	+56	-12
<i>e</i> Aquarii	5.4	2.53	17.4	11 56.1	12 50.5	+ 3 53.4	-0.4330	0.5633	0.1554	+ 7	-63
σ Aquarii	4.9	2.58	17.7	11 3.7	21 56.8	-11 18.9	+0.1197	0.5592	0.1650	+38	-29
58 Aquarii	6.4	2.59	17.7	11 17.4	22 25.2	-10 51.4	+0.4357	0.5589	0.1655	+58	-12
81 Aquarii	6.4	2.67	18.5	7 27.9	9 12 12.3	+ 2 28.1	-1.1964	0.5531	0.1772	-41	-90
<i>h</i> Aquarii	5.4	+2.68	+18.3	- 8 5.9	13 57.9	+ 4 10.3	-0.2192	0.5524	+0.1784	+22	-49
φ Aquarii	4.4	2.70	18.4	6 27.2	18 17.3	+ 8 21.2	-1.1672	0.5507	0.1813	-38	-90
χ Aquarii	5.3	2.70	18.2	8 8.2	19 28.8	+ 9 30.3	+0.8148	0.5503	0.1821	+82	+10
317 B. Aquarii	6.3	2.71	18.4	6 19.1	21 18.3	+11 16.3	-0.7609	0.5496	0.1831	- 8	-90
24 Piscium	6.1	2.80	18.3	3 34.4	10 12 45.5	+ 2 13.7	-0.7692	0.5445	0.1900	- 8	-90
27 Piscium	5.1	+2.80	+18.1	- 3 58.4	15 32.9	+ 4 55.9	+0.1843	0.5436	+0.1908	+46	-26
29 Piscium	5.1	2.81	18.1	3 26.7	17 4.6	+ 6 24.6	-0.0811	0.5432	0.1912	+31	-41
4 Ceti	6.3	2.82	18.0	2 58.0	19 57.3	+ 9 11.9	-0.0370	0.5424	0.1918	+33	-38
5 Ceti	6.3	2.82	18.0	2 51.9	20 11.0	+ 9 25.1	-0.1005	0.5423	0.1919	+30	-42
54 B. Ceti	6.3	2.84	17.6	2 38.1	11 4 9.7	- 6 51.1	+1.1921	0.5404	0.1930	+88	+38
10 Ceti	6.4	+2.87	+17.7	- 0 27.9	5 12.1	- 5 50.6	-0.9120	0.5401	+0.1930	-15	-90
14 Ceti	5.4	2.88	17.4	- 0 55.1	9 35.7	- 1 35.2	+0.4174	0.5392	0.1931	+62	-13
26 Ceti	6.0	2.92	16.4	+ 0 57.9	23 36.6	+11 59.7	+1.1094	0.5368	0.1914	+90	+30
33 Ceti	6.1	2.94	16.2	2 2.8	12 2 58.3	- 8 44.8	+0.5939	0.5363	0.1905	+76	- 4
<i>f</i> Piscium	5.3	2.95	15.8	3 13.1	6 34.9	- 5 14.8	+0.0226	0.5359	0.1894	+37	-34
117 G. Piscium	6.5	+2.96	+15.4	+ 3 8.8	11 7.5	- 0 50.6	+0.9588	0.5355	+0.1878	+90	+20
<i>v</i> Piscium	4.7	2.98	14.6	5 6.5	18 23.8	+ 6 12.4	+0.2032	0.5349	0.1845	+48	-24
39 B. Arietis	6.5	3.02	13.2	7 22.5	18 6 7.3	- 6 25.5	-0.1189	0.5345	0.1778	+29	-41
64 Ceti	5.8	3.02	12.7	8 13.1	9 23.0	- 3 15.8	-0.4556	0.5345	0.1756	+11	-62
ξ^1 Ceti	4.5	3.03	12.7	8 29.7	10 12.2	- 2 28.0	-0.6111	0.5345	0.1751	+ 2	-75
25 Arietis	6.5	+3.03	+11.5	+ 9 51.9	17 25.1	+ 4 31.7	-0.8562	0.5346	+0.1696	-13	-81
ξ^2 Ceti	4.3	3.02	11.8	8 7.4	17 48.3	+ 4 54.1	+1.1014	0.5346	0.1693	+90	+32
389 B. Ceti	6.3	3.03	11.6	9 13.8	18 30.8	+ 5 35.3	+0.0187	0.5346	0.1689	+37	-33
85 Ceti	6.3	3.04	10.6	10 25.3	14 0 57.6	+11 50.4	-0.2068	0.5349	0.1634	+24	-45
μ Ceti	4.4	3.04	10.5	9 47.8	2 11.1	-10 58.4	+0.6729	0.5349	0.1623	+86	+ 4
147 B. Arietis	5.8	+3.05	+ 8.6	+12 53.8	12 52.9	- 0 36.3	-1.0294	0.5356	+0.1520	-25	-78

506 ELEMENTS OF OCCULTATIONS, 1924.

OCTOBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
8 B. Tauri	6.2	+3.01	+7.4	+12 21.8	14 21 44.0	+7 58.6	+0.8595	0.5364	+0.1426	+0	+18
f Tauri	4.3	3.01	6.9	12 40.8	15 1 3.6	+11 12.1	+0.9818	0.5367	0.1388	+90	+26
30 B. Tauri	6.4	3.04	6.0	15 11.0	4 27.8	-9 30.1	-1.3022	0.5370	0.1348	-62	-74
179 B. Tauri	5.9	2.96	3.8	14 57.7	19 13.5	+4 48.3	+0.7981	0.5386	0.1163	+90	+17
193 B. Tauri	6.2	2.99	3.0	17 5.0	21 34.1	+7 4.4	-1.2726	0.5389	0.1132	-56	-73
48 Tauri	6.3	+2.94	+3.2	+15 12.8	23 11.3	+8 38.6	+0.9726	0.5391	+0.1110	+90	+29
γ Tauri	3.9	2.94	2.8	15 26.8	16 1 9.6	+10 33.1	+0.9315	0.5393	0.1083	+90	+27
δ Tauri	3.9	2.96	2.2	17 22.0	2 40.3	-11 59.0	-1.0247	0.5395	0.1063	-26	-73
63 Tauri	5.7	2.95	2.3	16 36.1	2 55.2	-11 44.5	-0.1549	0.5395	0.1059	+27	-35
64 Tauri	4.9	2.96	2.1	17 16.2	3 14.6	-11 25.8	-0.8580	0.5396	0.1054	-14	-73
70 Tauri	6.4	+2.92	+2.3	+15 46.1	4 0.7	-10 41.0	+0.8790	0.5397	+0.1044	+90	+24
71 Tauri	4.6	2.91	2.4	15 26.9	4 22.2	-10 20.3	+1.2713	0.5397	0.1040	+85	+62
75 Tauri	5.2	2.92	2.1	16 11.5	5 23.3	-9 21.0	+0.5554	0.5398	0.1025	+74	+4
θ ¹ Tauri	4.2	2.91	2.1	15 47.7	5 27.4	-9 17.1	+0.9997	0.5398	0.1024	+90	+32
θ ² Tauri	3.6	2.91	2.1	15 42.3	5 30.0	-9 14.6	+1.1048	0.5398	0.1023	+90	+41
264 B. Tauri	4.8	+2.91	+1.9	+16 1.8	6 25.5	-8 20.8	+0.8388	0.5399	+0.1010	+90	+21
85 Tauri	6.0	2.90	1.9	15 41.4	7 4.0	-7 43.5	+1.2790	0.5400	0.1001	+81	+65
119 H ¹ Tauri	6.2	2.94	1.2	17 51.5	7 51.8	-6 57.2	-1.0356	0.5401	0.0990	-28	-73
275 B. Tauri	6.5	2.90	1.7	16 9.9	7 55.8	-6 53.3	+0.8402	0.5401	0.0989	+90	+22
α Tauri (Ald.)	1.1	2.90	1.3	16 21.5	9 2.5	-5 48.7	+0.7367	0.5402	0.0973	+90	+16
302 B. Tauri	6.1	+2.91	+0.1	+18 35.9	14 3.7	-0 57.0	-1.2694	0.5408	+0.0900	-58	-72
i Tauri	5.1	2.89	-0.3	18 42.7	16 32.4	+1 27.0	-1.1764	0.5411	0.0864	-42	-72
318 B. Tauri	5.7	2.82	0.3	17 2.1	19 29.1	+4 18.2	+0.9257	0.5415	0.0820	+90	+29
m Tauri	5.0	2.84	1.3	18 32.6	17 0.19.8	+8 59.7	-0.3641	0.5420	0.0746	+15	-45
353 B. Tauri	6.5	2.78	2.7	19 44.3	6 52.0	-8 40.6	-1.2318	0.5427	0.0645	-51	-71
115 Tauri	5.3	+2.71	-2.5	+17 53.9	9 54.0	-5 44.4	+0.9951	0.5430	+0.0597	+90	+37
119 Tauri	4.9	2.70	3.0	18 32.3	12 19.4	-3 23.6	+0.4255	0.5432	0.0558	+64	+2
120 Tauri	5.6	2.69	3.1	18 29.2	12 57.5	-2 46.7	+0.5179	0.5433	0.0548	+71	+7
B.D.+19° 1110	6.0	2.62	4.8	19 50.9	22 0.7	+5 59.2	-0.5604	0.5442	0.0402	+4	-55
χ ¹ Orionis	4.5	2.61	5.1	20 15.7	22 58.2	+6 54.9	-0.9814	0.5443	0.0386	-24	-70
57 Orionis	5.8	+2.61	-4.9	+19 44.1	23 14.4	+7 10.5	-0.3867	0.5443	+0.0382	+14	-43
64 Orionis	5.1	2.56	5.4	19 41.5	18 3 19.4	+11 7.7	-0.1968	0.5446	0.0314	+25	-29
γ ² Orionis	4.7	2.57	5.6	20 8.4	3 32.3	+11 20.3	-0.6869	0.5446	0.0311	-4	-66
68 Orionis	5.7	2.52	6.0	19 48.4	7 25.6	+8 54.0	-0.2097	0.5449	0.0246	+24	-30
19 B. Geminorum	6.2	2.49	5.7	18 42.0	8 10.6	-8 10.4	+1.0350	0.5450	0.0234	+90	+44
71 Orionis	5.1	+2.49	-6.1	+19 10.9	8 47.6	-7 34.6	+0.5151	0.5450	+0.0224	+71	+11
15 Geminorum	6.5	2.45	7.2	20 50.1	14 56.8	-1 37.2	-1.2098	0.5454	0.0120	-48	-70
16 Geminorum	6.2	2.44	7.1	20 32.5	15 1.8	-1 32.4	-0.8832	0.5454	0.0119	-17	-70
γ Geminorum	4.1	2.43	7.1	20 15.6	15 31.2	-1 4.0	-0.5659	0.5454	+0.0111	+3	-53
ζ Gem. (var.)	3.7	2.23	9.0	20 40.8	19 8 16.6	-8 50.9	-1.0802	0.5461	-0.0172	-33	-70
56 Geminorum	5.2	+2.11	-9.8	+20 35.1	16 46.3	-0 37.7	-1.1804	0.5464	-0.0315	-44	-70
61 Geminorum	5.8	2.08	10.0	20 24.5	19 8.8	+1 40.1	-1.0632	0.5464	0.0355	-31	-70
g Geminorum	5.0	1.94	10.1	18 41.6	20 4 18.1	+10 31.7	+0.4288	0.5465	0.0507	+64	+3
209 B. Geminorum	6.2	1.91	10.6	19 31.1	7 3.5	-10 48.2	-0.6227	0.5465	0.0553	0	-62
10 H. Cancri	6.1	1.83	10.8	19 3.3	13 9.4	-4 54.2	-0.4810	0.5465	0.0652	+9	-52
ζ Can. (mean)	4.7	+1.78	-10.6	+17 52.5	16 42.9	-1 27.6	+0.5681	0.5465	-0.0710	+76	+9
d ¹ Cancri	5.9	1.70	11.1	18 34.5	22 1.0	+3 40.3	-0.5952	0.5465	0.0795	+2	-62
d ² Cancri	6.2	1.67	10.8	17 17.7	23 12.7	+4 49.6	+0.7057	0.5465	0.0814	+90	+16
θ Cancri	5.5	1.65	11.2	18 20.9	21 1 56.2	+7 27.8	-0.6722	0.5465	0.0857	-2	-69
X Can. (var.)	6.2	1.50	11.3	17 31.1	13 16.0	-5 34.3	-0.8348	0.5464	0.1030	-13	-73
o ¹ Cancri	5.1	+1.48	-10.6	+15 36.7	14 10.4	-4 41.7	+1.1391	0.5464	-0.1044	+90	+44

ELEMENTS OF OCCULTATIONS, 1924. 507

OCTOBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, <i>H</i>	<i>r</i>	<i>z</i> '	<i>y</i> '	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
α^a Cancri	5.7	+1.48	-10.7	+15 52.3	21 14 19.9	- 4 32.5	+0.8417	0.5465	-0.1047	+90	+21
81 Cancri	6.4	1.36	10.5	15 18.0	21 21.8	+ 2 15.8	+0.6848	0.5465	0.1150	+90	+11
π Cancri	5.6	1.37	10.7	15 15.3	22 44.6	+ 3 35.8	+0.5736	0.5465	0.1169	+76	+ 4
227 B. Cancri	6.4	1.33	10.9	15 41.5	22 1 36.6	+ 6 22.3	-0.2391	0.5465	0.1210	+22	-41
7 Leonis	6.2	1.24	10.6	14 43.0	8 35.0	-10 52.8	-0.0666	0.5466	0.1306	+32	-32
11 Leonis	6.5	+1.23	-10.7	+14 41.3	9 36.2	- 9 53.5	-0.1704	0.5467	-0.1320	+26	-39
NEPTUNE	7.8	..	..	14 21.9	12 1.2	- 7 33.2	-0.1451	0.5460	0.1350	+28	-37
ψ Leonis	5.6	1.20	10.5	14 22.0	12 19.3	- 7 15.7	-0.1889	0.5467	0.1356	+25	-40
ν Leonis	5.0	1.12	10.0	12 48.3	19 13.9	- 0 34.5	+0.5142	0.5470	0.1445	+70	- 2
α Leon. (Reg.)	1.3	1.06	9.7	12 20.2	23 0 4.4	+ 4 6.6	+0.2989	0.5472	0.1504	+54	-14
45 Leonis	5.8	+0.98	- 8.9	+10 8.9	9 14.1	-11 1.6	+1.1924	0.5479	-0.1610	+90	+44
ρ Leonis	3.8	0.96	8.7	9 41.7	11 41.2	- 8 39.2	+1.2711	0.5482	0.1636	+90	+52
χ Leonis	4.7	0.80	7.6	7 44.7	24 2 56.4	+ 6 6.2	+0.7009	0.5500	0.1785	+90	+ 5
308 B. Leonis	5.8	0.78	7.7	8 28.5	7 10.1	+10 11.6	-0.8247	0.5507	0.1822	-11	-82
σ Leonis	4.1	0.76	6.9	6 26.7	10 31.1	-10 34.0	+0.6796	0.5513	0.1848	+86	+ 2
b Virginis	5.2	+0.64	- 5.3	+ 4 4.6	25 4 37.7	+ 6 56.8	-0.3275	0.5552	-0.1962	+18	-55
10 Virginis	6.2	0.64	- 4.8	+ 2 19.4	9 7.7	+11 17.8	+0.5893	0.5505	0.1983	+75	- 4
NEW MOON.											
φ Ophiuchi	4.4	+0.82	+ 5.4	-16 26.8	30 0 25.0	- 1 27.6	-0.4371	0.6024	-0.1132	+ 2	-64
24 Scorpil	5.0	+0.86	+ 5.6	-17 35.7	4 29.8	+ 2 27.3	+0.2551	0.6035	-0.1052	+40	-21
78 B. Ophiuchi	6.5	0.90	6.3	16 41.1	10 9.1	+ 7 53.2	-1.2097	0.6049	0.0936	-54	-90
90 B. Ophiuchi	6.5	0.92	6.0	18 7.8	11 34.9	+ 9 15.6	+0.0918	0.6051	0.0906	+29	-31
29 Ophiuchi	6.4	0.93	6.0	18 46.4	12 23.9	+10 2.6	+0.6569	0.6053	0.0888	+67	+ 2
125 B. Ophiuchi	6.2	0.94	6.5	17 30.5	14 54.0	-11 33.3	-0.8142	0.6057	0.0835	-23	-90
164 B. Ophiuchi	6.0	+0.98	+ 6.9	-17 40.6	19 25.0	- 7 13.2	-1.0031	0.6063	-0.0737	-37	-90
192 B. Ophiuchi	6.3	1.00	6.9	18 22.5	21 14.4	- 5 28.2	-0.4404	0.6065	0.0697	- 2	-65
305 B. Ophiuchi	6.3	1.11	7.8	18 47.3	31 9 20.9	+ 6 8.9	-0.7096	0.6068	0.0423	-20	-90
16 G. Sagittarii	6.4	1.14	7.5	20 20.0	10 54.6	+ 7 38.9	+0.7669	0.6067	0.0387	+70	+ 9
39 G. Sagittarii	6.3	1.17	8.0	19 51.4	15 16.1	+11 49.8	+0.1449	0.6063	0.0287	+26	-27
15 Sagittarii	5.3	+1.20	+ 7.9	-20 45.0	16 47.7	-10 42.2	+0.9963	0.6062	-0.0251	+70	+25
16 Sagittarii	5.9	1.20	8.0	20 24.6	16 48.0	-10 41.9	+0.6566	0.6062	0.0251	+63	+ 2
64 B. Sagittarii	6.1	1.18	8.5	18 41.0	16 56.2	-10 34.1	-1.0699	0.6062	0.0248	-47	-90
17 H. Sagittarii	6.4	1.19	8.6	18 38.9	18 10.9	- 9 22.4	-1.1354	0.6060	0.0220	-53	-90
Υ Sagit. (var.)	5.4	1.20	8.6	18 53.6	19 12.6	- 8 23.1	-0.9123	0.6059	0.0195	-35	-90
21 Sagittarii	5.0	+1.24	+ 8.2	-20 34.9	20 43.7	- 6 55.7	+0.7480	0.6056	-0.0160	+70	+ 8
95 B. Sagittarii	5.7	+1.24	+ 8.9	-18 46.5	22 38.1	- 5 6.0	-1.0839	0.6053	-0.0116	-49	-90

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121 B. Sagittarii	5.9	+1.29	+ 8.4	-21 6.8	1 1 59.4	- 1 52.7	+1.2297	0.6046	-0.0039	+69	+52
128 B. Sagittarii	6.3	1.32	8.7	21 4.7	4 29.4	+ 0 31.3	+1.1923	0.6039	+0.0019	+69	+46
29 Sagittarii	5.3	1.33	9.1	20 24.6	6 12.1	+ 2 9.9	+0.5300	0.6035	0.0058	+50	- 6
36 Sagittarii	5.1	1.36	9.1	20 45.3	9 12.0	+ 5 2.7	+0.9040	0.6026	0.0126	+70	+18
171 B. Sagittarii	6.1	1.38	9.7	19 21.3	11 27.8	+ 7 13.1	-0.4675	0.6019	0.0177	- 8	-67
173 B. Sagittarii	6.4	+1.38	+ 9.8	-19 12.7	11 29.2	+ 7 14.4	-0.6110	0.6019	+0.0178	-16	-81
187 B. Sagittarii	6.4	1.39	10.0	18 51.2	13 4.4	+ 8 45.8	-0.9393	0.6013	0.0214	-37	-90
190 B. Sagittarii	5.4	1.40	9.9	19 24.5	13 30.8	+ 9 11.2	-0.3730	0.6012	0.0223	- 3	-60
195 B. Sagittarii	6.3	1.41	9.7	19 55.3	14 6.4	+ 9 45.4	+0.1574	0.6010	0.0237	+26	-27
d Sagittarii	5.0	1.43	10.2	19 5.2	17 12.6	-11 15.8	-0.5990	0.5999	0.0306	-15	-80
226 B. Sagittarii	6.4	+1.45	+10.3	-19 22.5	18 46.9	- 9 45.2	-0.2583	0.5993	+0.0341	+ 4	-52

508 ELEMENTS OF OCCULTATIONS, 1924.

NOVEMBER.

THE STAR'S				AT CONJUNCTION IN R.A.					Limiting Parallels.		
Name.	Mag.	Reductions from 1924.0		Apparent Declination.	Greenwich Mean Time.	Hour Angle, H	F	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
		s	"	°	d h m	h m				°	°
45 Sagittarii	6.0	+1.45	+10.5	-18 26.8	1 18 52.9	- 9 39.4	-1.1892	0.5993	+0.0343	-58	-90
266 B. Sagittarii	6.1	1.51	10.8	19 1.1	2 0 40.8	- 4 5.2	-0.3792	0.5968	0.0468	- 1	-60
267 B. Sagittarii	5.8	1.51	11.0	18 23.9	0 56.2	- 3 50.4	-0.9942	0.5967	0.0474	-38	-90
f Sagittarii	5.1	1.56	10.6	19 56.5	4 39.1	+ 0 16.2	+0.7571	0.5950	0.0553	+71	+ 8
57 Sagittarii	6.0	1.58	11.0	19 14.2	7 0.4	+ 1 59.6	+0.1791	0.5939	0.0603	+31	-26
σ Capricorni	5.5	+1.70	+11.6	-19 21.2	18 4.7	-11 21.4	+1.0919	0.5881	+0.0823	+71	+33
π Capricorni	5.2	1.73	12.1	18 27.5	21 21.6	- 8 12.1	+0.4619	0.5862	0.0885	+52	-10
ρ Capricorni	5.0	1.74	12.3	18 3.8	22 0.1	+ 7 35.0	+0.1159	0.5859	0.0897	+31	-29
θ Capricorni	5.6	1.75	12.0	18 49.9	22 25.4	- 7 10.6	+0.9387	0.5857	0.0905	+72	+20
47 B. Capricorni	6.2	1.77	12.8	16 47.1	3 0 47.2	- 4 54.1	-0.9312	0.5843	0.0949	-29	-90
ν Capricorni	5.3	+1.79	+12.4	-18 24.2	2 39.4	- 3 6.1	+0.9026	0.5833	+0.0982	+72	+17
61 B. Capricorni	5.9	1.78	13.2	16 23.5	2 53.1	- 2 52.8	-1.1299	0.5831	0.0986	-45	-90
81 B. Capricorni	6.4	1.83	12.5	18 18.8	6 33.5	+ 0 39.4	+1.2092	0.5810	0.1051	+72	+46
94 B. Capricorni	5.7	1.86	13.4	16 19.2	10 6.1	+ 4 4.1	-0.4477	0.5789	0.1111	+ 2	-65
21 Capricorni	6.5	1.88	12.9	17 49.5	11 26.7	+ 5 21.9	+1.2446	0.5780	0.1133	+73	+51
θ Capricorni	4.2	+1.90	+13.0	-17 31.9	13 36.7	+ 7 27.1	+1.1956	0.5767	+0.1169	+73	+43
29 Capricorni	5.5	1.94	14.0	15 29.1	17 50.6	+11 31.8	-0.3994	0.5742	0.1235	+ 6	-61
42 Capricorni	5.1	2.04	14.4	14 23.0	4 5 7.4	- 1 35.6	-0.0496	0.5674	0.1397	+27	-39
44 Capricorni	6.0	2.06	14.5	14 44.6	5 47.4	- 0 56.9	+0.4169	0.5671	0.1406	+55	-13
45 Capricorni	5.8	2.06	14.4	15 5.7	6 12.3	- 0 32.8	+0.8383	0.5668	0.1411	+75	+12
151 B. Capricorni	6.1	+2.08	+15.2	-13 4.4	8 44.2	+ 1 53.8	-0.8921	0.5653	+0.1444	-21	-90
μ Capricorni	5.2	2.12	14.9	13 54.4	10 19.7	+ 3 26.0	+0.2021	0.5645	0.1464	+42	-25
e Aquarii	5.4	2.18	15.6	11 56.1	18 9.4	+10 59.6	-0.6624	0.5600	0.1557	- 5	-85
42 Aquarii	5.5	2.21	15.2	13 12.4	20 57.7	-10 17.9	+1.1028	0.5584	0.1588	+77	+31
σ Aquarii	4.9	2.27	15.9	11 3.8	5 320.1	- 4 8.4	-0.0991	0.5550	0.1652	+27	-42
58 Aquarii	6.4	+2.28	+15.8	-11 17.5	3 48.8	- 3 40.7	+0.2181	0.5548	+0.1656	+45	-24
MARS	-0.8	..	..	10 59.2	7 51.0	+ 0 13.6	+0.5796	0.5375	0.1605	+70	- 4
70 Aquarii	6.1	2.35	15.9	10 57.2	11 39.2	+ 3 54.3	+1.1929	0.5508	0.1725	+80	+40
h Aquarii	5.4	2.43	16.6	8 6.0	19 32.1	+11 31.8	-0.4184	0.5472	0.1784	+11	-62
χ Aquarii	5.3	2.47	16.4	8 8.2	6 1 7.6	- 7 3.5	+0.6287	0.5449	0.1820	+76	- 1
317 B. Aquarii	6.3	+2.48	+16.9	- 6 19.1	2 58.7	- 5 15.9	-0.9514	0.5441	+0.1830	-19	-90
24 Piscium	6.1	2.64	17.0	3 34.4	18 40.3	+ 9 56.0	-0.9332	0.5386	0.1899	-18	-90
27 Piscium	5.1	2.66	16.7	3 58.4	21 30.4	-11 19.2	+0.0312	0.5377	0.1907	+38	-34
29 Piscium	5.1	2.68	16.8	3 26.8	23 3.6	- 9 48.9	-0.2329	0.5373	0.1911	+24	-49
4 Ceti	6.3	2.70	16.8	2 58.0	7 1 59.2	- 6 58.8	-0.1827	0.5365	0.1918	+26	-46
5 Ceti	6.3	+2.70	+16.8	- 2 51.9	2 13.1	- 6 45.3	-0.2461	0.5364	+0.1918	+23	-50
54 B. Ceti	6.3	2.76	16.3	2 38.1	10 19.9	+ 1 6.5	+1.0708	0.5345	0.1931	+88	+27
10 Ceti	6.4	2.80	16.8	0 27.9	11 23.4	+ 2 8.1	-1.0438	0.5343	0.1931	-25	-90
14 Ceti	5.4	2.83	16.3	+ 0 55.1	15 51.4	+ 6 27.9	+0.3032	0.5335	0.1932	+54	-19
26 Ceti	6.0	2.94	15.5	+ 0 57.8	8 6 6.1	- 3 43.3	+1.0312	0.5316	0.1918	+90	+24
33 Ceti	6.1	+2.97	+15.4	+ 2 2.8	9 30.9	- 0 24.7	+0.5205	0.5313	+0.1910	+69	- 8
f Piscium	5.3	3.00	15.3	3 13.1	13 10.8	+ 3 8.7	-0.0455	0.5311	0.1901	+33	-39
117 G. Piscium	6.5	3.03	14.8	3 8.8	17 47.4	+ 7 36.9	+0.9069	0.5309	0.1886	+90	+15
ν Piscium	4.7	3.10	14.3	5 6.5	9 1 9.7	- 9 14.1	+0.1647	0.5308	0.1855	+45	-26
39 B. Arietis	6.5	3.19	13.2	7 22.5	13 1.9	+ 2 16.6	-0.1302	0.5312	0.1792	+29	-43
64 Ceti	5.8	+3.21	+12.8	+ 8 13.1	16 19.8	+ 5 28.6	-0.4605	0.5314	+0.1770	+11	-63
ξ^1 Ceti	4.5	3.23	12.8	8 29.7	17 9.5	+ 6 16.8	-0.6147	0.5314	0.1765	+ 2	-75
25 Arietis	6.5	3.27	11.7	9 51.9	10 26.6	-10 39.2	-0.8428	0.5320	0.1713	-12	-81
ξ^2 Ceti	4.3	3.25	11.7	8 7.4	0 50.0	-10 16.6	+1.1242	0.5321	0.1710	+90	+34
389 B. Ceti	6.3	3.28	11.7	9 13.8	1 32.9	- 9 34.9	+0.0386	0.5321	0.1704	+38	-32
85 Ceti	6.3	+3.32	+10.8	+10 25.3	8 2.9	- 3 16.7	-0.1721	0.5328	+0.1651	+26	-43

ELEMENTS OF OCCULTATIONS, 1924. 509

NOVEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.				
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	x'	y'	N.	S.			
		Δα	Δδ											
		s	"	°	d	h	m	h	m	°	'			
μ Ceti	4.4	+3.33	+10.6	+9 47.8	10	9	16.9	-2	5.0	+0.7139	0.5329	+0.1641	+90	+7
147 B. Arietis	5.8	3.40	9.1	12 53.8		20	2.7	+8	21.2	-0.9686	0.5344	0.1540	-21	-78
8 B. Tauri	6.2	3.40	7.8	12 21.8	11	4	56.2	-7	1.6	+0.9468	0.5358	0.1447	+90	+24
f Tauri	4.3	3.42	7.2	12 40.8		8	16.4	-3	47.6	+1.0769	0.5363	0.1410	+90	+34
30 B. Tauri	6.4	3.47	6.6	15 11.0		11	41.2	-0	29.1	-1.2051	0.5369	0.1371	-43	-75
179 B. Tauri	5.9	+3.47	+4.1	+14 57.7	12	2	28.0	-10	9.8	+0.9324	0.5393	+0.1187	+90	+26
193 B. Tauri	6.2	3.51	3.6	17 5.0		4	48.6	-7	53.5	-1.1375	0.5397	0.1155	-37	-73
48 Tauri	6.3	3.47	3.4	15 12.8		6	25.8	-6	19.4	+1.1155	0.5400	0.1133	+90	+41
γ Tauri	3.9	3.47	3.1	15 26.8		8	23.9	-4	25.0	+1.0783	0.5403	0.1106	+90	+38
δ Tauri	3.9	3.52	2.6	17 22.0		9	54.6	-2	57.1	-0.8785	0.5405	0.1085	-15	-73
63 Tauri	5.7	+3.50	+2.6	+16 36.1	10	9	5.5	-2	42.7	-0.0066	0.5406	+0.1082	+35	-27
64 Tauri	4.9	3.51	2.5	17 16.2		10	28.9	-2	23.9	-0.7104	0.5406	0.1077	-5	-73
68 Tauri	4.3	3.52	2.4	17 45.4		11	9.3	-1	44.7	-1.1756	0.5407	0.1068	-41	-73
70 Tauri	6.4	3.47	2.5	15 46.2		11	14.9	-1	39.3	+1.0314	0.5407	0.1067	+90	+35
75 Tauri	5.2	3.47	2.3	16 11.5		12	37.5	-0	19.3	+0.7100	0.5409	0.1047	+90	+13
θ ¹ Tauri	4.2	+3.47	+2.3	+15 47.7	12	41	6.0	-0	15.3	+1.1552	0.5409	+0.1046	+90	+46
θ ² Tauri	3.6	3.47	2.3	15 42.3		12	44.2	-0	12.8	+1.2607	0.5410	0.1046	+87	+60
264 B. Tauri	4.8	3.47	2.1	16 1.8		13	39.6	+0	40.8	+0.9960	0.5411	0.1033	+90	+32
119 H ⁴ Tauri	6.2	3.51	1.7	17 51.5		15	5.8	+2	2.4	-0.8789	0.5413	0.1013	-16	-73
275 B. Tauri	6.5	3.47	1.9	16 9.9		15	9.8	+2	8.3	+1.0005	0.5413	0.1012	+90	+32
α Tauri (Ald.)	1.1	+3.47	+1.5	+16 21.5	16	16	4.4	+3	12.8	+0.8988	0.5415	+0.0995	+90	+26
302 B. Tauri	6.1	3.51	+0.4	18 35.9		21	17.2	+8	4.1	-1.1010	0.5422	0.0922	-34	-72
i Tauri	5.1	3.50	0.0	18 42.7		23	45.6	+10	27.8	-1.0031	0.5426	0.0885	-25	-72
318 B. Tauri	5.7	3.45	-0.3	17 2.1	18	2	42.0	-10	41.3	+1.1081	0.5430	0.0841	+90	+44
m Tauri	5.0	3.50	1.3	18 32.6		7	32.0	-6	0.5	-0.1751	0.5436	0.0767	+26	-33
353 B. Tauri	6.5	+3.46	-2.7	+19 44.3	14	3	3.3	+0	18.4	-1.0329	0.5443	+0.0664	-28	-71
115 Tauri	5.3	3.40	2.9	17 53.9		17	4.9	+3	14.2	+1.2032	0.5447	0.0616	+90	+57
119 Tauri	4.9	3.40	3.4	18 32.3		19	30.0	+5	34.7	+0.6366	0.5449	0.0577	+84	+14
120 Tauri	5.6	3.40	3.5	18 29.2		20	8.0	+6	11.5	+0.7303	0.5449	0.0567	+90	+19
B. D. + 19° 1110	6.0	3.37	5.3	19 50.9	14	5	10.2	-9	3.8	-0.3358	0.5456	0.0418	+17	-39
χ ¹ Orionis	4.5	+3.36	-5.6	+20 15.7	6	7	6.0	-8	8.2	-0.7563	0.5456	+0.0403	-8	-70
57 Orionis	5.8	3.36	5.5	19 44.1		6	23.7	-7	52.5	-0.1599	0.5457	0.0398	+27	-28
64 Orionis	5.1	3.33	6.1	19 41.5		10	28.4	-3	55.7	+0.0365	0.5459	0.0330	+38	-16
χ ² Orionis	4.7	3.34	6.2	20 8.4		10	41.3	-3	43.3	-0.4545	0.5459	0.0327	+10	-46
68 Orionis	5.7	3.30	6.8	19 48.4		14	34.3	+0	2.3	+0.0294	0.5460	0.0261	+38	-17
71 Orionis	5.1	+3.26	-7.0	+19 10.9	15	5	6.2	+1	21.6	+0.7581	0.5461	+0.0238	+90	+25
15 Geminorum	6.5	3.25	8.3	20 50.1		22	5.3	+7	18.8	-0.9637	0.5462	0.0134	-23	-70
16 Geminorum	6.2	3.24	8.2	20 32.4		22	10.4	+7	23.7	-0.6359	0.5463	0.0132	-1	-60
γ Geminorum	4.1	3.24	8.2	20 15.6		22	39.7	+7	52.1	-0.3170	0.5463	+0.0124	+18	-35
ζ Gem. (var.)	3.7	3.08	10.8	20 40.8	15	15	26.5	+0	6.5	-0.8143	0.5460	-0.0161	-12	-70
56 Geminorum	5.2	+2.97	-11.9	+20 35.1	23	5	8.2	+8	21.8	-0.9072	0.5456	-0.0305	-18	-70
61 Geminorum	5.8	2.95	12.1	20 24.4	16	2	21.5	+10	40.5	-0.7875	0.5454	0.0346	-10	-70
79 Geminorum	6.3	2.84	13.1	20 29.8		11	4.7	-4	53.1	-1.2488	0.5448	0.0491	-56	-70
g Geminorum	5.0	2.80	12.7	18 41.6		11	34.2	-4	24.6	+0.7202	0.5448	0.0499	+90	+20
209 B. Geminorum	6.2	2.78	13.2	19 31.0		14	21.0	-1	43.2	-0.3357	0.5445	0.0544	+17	-41
85 Geminorum	5.2	+2.77	-13.6	+20 4.9	16	7	4.0	-0	0.2	-1.0584	0.5444	-0.0573	-30	-70
217 B. Geminorum	6.3	2.74	13.8	20 1.3		18	35.2	+2	23.0	-1.1375	0.5442	0.0613	-38	-70
10 H. Cancri	6.1	2.70	13.7	19 3.2		20	30.1	+4	14.2	-0.1894	0.5440	0.0644	+25	-33
ζ Can. (mean)	4.7	2.65	13.7	17 52.5	17	0	5.8	+7	43.0	+0.8692	0.5436	0.0702	+90	+27
d ¹ Canori	5.9	2.58	14.4	18 34.4		5	27.6	-11	5.5	-0.3000	0.5431	0.0786	+19	-41
d ² Canori	6.2	+2.54	-14.1	+17 17.6	6	4	0.2	-9	55.2	+1.0114	0.5430	-0.0805	+90	+36

510 ELEMENTS OF OCCULTATIONS, 1924.

NOVEMBER.

THE STAR'S				AT CONJUNCTION IN R.A.					Limiting Parallels.		
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	z'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
θ Cancri	5.5	+2.53	-14.6	+18° 20.9	17 9 25.8	- 7 14.9	-0.3762	0.5428	-0.0848	+15	-47
δ Cancri	4.2	2.45	15.3	18 25.8	15 44.8	- 1 7.9	-1.0308	0.5420	0.0944	-27	-72
X Can. (var.)	6.2	2.37	15.1	17 31.0	20 55.8	+ 3 53.2	-0.5378	0.5416	0.1021	+ 6	-60
α^a Cancri	5.7	2.35	14.6	15 52.2	22 0.7	+ 4 56.0	+1.1539	0.5415	0.1036	+90	+46
81 Cancri	6.4	2.21	14.5	15 18.0	18 5 10.2	+11 51.7	+0.9905	0.5409	0.1139	+90	+31
π Cancri	5.6	+2.22	-14.8	+15 15.2	6 34.5	-10 46.5	+0.8843	0.5408	-0.1158	+90	+23
227 B. Cancri	6.4	2.19	15.1	15 41.4	9 29.8	- 7 56.8	+0.0634	0.5406	0.1199	+39	-25
7 Leonis	6.2	2.09	15.0	14 42.9	16 36.8	- 1 3.3	+0.2364	0.5401	0.1293	+50	-15
11 Leonis	6.5	2.08	15.0	14 41.2	17 39.3	- 0 2.7	+0.1312	0.5400	0.1307	+44	-22
ψ Leonis	5.6	2.04	15.0	14 22.0	20 26.0	+ 2 38.8	+0.1117	0.5399	0.1343	+47	-23
NEPTUNE					20 41.5	+ 2 53.7	+0.1745	0.5398	-0.1346	+47	-20
ν Leonis	5.0	+1.94	-14.5	12 48.2	19 3 30.2	+ 9 29.4	+0.8197	0.5397	0.1431	+90	+15
α Leon. (Reg.)	1.3	1.87	14.4	12 20.1	8 27.6	- 9 42.5	+0.5994	0.5396	0.1489	+78	+ 2
34 Leonis	6.4	1.86	14.9	13 43.6	10 1.8	- 8 11.3	-1.1341	0.5396	0.1508	-34	-77
1 Leonis	5.3	1.64	13.7	10 56.6	20 4 21.7	+ 9 34.0	-1.0878	0.5403	0.1700	-30	-80
γ Leonis	4.7	+1.54	-12.4	+ 7 44.6	12 2.1	- 7 0.1	+0.9804	0.5412	-0.1769	+90	+23
308 B. Leonis	5.8	1.51	12.6	8 28.4	16 22.7	- 2 47.8	-0.5684	0.5418	0.1805	+ 5	-71
σ Leonis	4.1	1.47	11.7	6 26.6	19 49.3	+ 0 32.3	+0.9482	0.5423	0.1832	+90	+20
b Virginis	5.2	1.29	10.0	4 4.5	21 14 25.0	- 5 27.9	-0.1011	0.5466	0.1950	+30	-42
10 Virginis	6.2	1.27	9.3	+ 2 19.3	19 1.9	- 1 0.0	+0.8158	0.5480	0.1972	+90	+ 9
γ Vir. (mean)	2.9	+1.12	- 7.1	- 1 2.1	22 10 1.6	-10 29.8	+1.2749	0.5536	-0.2018	+89	+48
65 Virginis	6.0	1.04	4.6	4 31.7	23 5 1.2	+ 7 51.3	+0.9827	0.5626	0.2018	+86	+21
66 Virginis	5.7	1.05	4.5	4 46.1	5 34.1	+ 8 23.1	+1.1149	0.5629	0.2017	+86	+31
80 Virginis	5.6	1.01	3.9	5 0.6	10 28.4	-10 52.8	+0.3711	0.5656	0.2004	+58	-16
566 B. Virginis	6.4	0.98	3.6	5 7.1	14 11.4	- 7 17.6	-0.2638	0.5677	0.1992	+21	-51
88 Virginis	6.5	+0.98	- 3.2	- 6 27.6	16 7.2	- 5 25.8	+0.7043	0.5688	-0.1984	+84	+ 3
235 G. Virginis	6.5	0.93	- 1.9	7 11.2	24 5 0.0	+ 6 59.5	-1.0773	0.5767	0.1911	-30	-90
NEW MOON.											
21 Sagittarii	5.0	+1.04	+ 8.1	-20 34.9	28 5 45.0	+ 3 53.5	+0.5569	0.6172	-0.0184	+52	- 4
95 B. Sagittarii	5.7	+1.04	+ 8.5	-18 46.5	7 35.2	+ 5 39.1	-1.2486	0.6168	-0.0139	-67	-85
121 B. Sagittarii	5.9	1.06	8.3	21 6.8	10 49.2	+ 8 45.0	+1.0200	0.6164	-0.0059	+69	+27
128 B. Sagittarii	6.3	1.09	8.6	21 4.7	13 13.6	+11 3.4	+0.9783	0.6159	0.0000	+69	+24
29 Sagittarii	5.3	1.09	8.8	20 24.6	14 52.5	-11 21.9	+0.3239	0.6154	+0.0040	+35	-17
36 Sagittarii	5.1	1.11	8.9	20 45.3	17 45.7	- 8 35.8	+0.6860	0.6146	0.0111	+65	+ 4
ξ Sagittarii	3.7	+1.12	+ 8.8	-21 12.3	17 54.1	- 8 27.8	+1.1326	0.6145	+0.0114	+69	+38
171 B. Sagittarii	6.1	1.11	9.3	19 21.3	19 56.4	- 6 30.5	-0.6663	0.6140	0.0163	-20	-89
173 B. Sagittarii	6.4	1.12	9.4	19 12.7	19 57.7	- 6 29.3	-0.8074	0.6140	0.0164	-28	-90
187 B. Sagittarii	6.4	1.12	9.5	18 51.2	21 29.4	- 5 1.4	-1.1329	0.6134	0.0201	-53	-90
190 B. Sagittarii	5.4	1.13	9.5	19 24.5	21 54.8	- 4 37.0	-0.5769	0.6133	0.0211	-14	-77
π Sagittarii	3.0	+1.14	+ 9.1	-21 8.6	22 27.3	- 4 5.9	+1.1500	0.6131	+0.0224	+69	+40
195 B. Sagittarii	6.3	1.14	9.3	19 55.3	22 29.0	- 4 4.1	-0.0566	0.6131	0.0225	+14	-39
d Sagittarii	5.0	1.15	9.7	19 5.2	29 1 28.2	+ 1 12.4	-0.8054	0.6119	0.0296	-27	-90
226 B. Sagittarii	6.4	1.16	9.8	19 22.5	2 59.0	+ 0 14.7	+0.4731	0.6113	0.0332	- 8	-68
266 B. Sagittarii	6.1	1.20	10.1	19 1.1	8 39.5	+ 5 41.3	-0.6014	0.6087	0.0463	-14	-80
267 B. Sagittarii	5.8	+1.20	+10.3	-18 23.9	8 54.3	+ 5 55.5	-1.2064	0.6085	+0.0469	-59	-90
f Sagittarii	5.1	1.23	10.0	19 56.5	12 28.9	+ 9 21.3	+0.5095	0.6067	0.0550	+52	- 7
57 Sagittarii	6.0	1.26	10.3	19 14.2	14 44.9	+11 31.9	-0.0621	0.6055	0.0601	+18	-39
σ Capricorni	5.5	1.35	10.8	19 21.2	30 1 25.0	- 2 13.5	+0.8209	0.5990	0.0829	+71	+12
π Capricorni	5.2	1.38	11.1	18 27.5	4 34.9	+ 0 48.9	+0.1974	0.5969	0.0892	+34	-25
q Capricorni	5.0	+1.38	+11.2	-18 3.8	5 12.1	+ 1 24.6	-0.1438	0.5965	+0.0904	+16	-44

ELEMENTS OF OCCULTATIONS, 1924. 511

NOVEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	F	z'	y'	N.	S.
		Δα	Δδ								
o Capricorni	5.6	+1.39	+11.0	-18 50.0	30 5 36.4	+ 1 48.0	+0.6652	0.5962	+0.0912	+09	+ 2
47 B. Capricorni	6.2	1.40	11.7	16 47.1	7 53.4	+ 3 59.7	-1.1774	0.5947	0.0957	-50	-90
v Capricorni	5.3	1.42	11.3	18 24.2	9 41.7	+ 5 43.9	+0.6253	0.5934	0.0991	+65	o
81 B. Capricorni	6.4	1.46	11.4	18 18.8	13 27.9	+ 9 21.3	+0.9234	0.5908	0.1061	+72	+19
19 Capricorni	5.7	1.47	11.5	18 12.5	15 41.9	+11 30.3	+1.0600	0.5891	0.1101	+72	+29
94 B. Capricorni	5.7	+1.49	+12.1	-16 19.3	16 53.6	-11 20.8	-0.7116	0.5883	+0.1123	-13	-90
21 Capricorni	6.5	1.50	11.6	17 49.5	18 11.6	-10 5.7	+0.9542	0.5873	0.1145	+73	+21
θ Capricorni	4.2	+1.52	+11.7	-17 32.0	20 17.6	- 8 4.5	+0.9044	0.5858	+0.1181	+73	+17

DECEMBER.

29 Capricorni	5.5	+1.56	+12.5	-15 29.1	1 0 23.7	- 4 7.5	-0.6709	0.5827	+0.1248	-10	-88
42 Capricorni	5.1	1.66	12.6	14 23.0	11 21.4	+ 6 26.2	-0.3333	0.5746	0.1413	+11	-56
44 Capricorni	6.0	1.68	12.8	14 44.7	12 0.4	+ 7 3.7	+0.1270	0.5741	0.1422	+37	-29
45 Capricorni	5.8	1.68	12.7	15 5.7	12 24.6	+ 7 27.0	+0.5428	0.5738	0.1428	+64	- 6
151 B. Capricorni	6.1	+1.71	+13.4	-13 4.4	14 52.6	+ 9 49.7	-1.1672	0.5720	+0.1461	-44	-90
μ Capricorni	5.2	1.74	13.1	13 54.4	16 25.8	+11 19.6	-0.0871	0.5709	0.1481	+27	-41
e Aquarii	4.4	1.78	12.9	14 14.1	22 12.4	- 7 6.0	+1.1281	0.5667	0.1552	+76	+34
i Aquarii	5.4	1.80	13.8	11 56.1	2 0 4.7	- 5 17.7	-0.9441	0.5653	0.1573	-23	-90
42 Aquarii	5.5	1.83	13.3	13 12.4	2 49.5	- 2 38.6	+0.8016	0.5633	0.1603	+77	+ 9
σ Aquarii	4.9	+1.90	+13.9	-11 3.8	9 4.6	+ 3 23.6	-0.3881	0.5591	+0.1667	+12	-60
58 Aquarii	6.4	1.91	13.8	11 17.5	9 32.7	+ 3 50.8	-0.0738	0.5588	0.1672	+29	-40
70 Aquarii	6.1	2.00	13.8	10 57.2	17 15.6	+11 18.1	+0.8941	0.5538	0.1740	+80	+15
h Aquarii	5.4	2.09	14.6	8 6.0	3 1 2.3	- 5 10.6	-0.7016	0.5491	0.1798	- 5	-90
χ Aquarii	5.3	2.14	14.3	8 8.2	6 34.4	+ 0 10.7	+0.3414	0.5461	0.1832	+56	-17
317 B. Aquarii	6.3	+2.16	+14.8	- 6 19.1	8 24.5	+ 1 57.2	-1.2280	0.5452	+0.1843	-43	-90
24 Piscium	6.1	2.36	15.0	3 34.4	4 0 1.0	- 6 56.1	-1.1992	0.5378	0.1908	-38	-90
27 Piscium	5.1	2.38	14.7	3 58.4	2 50.8	- 4 11.5	-0.2354	0.5366	0.1916	+23	-50
29 Piscium	5.1	2.41	14.8	3 26.8	4 23.8	- 2 41.4	-0.4969	0.5360	0.1920	+ 9	-68
4 Ceti	6.3	2.44	14.8	2 58.1	7 19.3	+ 0 8.7	-0.4436	0.5350	0.1926	+12	-63
5 Ceti	6.3	+2.44	+14.8	- 2 52.0	7 33.2	+ 0 22.1	-0.5067	0.5349	+0.1927	+ 9	-68
54 B. Ceti	6.3	2.53	14.3	2 38.1	15 40.6	+ 8 14.6	+0.8182	0.5323	0.1936	+88	+10
10 Ceti	6.4	2.57	15.0	0 28.0	16 44.2	+ 9 16.2	-1.2915	0.5320	0.1937	-50	-90
14 Ceti	5.4	2.61	14.4	- 0 55.1	21 13.2	-10 22.9	+0.0600	0.5308	0.1938	+40	-33
26 Ceti	6.0	2.78	13.8	+ 0 57.8	5 11 32.7	+ 3 30.6	+0.8119	0.5280	0.1923	+90	+ 9
33 Ceti	6.1	+2.82	+13.8	+ 2 2.7	14 59.1	+ 6 50.9	+0.3073	0.5276	+0.1916	+54	-20
f Piscium	5.3	2.87	13.8	3 13.1	18 40.8	+10 26.0	-0.2524	0.5272	0.1905	+22	-51
117 G. Piscium	6.5	2.91	13.3	3 8.7	23 19.9	- 9 3.3	+0.7099	0.5268	0.1891	+90	+ 3
v Piscium	4.7	3.01	13.0	5 6.4	6 6 46.5	- 1 49.9	-0.0182	0.5265	0.1861	+35	-36
39 B. Arietis	6.5	3.16	12.1	7 22.5	18 46.3	+ 9 48.5	-0.2884	0.5268	0.1799	+20	-52
64 Ceti	5.8	+3.19	+11.8	+ 8 13.1	22 6.3	-10 57.5	-0.6121	0.5270	+0.1778	+ 2	-77
ξ ¹ Ceti	4.5	3.21	11.8	8 29.6	22 56.5	-10 8.7	-0.7648	0.5271	0.1772	- 7	-82
25 Arietis	6.5	3.28	11.0	9 51.9	7 6 18.5	- 3 0.0	-0.9771	0.5278	0.1722	-21	-81
ξ ² Ceti	4.3	3.27	10.7	8 7.4	6 42.2	- 2 37.0	+0.9960	0.5278	0.1719	+90	+24
389 B. Ceti	6.3	3.30	10.8	9 13.8	7 25.6	- 1 55.0	-0.0908	0.5279	0.1714	+31	-39
85 Ceti	6.3	+3.37	+10.1	+10 25.3	13 59.8	+ 4 27.6	-0.2869	0.5288	+0.1662	+20	-50
μ Ceti	4.4	3.39	9.8	9 47.8	15 14.6	+ 5 40.1	+0.6045	0.5290	0.1651	+78	o
147 B. Arietis	5.8	3.52	8.7	12 53.8	8 2 7.1	- 7 47.0	-1.0571	0.5308	0.1553	-28	-78
8 B. Tauri	6.2	3.56	7.2	12 21.8	11 5.6	+ 0 55.3	+0.8852	0.5326	0.1462	+90	+20
f Tauri	4.3	3.59	6.7	12 40.7	14 27.6	+ 4 11.2	+1.0238	0.5333	0.1426	+90	+30
30 B. Tauri	6.4	+3.67	+ 6.4	+15 11.0	17 54.1	+ 7 31.3	-1.2561	0.5341	+0.1387	-50	-75

512 ELEMENTS OF OCCULTATIONS, 1924.

DECEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	P	x'	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
179 B. Tauri	5.9	+3.75	+ 3.7	+14 57.7	9 8 47.1	- 2 3.2	+0.9224	0.5374	+0.1206	+0.0	+25
193 B. Tauri	6.2	3.80	3.4	17 5.0	11 8.6	+ 0 13.9	-1.1467	0.5380	0.1175	-37	-73
48 Tauri	6.3	3.77	3.0	15 12.8	12 46.2	+ 1 48.6	+1.1153	0.5383	0.1153	+90	+41
γ Tauri	3.9	3.78	2.6	15 26.8	14 45.0	+ 3 43.7	+1.0827	0.5388	0.1127	+90	+38
δ Tauri	3.9	3.84	2.5	17 22.0	16 16.2	+ 5 12.1	-0.8748	0.5391	0.1107	-15	-73
63 Tauri	5.7	+3.82	+ 2.4	+16 36.1	16 31.1	+ 5 26.5	-0.0004	0.5391	+0.1104	+36	-27
64 Tauri	4.9	3.84	2.4	17 16.2	16 50.6	+ 5 45.4	-0.7049	0.5392	0.1098	- 4	-74
68 Tauri	4.3	3.85	2.3	17 45.4	17 31.2	+ 6 24.7	-1.1695	0.5394	0.1080	-40	-73
70 Tauri	6.4	3.80	2.1	15 46.1	17 36.8	+ 6 30.2	+1.0424	0.5394	0.1087	+90	+36
75 Tauri	5.2	3.80	1.9	16 11.5	18 59.8	+ 7 50.5	+0.7235	0.5397	0.1069	+90	+14
θ^1 Tauri	4.2	+3.80	+ 1.9	+15 47.7	19 3.8	+ 7 54.4	+1.1698	0.5397	+0.1068	+90	+47
θ^2 Tauri	3.6	3.80	1.8	15 42.2	19 6.5	+ 7 57.0	+1.2756	0.5398	0.1067	+84	+63
264 B. Tauri	4.8	3.81	1.7	16 1.8	20 2.2	+ 8 51.0	+1.0125	0.5400	0.1054	+90	+33
119 H ¹ . Tauri	6.2	3.86	1.5	17 51.5	21 28.7	+10 14.8	-0.8628	0.5402	0.1034	-14	-73
275 B. Tauri	6.5	3.81	1.5	16 9.9	21 32.7	+10 18.7	+1.0205	0.5403	0.1033	+90	+34
α Tauri (<i>Ald.</i>)	1.1	+3.82	+ 1.1	+16 21.5	22 39.6	+11 23.5	+0.9213	0.5405	+0.1017	+90	+27
302 B. Tauri	6.1	3.90	+ 0.3	18 35.9	10 3 41.3	- 7 44.3	-1.0707	0.5416	0.0945	-31	-72
ϵ Tauri	5.1	3.91	- 0.1	18 42.7	6 10.1	- 5 20.2	-0.9668	0.5421	0.0908	-22	-72
318 B. Tauri	5.7	3.86	0.7	17 2.1	9 6.9	- 2 28.9	+1.1548	0.5427	0.0864	+90	+48
m Tauri	5.0	3.94	1.6	18 32.6	13 57.5	+ 2 12.5	-0.1196	0.5436	0.0789	+29	-30
353 B. Tauri	6.5	+3.94	- 3.0	+19 44.3	20 29.1	+ 8 31.7	-0.9641	0.5447	+0.0687	-22	-71
119 Tauri	4.9	3.90	4.0	18 32.3	11 1 55.8	-10 12.0	+0.7198	0.5455	0.0600	+90	+19
120 Tauri	5.6	3.90	4.1	18 29.2	2 33.8	- 9 35.2	+0.8150	0.5456	0.0589	+90	+25
B.D. +19° 1110	6.0	3.92	5.9	19 50.9	11 35.4	- 0 51.0	-0.2333	0.5468	0.0441	+23	-34
χ^1 Orionis	4.5	3.92	6.2	20 15.7	12 32.7	+ 0 4.6	-0.6524	0.5469	0.0425	- 2	-63
57 Orionis	5.8	+3.92	- 6.2	+19 44.1	12 48.9	+ 0 20.2	-0.0546	0.5469	+0.0420	+33	-22
64 Orionis	5.1	3.91	6.9	19 41.5	16 53.1	+ 4 16.6	+0.1505	0.5473	0.0352	+45	-11
γ^2 Orionis	4.7	3.92	7.0	20 8.4	17 6.0	+ 4 29.0	-0.3406	0.5473	0.0348	+16	-39
68 Orionis	5.7	3.90	7.7	19 48.4	20 58.5	+ 8 14.0	+0.1518	0.5476	0.0282	+45	-10
71 Orionis	5.1	3.87	8.1	19 10.9	22 20.2	+ 9 33.2	+0.8841	0.5477	0.0259	+90	+32
15 Geminorum	6.5	+3.89	- 9.2	+20 50.1	12 4 28.4	- 8 30.6	-0.8277	0.5480	+0.0154	-13	-70
16 Geminorum	6.2	3.88	9.2	20 32.4	4 33.4	- 8 25.7	-0.4994	0.5480	0.0152	+ 7	-49
ν Geminorum	4.1	3.88	9.3	20 15.5	5 2.8	- 7 57.3	-0.1791	0.5480	+0.0144	+26	-27
ζ Gem. (<i>var.</i>)	3.7	3.79	12.3	20 40.8	21 46.7	+ 8 14.2	-0.6460	0.5480	-0.0144	-1	-61
56 Geminorum	5.2	3.72	13.7	20 35.1	13 6 17.1	- 7 31.8	-0.7244	0.5475	0.0290	- 6	-70
61 Geminorum	5.8	+3.70	-14.0	+20 24.4	8 40.0	- 5 13.5	-0.6005	0.5472	-0.0330	+ 2	-58
79 Geminorum	6.3	3.63	15.3	20 29.7	17 22.3	+ 3 11.9	-1.0493	0.5464	0.0476	-30	-70
η Geminorum	5.0	3.59	15.1	18 41.5	17 51.8	+ 3 40.5	+0.9259	0.5464	0.0485	+90	+33
209 B. Geminorum	6.2	3.58	15.6	19 31.0	20 38.4	+ 6 21.7	-0.1286	0.5460	0.0530	+28	-28
85 Geminorum	5.2	3.58	16.0	20 4.9	22 24.7	+ 8 4.7	-0.8509	0.5458	0.0560	-14	-70
217 B. Geminorum	6.3	+3.55	-16.3	+20 1.3	14 0 52.5	+10 27.7	-0.9269	0.5455	-0.0600	-20	-70
10 H. Cancri	6.1	3.52	16.4	19 3.2	2 47.4	-11 41.1	+0.0272	0.5452	0.0631	+37	-21
ζ Can. (<i>mean</i>)	4.7	3.47	16.7	17 52.4	6 23.1	- 8 12.3	+1.0949	0.5447	0.0689	+90	+44
d^1 Cancri	5.9	3.42	17.4	18 34.3	11 45.2	- 3 0.5	-0.0713	0.5439	0.0774	+32	-27
d^2 Cancri	6.2	3.37	17.3	17 17.6	12 58.0	- 1 50.0	+1.2474	0.5437	0.0793	+88	+61
θ Cancri	5.5	+3.37	-17.8	+18 20.8	15 43.9	+ 0 50.7	-0.1427	0.5432	-0.0836	+28	-32
δ Cancri	4.2	3.31	18.7	18 25.8	22 4.1	+ 6 58.8	-0.7930	0.5421	0.0932	-10	-72
X Cancri (<i>var.</i>)	6.2	3.24	18.7	17 31.0	15 3 16.5	-11 58.7	-0.2916	0.5412	0.1009	+20	-43
81 Cancri	6.4	3.09	18.6	15 17.9	11 34.0	- 3 56.8	+1.2611	0.5398	0.1127	+88	+58
π Cancri	5.6	3.10	18.9	15 15.1	12 59.0	- 2 34.5	+1.1498	0.5396	0.1147	+90	+44
227 B. Cancri	6.4	+3.07	-19.2	+15 41.4	15 55.7	+ 0 16.7	+0.3261	0.5390	-0.1187	+56	-10

ELEMENTS OF OCCULTATIONS, 1924. 513

DECEMBER.

THE STAR'S					AT CONJUNCTION IN R.A.					Limiting Parallels.	
Name.	Mag.	Reductions from 1924 ^o		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	F	z'	y'	N.	S.
		Δα	Δδ								
12 B. Leonis	6.3	+3.05	-19.7	+16 54.5	15 18 1.1	+ 2 18.2	-1.2623	0.5387	-0.1214	-53	-74
7 Leonis	6.2	2.98	19.4	14 42.8	23 6.9	+ 7 14.4	+0.5068	0.5379	0.1280	+70	- 1
11 Leonis	6.5	2.96	19.5	14 41.2	16 0 10.1	+ 8 15.6	+0.4016	0.5377	0.1294	+61	- 8
ψ Leonis	5.6	2.93	19.5	14 21.9	258.8	+10 59.0	+0.3841	0.5373	0.1330	+60	- 9
NEPTUNE	7.7	..	..	14 19.5	3 0.5	+11 0.7	+0.4244	0.5379	0.1332	+64	- 6
ν Leonis	5.0	+2.84	-19.3	+12 48.1	10 8.6	- 6 4.6	+1.1034	0.5363	-0.1416	+90	+36
α Leon. (Reg.)	1.3	2.76	19.3	12 20.0	15 10.5	- 1 12.0	+0.8843	0.5357	0.1474	+90	+20
34 Leonis	6.4	2.77	19.8	13 43.5	16 46.3	+ 0 20.9	-0.8658	0.5355	0.1491	-14	-77
l Leonis	5.3	2.53	19.1	10 56.5	17 11 28.0	- 5 32.1	-0.8164	0.5343	0.1680	-10	-80
χ Leonis	4.7	2.42	18.0	7 44.5	19 19.6	+ 2 5.0	+1.2779	0.5343	0.1748	+90	+52
308 B. Leonis	5.8	+2.39	-18.2	+ 8 28.3	23 47.0	+ 6 24.1	-0.2922	0.5344	-0.1782	+20	-51
σ Leonis	4.1	2.35	17.3	6 26.5	18 3 19.3	+ 9 49.8	+1.2442	0.5346	0.1808	+90	+45
b Virginis	5.2	2.15	15.7	4 4.5	22 28.9	+ 4 23.8	+0.1704	0.5372	0.1923	+46	-27
10 Virginis	6.2	2.12	15.0	+ 2 19.2	19 3 15.0	+ 9 0.9	+1.0977	0.5383	0.1944	+90	+29
65 Virginis	6.0	1.82	9.6	- 4 31.8	20 14 26.7	- 4 55.1	+1.2223	0.5516	0.1993	+86	+42
80 Virginis	5.6	+1.77	- 8.8	- 5 0.7	20 5.7	+ 0 32.6	+0.5915	0.5546	-0.1981	+77	- 4
566 B. Virginis	6.4	1.73	8.5	5 7.1	23 56.6	+ 4 15.7	-0.0598	0.5568	0.1970	+32	-39
88 Virginis	6.5	1.72	7.9	6 27.7	21 1 56.4	+ 6 11.5	+0.9188	0.5580	0.1963	+84	+17
235 G. Virginis	6.5	1.62	6.4	7 11.3	15 15.2	- 4 57.2	-0.9139	0.5664	0.1895	-18	-90
13 Libræ	5.7	1.52	3.0	11 35.4	22 7 0.3	+10 14.2	+0.6307	0.5776	0.1766	+75	- 1
ξ ^a Libræ	5.6	+1.51	- 3.0	-11 6.3	8 1.3	+11 13.0	-0.0348	0.5784	-0.1756	+31	-38
17 Libræ	6.4	1.50	3.0	10 51.1	8 38.5	+11 48.9	-0.3973	0.5788	0.1750	+11	-61
18 Libræ	5.9	1.49	3.0	10 50.4	8 55.7	-11 54.5	-0.4583	0.5791	0.1747	+ 8	-65
130 B. Libræ	5.9	1.43	1.4	12 6.0	19 21.3	- 1 52.1	-0.9567	0.5868	0.1625	-24	-90
γ Libræ	4.0	1.44	- 0.2	14 32.2	23 0 6.5	+ 2 42.2	+0.7095	0.5904	0.1561	+77	+ 4
190 B. Libræ	6.5	+1.42	+ 0.2	-14 48.0	3 18.7	+ 5 47.0	+0.4776	0.5928	-0.1514	+59	- 9
η Libræ	5.5	1.42	0.4	15 25.9	3 34.4	+ 6 2.2	+1.0636	0.5930	0.1510	+75	+29
195 B. Libræ	6.2	1.38	0.5	13 54.3	6 38.2	+ 8 58.9	-0.9042	0.5953	0.1463	-22	-90
202 B. Libræ	6.4	1.37	0.7	14 10.6	8 28.4	+10 44.8	-0.9004	0.5965	0.1433	-22	-90
203 B. Libræ	6.2	1.38	0.9	14 36.4	8 35.7	+10 51.8	-0.4920	0.5967	0.1432	+ 1	-68
48 Libræ	4.6	+1.36	+ 0.9	-14 3.7	9 15.3	+11 29.8	-1.1262	0.5971	-0.1421	-41	-90
49 Libræ	5.4	1.35	1.0	16 18.6	10 6.3	-11 41.1	+0.9764	0.5977	-0.1407	+74	+22
NEW MOON.											
ν Capricorni	5.3	+1.27	+10.7	-18 24.2	27 19 31.1	- 6 38.6	+0.4560	0.6051	+0.0995	+52	-10
81 B. Capricorni	6.4	+1.30	+10.7	-18 18.8	23 9.2	- 3 9.3	+0.7428	0.6026	+0.1068	+72	+ 7
19 Capricorni	5.7	1.30	10.8	18 12.5	28 1 18.2	- 1 5.4	+0.8735	0.6010	0.1109	+72	+15
94 B. Capricorni	5.7	1.31	11.2	16 19.3	2 27.4	+ 0 1.1	-0.8712	0.6002	0.1131	-23	-90
21 Capricorni	6.5	1.32	10.9	17 49.5	3 42.4	+ 1 13.1	+0.7652	0.5993	0.1154	+73	+ 8
θ Capricorni	4.2	1.34	10.9	17 32.0	5 43.8	+ 3 9.7	+0.7127	0.5978	0.1191	+73	+ 5
114 B. Capricorni	6.1	+1.35	+11.0	-17 39.4	9 24.2	+ 6 41.5	+1.2882	0.5950	+0.1257	+74	+60
29 Capricorni	5.5	1.35	11.5	15 29.1	9 40.6	+ 6 57.3	-0.8425	0.5948	0.1262	-20	-90
ι Capricorni	4.3	1.37	11.1	17 9.4	12 17.4	+ 9 28.1	+1.1603	0.5928	0.1306	+73	+39
42 Capricorni	5.1	1.42	11.4	14 23.0	20 13.4	- 6 54.0	-0.5258	0.5866	0.1432	+ 1	-71
44 Capricorni	6.0	1.43	11.6	14 44.7	20 50.9	- 6 18.0	-0.0743	0.5861	0.1441	+25	-40
45 Capricorni	5.8	+1.43	+11.5	-15 5.7	21 14.3	- 5 55.4	+0.3340	0.5858	+0.1446	+49	-17
μ Capricorni	5.2	1.49	11.8	13 54.4	29 1 6.3	- 2 12.1	-0.2902	0.5827	0.1501	+14	-54
ι Aquarii	4.4	1.51	11.6	14 14.2	6 39.8	+ 3 9.1	+0.8974	0.5782	0.1574	+76	+16
ε Aquarii	5.4	1.53	12.2	11 56.1	8 27.9	+ 4 53.3	-1.1414	0.5768	0.1597	-40	-90
42 Aquarii	5.5	1.55	11.8	13 12.5	11 6.5	+ 7 26.1	+0.5717	0.5747	0.1629	+68	- 4
45 Aquarii	6.1	+1.57	+11.6	-13 41.0	12 3.4	+ 8 21.0	+1.2084	0.5740	+0.1639	+77	+42

514 ELEMENTS OF OCCULTATIONS, 1924.

DECEMBER

THE STAR'S				AT CONJUNCTION IN R.A.						Limiting Parallels.	
Name.	Mag.	Reductions from 1924.0		Apparent Declina- tion.	Greenwich Mean Time.	Hour Angle, H	Y	z	y'	N.	S.
		$\Delta\alpha$	$\Delta\delta$								
σ Aquarii	4.9	+1.61	+12.3	-11 3.8	29 17 7.8	-10 45.5	-0.6040	0.5700	+0.1693	0	-78
58 Aquarii	6.4	1.62	12.2	11 17.5	17 34.9	-10 19.3	-0.2954	0.5696	0.1698	+17	-54
70 Aquarii	6.1	1.70	12.1	10 57.2	30 1 1.3	- 3 8.4	+0.6504	0.5640	0.1767	+76	0
h Aquarii	5.4	1.79	12.7	8 6.0	8 32.2	+ 4 7.0	-0.9249	0.5586	0.1825	-19	-90
χ Aquarii	5.3	1.83	12.4	8 8.3	13 53.5	+ 9 17.5	+0.0987	0.5550	0.1860	+41	-30
27 Piscium	5.1	+2.07	+12.6	- 3 58.4	31 9 34.9	+ 4 20.2	-0.4752	0.5433	+0.1942	+10	-66
29 Piscium	5.1	2.10	12.8	3 26.8	11 5.6	+ 5 47.9	-0.7334	0.5425	0.1945	- 4	-90
4 Ceti	6.3	2.13	12.8	2 58.1	13 56.7	+ 8 33.6	-0.6810	0.5411	0.1950	- 1	-86
5 Ceti	6.3	2.14	12.8	2 52.0	14 10.3	+ 8 46.8	-0.7432	0.5410	0.1951	- 5	-90
54 B. Ceti	6.3	+2.22	+12.2	- 2 38.2	22 6.8	- 7 31.7	+0.5669	0.5374	+0.1960	+74	- 5

OCCULTATIONS, 1924.

515

OCCULTATIONS VISIBLE AT GREENWICH.

* * The Angles are reckoned from the North Point and Vertex of the Moon's limb towards the East.

Date.	Star's Name.	Mag.	Disappearance.				Reappearance.							
			Sidereal		Mean		Angle from		Sidereal		Mean		Angle from	
			Time.	Time.	N. Point.	Vertex.	Time.	Time.	N. Point.	Vertex.				
Jan. 1	B.D. - 11° 38' 14	7.0												
2	190 B. Libræ	6.5						14 0	19 17	337	345			
8	29 Capricorni	5.5	0 42	5 34	106	76	1 33	6 25	217	183				
9	e Aquarii	5.4	1 9	5 57	56	29	2 14	7 2	261	227				
10	h Aquarii	5.4	3 4	7 48	113	79	3 49	8 33	203	166				
10	W.Z.C. 1541	7.5	3 28	8 11	156	121								
17	264 B. Tauri	4.8	0 10	4 27	0	39	0 27	4 44	331	10				
17	85 Tauri	6.0	0 23	4 40	117	156	1 15	5 32	212	248				
17	275 B. Tauri	6.5	1 41	5 58	30	63	2 36	6 53	297	323				
17	a Tauri (Aldeb.)	1.1	3 20	7 36	17	35	4 3	8 19	314	322				
18	115 Tauri	5.3	3 40	7 52	36	61	4 38	8 50	305	317				
19	W.B. VI. 186	6.7	1 38	5 47	86	127								
23	W.Z.C. 662	6.7					4 31	8 23	304	343				
27	l Virginis	4.8	10 33	14 9	202	230	10 37	14 13	209	236				
30	W.Z.C. 1056	6.7					12 23	15 47	277	309				
Feb. 11	μ Ceti	4.4	6 14	8 51	115	80	7 7	9 44	213	175				
12	Lalande 6357	6.7	2 50	5 24	113	120								
12	f Tauri	4.3	5 33	8 7	139	112	6 8	8 42	190	159				
13	48 Tauri	6.3	3 1	5 31	70	87	4 23	6 53	259	256				
13	γ Tauri	3.9	5 47	8 17	73	51	7 7	9 37	266	233				
13	70 Tauri	6.4	9 30	11 59	44	4	10 18	12 47	305	265				
13	71 Tauri	4.6	9 50	12 19	130	90	10 32	13 1	218	179				
13	θ ¹ Tauri	4.2	10 54	13 23	56	17	11 44	14 13	294	258				
13	θ ² Tauri	3.6	10 52	13 21	78	39								
15	Lalande 11713	6.6	11 56	14 16	97	57								
16	74 B. Geminorum	6.2	2 41	4 59	101	141	3 50	6 8	252	287				
17	f Geminorum	5.3	2 32	4 46	40	81	3 12	5 26	322	2				
17	5 Cancri	5.9	14 44	16 57	151	114	15 18	17 30	230	194				
19	18 Leonis	5.8	13 35	15 40	101	64	14 36	16 41	297	258				
19	19 Leonis	6.4	14 15	16 20	132	93	15 10	17 14	264	224				
19	R. Leonis	var.	14 37	16 42	170	131	15 6	17 11	229	190				
20	49 Leonis	5.7	10 39	12 40	104	102	11 52	13 53	302	285				
28	39 G. Sagittarii	6.3	15 26	16 55	129	153	16 26	17 55	244	260				
29	190 B. Sagittarii	5.4					15 17	16 42	311	342				
Mar. 6	W.Z.C. 1604	6.8	5 15	6 18	50	12								
11	179 B. Tauri	5.9	10 35	11 18	41	3	11 16	11 59	307	271				
16	B.D. + 16° 1704	7.0	10 46	11 9	99	68								
17	B.D. + 13° 2074	6.7	14 0	14 18	137	98								
21	k Virginis	5.7	15 18	15 21	179	155	15 45	15 48	225	198				
21	46 Virginis	6.1	15 22	15 25	49	25	15 52	15 55	356	327				

OCCULTATIONS VISIBLE AT GREENWICH.

* * * The Angles are reckoned from the North Point and Vertex of the Moon's limb towards the East.

Date.	Star's Name.	Mag.	Disappearance.				Reappearance.			
			Sidereal Time.	Mean Time.	Angle from		Sidereal Time.	Mean Time.	Angle from	
					N. Point.	Vertex.			N. Point.	Vertex.
Mar. 21	48 Virginis	6.5	h m 17 22	h m 17 24†	° 19	° 344	h m 17 24	h m 17 26	° 15	° 340
22	W.Z.C. 885	7.0					13 0	12 59	259	268
22	598 B. Virginis	6.1	14 12	14 11	113	109	15 23	15 22	294	278
23	B.D.—11° 3814	7.0					14 14	14 9	304	310
24	190 B. Libræ	6.5					11 15	11 7	301	336
26	W.Z.C. 1153	6.8					15 39	15 22	292	312
Apr. 8	275 B. Tauri	6.5	8 29	7 22	78	39	9 37	8 30	270	230
8	α Tauri (Aldeb.)	1.1	9 54	8 47	41	1	10 40	9 33	308	269
9	115 Tauri	5.3	10 55	9 44	50	9	11 42	10 30	309	270
10	19 B. Geminorum	6.2	8 51	7 36	44	9	9 41	8 26	321	282
10	W.B. VI. 186	6.7	10 6	8 51	135	95				
13	54 Cancrī	6.3	10 32	9 5	48	24	11 11	9 44	345	315
14	18 Leonis	5.8	12 30	10 59	151	119	13 22	11 51	249	213
14	W.Z.C. 662	6.7	14 46	13 14	48	9				
15	49 Leonis	5.7	9 48	8 13	138	148	10 56	9 21	266	261
17	W.Z.C. 811	7.1	16 18	14 35	113	79				
18	72 Virginis	6.1	16 52	15 4	182	152	17 11	15 23	217	185
18	l Virginis	4.8	17 4	15 16	95	63	18 3	16 15	305	269
21	W.Z.C. 1056	6.7					13 26	11 27	345	10
29	27 Piscium	5.1					18 48	16 17	268	305
May 9	f Geminorum	5.3	10 26	7 17	166	131	10 57	7 48	216	178
15	46 Virginis	6.1	15 42	12 8	82	54	16 37	13 4	323	290
15	48 Virginis	6.5	17 27	13 53	72	36	18 13	14 39	328	290
16	W.Z.C. 885	7.0	12 35	8 57	150	163				
16	598 B. Virginis	6.1	14 42	11 4	112	103	15 52	12 14	294	274
17	B.D.—11° 3814	7.0	12 57	9 16	84	102				
19	29 Ophiuchi	6.4	16 26	12 36	89	94	17 35	13 46	291	284
21	195 B. Sagittarii	6.3	17 2	13 4	23	42	17 32	13 34	335	350
June 11	γ Virginis	2.9	18 6	12 46	61	23				
12	W.Z.C. 857	7.2	15 15	9 52	165	146				
12	l Virginis	4.8	16 54	11 30	165	134	17 32	12 8	237	203
18	f Sagittarii	5.1	19 26	13 38	139	142	20 5	14 17	204	200
20	44 Capricorni	6.0	18 19	12 23	60	89	19 26	13 30	273	294
22	B.D.—7° 6012	7.0					18 25	12 21	323	0
22	Lalande 46034	6.5					21 14	15 10	288	310
24	26 Ceti	6.0					19 8	12 56	182	221
29	α Tauri (Aldeb.)	1.1	9 50	3 20	76	35	10 50	4 20	274	235
July 4	α ¹ Cancrī	5.1	14 24	7 34	97	57	15 20	8 30	293	254
10	W.Z.C. 897	6.6	17 18	10 4	166	136				
12	49 Libræ	5.4	17 10	9 48	157	145	17 54	10 32	233	214

† A graze; occultation doubtful.

OCULTATIONS VISIBLE AT GREENWICH.

** The Angles are reckoned from the North Point and Vertex of the Moon's limb towards the East.

Date.	Star's Name.	Mag.	Disappearance.				Reappearance.			
			Sidereal Time.	Mean Time.	Angle from		Sidereal Time.	Mean Time.	Angle from	
					N. Point.	Vertex.			N. Point.	Vertex.
July 13	29 Ophiuchi	6.4	h m	h m	101°	102°	h m	h m	279°	268°
14	16 Sagittarii	5.9	21 50	14 20	121	90				
17	W.Z.C. 1422	6.9					21 17	13 35	187	187
20	W.Z.C. 1595	7.9					18 42	10 48	239	277
23	ξ ² Ceti	4.3	23 38	15 32	100	130	0 42	16 36	212	233
Aug. 6	88 Virginis	6.5	16 11	7 11	58	34	16 51	7 51	346	317
8	190 B. Libræ	6.5	19 15	10 7	38	7	19 44	10 36	344	311
9	W.Z.C. 1069	6.7	17 40	8 28	170	159				
11	W.Z.C. 1237	7.1	20 36	11 15	83	65				
11	29 Sagittarii	5.3	21 30	12 9	100	75	22 32	13 11	249	218
12	f Sagittarii	5.1	18 55	9 31	136	143	19 40	10 16	211	211
12	57 Sagittarii	6.0	22 22	12 57	5	342	22 39	13 14	334	309
14	44 Capricorni	6.0	17 55	8 23	27	58	18 37	9 5	308	335
14	45 Capricorni	5.8	18 9	8 37	121	151	18 58	9 26	213	238
14	μ Capricorni	5.2	23 53	14 20	4	344	0 22	14 49	315	292
17	54 B. Ceti	6.3	19 10	9 26	98	136	20 6	10 22	220	255
19	W.Z.C. 118	7.1					19 40	9 48	222	260
22	71 Tauri	6.4					21 38	11 34	243	281
22	θ ² Tauri	3.6	21 52	11 48	62	101	22 49	12 45	269	309
22	θ ¹ Tauri	4.2	21 57	11 53	38	77	22 44	12 40	292	332
22	81 Tauri	5.5	23 2	12 58	149	189	23 18	13 14	178	218
22	264 B. Tauri	4.8	23 24	13 20	346	26	23 28	13 24	339	19
22	85 Tauri	6.0	23 28	13 24	116	156	0 17	14 13	211	250
22	275 B. Tauri	6.5	0 41	14 37	31	69	1 35	15 30	296	330
22	α Tauri (Aldeb.)	1.1	2 12	16 7	22	52	3. 1	16 56	305	327
24	19 B. Geminorum	6.2	0 43	14 31	80	121	1 48	15 36	263	304
26	VENUS	-4.1	10 36	0 18	170	132	11 0	0 42	207	168
Sept. 1	γ Virginis	2.9	17 19	6 36	129	92	18 15	7 32	271	233
1	B.A.C. 4277	6.1	18 13	7 30	119	81				
6	W.Z.C. 1121	6.6	17 47	6 44	88	83				
7	21 Sagittarii	5.0	20 22	9 15	142	123	21 2	9 55	213	189
9	57 Sagittarii	6.0	21 11	9 56	67	59	22 22	11 7	266	247
9	W.Z.C. 1361	6.7	22 45	11 30†	352	331				
10	W.Z.C. 1422	6.9	17 57	6 39	129	157				
12	χ Aquarii	5.3	23 2	11 35	70	72	0 17	12 50	241	230
16	ξ ² Ceti	4.3					20 34	8 52	248	287
17	8 B. Tauri	6.2	0 4	12 17	56	91	1 16	13 29	261	287
17	Lalande 6357	6.7					3 13	15 25	219	221
17	f Tauri	4.3	4 46	16 59	137	118	5 22	17 35	190	165
18	179 B. Tauri	5.9	21 54	10 4	355	34	22 6	10 16	333	13

† A graze; occultation doubtful.

OCCULTATIONS VISIBLE AT GREENWICH.

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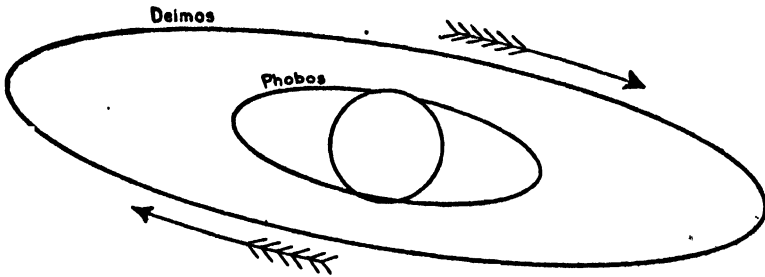
Date.	Star's Name.	Mag.	Disappearance.				Reappearance.				
			Sidereal Time.	Mean Time.	Angle from		Sidereal Time.	Mean Time.	Angle from		
					N. Point.	Vertex.			N. Point.	Vertex.	
Sept. 18	48 Tauri	6.3	h m	h m	°	°	h m	h m	°	°	
18	γ Tauri	3.9	1 51	14 0	98	128	3 3	15 12	225	242	
19	318 B. Tauri	5.7	4 41	16 50	116	110	5 44	17 53	214	193	
23	d ¹ Cancri	5.9	21 59	10 5	46	83	22 47	10 53	289	329	
24	VENUS	-3.8	5.9	1 25	13 15	45	82	2 3	13 53	321	0
								2 53	14 38	299	338
Oct. 6	W.Z.C. 1335	7.0	21 15	8 14	13	1					
7	B.D. -17° 6193	7.0	23 1	9 55	111	93					
9	W.Z.C. 1524	6.7	20 21	7 8	136	160					
9	W.Z.C. 1535	6.8	1 11	11 58	47	25					
11	W.Z.C. 36	6.9	23 40	10 19	31	41					
11	W.Z.C. 39	7.0	4 14	14 52	55	22					
12	117 G. Piscium	6.5	23 29	10 4	92	114	0. 35	11 10	215	225	
13	B.D. +7° 362	7.0					3 24	13 55	257	242	
14	B.D. +10° 401	6.8					22 49	9 16	206	243	
14	B.D. +11° 445	6.8					5 35	16 2	218	189	
16	α Tauri (Aldeb.)	1.1	21 17	7 37	42	78	22 2	8 22	291	330	
17	115 Tauri	5.3	22 5	8 21	111	147	22 52	9 8	228	267	
17	W.Z.C. 373	6.6					23 58	10 13	303	344	
17	B.D. +18° 873	7.0					1 14	11 30	245	285	
17'	120 Tauri	5.6	1 21	11 36	42	82	2 19	12 34	293	330	
20	ζ Cancri	4.7	5 26	15 29	103	137	6 46	16 49	270	291	
20	B.D. +18° 1882	6.7					8 2	18 4	294	296	
21	o ² Cancri	5.7	2 58	12 57	151	191	3 33	13 32	221	261	
22	W.Z.C. 663	6.7					5 2	14 57	333	12	
22	ν Leonis	5.0	8 24	18 18	94	115					
Nov. 1	128 B. Sagittarii	6.3					19 38	4 55	203	194	
2	f Sagittarii	5.1					19 50	5 3	307	306	
4	45 Capricorni	5.8	20 23	5 28	50	63	21 35	6 40	272	273	
5	MARS	-0.1	23 2	8 3	352	348	23 22	8 23	323	315	
8	26 Ceti	6.0	19 36	4 26	76	114	20 38	5 28	240	276	
8	W.Z.C. 64	6.7	22 19	7 8	37	65					
8	33 Ceti	6.1	0 30	9 19	1	8	1 7	9 56	305	305	
8	W.Z.C. 71	6.8	1 19	10 8	57	55					
10	μ Ceti	4.4	23 20	8 1	45	79	0 28	9 9	267	294	
11	f Tauri	4.3	22 2	6 39	114	154	22 48	7 25	206	245	
12	γ Tauri	3.9	22 16	6 50	125	165	22 54	7 27	202	242	
12	75 Tauri	5.2	3 14	11 47	98	116	4 29	13 2	229	227	
14	71 Orionis	5.1	7 39	16 3	141	118	8 30	16 54	219	187	
16	g Geminorum	5.0	1 39	9 56	103	143	2 40	10 57	257	298	
18	W.Z.C. 639	7.1					3 13	11 22	210	249	

OCCULTATIONS VISIBLE AT GREENWICH.

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Date.	Star's Name.	Mag.	Disappearance.				Reappearance.			
			Sidereal Time.	Mean Time.	Angle from		Sidereal Time.	Mean Time.	Angle from	
					N. Point.	Vertex.			N. Point.	Vertex.
Nov. 21	10 Virginis	6.2	h m	h m	°	°	h m	h m	°	°
24	B.D. - 11° 38 14	7.0	10 18	18 14	145	165	11 23	19 19	268	277
30	0 Capricorni	5.6	22 29	5 52	37	18	10 22	18 7	230	265
Dec. 4	W.Z.C. 7	6.8	1 59	9 5	69	49	23 22	6 45	294	268
4	B.D. - 3° 20	6.7	4 20	11 26	103	68				
5	26 Ceti	6.0	5 8	12 10	125	90	5 43	12 45	192	155
7	ξ ² Ceti	4.3	22 13	5 8	89	126	23 16	6 11	223	256
9	179 B. Tauri	5.9	0 37	7 24	112	149	1 32	8 19	209	240
11	W.Z.C. 388	7.5					23 10	5 49	349	28
11	W.Z.C. 389	6.7					23 31	6 10	329	9
11	B.D. + 18° 950	6.9					0 46	7 25	224	265
12	W.Z.C. 458	6.9					0 32	7 7	276	316
13	9 Geminorum	5.0	12 10	18 39	147	106	12 54	19 23	235	194
15	227 B. Cancri	6.4	9 16	15 38	36	36	9 42	16 4	359	352
20	80 Virginis	5.6	13 46	19 48	49	46				
27	W.Z.C. 1326	7.8	23 1	4 38	82	55				
28	21 Capricorni	6.5					23 11	4 44	273	252
28	θ Capricorni	4.2	0 37	6 9	70	39				
29	ι Aquarii	4.4	1 39	7 7	118	87	2 20	7 48	201	167

South



North

APPARENT ORBITS OF THE SATELLITES OF MARS AT DATE OF OPPOSITION, AUGUST 23, 1924, AS SEEN IN AN INVERTING TELESCOPE.

Date.		PHOBOS.		Date.		DEIMOS.	
		Position Angle of Apsis.	Apparent Distance at Apsis.			Position Angle of Apsis.	Apparent Distance at Apsis.
Aug.	3	75°6'	32·6	Aug.	3	76°3'	81·5
Aug.	23	78·2	34·7	Aug.	23	78·7	86·8
Sept.	12	81·0	32·1	Sept.	12	81·3	80·2

GREENWICH MEAN TIME OF GREATEST ELONGATION.

PHOBOS.						DEIMOS.					
d h		d h		d h		d h		d h		d h	
July	17 22·4 E.	Aug.	11 11·7 E.	Sept.	5 1·0 E.	July	13 1·0 E.	Aug.	23 16·5 E.		
	19 1·2 W.		12 14·5 W.		6 3·7 W.		14 22·5 W.		25 13·9 W.		
	20 4·0 E.		13 17·3 E.		7 6·5 E.		16 20·0 E.		27 11·3 E.		
	21 6·8 W.		14 20·1 W.		8 9·3 W.		18 17·4 W.		29 8·7 W.		
	22 9·6 E.		15 22·9 E.		9 12·1 E.		20 14·9 E.		31 6·1 E.		
	23 12·4 W.		17 1·6 W.		10 14·9 W.		22 12·3 W.	Sept.	2 3·5 W.		
	24 15·2 E.		18 4·4 E.		11 17·7 E.		24 9·8 E.		4 0·9 E.		
	25 18·0 W.		19 7·2 W.		12 20·4 W.		26 7·2 W.		5 22·4 W.		
	26 20·7 E.		20 10·0 E.		13 23·2 E.		28 4·7 E.		7 19·8 E.		
	27 23·5 W.		21 12·8 W.		15 2·0 W.		30 2·1 W.		9 17·2 W.		
	29 2·3 E.		22 15·6 E.		16 4·8 E.		31 23·5 E.		11 14·6 E.		
	30 5·1 W.		23 18·3 W.		17 7·6 W.		Aug.	2 21·0 W.		13 12·0 W.	
	31 7·9 E.		24 21·1 E.		18 10·4 E.		4 18·4 E.		15 9·5 E.		
Aug.	1 10·7 W.		25 23·9 W.		19 13·2 W.		6 15·8 W.		17 6·9 W.		
	2 13·5 E.		27 2·7 E.		20 16·0 E.		8 13·2 E.		19 4·3 E.		
	3 16·2 W.		28 5·5 W.		21 18·7 W.		10 10·6 W.		21 1·8 W.		
	4 19·0 E.		29 8·3 E.		22 21·5 E.		12 8·0 E.		22 23·2 E.		
	5 21·8 W.		30 11·0 W.		24 0·3 W.		14 5·5 W.		24 20·7 W.		
	7 0·6 E.		31 13·8 E.		25 3·1 E.		16 2·9 E.		26 18·1 E.		
	8 3·4 W.	Sept.	1 16·6 W.		26 5·9 W.		18 0·3 W.		28 15·6 W.		
	9 6·2 E.		2 19·4 E.		27 8·7 E.		19 21·7 E.		30 13·1 E.		
	10 9·0 W.		3 22·2 W.		28 11·5 W.		21 19·1 W.	Oct.	2 10·5 W.		

For Phobos every seventh eastern and western elongation is given, and for Deimos every third; the intermediate ones may be found by adding multiples of the period of the satellite.
 Sidereal period of Phobos, 7^h 39^m 13^s·85. Sidereal period of Deimos, 30^h 17^m 54^s·87.

SATELLITES OF JUPITER, 1924. 521

MEAN SYNODIC PERIODS OF THE SATELLITES.

$$V. \text{ } 0^{\text{d}} 11^{\text{h}} 57^{\text{m}} 27^{\text{s}}.6 = 0^{\text{d}}.498236$$

$$\begin{array}{l} \text{I. } \begin{array}{cccc} \text{d} & \text{h} & \text{m} & \text{s} \\ 1 & 18 & 28 & 35.94619 \end{array} = \begin{array}{c} \text{d} \\ 1.7698604883 \end{array} \\ \text{II. } \begin{array}{cccc} \text{d} & \text{h} & \text{m} & \text{s} \\ 3 & 13 & 17 & 53.73665 \end{array} = \begin{array}{c} \text{d} \\ 3.5540941742 \end{array} \end{array}$$

$$\begin{array}{l} \text{III. } \begin{array}{cccc} \text{d} & \text{h} & \text{m} & \text{s} \\ 7 & 3 & 59 & 35.85660 \end{array} = \begin{array}{c} \text{d} \\ 7.1663872292 \end{array} \\ \text{IV. } \begin{array}{cccc} \text{d} & \text{h} & \text{m} & \text{s} \\ 16 & 18 & 5 & 6.91878 \end{array} = \begin{array}{c} \text{d} \\ 16.7535523007 \end{array} \end{array}$$

MEAN TIME OF EVERY TWENTIETH GREATEST ELONGATION.

SATELLITE V.

		d	h				d	h				d	h						
Mar.		12	15.6	E.	June		10	7.5	E.	Mar.		12	21.6	W.	June		10	13.4	W.
		22	14.7	E.			20	6.6	E.			22	20.7	W.			20	12.5	W.
Apr.		1	13.8	E.	July		30	5.7	E.	Apr.		1	19.8	W.	July		30	11.6	W.
		11	12.9	E.			10	4.8	E.			11	18.9	W.			10	10.8	W.
May		21	12.0	E.		20	3.9	E.	May		21	18.0	W.		20	9.9	W.		
		1	11.1	E.		30	3.0	E.			1	17.1	W.		30	9.0	W.		
		11	10.2	E.	Aug.		9	2.1		E.		11	16.2	W.	Aug.		9	8.1	W.
		21	9.3	E.			19	1.3		E.		21	15.3	W.			19	7.3	W.
	31	8.4	E.		29	0.4	E.		31	14.4	W.		29	6.4	W.				

MEAN TIME OF SUPERIOR GEOCENTRIC CONJUNCTION.

SATELLITE I. (Io).

		d	h	m			d	h	m			d	h	m						
Jan.		1	15	10.1	Feb.		9	14	4.2	Mar.		19	12	34.9	Apr.		27	10	34.5	
		3	9	40.2			11	8	33.5			21	7	2.9			29	5	1.0	
		5	4	10.2			13	3	2.7			23	1	30.8			30	23	27.4	
		6	22	40.3			14	21	31.9			24	19	58.7		May		2	17	53.9
		8	17	10.3			16	16	1.0			26	14	26.4				4	12	20.2
		10	11	40.3			18	10	30.1			28	8	54.1			6	6	46.6	
		12	6	10.2			20	4	59.0			30	3	21.6			8	1	12.8	
		14	0	40.2			21	23	28.0			31	21	49.2			9	19	39.0	
	15	19	10.0		23	17	56.8	Apr.		2	16	16.6		11	14	5.2				
	17	13	39.9		25	12	25.7			4	10	44.1		13	8	31.3				
	19	8	9.6		27	6	54.4		6	5	11.4		15	2	57.4					
	21	2	39.5		29	1	23.2		7	23	38.8		16	21	23.5					
	22	21	9.1	Mar.		1	19	51.8		9	18	5.9		18	15	49.5				
	24	15	38.9			3	14	20.4		11	12	33.1		20	10	15.6				
	26	10	8.5		5	8	48.9		13	7	0.1		22	4	41.5					
	28	4	38.2		7	3	17.4		15	1	27.2		23	23	7.5					
	29	23	7.7		8	21	45.8		16	19	54.1		25	17	33.4					
	31	17	37.3		10	16	14.2		18	14	21.0		27	11	59.4					
Feb.		2	12	6.7		12	10	42.4		20	8	47.8		29	6	25.3				
		4	6	36.2		14	5	10.7		22	3	14.6		31	0	51.2				
	6	1	5.5		15	23	38.8		23	21	41.3	June		1	19	17.1				
	7	19	34.9		17	18	6.9		25	16	7.9			3	13	43.0				

522 SATELLITES OF JUPITER, 1924.

MEAN TIME OF SUPERIOR GEOCENTRIC CONJUNCTION.

SATELLITE I. (Io)—*continued.*

June	d	h	m	July	d	h	m	Sept.	d	h	m	Oct.	d	h	m
	5	8	8.9		21	7	33.6		5	7	40.0		21	8	25.6
	7	2	34.8		23	2	0.6		7	2	8.8		23	2	55.5
	8	21	0.7		24	20	27.8		8	20	37.7		24	21	25.6
	10	15	26.7		26	14	55.0		10	15	6.6		26	15	55.6
	12	9	52.6		28	9	22.3		12	9	35.6		28	10	25.7
	14	4	18.6		30	3	49.7		14	4	4.6		30	4	55.8
	15	22	44.6		31	22	17.1		15	22	33.7		31	23	26.0
	17	17	10.6	Aug.	2	16	44.6		17	17	2.8	Nov.	2	17	56.1
	19	11	36.7		4	11	12.1		19	11	32.1		4	12	26.3
	21	6	2.7		6	5	39.7		21	6	1.3		6	6	56.5
	23	0	28.9		8	0	7.4		23	0	30.7		8	1	26.8
	24	18	55.0		9	18	35.2		24	19	0.0		9	19	57.0
	26	13	21.2		11	13	3.0		26	13	29.5		11	14	27.3
	28	7	47.4		13	7	31.0		28	7	58.9		13	8	57.5
	30	2	13.7		15	1	58.9		30	2	28.5		15	3	27.9
July	1	20	40.0		16	20	27.0	Oct.	1	20	58.0		16	21	58.2
	3	15	6.4		18	14	55.1		3	15	27.6		18	16	28.6
	5	9	32.9		20	9	23.3		5	9	57.2		20	10	58.9
	7	3	59.4		22	3	51.6		7	4	26.9		22	5	29.3
	8	22	26.0		23	22	19.9		8	22	56.6		23	23	59.6
	10	16	52.6		25	16	48.3		10	17	26.3		25	18	30.1
	12	11	19.3		27	11	16.8		12	11	56.1		27	13	0.4
	14	5	46.0		29	5	45.3		14	6	25.9		29	7	30.9
	16	0	12.8		31	0	13.9		16	0	55.8	Dec.	1	2	1.3
	17	18	39.7	Sept.	1	18	42.5		17	19	25.7				
	19	13	6.6		3	13	11.2		19	13	55.6				

SATELLITE II. (EUROPA).

Jan.	d	h	m	Feb.	d	h	m	Apr.	d	h	m	June	d	h	m
	0	19	28.5		23	3	46.8		16	10	39.1		8	15	53.3
	4	8	51.4		26	17	5.5		19	23	50.4		12	5	1.5
	7	22	14.1	Mar.	1	6	23.8		23	13	1.6		15	18	9.0
	11	11	36.7		4	19	41.7		27	2	11.8		19	7	17.6
	15	0	59.0		8	8	59.1		30	15	22.2		22	20	25.5
	18	14	21.1		11	22	16.1	May	4	4	31.5		26	9	34.7
	22	3	42.9		15	11	32.6		7	17	41.1		29	22	43.3
	25	17	4.5		19	0	48.7		11	6	49.7	July	3	11	53.2
	29	6	25.9		22	14	4.2		14	19	58.6		7	1	2.6
Feb.	1	19	47.0		26	3	19.4		18	9	6.6		10	14	13.4
	5	9	7.8		29	16	33.8		21	22	15.0		14	3	23.8
	8	22	28.3	Apr.	2	5	48.0		25	11.	22.5		17	16	35.6
	12	11	48.5		5	19	1.4		29	0	30.6		21	5	47.1
	16	1	8.3		9	8	14.6	June	1	13	37.9		24	19	0.0
	19	14	27.7		12	21	26.9		5	2	46.0		28	8	12.6

SATELLITES OF JUPITER, 1924. 523

MEAN TIME OF SUPERIOR GEOCENTRIC CONJUNCTION.

SATELLITE II. (EUROPA)—*continued.*

	d	h	m		d	h	m		d	h	m		d	h	m
July	31	21	26.7	Sept.	1	20	54.4	Oct.	3	21	2.1	Nov.	4	21	34.3
Aug.	4	10	40.5		5	10	13.9		7	10	24.4		8	10	59.0
	7	23	55.8		8	23	33.1		10	23	47.7		12	0	23.5
	11	13	10.6		12	12	53.6		14	13	10.6		15	13	48.3
	15	2	27.0		16	2	13.6		18	2	34.3		19	3	13.0
	18	15	43.0		19	15	34.9		21	15	57.7		22	16	38.0
	22	5	0.5		23	4	55.8		25	5	21.8		26	6	2.9
	25	18	17.7		26	18	17.8		28	18	45.6		29	19	28.0
	29	7	36.2		30	7	39.4	Nov.	1	8	10.1				

SATELLITE III. (GANYMEDE).

	d	h	m		d	h	m		d	h	m		d	h	m
Jan.	0	22	52.8	Mar.	27	0	46.4	June	20	18	1.4	Sept.	14	14	14.4
	8	3	17.3	Apr.	3	4	32.3		27	21	20.8		21	18	22.1
	15	7	39.6		10	8	13.1	July	5	0	43.0		28	22	33.1
	22	11	59.7		17	11	49.9		12	4	9.0	Oct.	6	2	47.0
	29	16	17.5		24	15	21.9		19	7	38.6		13	7	3.6
Feb.	5	20	32.8	May	1	18	49.6		26	11	13.0		20	11	23.3
	13	0	45.8		8	22	13.5	Aug.	2	14	51.3		27	15	45.0
	20	4	55.4		16	1	34.4		9	18	34.0	Nov.	3	20	8.7
	27	9	2.0		23	4	53.6		16	22	21.2		11	0	33.9
Mar.	5	13	4.3		30	8	10.6		24	2	12.8		18	5	0.3
	12	17	2.6	June	6	11	27.4		31	6	9.4		25	9	27.9
	19	20	56.7		13	14	43.9	Sept.	7	10	9.8				

SATELLITE IV. (CALLISTO).

	d	h	m		d	h	m		d	h	m		d	h	m
Jan.	14	5	36.2	Apr.	7	2	5.0	June	29	4	13.7	Sept.	20	15	57.3
	31	1	27.3		23	18	1.5	July	15	19	12.6	Oct.	7	11	10.6
Feb.	16	20	45.7	May	10	9	7.1	Aug.	1	11	1.1		24	6	58.2
Mar.	4	15	22.9		26	23	35.4		18	3	46.6	Nov.	10	3	11.7
	21	9	11.5	June	12	13	48.6	Sept.	3	21	26.9		26	23	44.2

524 SATELLITES OF JUPITER, 1924.

JANUARY.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m	
0	I. Sh. c.	16 10	7	II. Em.	23 25	15	I. Em.	20 16	23	II. Sh. c.	19 33	
	I. Tr. c.	16 48								II. Tr. c.	21 30	
	II. E. c.	17 1·8	8	III. E. f.	1 14·6	16	I. Sh. c.	14 25		II. Sh. f.	21 53	
	I. Sh. f.	18 20		III. Im.	2 11		I. Tr. c.	15 16		II. Tr. f.	23 51	
	I. Tr. f.	18 58		III. Em.	4 24		I. Sh. f.	16 35				
	III. E. c.	19 12·8		I. E. c.	15 18·5		II. Sh. c.	16 57	24	I. E. c.	13 34·6	
	II. Em.	20 39		I. Em.	18 16		I. Tr. f.	17 26		I. Em.	16 45	
	III. E. f.	21 15·3					II. Tr. c.	18 43	25	I. Sh. c.	10 47	
	III. Im.	21 47	9	I. Sh. c.	12 32		II. Sh. f.	19 17		I. Tr. c.	11 44	
	III. Em.	23 59		I. Tr. c.	13 18		II. Tr. f.	21 5		I. Sh. f.	12 56	
1	I. E. c.	13 24·6		II. Sh. c.	14 21	17	I. E. c.	11 41·0		I. Tr. f.	13 54	
	I. Em.	16 16		I. Sh. f.	14 41		I. Em.	14 45		II. E. c.	13 57·5	
2	I. Sh. c.	10 39		I. Tr. f.	15 28					II. Em.	18 15	
	I. Tr. c.	11 18		II. Tr. c.	15 55	18	I. Sh. c.	8 54		III. Sh. c.	20 57	
	II. Sh. c.	11 45		II. Sh. f.	16 41		I. Tr. c.	9 46		III. Sh. f.	23 1	
	I. Sh. f.	12 48	10	II. Tr. f.	18 17		I. Sh. f.	11 3				
	II. Tr. c.	13 6		I. E. c.	9 47·1		II. E. c.	11 24·5	26	III. Tr. c.	0 52	
	I. Tr. f.	13 28		I. Em.	12 46		I. Tr. f.	11 56		III. Tr. f.	3 5	
	II. Sh. f.	14 5	11				II. Em.	15 32		I. E. c.	8 3·0	
	II. Tr. f.	15 28		I. Sh. c.	7 0		III. Sh. c.	16 59		I. Em.	11 14	
3	I. E. c.	7 53·2		I. Tr. c.	7 47		III. Sh. f.	19 3	27	I. Sh. c.	5 15	
	I. Em.	10 46		II. E. c.	8 51·4		III. Tr. c.	20 33		I. Tr. c.	6 14	
4	I. Sh. c.	5 7		I. Sh. f.	9 10		III. Tr. f.	22 46		I. Sh. f.	7 24	
	I. Tr. c.	5 48		I. Tr. f.	9 57	19	I. E. c.	6 9·3		I. Tr. f.	8 24	
	II. E. c.	6 18·3		II. Em.	12 47		I. Em.	9 15		II. Sh. c.	8 51	
	I. Sh. f.	7 16	12	III. Sh. c.	13 1					II. Tr. c.	10 52	
	I. Tr. f.	7 58		III. Sh. f.	15 4	20	I. Sh. c.	3 22		II. Sh. f.	11 11	
	III. Sh. c.	9 4		III. Tr. c.	16 12		I. Tr. c.	4 16		II. Tr. f.	13 14	
	II. Em.	10 2	13	III. Tr. f.	18 24		I. Sh. f.	5 31				
	III. Sh. f.	11 6		I. E. c.	4 15·5		II. Sh. c.	6 15	28	I. E. c.	2 31·5	
	III. Tr. c.	11 49		I. Em.	7 16		I. Tr. f.	6 26		I. Em.	5 44	
	III. Tr. f.	14 1	14				II. Tr. c.	8 6		I. Sh. c.	23 43	
5	I. E. c.	2 21·6		I. Sh. c.	1 29	21	II. Sh. f.	8 35				
	I. Em.	5 16		I. Tr. c.	2 17		II. Tr. f.	10 28	29	I. Tr. c.	0 43	
	I. Sh. c.	23 35		I. Sh. f.	3 38					I. Sh. f.	1 53	
6	I. Tr. c.	0 18		II. Sh. c.	3 38		I. E. c.	0 37·8		I. Tr. f.	2 53	
	II. Sh. c.	1 2		I. Tr. f.	4 27		I. Em.	3 45		II. E. c.	3 14·0	
	I. Sh. f.	1 45	15	II. Tr. c.	5 19		I. Sh. c.	21 50		II. Em.	7 37	
	I. Tr. f.	2 28		II. Sh. f.	5 59		I. Tr. c.	22 45		III. E. c.	11 3·7	
	II. Tr. c.	2 30		II. Tr. f.	7 41					III. E. f.	13 10·1	
	II. Sh. f.	3 22	14	I. E. c.	22 44·0					III. Im.	15 10	
	II. Tr. f.	4 52								III. Em.	17 25	
	I. E. c.	20 50·1		I. Em.	1 46	22	I. Sh. f.	0 0		I. E. c.	20 59·8	
	I. Em.	23 46		I. Sh. c.	19 57		II. E. c.	0 41·0				
7	I. Sh. c.	18 4		I. Tr. c.	20 47		I. Tr. f.	0 55	30	I. Em.	0 13	
	I. Tr. c.	18 48		I. Sh. f.	22 6		II. Em.	4 54		I. Sh. c.	18 12	
	II. E. c.	19 34·9		I. Tr. c.	20 47		III. E. c.	7 6·4		I. Tr. c.	19 13	
	I. Sh. f.	20 13	15	II. E. c.	22 7·9		III. E. f.	9 11·8		I. Sh. f.	20 21	
	I. Tr. f.	20 58		I. Tr. f.	22 57		III. Im.	10 53		I. Tr. f.	21 22	
	III. E. c.	23 11·1					III. Em.	13 7		II. Sh. c.	22 9	
				II. Em.	2 10		I. E. c.	19 6·2				
				III. E. c.	3 8·9	23	I. Em.	22 15		31	II. Tr. c.	0 15
				III. E. f.	5 13·3						II. Sh. f.	0 29
				III. Im.	6 33		I. Sh. c.	16 19			II. Tr. f.	2 36
				III. Em.	8 46		I. Tr. c.	17 15			I. E. c.	15 28·3
				I. E. c.	17 12·4		I. Sh. f.	18 28			I. Em.	18 43
							I. Tr. f.	19 25				

Eclipse commences - - - E. c.
 „ finishes - - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - - - Em.

Shadow commences - - - Sh. c.
 „ finishes - - - - Sh. f.

SATELLITES OF JUPITER, 1924. 525

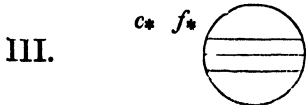
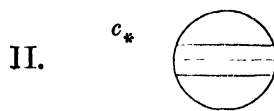
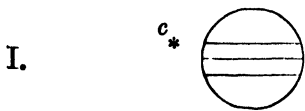
JANUARY.

MEAN TIME.

Configurations at 18^h 45^m for an inverting Telescope.

Day.	West.		East.
1		○ ·1 2·3	4·
2		1,2· ○	3· 4·
3		·2 ○	·1 3· 4·
4		·1 3· ○	·2 4·
5	3·	4· ○	1· ₂
6	·3 4,2·	·1 ○	
7	4·	·3 ·2 ₁ ○	
8	4·	○	·3,2 ● ·1
9	4·	1· ₂ ○	·3
10	·4	·2 ○	·1 3·
11	·4	1· ₃ ○	·2
12	·4 ₃	○	1,2·
13	·3 2·	·4 ₁ ○	
14		·3 ·2 ○	1· ·4
15	● ·1	○	·3 ·2 ·4
16		1· ○	·3 ·4 2○
17		·2 ○	·1 3· 4·
18		1· 3○ ·2	4·
19		3· ○	1· 2· 4·
20	·3	2, ·1 ○	4·
21		·3 ·2 ○	1· 4·
22		4· ○ ¹ ·3 ·2	
23	1, ○	4· ○	2· ·3
24	4·	2· ○	·1 3·
25	4·	1· ○ ² ₃	
26	4·	3· ○	·1 2·
27	·4 3·	·1 ₂ ○	
28	·4	·3 ·2 ○	1·
29		·4 ·1 ○ ³ ·2	
30		·4 ₁ ○ ·2·	·3
31		2· ○	·4 3· ● ·1

Phases of the Eclipses of the Satellites for an inverting Telescope.



526 SATELLITES OF JUPITER, 1924.

FEBRUARY.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	I. Sh. c.	12 40	8	I. Tr. f.	17 49	16	II. Em.	2 19	23	II. Im.	2 36
	I. Tr. c.	13 42		II. E. c.	19 3·7		III. Sh. c.	8 48		II. Em.	4 58
	I. Sh. f.	14 49		II. Em.	23 39		III. Sh. f.	10 55		III. Sh. c.	12 45
	I. Tr. f.	15 52					III. Tr. c.	13 31		III. Sh. f.	14 53
	II. E. c.	16 30·6					I. E. c.	13 43·8		I. E. c.	15 37·3
	II. Em.	20 58	9	III. Sh. c.	4 52		III. Tr. f.	15 45		III. Tr. c.	17 39
				III. Sh. f.	6 58		I. Em.	17 7		I. Em.	19 2
				III. Tr. c.	9 21					III. Tr. f.	19 53
				III. Tr. f.	11 35						
2	III. Sh. c.	0 55		I. E. c.	11 50·3	17	I. Sh. c.	10 54	24	I. Sh. c.	12 48
	III. Sh. f.	3 0		I. Em.	15 10		I. Tr. c.	12 4		I. Tr. c.	14 0
	III. Tr. c.	5 8					I. Sh. f.	13 4		I. Sh. f.	14 57
	III. Tr. f.	7 21					I. Tr. f.	14 14		I. Tr. f.	16 9
	I. E. c.	9 56·7	10	I. Sh. c.	9 1		II. Sh. c.	16 37		II. Sh. c.	19 13
	I. Em.	13 12		I. Tr. c.	10 8		II. Sh. f.	18 58		II. Sh. f.	21 33
				I. Sh. f.	11 11		II. Tr. d.	19 1		II. Tr. c.	21 41
				I. Tr. f.	12 18		II. Tr. f.	21 22			
3	I. Sh. c.	7 8		II. Sh. c.	14 2	18	I. E. c.	8 12·2	25	II. Tr. f.	0 2
	I. Tr. c.	8 11		II. Tr. c.	16 20		I. Em.	11 36		I. E. c.	10 5·7
	I. Sh. f.	9 18		II. Sh. f.	16 22					I. Em.	13 31
	I. Tr. f.	10 21		II. Tr. f.	18 41						
	II. Sh. c.	11 26				19	I. Sh. c.	5 23	26	I. Sh. c.	7 16
	II. Tr. c.	13 37	11	I. E. c.	6 18·7		I. Tr. c.	6 33		I. Tr. c.	8 29
	II. Sh. f.	13 46		I. Em.	9 39		I. Sh. f.	7 32		I. Sh. f.	9 25
	II. Tr. f.	15 58					I. Tr. f.	8 43		I. Tr. f.	10 38
							II. E. c.	10 53·4		II. E. c.	13 26·7
4	I. E. c.	4 25·1	12	I. Sh. c.	3 30		II. E. f.	13 14·3	27	II. E. f.	15 47·8
	I. Em.	7 42		I. Tr. c.	4 37		II. Im.	13 17		II. Im.	15 55
				I. Sh. f.	5 39		II. Em.	15 39		II. Em.	18 17
				I. Tr. f.	6 47		III. E. c.	22 56·1			
5	I. Sh. c.	1 37		II. E. c.	8 20·3	20	III. E. f.	1 5·5	28	III. E. c.	2 54·0
	I. Tr. c.	2 41		II. Em.	12 59		I. E. c.	2 40·5		I. E. c.	4 34·0
	I. Sh. f.	3 46		III. E. c.	18 58·7		III. Im.	3 47		III. E. f.	5 4·4
	I. Tr. f.	4 50		III. E. f.	21 7·1		III. Em.	6 3		III. Im.	7 54
	II. E. c.	5 47·2		III. Im.	23 38		I. Em.	6 5		I. Em.	8 0
	II. Em.	10 19					I. Sh. c.	23 51		III. Em.	10 10
	III. E. c.	15 0·9	13	I. E. c.	0 47·0	21	I. Tr. c.	1 2	29	I. Sh. c.	1 44
	III. E. f.	17 8·3		III. Em.	1 54		I. Sh. f.	2 0		I. Tr. c.	2 57
	III. Im.	19 25		I. Em.	4 8		I. Tr. f.	3 12		I. Sh. f.	3 53
	III. Em.	21 40		I. Sh. c.	21 58		II. Sh. c.	5 55		I. Tr. f.	5 7
	I. E. c.	22 53·5		I. Tr. c.	23 6		II. Sh. f.	8 16		II. Sh. c.	8 31
6	I. Em.	2 11	14	I. Sh. f.	0 7		II. Tr. c.	8 22		II. Sh. f.	10 51
	I. Sh. c.	20 5		I. Tr. f.	1 16		I. E. c.	21 8·9		II. Tr. c.	11 1
	I. Tr. c.	21 10		II. Sh. c.	3 20					II. Tr. f.	13 21
	I. Sh. f.	22 14		II. Sh. f.	5 40					I. E. c.	23 2·4
	I. Tr. f.	23 20		II. Tr. c.	5 41						
				II. Tr. f.	8 2	22	I. Em.	0 34	29	I. Em.	2 29
7	II. Sh. c.	0 45		I. E. c.	19 15·4		I. Sh. c.	18 19		I. Sh. c.	20 12
	II. Tr. c.	2 59		I. Em.	22 38		I. Tr. c.	19 31		I. Tr. c.	21 26
	II. Sh. f.	3 5					I. Sh. f.	20 29		I. Sh. f.	22 22
	II. Tr. f.	5 20					I. Tr. f.	21 41		I. Tr. f.	23 35
	I. E. c.	17 21·9	15	I. Sh. c.	16 26	23	II. E. c.	0 10·0			
	I. Em.	20 41		I. Tr. c.	17 35		II. E. f.	2 31·0			
				I. Sh. f.	18 35						
				I. Tr. f.	19 45						
				II. E. c.	21 36·8						
8	I. Sh. c.	14 33									
	I. Tr. c.	15 39									
	I. Sh. f.	16 42									

Eclipse commences - - - E. c.
 „ finishes - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - Em.

Shadow commences - - - Sh. c.
 „ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 527

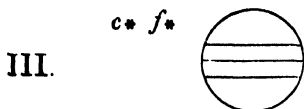
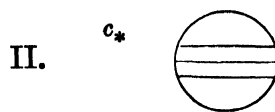
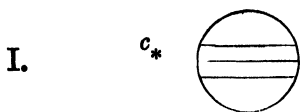
FEBRUARY.

MEAN TIME.

Configurations at 17^h 30^m for an inverting Telescope.

Day.	West.	East.
1	• ● 2	1 [•] ○ 3 [•] 4 [•]
2		3 [•] ○ 1 [•] 2 [•] 4 [•]
3		3 [•] 1 [•] 2 [•] ○ 4 [•]
4		3 [•] 2 [•] ○ 1 [•] 4 [•]
5		1 [•] ○ 3 [•] 2 [•] 4 [•]
6		○ 1 [•] 2 [•] 3 [•] 4 [•]
7	• ● 1	2 [•] ○ 4 [•] 3 [•]
8	1. ○	2 [•] 4 [•] ○ 3 [•]
9		4 [•] 3 [•] ○ 1 [•] 2 [•]
10	2. ○	4 [•] 3 [•] 1 [•] ○
11		4 [•] 3 [•] 2 [•] ○ 1 [•]
12		4 [•] 1 [•] 3 [•] ○ 2 [•]
13		4 [•] ○ 1 [•] 2 [•] 3 [•]
14		4 [•] 2 [•] 1 [•] ○ 3 [•]
15		4 [•] 2 [•] 1 [•] ○ 3 [•]
16		3 [•] 4 [•] 1 [•] 2 [•]
17		3 [•] 1 [•] 2 [•] ○ 4 [•]
18		3 [•] 2 [•] ○ 1 [•] 4 [•]
19		1 [•] 3 [•] ○ 2 [•] 4 [•]
20		○ 1 [•] 2 [•] 3 [•] 4 [•]
21		2 [•] 1 [•] ○ 3 [•] 4 [•]
22		2 [•] ○ 1 [•] 3 [•] 4 [•]
23	• ● 1	3 [•] ○ 2 [•] 4 [•]
24		3 [•] 1 [•] ○ 2 [•] 4 [•]
25		3 [•] 2 [•] 4 [•] ○ 1 [•]
26		4 [•] 3 [•] 1 [•] ○
27		4 [•] ○ 3 [•] 2 [•]
28		4 [•] 1 [•] ○ 2 [•] 3 [•]
29		4 [•] 2 [•] ○ 1 [•] 3 [•]

Phases of the Eclipses of the Satellites for an inverting Telescope.



528 SATELLITES OF JUPITER, 1924.

MARCH.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	II. E. c.	2 43.3	8	III. Sh. c.	20 40	16	III. Tr. f.	7 55	24	II. Sh. c.	5 32
	II. E. f.	5 4.6		III. Sh. f.	22 50		I. Sh. c.	18 27		II. Sh. f.	7 53
	II. Im.	5 13		I. Em.	22 51		I. Tr. c.	19 41		II. Tr. c.	8 1
	II. Em.	7 35					I. Sh. f.	20 36		II. Tr. f.	10 21
	III. Sh. c.	16 42	9	III. Tr. c.	1 43	17	I. Tr. f.	21 51		I. E. c.	17 39.2
	I. E. c.	17 30.7		III. Tr. f.	3 58					I. Em.	21 4
	III. Sh. f.	28 51		I. Sh. c.	16 34		II. Sh. c.	2 58	25	I. Sh. c.	14 48
	I. Em.	20 57		I. Tr. c.	17 48		II. Sh. f.	5 18		I. Tr. c.	16 0
	III. Tr. c.	21 42		I. Sh. f.	18 43		II. Tr. c.	5 29		I. Sh. f.	16 58
	III. Tr. f.	23 57		I. Tr. f.	19 58		II. Tr. f.	7 50		I. Tr. f.	18 10
							I. E. c.	15 45.8		II. E. c.	23 41.1
2	I. Sh. c.	14 41	10	II. Sh. c.	0 23	18	I. Em.	19 12	26	II. E. f.	2 3.2
	I. Tr. c.	15 54		II. Sh. f.	2 43					II. Im.	2 8
	I. Sh. f.	16 50		II. Tr. c.	2 55		I. Sh. c.	12 55		II. Em.	4 31
	I. Tr. f.	18 4		II. Tr. f.	5 16		I. Tr. c.	14 9		I. E. c.	12 7.4
	II. Sh. c.	21 48		I. E. c.	13 52.5		I. Sh. f.	15 4		I. Em.	15 32
				I. Em.	17 20		I. Tr. f.	16 19		III. E. c.	18 42.6
3	II. Sh. f.	0 8	11	I. Sh. c.	11 2	19	II. E. c.	21 7.3	27	III. E. c.	20 57.2
	II. Tr. c.	0 19		I. Tr. c.	12 16		II. E. f.	23 29.1		III. E. f.	20 57.2
	II. Tr. f.	2 40		I. Sh. f.	13 11		II. Im.	23 38		III. Im.	23 38
	I. E. c.	11 59.1		I. Tr. f.	14 26						
	I. Em.	15 26		II. E. c.	18 33.6		II. Em.	2 0		III. Em.	1 55
4	I. Sh. c.	9 9	12	II. E. f.	20 55.2	20	I. E. c.	10 14.1	28	I. Sh. c.	9 16
	I. Tr. c.	10 23		II. Im.	21 5		I. Em.	13 40		I. Tr. c.	10 28
	I. Sh. f.	11 18		II. Em.	23 27		III. E. c.	14 45.5		I. Sh. f.	11 26
	I. Tr. f.	12 33					III. E. f.	16 59.1		I. Tr. f.	12 38
	II. E. c.	16 0.1		I. E. c.	8 20.7		III. Im.	19 48		II. Sh. c.	18 50
	II. E. f.	18 21.5		III. E. c.	10 48.5		III. Em.	22 5		II. Sh. f.	21 11
	II. Im.	18 31		I. Em.	11 48	21	I. Sh. c.	7 23	29	II. Tr. c.	21 16
	II. Em.	20 53		III. E. f.	13 1.0		I. Tr. c.	8 37		II. Tr. f.	23 36
5	I. E. c.	6 27.4	13	III. Im.	15 54	22	I. Sh. f.	9 33	30	I. E. c.	6 35.8
	III. E. c.	6 51.3		III. Em.	18 11		I. Tr. f.	10 47		I. Em.	10 0
	III. E. f.	9 2.8		I. Sh. c.	5 30		II. Sh. c.	16 16			
	I. Em.	9 55		I. Tr. c.	6 45		II. Sh. f.	18 36		I. Sh. c.	3 45
	III. Im.	11 56		I. Sh. f.	7 40		II. Tr. c.	18 46		I. Sh. f.	4 56
	III. Em.	14 13		I. Tr. f.	8 54		II. Tr. f.	21 6		I. Sh. f.	5 54
6	I. Sh. c.	3 37	14	II. Sh. c.	13 41	21	I. E. c.	4 42.5	31	I. Tr. f.	7 6
	I. Tr. c.	4 51		II. Sh. f.	16 1		I. Em.	8 8		II. E. c.	12 58.0
	I. Sh. f.	5 46		II. Tr. c.	16 13					II. E. f.	15 20.3
	I. Tr. f.	7 1		II. Tr. f.	18 33		I. Sh. c.	1 51		II. Im.	15 23
	II. Sh. c.	11 6		I. E. c.	2 49.1		I. Tr. c.	3 5		II. Em.	17 45
	II. Sh. f.	13 26		I. Em.	6 16	22	I. Sh. f.	4 1	30		
	II. Tr. c.	13 38		I. Sh. c.	23 58		I. Tr. f.	5 14		I. E. c.	1 4.1
	II. Tr. f.	15 58					II. E. c.	10 24.1		I. Em.	4 27
7	I. E. c.	0 55.7	15	I. Tr. c.	1 13	23	II. E. f.	12 46.1	31	III. Sh. c.	8 32
	I. Em.	4 23		I. Sh. f.	2 8		II. Im.	12 53		III. Sh. f.	10 45
	I. Sh. c.	22 5		I. Tr. f.	3 22		II. E. c.	15 15		III. Tr. c.	13 20
	I. Tr. c.	23 20		II. E. c.	7 50.4		II. E. c.	23 10.8		III. Tr. f.	15 34
				II. E. f.	10 12.1		I. E. c.			I. Sh. c.	22 13
				II. Im.	10 22		I. Em.	2 36		I. Tr. c.	23 23
				II. Em.	12 43		III. Sh. c.	4 35		I. Sh. f.	0 23
				I. E. c.	21 17.4		III. Sh. f.	6 47		I. Tr. f.	1 33
8	I. Sh. f.	0 15	16	III. Sh. c.	0 37		III. Tr. c.	9 32		II. Sh. c.	8 7
	I. Tr. f.	1 29		I. Sh. c.	0 37		III. Tr. f.	11 47		II. Sh. f.	10 28
	II. E. c.	5 16.8		I. Em.	0 44		I. Sh. c.	20 20		II. Tr. c.	10 30
	II. E. f.	7 38.3		III. Sh. f.	2 48		I. Tr. c.	21 33		II. Tr. f.	12 50
	II. Im.	7 48		III. Sh. f.	2 48		I. Sh. f.	22 29		I. E. c.	19 32.5
	II. Em.	10 10		III. Tr. c.	5 40		I. Tr. f.	23 42		I. Em.	22 55
	I. E. c.	19 24.1									

Eclipse commences - - - E. c.

„ finishes - - - E. f.

Occultation, immersion - - Im.

„ emersion - - Em.

Transit commences - - - Tr. c.

„ finishes - - - Tr. f.

Shadow commences - - - Sh. c.

„ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 529

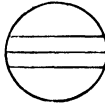
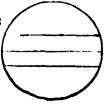
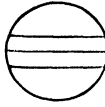
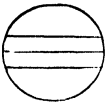
MARCH.

MEAN TIME.

Configurations at 16^h 15^m for an inverting Telescope.

Day.	West.	East.
1	4	1 3 2
2	4 3	2 1 0
3	3 4	1 0
4	2 3 1	0 4
5		0 3 1 4
6		1 2 3 4
7		2 1 3 4
8		1 0 3 4
9		3 1 2 4
10	3 2	0 4 1
11		3 2 4
12	3	0 4 1 2
13		1 0 3 2 0
14	4 2	0 1 3
15	4	1 2 3
16	4	3 1 2
17	1 4 3 2	0
18	1 0 4 3 2	0
19	3 4	0 1 2
20		4 1 2 3
21		2 0 4 1 3
22		1 0 3 4
23		3 0 1 2 4
24		3 2 1 0 4
25		3 2 0 4 1 0
26		3 0 1 2 4
27		1 0 2 3 4
28		2 0 1 4 3
29	2	1 4 3
30		4 0 1 2
31	4 3	1 2 0

Phases of the Eclipses of the Satellites for an inverting Telescope.

<p>I. <i>c*</i> </p>	<p>II. <i>c*</i> <i>f*</i> </p>
<p>III. <i>c*</i> <i>f*</i> </p>	<p>IV. No Eclipse  of this Satellite.</p>

530 SATELLITES OF JUPITER, 1924.

APRIL.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	I. Sh. c.	16 41	9	II. E. c.	4 49.4	17	III. E. c.	6 35.6	24	I. Sh. c.	16 49
	I. Tr. c.	17 51		II. Em.	9 25		III. E. f.	8 53.5		I. Tr. c.	17 43
	I. Sh. f.	18 51		I. E. c.	15 54.1		III. Im.	10 42		I. Sh. f.	19 0
	I. Tr. f.	20 1		I. Em.	19 11		III. Em.	12 58		I. Tr. f.	19 53
							I. Sh. c.	14 56			
2	II. E. c.	2 15.0	10	III. E. c.	2 37.6		I. Tr. c.	15 56			
	II. Em.	6 59		III. E. f.	4 54.4		I. Sh. f.	17 6			
	I. E. c.	14 0.8		III. Im.	7 5		I. Tr. f.	18 6	25	II. Sh. c.	5 7
	I. Em.	17 22		III. Em.	9 21					II. Tr. c.	6 54
	III. E. c.	22 40.3		I. Sh. c.	13 3	18	II. Sh. c.	2 33		II. Sh. f.	7 29
				I. Tr. c.	14 7		II. Tr. c.	4 33		II. Tr. f.	9 14
				I. Sh. f.	15 13		II. Sh. f.	4 55		I. E. c.	14 9.3
				I. Tr. f.	16 18		II. Tr. f.	6 53		I. Em.	17 13
				II. Sh. c.	23 59		I. E. c.	12 15.9			
							I. Em.	15 26			
3	III. E. f.	0 56.0		II. Tr. c.	2 10	19	I. Sh. c.	9 24	26	I. Sh. c.	11 17
	III. Im.	3 24		II. Sh. f.	2 20		I. Tr. c.	10 22		I. Tr. c.	12 9
	III. Em.	5 41		II. Tr. f.	4 30		I. Sh. f.	11 35		I. Sh. f.	13 28
	I. Sh. c.	11 9	11	I. E. c.	10 22.5		I. Tr. f.	12 33		I. Tr. f.	14 20
	I. Tr. c.	12 18		I. Em.	13 39		II. E. c.	20 41.0		II. E. c.	23 15.7
	I. Sh. f.	13 19									
	I. Tr. f.	14 28									
	II. Sh. c.	21 24									
	II. Tr. c.	23 44									
	II. Sh. f.	23 46									
4	II. Tr. f.	2 4	12	I. Sh. c.	7 31	20	II. Em.	1 0	27	II. Em.	3 22
	I. E. c.	8 29.1		I. Tr. c.	8 35		I. E. c.	6 44.2		I. E. c.	8 37.6
	I. Em.	11 50		I. Sh. f.	9 41		I. Em.	9 53		I. Em.	11 40
				I. Tr. f.	10 45		III. Sh. c.	20 23			
				II. E. c.	18 6.5		III. Sh. f.	22 40			
				II. Em.	22 37						
5	I. Sh. c.	5 38		I. E. c.	4 50.8	21	III. Tr. c.	0 16	28	III. Sh. c.	0 21
	I. Tr. c.	6 46		I. Em.	8 6		III. Tr. f.	2 30		III. Sh. f.	2 39
	I. Sh. f.	7 48		III. Sh. c.	16 25		I. Sh. c.	3 52		III. Tr. c.	3 46
	I. Tr. f.	8 56	13	III. Sh. f.	18 41		I. Tr. c.	4 49		I. Sh. c.	5 46
	II. E. c.	15 32.2		III. Tr. c.	20 41		I. Sh. f.	6 3		III. Tr. f.	6 0
	II. Em.	20 12		III. Tr. f.	22 55		I. Tr. f.	7 0		I. Tr. c.	6 36
							II. Sh. c.	15 50		I. Sh. f.	7 57
							II. Tr. c.	17 44		I. Tr. f.	8 46
							II. Sh. f.	18 12		II. Sh. c.	18 24
							II. Tr. f.	20 4		II. Tr. c.	20 4
										II. Sh. f.	20 46
										II. Tr. f.	22 24
6	I. E. c.	2 57.5		I. Sh. c.	1 59	22	I. E. c.	1 12.6			
	I. Em.	6 17		I. Tr. c.	3 2		I. Em.	4 20			
	III. Sh. c.	12 28	14	I. Sh. f.	4 9		I. Sh. c.	22 21			
	III. Sh. f.	14 43		I. Tr. f.	5 12		I. Tr. c.	23 16			
	III. Tr. c.	17 3		II. Sh. c.	13 16						
	III. Tr. f.	19 17		II. Tr. c.	15 21						
				II. Sh. f.	15 37						
				II. Tr. f.	17 41						
				I. E. c.	23 19.2						
7	I. Sh. c.	0 6		I. Em.	2 33	23	I. Sh. f.	0 31	29	I. E. c.	3 6.1
	I. Tr. c.	1 13		I. Sh. c.	20 27		I. Tr. f.	1 26		I. Em.	6 6
	I. Sh. f.	2 16		I. Tr. c.	21 29		II. E. c.	9 58.5			
	I. Tr. f.	3 23		I. Sh. f.	22 38		II. Em.	14 12			
	II. Sh. c.	10 41		I. Sh. c.	23 39		I. E. c.	19 40.9			
	II. Tr. c.	12 57	15	I. Tr. f.			I. Em.	22 47			
	II. Sh. f.	13 3									
	II. Tr. f.	15 17									
	I. E. c.	21 25.8									
8	I. Em.	0 44		II. E. c.	7 23.9	24	III. E. c.	10 33.1	30	I. Sh. c.	0 14
	I. Sh. c.	18 34	16	II. Em.	11 49		III. E. f.	12 52.2		I. Tr. c.	1 3
	I. Tr. c.	19 40		I. E. c.	17 47.5		III. Im.	14 14		I. Sh. f.	2 25
	I. Sh. f.	20 44		I. Em.	21 0		III. Em.	16 30		I. Tr. f.	3 13
	I. Tr. f.	21 50								II. E. c.	12 33.4
										II. Em.	16 33
										I. E. c.	21 34.4

Eclipse commences - - - E. c.
 „ finishes - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - Em.

Shadow commences - - - Sh. c.
 „ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 531

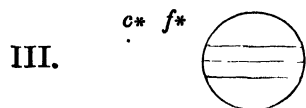
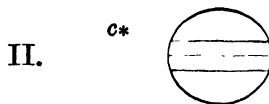
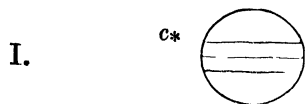
APRIL.

MEAN TIME.

Configurations at 14^h 45^m for an inverting Telescope.

Day.	West.	East.
1	4 [.] .3 .2	○ 1 [.]
2	● 1 4 [.]	○ .2
3	.4	○ _{1.} 3 ₂
4	.4	○ .1 .3
5	.4	○ 1 [.] .2 3 [.]
6		○ .4 3 [.] .1 .2
7	2. ○	○ 3 [.] .1 .4
8		○ .3 .2 ○ 1 [.] .4
9		○ .3 .1 ○ .2 .4
10		○ .3 2 [.] .4 ○ 1 [.]
11		○ .2 .1 .3 .4
12		○ _{1.} 3 [.] 4 [.]
13		○ 3 [.] .1 .2 .4
14		○ 3 [.] .1 .2 .4
15		○ 3 [.] .2 .4 ○ 1 [.]
16		○ 4 [.] .3 .1 ○ 2
17	4 [.]	○ 1 [.] 3 [.] 2 [.]
18	4 [.]	○ .2 .3 ● .1
19	.4	○ .2 1 [.] 3 [.]
20	.4	○ .1 3 [.] .2
21	.4	○ 2 [.]
22	3 [.] .4	○ 1 [.]
23	.3 .1	○ .4 .2
24	● ● 3	○ 1 [.] 2 [.] 4 [.]
25	● ● 1	○ .2 .3 .4
26		○ .2 1 [.] 3 [.] .4
27		○ .1 3 [.] .2 .4
28		○ 2 [.] .1 3 [.] 4 [.]
29	3 [.] 2 [.]	○ .1 .2 .4
30	● ● 2 .3	○ .1 .2 .4

Phases of the Eclipses of the Satellites for an inverting Telescope.



SATELLITES OF JUPITER, 1924. 533

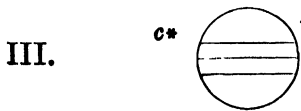
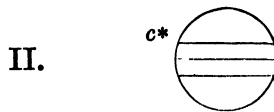
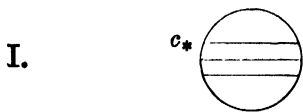
MAY.

MEAN TIME.

Configurations at 13^h 15^m for an inverting Telescope.

Day.	West.	East.
1		·3 ○ ¹ / ₄ ·2
2		4 · ¹ / ₂ ○ ·3
3	4 ·2	1 ○ ·3
4	4	○ ·2 3 · ·1
5	4	¹ / ₃ ○ ·2
6	·4 3 ·2	○ ·1
7	·4 ·3	1 ·2 ○
8	·4 ·3	○ 1 ·2
9	2. ○	·4 ·1 ○ ·3
10		·2 ○ ¹ / ₄ ·3
11	· ·1	○ ·2 3 · ⁴
12		¹ / ₃ ○ ·2 ·4
13	3 ·2	○ ·1 ·4
14	·3 1 ·2	○ ·4
15		·3 ○ ·1 ·2 ·4
16		·1 ² / ₃ ○ ·3 ·4
17	·2	○ 1 ·4 ·3
18		¹ / ₄ ○ ·2 3 ·
19	1. ○	·4 ³ / ₄ ○ ·2
20	4 3 ·2	○ ·1
21	4 ·3	² / ₁ ○
22	4	·3 ○ ·1 ·2
23	·4	·1 ○ ² / ₃ ·3
24	·4 2 ·	○ 1 ·3
25	·4	·1 ○ ³ / ₄ 3 ·
26		·4 ¹ / ₃ ○ 3 ·2
27	3 ·2	○ ¹ / ₄ ·4
28	3 ·2 1 ·	○ ·4
29	·3	○ ·1 ·2 ·4
30	1 ·	○ ³ / ₂ ·4
31	2 ·	○ 1 ·3 4 ·

Phases of the Eclipses of the Satellites for an inverting Telescope.



534 SATELLITES OF JUPITER, 1924.

JUNE.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	II. E. c.	12 13·6	9	I. Tr. c.	17 4	17	III. Tr. c.	3 4	24	II. Tr. c.	14 5
	II. Em.	14 49		I. Sh. c.	17 10		III. Sh. c.	4 7		II. Sh. c.	14 57
	I. E. c.	18 5·9		I. Tr. f.	19 15		III. Tr. f.	5 20		II. Tr. f.	16 26
	I. Em.	20 22		I. Sh. f.	19 22		III. Sh. f.	6 33		II. Sh. f.	17 21
				III. Tr. c.	23 46		II. Tr. c.	11 50		I. Im.	17 50
2	I. Sh. c.	15 15	10	III. Sh. c.	0 8		II. Sh. c.	12 23		I. E. f.	20 28·1
	I. Tr. c.	15 20		III. Tr. f.	2 1		II. Tr. f.	14 11			
	I. Sh. f.	17 27		III. Sh. f.	2 33		II. Sh. f.	14 47			
	I. Tr. f.	17 31		II. Tr. c.	9 36		I. Im.	16 5			
	III. Sh. c.	20 9		II. Sh. c.	9 49		I. E. f.	18 33·9			
	III. Tr. c.	20 30		II. Tr. f.	11 57	18	I. Tr. c.	13 14	25	I. Tr. c.	14 59
	III. Sh. f.	22 34		II. Sh. f.	12 12		I. Sh. c.	13 33		I. Sh. c.	15 27
	III. Tr. f.	22 44		I. Im.	14 21		I. Tr. f.	15 25		I. Tr. f.	17 10
				I. E. f.	16 39·8		I. Sh. f.	15 45		I. Sh. f.	17 39
3	II. Sh. c.	7 14	11	I. Tr. c.	11 30	19	II. Im.	6 6	26	II. Im.	8 23
	II. Tr. c.	7 22		I. Sh. c.	11 38		II. E. f.	9 11·1		II. E. f.	11 48·4
	II. Sh. f.	9 38		I. Tr. f.	13 41		I. Im.	10 31		I. Im.	12 16
	II. Tr. f.	9 43		I. Sh. f.	13 50		I. E. f.	13 2·4		I. E. f.	14 56·6
	I. E. c.	12 34·4									
	I. Em.	14 48									
4	I. Sh. c.	9 44	12	II. Im.	3 50	20	I. Tr. c.	7 40			
	I. Tr. c.	9 46		II. E. f.	6 34·0		I. Sh. c.	8 1			
	I. Sh. f.	11 56		I. Im.	8 47		I. Tr. f.	9 52	27	I. Tr. c.	9 25
	I. Tr. f.	11 57		I. E. f.	11 8·3		I. Sh. f.	10 13		I. Sh. c.	9 56
							III. Im.	16 53		I. Tr. f.	11 37
							III. E. f.	20 44·4		I. Sh. f.	12 8
5	II. E. c.	1 32·0	13	I. Tr. c.	5 56					III. Im.	20 12
	II. E. f.	3 57·2		I. Sh. c.	6 7						
	I. E. c.	7 2·9		I. Tr. f.	8 7	21	II. Tr. c.	0 57			
	I. E. f.	9 14·3		I. Sh. f.	8 19		II. Sh. c.	1 40			
				III. Im.	13 36		II. Tr. f.	3 18			
				III. E. f.	16 45·2		II. Sh. f.	4 4	28	III. E. f.	0 43·8
6	I. Tr. c.	4 12		II. Tr. c.	22 43		I. Im.	4 57		II. Tr. c.	3 12
	I. Sh. c.	4 12		II. Sh. c.	23 6		I. E. f.	7 31·0		II. Sh. c.	4 14
	I. Tr. f.	6 23								II. Tr. f.	5 34
	I. Sh. f.	6 24								II. Sh. f.	6 38
	III. Im.	10 20	14	II. Tr. f.	1 4	22	I. Tr. c.	2 6		I. Im.	6 42
	III. E. f.	12 45·9		II. Sh. f.	1 30		I. Sh. c.	2 30		I. E. f.	9 25·2
	II. Tr. c.	20 29		I. Im.	3 13		I. Tr. f.	4 18			
	II. Sh. c.	20 31		I. E. f.	5 36·8		I. Sh. f.	4 42			
	II. Tr. f.	22 50					II. Im.	19 14			
	II. Sh. f.	22 55					II. E. f.	22 29·3			
			15	I. Tr. c.	0 22		I. Im.	23 23	29	I. Tr. c.	3 52
				I. Sh. c.	0 35					I. Sh. c.	4 25
				I. Tr. f.	2 33					I. Tr. f.	6 3
				I. Sh. f.	2 47	23	I. E. f.	1 59·5		I. Sh. f.	6 37
				II. Im.	16 58		I. Tr. c.	20 33		II. Im.	21 32
				II. E. f.	19 52·1		I. Sh. c.	20 59			
				I. Im.	21 39		I. Tr. f.	22 44			
							I. Sh. f.	23 11			
7	I. Im.	1 30									
	I. E. f.	3 42·8									
	I. Tr. c.	22 38									
	I. Sh. c.	22 41									
8	I. Tr. f.	0 49	16	I. E. f.	0 5·3	24	III. Tr. c.	6 22	30	II. E. f.	1 6·7
	I. Sh. f.	0 53		I. Tr. c.	18 48		III. Sh. c.	8 6		I. Im.	1 8
	II. Im.	14 42		I. Sh. c.	19 4		III. Tr. f.	8 39		I. E. f.	3 53·8
	II. E. f.	17 15·2		I. Tr. f.	20 59		III. Sh. f.	10 33		I. Tr. c.	22 18
	I. Im.	19 55		I. Sh. f.	21 16					I. Sh. c.	22 54
	I. E. f.	22 11·3									

Eclipse commences - - - E. c.
 „ finishes - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - - Em.

Shadow commences - - - Sh. c.
 „ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 535

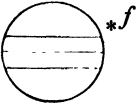
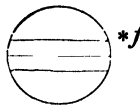
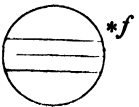

JUNE.

MEAN TIME.

Configurations at 11^h 30^m for an inverting Telescope.

Day.	West.	East.
1		·1 ·0 2 3· 4·
2		○ 1 ² · 3· 4·
3		3· 2· 1· 4·
4	1· ○	3· ·2 4· ○
5		4· 3· ○ ·1 ·2
6		4· 1· ○ 2· ● ·3
7	4·	2· ○ ·1 ·3
8	·4	·1 ·2 ○ 3·
9	·4	○ 1· 3· ·2
10	2· ○	·4 3· ·1 ○
11		3· 4· 2· ○ 1 ○
12		·3 ○ 4 ¹ ·2
13		1· ·3 2· ·4
14		2· ○ ·1 ·3 ·4
15		1· ·2 ○ 3· ·4
16		○ 1· 3 ² ·4
17		·1 3· ○ 4· 2 ○
18		3· ·2 ○ 1· 4·
19	· ● 1	·3 ○ ·2 4·
20		·3 1· ○ 4· 2·
21		2· 4· ○ ·1 ·3
22		4· 1· 2· ○ ·3
23	4·	○ 1· ·2 3·
24	4·	·1 3· 2·
25	·4 3· 2·	○ 1·
26	·4 ·3	· ○ 1 ²
27	1· ○	·4 ·3 ○ 2·
28		4 ² · ○ ·1 ·3
29		·2 1· ○ ·4 ·3
30		○ ·1 ·2 3· ·4

Phases of the Eclipses of the Satellites for an inverting Telescope.

<p>I. </p>	<p>II. </p>
<p>III. </p>	<p>IV. No Eclipse  of this Satellite.</p>

536 SATELLITES OF JUPITER, 1924.

JULY.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	I. Tr. f.	0 29	8	II. Tr. f.	21 0	16	I. Sh. c.	21 12	24	II. E. f.	22 19.2
	I. Sh. f.	1 6		I. Im.	21 20		I. Tr. f.	22 30		I. E. f.	22 34.5
	III. Tr. c.	9 44		II. Sh. f.	22 30		I. Sh. f.	23 24			
	III. Tr. f.	12 2									
	III. Sh. c.	12 5	9	I. E. f.	0 16.8	17	II. Im.	15 23	25	I. Tr. c.	16 35
	III. Sh. f.	14 34		I. Tr. c.	18 31		I. Im.	17 34		I. Sh. c.	17 36
	II. Tr. c.	16 21		I. Sh. c.	19 17		II. E. f.	19 41.3		I. Tr. f.	18 46
	II. Sh. c.	17 31		I. Tr. f.	20 42		I. E. f.	20 39.9		I. Sh. f.	19 48
	II. Tr. f.	18 42		I. Sh. f.	21 29						
	I. Im.	19 35				18	I. Tr. c.	14 46			
	II. Sh. f.	19 56	10	II. Im.	13 1		I. Sh. c.	15 41	26	III. Im.	10 1
	I. E. f.	22 22.4		I. Im.	15 47		I. Tr. f.	16 57		III. Em.	12 25
				II. E. f.	17 3.5		I. Sh. f.	17 53		II. Tr. c.	12 30
2	I. Tr. c.	16 45		I. E. f.	18 45.4					I. Im.	13 49
	I. Sh. c.	17 22								III. E. c.	14 10.0
	I. Tr. f.	18 56	11	I. Tr. c.	12 58		III. Im.	6 27	19	III. Em.	14 32
	I. Sh. f.	19 34		I. Sh. c.	13 46		II. Tr. c.	10 8		II. Sh. c.	14 53
				I. Tr. f.	15 9		III. E. c.	10 10.7		III. E. f.	16 43.8
				I. Sh. f.	15 58		II. Sh. c.	11 58		II. Sh. f.	16 57
3	II. Im.	10 41					I. Im.	12 1		I. E. f.	17 3.2
	I. Im.	14 1					II. Tr. f.	12 30			
	II. E. f.	14 25.9	12	III. Im.	2 58		III. E. f.	12 43.4			
	I. E. f.	16 51.0		III. Em.	5 20		II. Sh. f.	14 22	27	I. Tr. c.	11 2
				III. E. c.	6 11.9		I. E. f.	15 8.6		I. Sh. c.	12 5
4	I. Tr. c.	11 11		II. Tr. c.	7 48					I. Tr. f.	13 13
	I. Sh. c.	11 51		III. E. f.	8 43.5					I. Sh. f.	14 17
	I. Tr. f.	13 23		II. Sh. c.	9 23	20	I. Tr. c.	9 13			
	I. Sh. f.	14 3		II. Tr. f.	10 10		I. Sh. c.	10 10			
	III. Im.	23 33		I. Im.	10 14		I. Tr. f.	11 24			
				II. Sh. f.	11 47		I. Sh. f.	12 22			
				I. E. f.	13 14.0				28	II. Im.	7 0
5	III. Em.	1 53								I. Im.	8 17
	III. E. c.	2 12.9				21	II. Im.	4 35		I. E. f.	11 31.8
	III. E. f.	4 43.3	13	I. Tr. c.	7 25		I. Im.	6 28		II. E. f.	11 37.7
	II. Tr. c.	5 29		I. Sh. c.	8 15		II. E. f.	8 59.8			
	II. Sh. c.	6 49		I. Tr. f.	9 36		I. E. f.	9 37.3			
	II. Tr. f.	7 51		I. Sh. f.	10 27						
	I. Im.	8 27									
	II. Sh. f.	9 13	14	II. Im.	2 12		I. Tr. c.	3 40	22	I. Tr. c.	5 30
	I. E. f.	11 19.6		I. Im.	4 40		I. Sh. c.	4 39		I. Sh. c.	6 34
				II. E. f.	6 21.9		I. Tr. f.	5 51		I. Tr. f.	7 41
				I. E. f.	7 42.6		I. Sh. f.	6 51		I. Sh. f.	8 46
6	I. Tr. c.	5 38					III. Tr. c.	20 5		III. Tr. c.	23 41
	I. Sh. c.	6 20					III. Tr. f.	22 27			
	I. Tr. f.	7 49					II. Tr. c.	23 18			
	I. Sh. f.	8 32	15	I. Tr. c.	1 52						
	II. Im.	23 51		I. Sh. c.	2 44						
				I. Tr. f.	4 3						
				I. Sh. f.	4 56						
7	I. Im.	2 54		III. Tr. c.	16 34	23	III. Sh. c.	0 1	30	II. Tr. c.	1 42
	II. E. f.	3 44.2		III. Tr. f.	18 55		I. Im.	0 55		III. Tr. f.	2 5
	I. E. f.	5 48.2		III. Sh. c.	20 2		II. Sh. c.	1 15		I. Im.	2 44
				III. Sh. c.	20 57		II. Tr. f.	1 41		II. Sh. c.	3 49
				III. Sh. f.	22 33		III. Sh. f.	2 33		III. Sh. c.	4 0
				II. Tr. c.	22 33		II. Sh. f.	3 39		II. Tr. f.	4 5
				III. Sh. c.	22 40		I. E. f.	4 5.9		I. E. f.	6 0.5
				II. Sh. c.	22 40		I. Tr. c.	22 7		II. Sh. f.	6 14
				I. Im.	23 7		I. Sh. c.	23 7		III. Sh. f.	6 33
				II. Tr. f.	23 20					I. Tr. c.	23 57
8	I. Tr. c.	0 5									
	I. Sh. c.	0 49									
	I. Tr. f.	2 16									
	I. Sh. f.	3 1									
	III. Tr. c.	13 7									
	III. Tr. f.	15 26									
	III. Sh. c.	16 3									
	III. Sh. f.	18 33									
	II. Tr. c.	18 38	16	II. Sh. f.	1 5	24	I. Tr. f.	0 19	31	I. Sh. c.	1 3
	II. Sh. c.	20 6		I. E. f.	2 11.3		I. Sh. f.	1 19		I. Tr. f.	2 8
				I. Tr. c.	20 19		II. Im.	17 47		I. Sh. f.	3 15
							I. Im.	19 22		II. Im.	20 14
										I. Im.	21 11

Eclipse commences - - - E. c.
 „ finishes - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - - Em.

Shadow commences - - - Sh. c.
 „ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 537

JULY.

MEAN TIME.

Configurations at 10^h 0^m for an inverting Telescope.

Day.	West.		East.
I		1° ○ 2°	4° 3○
2		3° 2° ○ 1°	4°
3		3° 1° ○ ²	4°
4		3° 1○ 2°	4°
5		2° ○ 3°	4° ●.1
6		2° 1° ○ 4° 3°	
7		4° ○ 1° ² 3°	
8		4° 1° ○ 3° 2°	
9		4° 3° 2° ○ 1°	
10		4° 3° 1° 2° ○	
11		4° 3° ○ 1° 2°	
12	2.○	4° ○ 1° 3°	
13		4° 2° 1.○	3°
14		4° ○ 1° ² 3°	
15		1° 4° ○ 3° 2°	
16		3° 2° ○ 1° ⁴	
17		3° 1° ² ○	4°
18		3° ○ 1° 2°	4°
19		1° ¹ 2° ³ ○	4°
20		2° ○ 3° 4°	1○
21		○ 1° ² 3° 4°	
22		1° ○ 3° 2° 4°	
23		2° 3° ○ 1° 4°	
24		3° 2° 1° 4° ○	
25		4° 3° ○ 1° 2°	
26		4° 1° ○ ³ 2°	
27		4° 2° 1○	3°
28		4° ○	3° ●.1 ●.2
29		4° 1° ○ 3° 2°	
30		4° 2° 3° ○ 1°	
31		3° 4° 1° ² ○	

Phases of the Eclipses of the Satellites for an inverting Telescope.

I.



II.



III.



IV. No Eclipse



538 SATELLITES OF JUPITER, 1924.

AUGUST.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	I. E. f.	0 29.2	9	I. Im.	17 30	17	II. Sh. f.	0 41	24	I. Sh. c.	19 47
	II. E. f.	0 57.2		II. Sh. c.	19 41		III. E. c.	2 6.5		I. Tr. f.	20 42
	I. Tr. c.	18 25		II. Tr. f.	19 45		III. E. f.	4 43.8		I. Sh. f.	21 58
	I. Sh. c.	19 32		III. Em.	19 48		I. Tr. c.	16 37			
	I. Tr. f.	20 36		I. E. f.	20 52.6		I. Sh. c.	17 51	25	I. Im.	15 42
	I. Sh. f.	21 43		II. Sh. f.	22 6		I. Tr. f.	18 48		II. Im.	17 3
				III. E. c.	22 7.7		I. Sh. f.	20 3		I. E. f.	19 11.0
2	III. Im.	13 38								II. Em.	19 31
	II. Tr. c.	14 55	10	III. E. f.	0 43.8	18	I. Im.	13 49		II. E. c.	19 41.3
	I. Im.	15 39		I. Tr. c.	14 44		II. Im.	14 29		II. E. f.	22 10.1
	III. Em.	16 4		I. Sh. c.	15 56		II. Em.	16 57			
	II. Sh. c.	17 7		I. Tr. f.	16 55		II. E. c.	17 3.5	26	I. Tr. c.	12 59
	II. Tr. f.	17 18		I. Sh. f.	18 8		I. E. f.	17 16.1		I. Sh. c.	14 16
	III. E. c.	18 8.9					II. E. f.	19 32.0		I. Tr. f.	15 10
	I. E. f.	18 57.9		II. Im.	11 57					I. Sh. f.	16 27
	II. Sh. f.	19 31	11	I. Im.	11 57	19	I. Tr. c.	11 5			
	III. E. f.	20 43.8		II. Em.	14 24		I. Sh. c.	12 20	27	I. Im.	10 11
				II. E. c.	14 25.7		I. Tr. f.	13 16		II. Tr. c.	11 37
				I. E. f.	15 21.3		I. Sh. f.	14 32		I. E. f.	13 39.7
3	I. Tr. c.	12 53		II. E. f.	16 53.9					II. Tr. f.	14 2
	I. Sh. c.	14 0								II. Sh. c.	14 8
	I. Tr. f.	15 4								III. Tr. c.	14 50
	I. Sh. f.	16 12	12	I. Tr. c.	9 12	20	I. Im.	8 18		II. Sh. f.	16 34
				I. Sh. c.	10 25		II. Tr. c.	9 5		III. Tr. c.	16 30
4	II. Im.	9 27		I. Tr. f.	11 23		III. Tr. c.	10 56		III. Tr. f.	17 20
	I. Im.	10 6		I. Sh. f.	12 36		II. Sh. c.	11 33		III. Sh. c.	19 59
	I. E. f.	13 26.5					I. E. f.	11 44.8		III. Sh. f.	22 36
	II. E. f.	14 15.8	13	I. Im.	6 25		III. Tr. f.	13 25			
				II. Tr. c.	6 35		II. Sh. f.	13 59	28	I. Tr. c.	7 27
				III. Tr. c.	7 7		III. Sh. c.	16 0		I. Sh. c.	8 44
				II. Sh. c.	8 59		III. Sh. f.	18 36		I. Tr. f.	9 39
5	I. Tr. c.	7 20		II. Tr. f.	8 59					I. Sh. f.	10 56
	I. Sh. c.	8 29		III. Tr. f.	9 34	21	I. Tr. c.	5 33			
	I. Tr. f.	9 32		I. E. f.	9 50.0		I. Sh. c.	6 49	29	I. Im.	4 39
	I. Sh. f.	10 41		II. Sh. f.	11 24		I. Tr. f.	7 45		II. Im.	6 22
6	III. Tr. c.	3 22		III. Sh. c.	12 0		I. Sh. f.	9 1		I. E. f.	8 8.5
	II. Tr. c.	4 8		III. Sh. f.	14 35					II. Em.	8 50
	I. Im.	4 34								II. E. c.	9 0.6
	III. Tr. f.	5 47	14	I. Tr. c.	3 40	22	I. Im.	2 46		II. E. f.	11 29.6
	II. Sh. c.	6 24		I. Sh. c.	4 53		II. Im.	3 47			
	II. Tr. f.	6 31		I. Tr. f.	5 51		I. E. f.	6 13.6	30	I. Tr. c.	1 56
	I. E. f.	7 55.2		I. Sh. f.	7 5		II. Em.	6 14		I. Sh. c.	3 13
	III. Sh. c.	8 0					II. E. c.	6 22.8		I. Tr. f.	4 8
	II. Sh. f.	8 49	15	I. Im.	0 53		II. E. f.	8 51.5		I. Sh. f.	5 25
	III. Sh. f.	10 34		II. Im.	1 14	23	I. Tr. c.	0 2		I. Im.	23 8
				II. Em.	3 40		I. Sh. c.	1 18			
7	I. Tr. e.	1 48		II. E. c.	3 45.0		I. Tr. f.	2 13	31	II. Tr. c.	0 54
	I. Sh. c.	2 58		I. E. f.	4 18.7		I. Tr. c.	2 13		I. E. f.	2 37.2
	I. Tr. f.	3 59		II. E. f.	6 13.4		I. Sh. f.	3 30		II. Tr. f.	3 19
	I. Sh. f.	5 10		I. Tr. c.	22 8		I. Im.	21 14		II. Sh. c.	3 26
	II. Im.	22 43		I. Sh. c.	23 22		II. Tr. c.	22 21		III. Im.	4 53
	I. Im.	23 2	16				I. E. f.	0 42.3		II. Sh. f.	5 52
8	I. E. f.	2 23.9		I. Tr. f.	0 20	24	II. Tr. f.	0 45		III. Em.	7 26
	II. E. f.	3 35.3		I. Sh. f.	1 34		II. Sh. c.	0 51		III. E. c.	10 5.0
	I. Tr. c.	20 16		I. Im.	19 21		III. Im.	0 57		III. E. f.	12 44.5
	I. Sh. c.	21 27		II. Tr. c.	19 50		II. Sh. f.	3 16		I. Tr. c.	20 25
	I. Tr. f.	22 27		III. Im.	21 6		III. Em.	3 29		I. Sh. c.	21 42
	I. Sh. f.	23 39		II. Tr. f.	22 14		III. E. c.	6 5.4		I. Tr. f.	22 36
9	III. Im.	17 20		II. Sh. c.	22 16		III. E. f.	8 43.8		I. Sh. f.	23 54
	II. Tr. c.	17 21		I. E. f.	22 47.4		I. Tr. c.	18 30			
				III. Em.	23 36						

Eclipse commences - - - E. c.
 „ finishes - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - Em.

Shadow commences - - - Sh. c.
 „ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 539

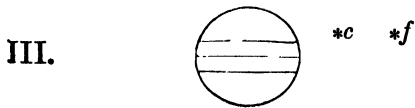
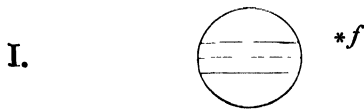
AUGUST.

MEAN TIME.

Configurations at 8^h 45^m for an inverting Telescope.

Day	West.		East.
1		·3	○ ⁴ ·1 ²
2		·1 ·3	○ 2 [·] ·4
3		2 [·]	○ 1 [·] ·3 ·4
4			○ ² ₁ ·3 ·4
5	1. ○		○ ² ₃ ·4
6		2 [·] ₃	○ ·1 ·4
7		3 [·] ·2 1 [·]	○ ·4
8		·3	○ ·2 [·] 4 [·]
9		1 [·] ₃	○ 4 [·] 2 [·]
10		2 [·] 4 [·]	○ 1 [·] ·3
11		4 [·]	○ ² ₁ ·3
12		4 [·]	○ ¹ ·2 3 [·]
13	2. ○ 3. ○	4 [·]	○ ·1
14		·4 3 [·] ·2 1 [·]	○
15		·4 ·3	○ ² ₁
16		·4 1 [·] ₃	○ 2 [·]
17		2 [·] ₄	○ 1 [·] ₃
18		·1 [·] ₂	○ ·4 ·3
19			○ 1 [·] ·2 [·] 3 [·] 4 [·]
20	· ● 1		○ ² ₃ ·4
21		3 [·] ·2 1 [·]	○ ·4
22		·3	○ ·1 ·4 [·] ● ·2
23		·3 1 [·]	○ 2 [·] ·4 [·]
24		2 [·]	○ ·3 ·1 ·4 [·]
25			○ ² ₁ 4 [·] ·3
26			○ ⁴ ₁ 1 [·] ·2 3 [·]
27		4 [·]	○ ² ₃ ·1
28	1. ○	4 [·]	○ ² ₃
29		4 [·] 3 [·]	○ ·1 ● ·2
30		4 [·] ·3 1 [·]	○ 2 [·]
31		·4 2 [·]	○ ³ ·1

Phases of the Eclipses of the Satellites for an inverting Telescope.



540 SATELLITES OF JUPITER, 1924.

SEPTEMBER.

MEAN TIME.

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

Eclipse commences - - - E. c.
 „ finishes - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - Em.

Shadow commences - - - Sh. c.
 „ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 541

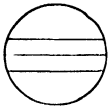
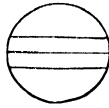
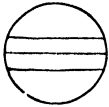
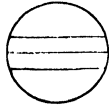
SEPTEMBER.

MEAN TIME.

Configurations at 7^h 15^m for an inverting Telescope.

Day.	West.	East.
1	4	3
2	4	1 2 3
3		1 2 3
4		1 4
5	1	2 4
6		1 2 4
7		2 3 1 4
8		1 3 4
9		1 2 3 4
10		1 2 3 4
11		1 3 4
12		1 3 4
13	1	2
14		1 2 3 4
15	4	1 3
16	4	1 2 3
17	4	1 2 3
18	4	1 3
19		1 2 3 4
20		1 2 3 4
21		1 2 3 4
22		1 3 4
23		1 3 4
24		1 2 3 4
25		1 4 3
26		1 4
27		1 2 4
28	1	2 4
29		1 2 3 4
30	2	1 3

Phases of the Eclipses of the Satellites for an inverting Telescope.

<p>I.  *<i>f</i></p>	<p>II.  *<i>c</i> *<i>f</i></p>
<p>III.  *<i>c</i> *<i>f</i></p>	<p>IV. No Eclipse  of this Satellite.</p>

542 SATELLITES OF JUPITER, 1924.

OCTOBER.

MEAN TIME.

Day.	h m	Day.	h m	Day.	h m	Day.	h m
1	I. Tr. f. 0 54 I. Sh. f. 2 5 I. Im. 19 52 I. E. f. 23 14.4	9	II. Sh. c. 5 39 II. Tr. f. 5 56 II. Sh. f. 8 8 III. Tr. c. 15 31 III. Tr. f. 18 11 I. Tr. c. 19 11 III. Sh. c. 19 56 I. Sh. c. 20 16 I. Tr. f. 21 23 I. Sh. f. 22 29 III. Sh. f. 22 40	16	III. Tr. f. 22 30 I. Tr. f. 23 23 III. Sh. c. 23 55	24	I. Im. 20 19 I. E. f. 23 27.9
2	II. Tr. c. 0 46 II. Sh. c. 3 4 II. Tr. f. 3 13 II. Sh. f. 5 32 III. Tr. c. 11 16 III. Tr. f. 13 54 III. Sh. c. 15 57 I. Tr. c. 17 12 I. Sh. c. 18 21 II. Sh. f. 18 39 I. Tr. f. 19 24 I. Sh. f. 20 33	10	I. Im. 16 20 I. E. f. 19 38.1 II. Im. 22 32	17	I. Sh. f. 0 24 III. Sh. f. 2 40 I. Im. 18 19 I. E. f. 21 33.0	25	II. Im. 4 6 II. E. f. 8 30.1 I. Tr. c. 17 41 I. Sh. c. 18 35 I. Tr. f. 19 53 I. Sh. f. 20 48
3	I. Im. 14 21 I. E. f. 17 43.2 II. Im. 19 47	11	II. E. f. 3 15.9 I. Tr. c. 13 41 I. Sh. c. 14 45 I. Tr. f. 15 53 I. Sh. f. 16 58	18	II. Im. 1 19 II. E. f. 5 53.1 I. Tr. c. 15 40 I. Sh. c. 16 40 I. Tr. f. 17 53 I. Sh. f. 18 53	26	I. Im. 14 49 I. E. f. 17 56.6 II. Tr. c. 22 21
4	II. E. f. 0 38.5 I. Tr. c. 11 42 I. Sh. c. 12 50 I. Tr. f. 13 54 I. Sh. f. 15 2	12	I. Im. 10 50 I. E. f. 14 6.8 II. Tr. c. 16 50 II. Sh. c. 18 57 II. Tr. f. 19 18 II. Sh. f. 21 26	19	I. Im. 12 49 I. E. f. 16 1.7 II. Tr. c. 19 35 II. Sh. c. 21 32 II. Tr. f. 22 3	27	II. Sh. c. 0 8 II. Tr. f. 0 50 II. Sh. f. 2 38 I. Tr. c. 12 11 I. Sh. c. 13 4 III. Im. 14 22 I. Tr. f. 14 23 I. Sh. f. 15 17 III. Em. 17 8 III. E. c. 17 58.8 III. E. f. 20 47.4
5	I. Im. 8 51 I. E. f. 12 11.9 II. Tr. c. 14 7 II. Sh. c. 16 22 II. Tr. f. 16 34 II. Sh. f. 18 50	13	III. Im. 5 43 I. Tr. c. 8 11 III. Em. 8 25 I. Sh. c. 9 14 III. E. c. 10 0.0 I. Tr. f. 10 23 I. Sh. f. 11 26 III. E. f. 12 46.3	20	II. Sh. f. 0 2 III. Im. 10 1 I. Tr. c. 10 10 I. Sh. c. 11 9 I. Tr. f. 12 23 III. Em. 12 45 I. Sh. f. 13 22 III. E. c. 13 59.5 III. E. f. 16 47.0	28	I. Im. 9 19 I. E. f. 12 25.4 II. Im. 17 30 II. E. f. 21 48.3
6	III. Im. 1 27 III. Em. 4 7 III. E. c. 6 1.0 I. Tr. c. 6 11 I. Sh. c. 7 19 I. Tr. f. 8 23 III. E. f. 8 46.2 I. Sh. f. 9 31	14	I. Im. 5 20 I. E. f. 8 35.5 II. Im. 11 55 II. E. f. 16 34.3	21	I. Im. 7 19 I. E. f. 10 30.5 II. Im. 14 42 II. E. f. 19 11.4	29	I. Tr. c. 6 41 I. Sh. c. 7 33 I. Tr. f. 8 54 I. Sh. f. 9 46
7	I. Im. 3 21 I. E. f. 6 40.6 II. Im. 9 9 II. E. f. 13 57.0	15	I. Tr. c. 2 41 I. Sh. c. 3 43 I. Tr. f. 4 53 I. Sh. f. 5 55 I. Im. 23 49	22	I. Tr. c. 4 40 I. Sh. c. 5 38 I. Tr. f. 6 53 I. Sh. f. 7 51	30	I. Im. 3 49 I. E. f. 6 54.1 II. Tr. c. 11 44 II. Sh. c. 12 26 II. Tr. f. 14 13 II. Sh. f. 15 56
8	I. Tr. c. 0 41 I. Sh. c. 1 48 I. Tr. f. 2 53 I. Sh. f. 4 0 I. Im. 21 50	16	I. E. f. 3 4.2 II. Tr. c. 6 12 II. Sh. c. 8 15 II. Tr. f. 8 40 II. Sh. f. 10 44 III. Tr. c. 19 48 I. Tr. c. 21 10 I. Sh. c. 22 12	23	I. Im. 1 49 I. E. f. 4 59.1 II. Tr. c. 8 58 II. Sh. c. 10 50 II. Tr. f. 11 26 II. Sh. f. 13 20 I. Tr. c. 23 10	31	I. Tr. c. 1 11 I. Sh. c. 2 2 I. Tr. f. 3 24 I. Sh. f. 4 14 III. Tr. c. 4 29 III. Tr. f. 7 14 III. Sh. c. 7 53 III. Sh. f. 10 41 I. Im. 22 19
9	I. E. f. 1 9.3 II. Tr. c. 3 28			24	I. Sh. c. 0 7 III. Tr. c. 0 8 I. Tr. f. 1 23 I. Sh. f. 2 19 III. Tr. f. 2 51 III. Sh. c. 3 54 III. Sh. f. 6 40		

Eclipse commences - - - E. c.
 „ finishes - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - Em.

Shadow commences - - - Sh. c.
 „ finishes - - - Sh. f.

SATELLITES OF JUPITER, 1924. 543

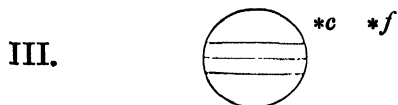
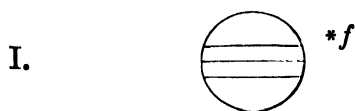
OCTOBER.

MEAN TIME.

Configurations at 5^h 45^m for an inverting Telescope.

Day.	West.	East.
1	4 [•] 1 [•] ○	2 [•] 3 [•]
2	4 [•] 2 [•] ○	3 [•] 1 [•]
3	4 [•] 3 [•] 2 [•] 1 [•] ○	
4	4 [•] 3 [•] ○	1 [•] 2 [•]
5	4 [•] 3 [•] 1 [•] ○	2 [•]
6	4 [•] 2 [•] 1 [•] ○	3 [•]
7		4 [•] 3 [•] ● 1 [•]
8		1 [•] 4 [•] 2 [•] 3 [•]
9	2 [•] ○	3 [•] 1 [•] 4 [•]
10		2 [•] 1 [•] 3 [•] 4 [•]
11	3 [•] ○	2 [•] 1 [•] 4 [•]
12	3 [•] 1 [•] ○	2 [•] 4 [•]
13	● 3 [•] 2 [•] ○	1 [•] 4 [•]
14	● 1 [•] 2 [•] ○	3 [•] 4 [•]
15		1 [•] 4 [•] 2 [•] 3 [•]
16		4 [•] 2 [•] 1 [•] 3 [•]
17	4 [•] 2 [•] 1 [•] 3 [•] ○	
18	4 [•] 3 [•] ○	1 [•] ● 2 [•]
19	4 [•] 3 [•] 1 [•] ○	2 [•]
20	4 [•] 2 [•] 3 [•] ○	1 [•]
21	4 [•] 2 [•] 1 [•] ○	3 [•]
22	1 [•] ○ 4 [•] ○	2 [•] 3 [•]
23		4 [•] 2 [•] 1 [•] 3 [•]
24		2 [•] 1 [•] 3 [•] 4 [•]
25	3 [•] ○	1 [•] 4 [•] ● 2 [•]
26	3 [•] 1 [•] ○	2 [•] 4 [•]
27	3 [•] 2 [•] ○	1 [•] 4 [•]
28	2 [•] 1 [•] ○	3 [•] 4 [•]
29	1 [•] ○	2 [•] 3 [•] 4 [•]
30		2 [•] 3 [•] 4 [•] ● 1 [•]
31	2 [•] 1 [•] ○	4 [•] 3 [•] ○

Phases of the Eclipses of the Satellites for an inverting Telescope.



544 SATELLITES OF JUPITER, 1924.

NOVEMBER.

MEAN TIME.

Day.		h m	Day.		h m	Day.		h m	Day.		h m
1	I. E. f.	1 22.8	9	I. Sh. f.	0 38	17	I. Tr. c.	18 13	25	III. Im.	8 2
	II. Im.	6 54		I. Im.	18 50		I. Sh. c.	18 49		III. E. f.	12 48.0
	II. E. f.	11 6.9		I. E. f.	21 46.3		I. Tr. f.	20 27		I. Im.	17 23
	I. Tr. c.	19 41					I. Sh. f.	21 2		I. E. f.	20 4.6
	I. Sh. c.	20 30	10	II. Tr. c.	3 55	18	III. Im.	3 35	26	II. Im.	4 47
	I. Tr. f.	21 54		II. Sh. c.	5 19		III. E. f.	8 48.0		II. E. f.	8 13.6
	I. Sh. f.	22 43		II. Tr. f.	6 26		I. Im.	15 22		I. Tr. c.	14 45
2	I. Im.	16 49		II. Sh. f.	7 50		I. E. f.	18 9.9		I. Sh. c.	15 12
	I. E. f.	19 51.5		I. Tr. c.	16 12					I. Tr. f.	16 59
				I. Sh. c.	16 54					I. Sh. f.	17 25
				I. Tr. f.	18 25						
				I. Sh. f.	19 7	19	II. Im.	1 57			
3	II. Tr. c.	1 7		III. Im.	23 10		II. E. f.	5 37.6			
	II. Sh. c.	2 44					I. Tr. c.	12 44			
	II. Tr. f.	3 37					I. Sh. c.	13 17	27	I. Im.	11 54
	II. Sh. f.	5 14	11	III. E. f.	4 48.1		I. Tr. f.	14 57		I. E. f.	14 33.2
	I. Tr. c.	14 11		I. Im.	13 20		I. Sh. f.	15 30		II. Tr. e.	22 58
	I. Sh. c.	14 59		I. E. f.	16 15.1					II. Sh. c.	23 49
	I. Tr. f.	16 24		II. Im.	23 8						
	I. Sh. f.	17 12									
	III. Im.	18 45	12	II. E. f.	3 1.4	20	I. Im.	9 52			
	III. Em.	21 32		I. Tr. c.	10 43		I. E. f.	12 38.5	28	II. Tr. f.	1 30
	III. E. c.	21 58.3		I. Sh. c.	11 23		II. Tr. c.	20 8		II. Sh. f.	2 22
4	III. E. f.	0 48.0		I. Tr. f.	12 56		II. Sh. c.	21 13		I. Tr. c.	9 16
	I. Im.	11 20		I. Sh. f.	13 36		II. Tr. f.	22 40		I. Sh. c.	9 40
	I. E. f.	14 20.2					II. Sh. f.	23 45		I. Tr. f.	11 29
	II. Im.	20 19	13	I. Im.	7 51					I. Sh. f.	11 54
				I. E. f.	10 43.7					III. Tr. c.	22 12
				II. Tr. c.	17 19	21	I. Tr. c.	7 14		III. Sh. c.	23 50
				II. Sh. c.	18 37		I. Sh. c.	7 46			
				II. Tr. f.	19 50		I. Tr. f.	9 27			
				II. Sh. f.	21 9		I. Sh. f.	9 59			
5	II. E. f.	0 25.0					III. Tr. c.	17 44			
	I. Tr. c.	8 42		I. Tr. c.	5 13		III. Sh. c.	19 51			
	I. Sh. c.	9 28		I. Sh. c.	5 51		III. Tr. f.	20 34			
	I. Tr. f.	10 54		I. Tr. f.	7 26		III. Sh. f.	22 42			
	I. Sh. f.	11 41	14	I. Sh. f.	8 4						
				III. Tr. c.	13 18						
				III. Sh. c.	15 52						
				III. Tr. f.	16 6						
				III. Sh. f.	18 42						
6	I. Im.	5 50									
	I. E. f.	8 48.9		I. Im.	2 21						
	II. Tr. c.	14 31		I. E. f.	5 12.5	22	I. Im.	4 22			
	II. Sh. c.	16 2		II. Im.	12 32		I. E. f.	7 7.3			
	II. Tr. f.	17 1		II. E. f.	16 19.7		II. Im.	15 22			
	II. Sh. f.	18 32		I. Tr. c.	23 43		II. E. f.	18 55.8			
7	I. Tr. c.	3 12	15								
	I. Sh. c.	3 56		I. Im.	2 21						
	I. Tr. f.	5 25		I. E. f.	5 12.5	23	I. Tr. c.	1 44			
	I. Sh. f.	6 9		II. Im.	12 32		I. Sh. c.	2 15			
	III. Tr. c.	8 52		II. E. f.	16 19.7		I. Tr. f.	3 58			
	III. Tr. f.	11 39		I. Tr. c.	23 43		I. Sh. f.	4 28			
	III. Sh. c.	11 52					I. Im.	22 53			
	III. Sh. f.	14 41	16	I. Sh. c.	0 20						
				I. Tr. f.	1 56						
				I. Sh. f.	2 33						
				I. Im.	20 51						
				I. E. f.	23 41.2						
8	I. Im.	0 20									
	I. E. f.	3 17.7									
	II. Im.	9 43									
	II. E. f.	13 43.4	17	II. Tr. c.	6 43		I. E. f.	1 35.9			
	I. Tr. c.	21 42		II. Sh. c.	7 55		II. Tr. c.	9 33			
	I. Sh. c.	22 25		II. Tr. f.	9 15		II. Sh. c.	10 31			
	I. Tr. f.	23 55		II. Sh. f.	10 27		II. Tr. f.	12 5			
							II. Sh. f.	13 3			
							I. Tr. c.	20 15			
							I. Sh. c.	20 43			
							I. Tr. f.	22 28			
							I. Sh. f.	22 57			

Eclipse commences - - - E. c.
 „ finishes - - - - E. f.

Transit commences - - - Tr. c.
 „ finishes - - - - Tr. f.

Occultation, immersion - - Im.
 „ emersion - - - - Em.

Shadow commences - - - Sh. c.
 „ finishes - - - - Sh. f.

SATELLITES OF JUPITER, 1924. 545

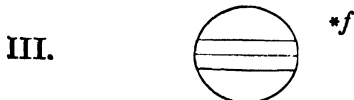
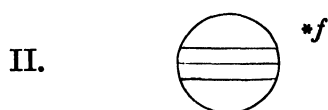
NOVEMBER.

MEAN TIME.

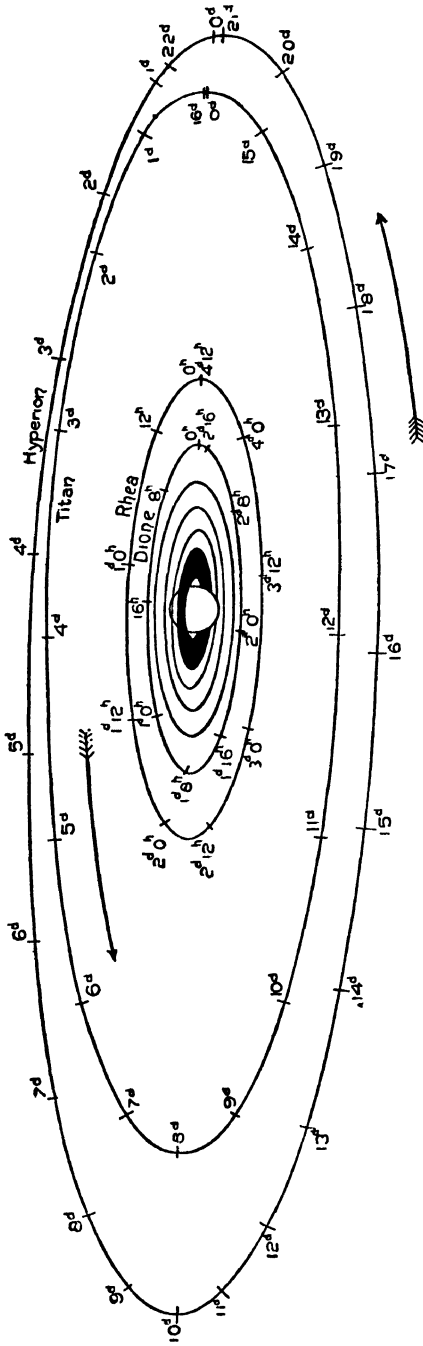
Configurations at 4^h 30^m for an inverting Telescope.

Day.	West.	East.
1	3 [.] .2 ^o 4 ⁱ	
2	.3 4 ⁱ 4 [.] 0 .2	
3	4 [.] .3 0 .1	
4	4 [.] .2 .1 0 .3	
5	4 [.] 0 1 [.] 2 [.] .3	
6	.4 0 1 [.] 2 [.] 3 [.]	
7	1 [.] 0 .4 . 2 [.] 0 3 [.]	
8	.4 3 [.] .2 0 .1	
9	3 [.] .4 1 [.] 0 .2	
10	.3 0 .4 .1	2 ^o 0 [.]
11	.2 .1 0 .4	● .3
12	0 .2 1 [.] .3 .4	
13	.1 0 2 [.] 3 [.] .4	
14	2 [.] 1 [.] 0 3 [.] .4	
15	3 [.] .2 0 4 [.] ● .1	
16	3 [.] .1 0 .2 4 [.]	
17	.3 0 2 [.] .1 4 [.]	
18	● 3 2 [.] 1 [.] 0 4 [.]	
19	4 [.] 0 1 [.] .3 ● .2	
20	4 [.] .1 0 2 [.] 3 [.]	
21	4 [.] .2 0 1 [.] 3 [.]	
22	● 1 4 [.] .3 0	
23	.4 3 [.] 1 [.] 0 .2	
24	.4 .3 0 1 [.] 2 [.]	
25	.4 2 [.] 1 [.] .3 0	
26	● 2 .4 0 1 [.] 3 [.]	
27	.1 0 .4 2 [.] .3	
28	2 [.] 0 1 [.] 3 [.] .4	

Phases of the Eclipses of the Satellites for an inverting Telescope.



South



North

NAMES OF THE SATELLITES.

- I. Mimas.
- II. Enceladus.
- III. Tethys.
- IV. Dione.
- V. Rhea.
- VI. Titan.
- VII. Hyperion.
- VIII. Iapetus.
- IX. Phœbe.

	MEAN SYNODIC PERIODS.	
	d	h
I.	0	22.6
II.	1	8.9
III.	1	21.3
IV.	2	17.7
V.	4	12.5
VI.	15	23.3
VII.	21	7.6
VIII.	79	22.1
IX.	523	15.6

APPARENT ORBITS OF THE SEVEN INNER SATELLITES OF SATURN, AT DATE OF OPPOSITION, APRIL 18, 1924, AS SEEN IN AN INVERTING TELESCOPE.

SATELLITES OF SATURN, 1924. 547

MIMAS.

Greenwich Mean Time of Eastern Elongation.

	d	h		d	h		d	h		d	h		d	h		d	h	
Jan.	1	21.2	Feb.	13	6.9	Mar.	26	16.6	May	8	2.2	June	19	12.0	July	31	21.9	
	2	19.8		14	5.5		27	15.2		9	0.8		20	10.6		Aug.	1	20.6
	3	18.4		15	4.1		28	13.8		9	23.5		21	9.2		2	19.2	
	4	17.0		16	2.7		29	12.4		10	22.1		22	7.8		3	17.8	
	5	15.6		17	1.4		30	11.0		11	20.7		23	6.4		4	16.5	
	6	14.2		18	0.0		31	9.6		12	19.3		24	5.1		5	15.1	
	7	12.8		18	22.6		Apr.	1		8.2	13		17.9	25		3.7	6	13.7
	8	11.4		19	21.3			2		6.9	14		16.5	26		2.3	7	12.3
	9	10.0		20	19.9		3	5.5		15	15.1		15	0.9		8	11.0	
	10	8.6		21	18.5		4	4.1		16	13.7		16	23.5		9	9.6	
	11	7.2		22	17.1		5	2.7		17	12.4		17	22.1		10	8.2	
	12	5.9		23	15.7		6	1.3		18	11.0		18	20.7		11	6.8	
	13	4.5		24	14.3		7	0.0		19	9.6		19	19.4		12	5.4	
	14	3.1		25	12.9		7	22.6		20	8.2		July	1		18.0	13	4.1
	15	1.8		26	11.5		8	21.2		21	6.8			2		16.6	14	2.7
16	0.4	27	10.1	9	19.8	22	5.5	3	15.2	15	1.3							
16	23.0	28	8.8	10	18.4	23	4.1	4	13.9	16	0.0							
17	21.6	29	7.4	11	17.0	24	2.7	5	12.5	16	22.6							
18	20.3	Mar.	1	6.0	12	15.6	25	1.3	6	11.1	17	21.2						
19	18.9		2	4.6	13	14.2	25	23.9	7	9.7	18	19.8						
20	17.5	3	3.3	14	12.8	26	22.6	8	8.3	19	18.4							
21	16.1	4	1.9	15	11.4	27	21.2	9	7.0	20	17.1							
22	14.7	5	0.5	16	10.0	28	19.8	10	5.6	21	15.7							
23	13.3	5	23.2	17	8.6	29	18.4	11	4.2	22	14.3							
24	12.0	6	21.8	18	7.2	30	17.0	12	2.8	23	12.9							
25	10.6	7	20.4	19	5.9	31	15.6	13	1.5									
26	9.2	8	19.0	20	4.5	June	1	14.2	14	0.1								
27	7.8	9	17.6	21	3.1		2	12.9	14	22.7								
28	6.5	10	16.3	22	1.7	3	11.5	15	21.3									
29	5.1	11	14.9	23	0.4	4	10.2	16	20.0									
30	3.7	12	13.5	23	23.0	5	8.8	17	18.6									
31	2.3	13	12.1	24	21.6	6	7.4	18	17.3									
Feb.	1	0.9	14	10.8	25	20.2	7	6.0	19	15.9								
	1	23.5	15	9.4	26	18.9	8	4.6	20	14.5								
	2	22.1	16	8.0	27	17.5	9	3.2	21	13.1								
	3	20.8	17	6.6	28	16.1	10	1.9	22	11.7								
	4	19.4	18	5.2	29	14.7	11	0.5	23	10.3								
	5	18.0	19	3.8	30	13.3	11	23.1	24	9.0								
	6	16.6	20	2.4	May	1	11.9	12	21.7	25	7.6							
	7	15.2	21	1.0		2	10.6	13	20.3	26	6.2							
	8	13.8	21	23.6	3	9.2	14	18.9	27	4.9								
	9	12.4	22	22.2	4	7.8	15	17.5	28	3.5								
	10	11.0	23	20.8	5	6.4	16	16.1	29	2.1								
	11	9.6	24	19.4	6	5.0	17	14.7	30	0.7								
12	8.2	25	18.0	7	3.6	18	13.4	30	23.3									

548 SATELLITES OF SATURN, 1924.

ENCELADUS.

Greenwich Mean Time of Eastern Elongation.

Jan.	d h	Feb.	d h	Mar.	d h	Apr.	d h	June	d h	July	d h
	2 3.1	Feb. 10	20.9	Mar. 21	14.4	Apr. 30	7.7	June 9	1.3	July 18	19.0
	3 12.0		12 5.7		22 23.2	May 1	16.6		10 10.2		20 3.9
	4 20.9		13 14.6		24 8.1		3 1.5		11 19.0		21 12.8
	6 5.8		14 23.5		25 17.0		4 10.4		13 3.9		22 21.7
	7 14.7		16 8.4		27 1.9		5 19.2		14 12.8		24 6.6
	8 23.6		17 17.3		28 10.7		7 4.1		15 21.7		25 15.4
	10 8.5		19 2.2		29 19.6		8 13.0		17 6.6		27 0.3
	11 17.4		20 11.0		31 4.5		9 21.9		18 15.4		28 9.2
	13 2.3		21 19.9	Apr. 1	13.4		11 6.7		20 0.3		29 18.1
	14 11.2		23 4.8		2 22.3		12 15.6		21 9.2		31 3.0
	15 20.1		24 13.7		4 7.2		14 0.5		22 18.1	Aug. 1	11.9
	17 5.0		25 22.5		5 16.1		15 9.4		24 3.0		2 20.8
	18 13.9		27 7.4		7 1.0		16 18.3		25 11.9		4 5.7
	19 22.8		28 16.3		8 9.8		18 3.1		26 20.7		5 14.6
	21 7.6	Mar. 1	1.2		9 18.7		19 12.0		28 5.6		6 23.5
	22 16.5		2 10.0		11 3.5		20 20.9		29 14.5		8 8.4
	24 1.4		3 18.9		12 12.4		22 5.8		30 23.4		9 17.3
	25 10.3		5 3.8		13 21.2		23 14.7	July 2	8.3		11 2.2
	26 19.2		6 12.7		15 6.1		24 23.6		3 17.2		12 11.1
	28 4.1		7 21.5		16 15.0		26 8.4		5 2.1		13 20.0
	29 13.0		9 6.4		17 23.9		27 17.3		6 11.0		15 4.9
	30 21.9		10 15.3		19 8.7		29 2.2		7 19.9		16 13.8
Feb. 1	6.8		12 0.2		20 17.6		30 11.1		9 4.7		17 22.7
	2 15.7		13 9.1		22 2.5		31 20.0		10 13.6		19 7.6
	4 0.5		14 17.9		23 11.4	June 2	4.9		11 22.5		20 16.5
	5 9.4		16 2.8		24 20.2		3 13.7		13 7.4		22 1.4
	6 18.2		17 11.7		26 5.1		4 22.6		14 16.3		23 10.3
	8 3.1		18 20.6		27 14.0		6 7.5		16 1.2		24 19.2
	9 12.0		20 5.5		28 22.9		7 16.4		17 10.1		

TETHYS.

Greenwich Mean Time of Eastern Elongation.

Jan.	d h	Jan.	d h	Feb.	d h	Feb.	d h	Mar.	d h	Apr.	d h
	1 17.1	Jan. 20	14.9	Feb. 8	11.7	Feb. 27	8.6	Mar. 17	5.5	Apr. 5	2.4
	3 14.5		22 12.3		10 9.0		29 5.9		19 2.8		6 23.7
	5 11.9		24 9.6		12 6.3	Mar. 2	3.2		21 0.1		8 21.0
	7 9.3		26 7.0		14 3.6		4 0.4		22 21.4		10 18.3
	9 6.7		28 4.3		16 0.8		5 21.7		24 18.7		12 15.6
	11 4.1		30 1.6		17 22.1		7 19.0		26 16.0		14 12.9
	13 1.4		31 22.8		19 19.4		9 16.3		28 13.3		16 10.2
	14 22.8	Feb. 2	20.0		21 16.7		11 13.6		30 10.6		18 7.5
	16 20.2		4 17.2		23 14.0		13 10.9	Apr. 1	7.9		20 4.7
	18 17.5		6 14.4		25 11.3		15 8.2		3 5.2		22 2.0

SATELLITES OF SATURN, 1924. 549

TETHYS—continued.

Greenwich Mean Time of Eastern Elongation.

d h		d h		d h		d h		d h		d h	
Apr.	23 23·3	May	14 17·5	June	4 11·8	June	25 6·2	July	16 0·6	Aug.	5 19·2
	25 20·6		16 14·8		6 9·1		27 3·5		17 21·9		7 16·5
	27 17·9		18 12·1		8 6·4		29 0·8		19 19·2		9 13·8
	29 15·2		20 9·4		10 3·7		30 22·1		21 16·6		11 11·1
May	1 12·5		22 6·7		12 1·0	July	2 19·4		23 13·9		13 8·4
	3 9·8		24 4·0		13 22·3		4 16·7		25 11·2		15 5·8
	5 7·1		26 1·3		15 19·6		6 14·0		27 8·5		17 3·1
	7 4·3		27 22·6		17 16·9		8 11·3		29 5·9		19 0·4
	9 1·6		29 19·9		19 14·2		10 8·7		31 3·2		20 21·7
	10 22·9		31 17·2		21 11·5		12 6·0	Aug.	2 0·5		22 19·1
	12 20·2	June	2 14·5		23 8·8		14 3·3		3 21·8		24 16·4

DIONE.

Greenwich Mean Time of Eastern Elongation.

d h		d h		d h		d h		d h		d h	
Jan.	2 5·0	Feb.	12 6·5	Mar.	24 7·4	May	4 8·2	June	14 9·1	July	25 10·5
	4 22·7		15 0·2		27 1·1		7 1·9		17 2·8		28 4·3
	7 16·4		17 17·9		29 18·8		9 19·6		19 20·5		30 22·0
	10 10·1		20 11·6	Apr.	1 12·5		12 13·2		22 14·2	Aug.	2 15·7
	13 3·8		23 5·2		4 6·1		15 6·8		25 7·9		5 9·4
	15 21·5		25 22·9		6 23·8		18 0·5		28 1·6		8 3·1
	18 15·2		28 16·5		9 17·4		20 18·1		30 19·3		10 20·9
	21 8·9	Mar.	2 10·2		12 11·0		23 11·8	July	3 13·0		13 14·6
	24 2·6		5 3·8		15 4·7		26 5·4		6 6·7		16 8·3
	26 20·3		7 21·5		17 22·4		28 23·1		9 0·3		19 2·0
	29 14·0		10 15·1		20 16·0		31 16·8		11 18·0		21 19·7
Feb.	1 7·7		13 8·8		23 9·7	June	3 10·5		14 11·7		24 13·4
	4 1·4		16 2·5		26 3·3		6 4·1		17 5·4		
	6 19·1		18 20·1		28 20·9		8 21·8		19 23·1		
	9 12·8		21 13·8	May	1 14·6		11 15·5		22 16·8		

RHEA.

Greenwich Mean Time of Eastern Elongation.

d h		d h		d h		d h		d h		d h	
Jan.	1 11·5	Feb.	11 3·7	Mar.	22 19·0	May	2 9·9	June	12 1·1	July	22 17·0
	6 0·0		15 16·1		27 7·3		6 22·2		16 13·5		27 5·5
	10 12·5		20 4·5		31 19·6		11 10·5		21 1·9		31 18·0
	15 1·0		24 16·8	Apr.	5 8·0		15 22·8		25 14·3	Aug.	5 6·5
	19 13·5		29 5·2		9 20·3		20 11·2		30 2·7		9 19·0
	24 1·9	Mar.	4 17·6		14 8·6		24 23·6	July	4 15·2		14 7·5
	28 14·4		9 5·9		18 20·9		29 11·9		9 3·6		18 20·0
Feb.	2 2·8		13 18·3		23 9·2	June	3 0·3		13 16·1		23 8·6
	6 15·2		18 6·6		27 21·5		7 12·7		18 4·6		

550 SATELLITES OF SATURN, 1924.

TITAN.

Greenwich Mean Time of Greatest Elongation.

d	h	d	h	d	h	d	h	d	h	d	h
Jan. 6	5·4 E	Feb. 15	3·9 W	Mar. 25	22·4 E	May 4	16·5 W	June 13	11·0 E	July 23	8·0 W
14	5·8 W	23	2·4 E	Apr. 2	21·6 W	12	15·1 E	21	10·2 W	31	7·8 E
22	4·9 E	Mar. 2	2·2 W	10	20·0 E	20	14·0 W	29	9·5 E	Aug. 8	7·6 W
30	5·0 W	10	0·6 E	18	19·0 W	28	12·9 E	July 7	8·9 W	16	7·5 E
Feb. 7	3·8 E	18	0·1 W	26	17·5 E	June 5	11·8 W	15	8·4 E	24	7·6 W

HYPERION.

Greenwich Mean Time of Greatest Elongation.

d	h	d	h	d	h	d	h	d	h	d	h
Jan. 8	19·4 E	Feb. 20	3·8 E	Apr. 2	9·5 E	May 14	15·2 E	June 26	0·4 E	Aug. 7	14·9 E
18	13·6 W	29	22·4 W	12	3·2 W	24	8·4 W	July 5	18·9 W	17	12·3 W
30	0·0 E	Mar. 12	6·8 E	23	12·0 E	June 4	19·2 E	17	7·0 E		
Feb. 8	18·7 W	22	1·0 W	May 3	5·4 W	14	13·0 W	27	2·9 W		

IAPETUS.

Greenwich Mean Time of Conjunction and Greatest Elongation.

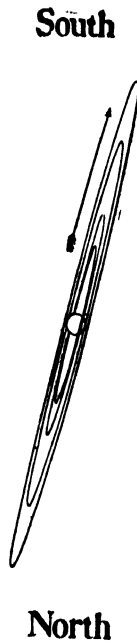
d	h	d	h	d	h	d	h	d	h	d	h
Jan. 13	11·6 E	Feb. 21	0·9 W	Apr. 1	12·6 E	May 9	6·6 W	June 18	20·2 E	July 27	7·6 W
Feb. 1	10·9 I	Mar. 12	17·4 S	20	1·7 I	29	19·8 S	July 7	17·0 I	Aug. 17	10·7 S

RINGS OF SATURN, 1924.

551

ELEMENTS FOR DETERMINING THE GEOCENTRIC POSITION, APPEARANCE, AND MAGNITUDE OF SATURN'S RINGS.

Greenwich Mean Midnight.	<i>a</i>	<i>b</i>	<i>P</i>	<i>B</i>	<i>U</i>	ω	<i>B'</i>	<i>U'</i>	Stellar Mag.	
Jan.	5	37 ^h .66	+10 ^m .63	-0 55 ^s .2	+16 23 ^s .5	82 20 ^s .8	42 11 ^s .4	+14 15 ^s .6	34 50 ^s .3	+0.9
	13	38 ^h .16	10 ^m .85	0 52 ^s .1	16 31 ^s .1	82 46 ^s .8	42 11 ^s .4	14 21 ^s .6	35 5 ^s .0	0.8
	21	38 ^h .69	11 ^m .06	0 49 ^s .7	16 36 ^s .2	83 6 ^s .8	42 11 ^s .4	14 27 ^s .5	35 19 ^s .7	0.8
Feb.	29	39 ^h .22	11 ^m .24	0 48 ^s .1	16 39 ^s .1	83 20 ^s .7	42 11 ^s .3	14 33 ^s .4	35 34 ^s .4	0.8
	6	39 ^h .76	11 ^m .40	0 47 ^s .2	16 39 ^s .6	83 28 ^s .0	42 11 ^s .3	14 39 ^s .3	35 49 ^s .1	0.7
	14	40 ^h .30	+11 ^m .53	-0 47 ^s .1	+16 37 ^s .7	83 28 ^s .7	42 11 ^s .2	+14 45 ^s .3	36 3 ^s .9	+0.7
Mar.	22	40 ^h .83	11 ^m .63	0 47 ^s .8	16 33 ^s .5	83 23 ^s .0	42 11 ^s .2	14 51 ^s .2	36 18 ^s .6	0.7
	1	41 ^h .32	11 ^m .70	0 49 ^s .2	16 26 ^s .9	83 11 ^s .0	42 11 ^s .2	14 57 ^s .2	36 33 ^s .3	0.6
	9	41 ^h .75	11 ^m .74	0 51 ^s .3	16 18 ^s .5	82 52 ^s .9	42 11 ^s .2	15 3 ^s .1	36 48 ^s .0	0.6
Apr.	17	42 ^h .14	11 ^m .71	0 54 ^s .1	16 8 ^s .4	82 29 ^s .6	42 11 ^s .1	15 8 ^s .9	37 2 ^s .8	0.5
	25	42 ^h .45	+11 ^m .66	-0 57 ^s .4	+15 56 ^s .9	82 1 ^s .8	42 11 ^s .0	+15 14 ^s .8	37 17 ^s .6	+0.5
	2	42 ^h .68	11 ^m .58	1 1 ^s .1	15 44 ^s .3	81 30 ^s .5	42 11 ^s .0	15 20 ^s .6	37 32 ^s .3	0.4
	10	42 ^h .84	11 ^m .46	1 5 ^s .0	15 30 ^s .9	80 56 ^s .7	42 11 ^s .0	15 26 ^s .4	37 47 ^s .1	0.4
	18	42 ^h .88	11 ^m .31	1 9 ^s .1	15 17 ^s .2	80 21 ^s .6	42 11 ^s .0	15 32 ^s .2	38 1 ^s .8	0.4
May	26	42 ^h .84	11 ^m .15	1 13 ^s .3	15 3 ^s .8	79 46 ^s .4	42 10 ^s .9	15 37 ^s .9	38 16 ^s .6	0.4
	4	42 ^h .71	+10 ^m .95	-1 17 ^s .3	+14 51 ^s .2	79 12 ^s .2	42 10 ^s .9	+15 43 ^s .6	38 31 ^s .4	+0.5
	12	42 ^h .49	10 ^m .75	1 21 ^s .0	14 39 ^s .6	78 40 ^s .3	42 10 ^s .8	15 49 ^s .3	38 46 ^s .2	0.5
	20	42 ^h .18	10 ^m .55	1 24 ^s .4	14 29 ^s .4	78 11 ^s .5	42 10 ^s .8	15 55 ^s .0	39 1 ^s .0	0.6
June	28	41 ^h .80	10 ^m .36	1 27 ^s .2	14 21 ^s .1	77 46 ^s .7	42 10 ^s .7	16 0 ^s .7	39 15 ^s .8	0.6
	5	41 ^h .37	10 ^m .18	1 29 ^s .5	14 14 ^s .9	77 26 ^s .6	42 10 ^s .7	16 6 ^s .4	39 30 ^s .6	0.7
	13	40 ^h .90	+10 ^m .02	-1 31 ^s .3	+14 11 ^s .0	77 11 ^s .9	42 10 ^s .7	+16 12 ^s .1	39 45 ^s .5	+0.7
July	21	40 ^h .39	9 ^m .88	1 32 ^s .3	14 9 ^s .7	77 2 ^s .9	42 10 ^s .6	16 17 ^s .7	40 0 ^s .3	0.8
	29	39 ^h .86	9 ^m .76	1 32 ^s .6	14 10 ^s .7	76 59 ^s .8	42 10 ^s .6	16 23 ^s .3	40 15 ^s .2	0.8
	7	39 ^h .32	9 ^m .67	1 32 ^s .3	14 14 ^s .1	77 2 ^s .6	42 10 ^s .5	16 28 ^s .9	40 30 ^s .0	0.9
	15	38 ^h .78	9 ^m .60	1 31 ^s .3	14 20 ^s .0	77 11 ^s .6	42 10 ^s .5	16 34 ^s .4	40 44 ^s .8	0.9
	23	38 ^h .26	+9 ^m .56	-1 29 ^s .6	+14 28 ^s .3	77 26 ^s .3	42 10 ^s .4	+16 40 ^s .0	40 59 ^s .7	+0.9
Aug.	31	37 ^h .76	9 ^m .54	1 27 ^s .3	14 38 ^s .7	77 46 ^s .7	42 10 ^s .4	16 45 ^s .4	41 14 ^s .6	0.9
	8	37 ^h .28	9 ^m .55	1 24 ^s .3	14 51 ^s .0	78 12 ^s .4	42 10 ^s .4	16 50 ^s .9	41 29 ^s .5	0.9
	16	36 ^h .83	9 ^m .58	1 20 ^s .9	15 5 ^s .2	78 43 ^s .3	42 10 ^s .3	16 56 ^s .4	41 44 ^s .4	1.0
Sept.	24	36 ^h .42	9 ^m .64	1 16 ^s .6	15 21 ^s .0	79 18 ^s .8	42 10 ^s .3	17 1 ^s .9	41 59 ^s .3	1.0
	1	36 ^h .05	+9 ^m .72	-1 11 ^s .9	+15 38 ^s .1	79 58 ^s .6	42 10 ^s .3	+17 7 ^s .3	42 14 ^s .2	+1.0
	9	35 ^h .72	9 ^m .81	1 6 ^s .8	15 56 ^s .5	80 42 ^s .4	42 10 ^s .2	17 12 ^s .8	42 29 ^s .1	0.9
	17	35 ^h .43	9 ^m .92	1 1 ^s .3	16 15 ^s .6	81 29 ^s .5	42 10 ^s .1	17 18 ^s .2	42 44 ^s .1	0.9
Oct.	25	35 ^h .20	10 ^m .05	0 55 ^s .3	16 35 ^s .3	82 19 ^s .6	42 10 ^s .1	17 23 ^s .6	42 59 ^s .0	0.9
	3	35 ^h .02	10 ^m .19	0 49 ^s .1	16 55 ^s .3	83 12 ^s .1	42 10 ^s .1	17 28 ^s .9	43 14 ^s .0	0.9
	11	34 ^h .89	+10 ^m .35	-0 42 ^s .6	+17 15 ^s .7	84 6 ^s .7	42 10 ^s .0	+17 34 ^s .2	43 28 ^s .9	+0.8
Nov.	19	34 ^h .80	10 ^m .52	0 35 ^s .9	17 36 ^s .0	85 2 ^s .6	42 10 ^s .0	17 39 ^s .5	43 43 ^s .9	0.8
	27	34 ^h .77	10 ^m .71	0 29 ^s .1	17 56 ^s .0	85 59 ^s .5	42 9 ^s .9	17 44 ^s .8	43 58 ^s .8	0.8
	4	34 ^h .79	10 ^m .90	0 22 ^s .2	18 15 ^s .5	86 56 ^s .8	42 9 ^s .9	17 50 ^s .1	44 13 ^s .8	0.8
	12	34 ^h .86	11 ^m .10	0 15 ^s .3	18 34 ^s .4	87 53 ^s .8	42 9 ^s .9	17 55 ^s .4	44 28 ^s .8	0.8
	20	34 ^h .99	+11 ^m .32	-0 8 ^s .5	+18 52 ^s .4	88 50 ^s .0	42 9 ^s .8	+18 0 ^s .7	44 43 ^s .8	+0.8
Dec.	28	35 ^h .17	11 ^m .54	-0 1 ^s .9	19 9 ^s .3	89 44 ^s .9	42 9 ^s .8	18 5 ^s .9	44 58 ^s .8	0.8
	6	35 ^h .40	11 ^m .77	+0 4 ^s .6	19 25 ^s .1	90 37 ^s .6	42 9 ^s .8	18 11 ^s .0	45 13 ^s .8	0.8
	14	35 ^h .68	12 ^m .00	0 10 ^s .7	19 39 ^s .6	91 27 ^s .7	42 9 ^s .8	18 16 ^s .2	45 28 ^s .8	0.8
	22	36 ^h .01	12 ^m .24	0 16 ^s .4	19 52 ^s .4	92 14 ^s .5	42 9 ^s .7	18 21 ^s .4	45 43 ^s .8	0.8
	30	36 ^h .38	+12 ^m .48	+0 21 ^s .6	+20 3 ^s .7	92 57 ^s .3	42 9 ^s .7	+18 26 ^s .5	45 58 ^s .9	+0.8



APPARENT ORBITS OF THE SATELLITES OF URANUS AT DATE OF OPPOSITION, SEPTEMBER 12, 1924, AS SEEN IN AN INVERTING TELESCOPE.

APPARENT APSIDES.

Date.	Position Angle.	Apparent Distance.			
		Ariel.	Umbriel.	Titania.	Oberon.
June 4	344 ^o .7	13 ^{''} .1	18 ^{''} .2	29 ^{''} .9	40 ^{''} .0
Sept. 12	344.8	13.9	19.3	31.7	42.3
Dec. 21	344.9	13.0	18.2	29.8	39.9

In the above diagram the central circle represents the planet.

SATELLITES OF URANUS, 1924. 553

GREENWICH MEAN TIME OF GREATEST ELONGATION.

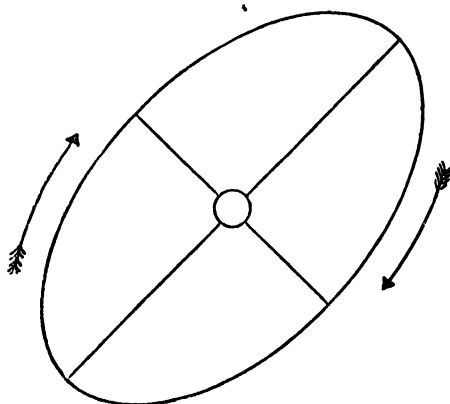
ARIEL.		UMBRIEL.		TITANIA.		OBERON.
North.	South.	North.	South.	North.	South.	North and South.
d h	d h	d h	d h	d h	d h	d h
June 9 5·6	June 13 0·4	June 1 23·4	June 4 1·1	May 28 7·0	June 1 15·5	June 25 18·5 N.
16 19·1	20 13·8	10 6·3	12 8·0	June 5 23·9	10 8·4	July 2 12·1 S.
24 8·5	28 3·3	18 13·2	20 14·9	14 16·8	19 1·3	9 5·6 N.
July 1 22·0	July 5 16·7	26 20·1	28 21·8	23 9·8	27 18·2	15 23·2 S.
9 11·4	13 6·2	July 5 3·0	July 7 4·7	July 2 2·7	July 6 11·2	22 16·7 N.
17 0·9	20 19·6	13 9·9	15 11·6	10 19·6	15 4·1	29 10·3 S.
24 14·4	28 9·1	21 16·8	23 18·6	19 12·6	23 21·0	Aug. 5 3·9 N.
Aug. 1 3·8	Aug. 4 22·6	29 23·7	Aug. 1 1·5	28 5·5	Aug. 1 14·0	11 21·5 S.
8 17·3	12 12·0	Aug. 7 6·7	9 8·4	Aug. 5 22·4	10 6·9	18 15·1 N.
16 6·8	20 1·5	15 13·6	17 15·3	14 15·4	18 23·9	25 8·6 S.
23 20·2	27 15·0	23 20·5	25 22·2	23 8·4	27 16·8	Sept. 1 2·2 N.
31 9·7	Sept. 4 4·4	Sept. 1 3·4	Sept. 3 5·2	Sept. 1 1·3	Sept. 5 9·8	7 19·8 S.
Sept. 7 23·2	11 17·9	9 10·4	11 12·1	9 18·3	14 2·8	14 13·4 N.
15 12·6	19 7·4	17 17·3	19 19·0	18 11·2	22 19·7	21 7·0 S.
23 2·1	26 20·9	26 0·2	28 2·0	27 4·2	Oct. 1 12·7	28 0·6 N.
30 15·6	Oct. 4 10·3	Oct. 4 7·2	Oct. 6 8·9	Oct. 5 21·2	10 5·7	Oct. 4 18·2 S.
Oct. 8 5·1	11 23·8	12 14·1	14 15·8	14 14·2	18 22·6	11 11·8 N.
15 18·5	19 13·3	20 21·0	22 22·8	23 7·1	27 15·6	18 5·4 S.
23 8·0	27 2·8	29 4·0	31 5·7	Nov. 1 0·1	Nov. 5 8·6	24 23·0 N.
30 21·5	Nov. 3 16·3	Nov. 6 10·9	Nov. 8 12·7	9 17·1	14 1·6	31 16·5 S.
Nov. 7 11·0	11 5·7	14 17·9	16 19·6	18 10·0	22 18·5	Nov. 7 10·1 N.
15 0·5	18 19·2	23 0·8	25 2·5	27 3·0	Dec. 1 11·5	14 3·7 S.
22 14·0	26 8·7	Dec. 1 7·7	Dec. 3 9·5	Dec. 5 20·0	10 4·4	20 21·3 N.
30 3·4	Dec. 3 22·2	9 14·7	11 16·4	14 12·9	18 21·4	27 14·9 S.
Dec. 7 16·9	11 11·7	17 21·6	19 23·3	23 5·8	27 14·3	Dec. 4 8·4 N.

For Ariel every third greatest elongation is given, and for Umbriel every alternate one; the intermediate ones may be found by adding multiples of the period of the satellite.

	d	h
Sidereal period of Ariel	2	12·489
Sidereal period of Umbriel	4	3·460
Sidereal period of Titania	8	16·941
Sidereal period of Oberon	13	11·118

554 SATELLITE OF NEPTUNE, 1924.

South



North

APPARENT ORBIT OF THE SATELLITE OF NEPTUNE AT DATE OF OPPOSITION, FEB. 8, 1924, AS SEEN IN AN INVERTING TELESCOPE.

Date.	Position Angle of Apsis.	Apparent Distance at Apsis.
Feb. 10	135.4	16.8
May 10	134.3	16.2
Oct. 23	138.3	16.0
Dec. 32	138.2	16.6

GREENWICH MEAN TIME OF GREATEST ELONGATION.

d	h		d	h		d	h		d	h		d	h	
Jan.	2	3.5 E.	Mar.	3	21.1 W.	May	4	14.5 E.	July	5	7.1 W.	Nov.	2	16.9 E.
	5	2.0 W.		6	19.7 E.		7	13.1 W.		8	5.6 E.		5	15.4 W.
	8	0.6 E.		9	18.2 W.		10	11.6 E.		...			8	13.9 E.
	10	23.1 W.		12	16.8 E.		13	10.1 W.	Sept.	10	20.2 E.		11	12.4 W.
	13	21.7 E.		15	15.3 W.		16	8.6 E.		13	18.6 W.		14	10.9 E.
	16	20.2 W.		18	13.9 E.		19	7.1 W.		16	17.1 E.		17	9.5 W.
	19	18.8 E.		21	12.4 W.		22	5.6 E.		19	15.6 W.		20	8.0 E.
	22	17.3 W.		24	11.0 E.		25	4.2 W.		22	14.1 E.		23	6.5 W.
	25	15.9 E.		27	9.5 W.		28	2.7 E.		25	12.5 W.		26	5.0 E.
	28	14.4 W.		30	8.1 E.		31	1.2 W.		28	11.0 E.		29	3.5 W.
	31	13.0 E.	Apr.	2	6.6 W.	June	2	23.7 E.	Oct.	1	9.5 W.	Dec.	2	2.0 E.
Feb.	3	11.6 W.		5	5.2 E.		5	22.2 W.		4	8.0 E.		5	0.5 W.
	6	10.1 E.		8	3.7 W.		8	20.7 E.		7	6.5 W.		7	23.1 E.
	9	8.7 W.		11	2.3 E.		11	19.2 W.		10	5.0 E.		10	21.6 W.
	12	7.2 E.		14	0.8 W.		14	17.7 E.		13	3.5 W.		13	20.1 E.
	15	5.8 W.		16	23.4 E.		17	16.2 W.		16	2.0 E.		16	18.6 W.
	18	4.4 E.		19	21.9 W.		20	14.7 E.		19	0.4 W.		19	17.2 E.
	21	2.9 W.		22	20.4 E.		23	13.2 W.		21	22.9 E.		22	15.7 W.
	24	1.5 E.		25	19.0 W.		26	11.7 E.		24	21.4 W.		25	14.3 E.
	27	0.0 W.		28	17.5 E.		29	10.2 W.		27	19.9 E.		28	12.8 W.
	29	22.6 E.	May	1	16.0 W.	July	2	8.6 E.		30	18.4 W.		31	11.3 E.

In the above diagram the central circle represents the planet. The sidereal period of the satellite of Neptune is 5^d 21^h 0.44.

	d	h	m			d	h	m		
Jan.	1	14		Earth in Perihelion.		Apr.	5	14	♃ Stationary.	
	2	3	53	♂ ♂ ☾ - - ♂ 4 22 S.		7	17	22	♀ ♂ ☾ - - ♀ 8 2 N.	
	2	8		♀ in ♀		13	5		♂ ☐ ☉	
	3	7		♀ Stationary.		14	0	34	♃ ♂ ☾ - - ♃ 1 28 N.	
	3	12	49	♃ ♂ ☾ - - ♃ 4 28 S.		14	5		♀ greatest Hel. Lat. N.	
	6	22	50	♀ ♂ ☾ - - ♀ 1 33 S.		16	15		♀ at greatest elong. 19 52 E.	
	6	23		♀ in Perihelion.		18	21		♃ ♂ ☉	
	8	8	25	♀ ♂ ☾ - - ♀ 3 14 S.		19	0	53	♃ ♂ ☾ - - ♃ 1 39 S.	
	10	8	49	♃ ♂ ☾ - - ♃ 0 18 N.		21	5		♀ greatest Hel. Lat. N.	
	12	16		♀ Inf. ♂ ☉		21	15		♀ at greatest elong. 45 40 E.	
	17	5		♀ greatest Hel. Lat. N.		22	9	47	♃ ♂ ☾ - - ♃ 4 5 S.	
	22	19		♃ ☐ ☉		25	9	13	♂ ♂ ☾ - - ♂ 3 50 S.	
	23	0	28	♃ ♂ ☾ - - ♃ 1 27 N.		27	3		♀ Stationary.	
	23	21		♀ Stationary.		28	2		♃ Stationary.	
	28	6	38	♃ ♂ ☾ - - ♃ 2 6 S.		29	2	0	♃ ♂ ☾ - - ♃ 1 4 N.	
30	17	50	♂ ♂ ☾ - - ♂ 4 52 S.		May	3	19	53	♀ ♂ ☾ - - ♀ 6 13 N.	
31	5	15	♃ ♂ ☾ - - ♃ 4 30 S.		7	13		♀ Inf. ♂ ☉		
31	13	29	♀ ♂ ♃ - - ♀ 0 33 S.		7	13	0	♀ ♂ ☾ - - ♀ 7 55 N.		
Feb.	2	15	23	♀ ♂ ☾ - - ♀ 2 31 S.		7	13	41	♀ Transit across ☉'s disc, partly	
	5	2		♀ at greatest elong. 25 30 W.		7	16		♀ in ♃	
	6	20	40	♃ ♂ ☾ - - ♃ 0 32 N.		8	0		♃ ☐ ☉	
	7	10	55	♀ ♂ ☾ - - ♀ 1 1 N.		11	8	24	♃ ♂ ☾ - - ♃ 1 13 N.	
	8	13		♃ ♂ ☉		16	8	28	♃ ♂ ☾ - - ♃ 1 40 S.	
	9	16		♀ in ♃		17	22		♀ in Aphelion.	
	11	11		♃ Stationary.		19	15	46	♃ ♂ ☾ - - ♃ 4 3 S.	
	13	4	52	♂ ♂ ♃ - - ♂ 0 26 S.		19	20		♀ Stationary.	
	19	7	24	♃ ♂ ☾ - - ♃ 1 32 N.		23	20	19	♂ ♂ ☾ - - ♂ 3 25 S.	
	19	22		♀ in Aphelion.		24	18		♀ at greatest brilliancy.	
	20	4	9	☾ eclipsed, partly vis. at G ^h		26	9	13	♃ ♂ ☾ - - ♃ 1 23 N.	
	24	12	15	♃ ♂ ☾ - - ♃ 2 2 S.		30	21	53	♀ ♂ ☾ - - ♀ 1 15 N.	
	25	17		♀ in ♀		June	3	8	♀ at greatest elong. 24 15 W.	
	27	17	38	♃ ♂ ☾ - - ♃ 4 26 S.		5	3	22	♀ ♂ ☾ - - ♀ 5 6 N.	
	28	7	22	♂ ♂ ☾ - - ♂ 4 49 S.		5	13		♃ ♂ ☉	
Mar.	1	12		♂ in ♃		7	6		♀ greatest Hel. Lat. S.	
	4	0	7	♀ ♂ ☾ - - ♀ 2 33 S.		7	15	20	♃ ♂ ☾ - - ♃ 0 56 N.	
	5	3	44	☉ eclipsed, invis. at Green ^h .		8	23		♀ Stationary.	
	5	8	11	♃ ♂ ☾ - - ♃ 0 41 N.		12	6		♃ ☐ ☉	
	7	20		♃ ♂ ☉		12	15	53	♃ ♂ ☾ - - ♃ 1 54 S.	
	8	13	48	♀ ♂ ☾ - - ♀ 5 27 N.		15	21	6	♃ ♂ ☾ - - ♃ 4 11 S.	
	9	2		♃ ☐ ☉		16	6		♀ in ♃	
	11	7		♀ greatest Hel. Lat. S.		21	3	16	♂ ♂ ☾ - - ♂ 3 37 S.	
	14	13	51	♀ ♂ ♃ - - ♀ 1 21 S.		21	5	0	☉ enters Sign ♄, Solstice.	
	17	15	52	♃ ♂ ☾ - - ♃ 1 34 N.		22	16	44	♃ ♂ ☾ - - ♃ 1 38 N.	
	20	9	20	☉ enters Sign ♃, Equinox		26	7		♀ in ♀	
	21	22		♀ Sup. ♂ ☉		26	8		♃ Stationary.	
	22	17	59	♃ ♂ ☾ - - ♃ 1 49 S.		29	14		♃ Stationary.	
	26	2	42	♃ ♂ ☾ - - ♃ 4 16 S.		30	21		♀ in Perihelion.	
	27	20	34	♂ ♂ ☾ - - ♂ 4 24 S.		July	1	0	♀ Inf. ♂ ☉	
30	5		♀ in Perihelion.		1	7	33	♀ ♂ ☾ - - ♀ 4 43 N.		
30	7		♀ in ♀		1	15	27	♀ ♂ ☾ - - ♀ 0 6 N.		
Apr.	1	17	59	♃ ♂ ☾ - - ♃ 0 50 N.		3	1		Earth in Aphelion.	
	3	22		♀ in Perihelion.		4	22	9	♃ ♂ ☾ - - ♃ 0 43 N.	
	4	21	5	♀ ♂ ☾ - - ♀ 5 42 N.		5	6		♀ Sup. ♂ ☉	

	d	h	m			d	h	m				
July	9	22	54	$\text{h} \delta \text{C}$	- -	$\text{h} \delta \overset{\circ}{2} 12 \text{ S.}$	Sept. 29	20	53	$\text{q} \delta \Psi$	- -	$\text{q} \overset{\circ}{0} 56 \text{ S.}$
	11	4		q	greatest Hel. Lat. N.		30	3	28	$\text{h} \delta \text{C}$	- -	$\text{h} \delta 2 43 \text{ S.}$
	13	2	17	$\text{z} \delta \text{C}$	- -	$\text{z} \delta 4 27 \text{ S.}$	Oct. 3	3	36	$\text{z} \delta \text{C}$	- -	$\text{z} \delta 4 27 \text{ S.}$
	18	10		$\text{h} \square \odot$			7	3		q	greatest Hel. Lat. N.	
	19	0	34	$\delta \delta \text{C}$	- -	$\delta \delta 4 44 \text{ S.}$	7	10		q	in Ω	
	20	0	57	$\text{H} \delta \text{C}$	- -	$\text{H} \delta 1 46 \text{ N.}$	8	11	7	$\delta \delta \text{C}$	- -	$\delta \delta 3 28 \text{ S.}$
	20	18		q	in Aphelion.		9	22	17	$\text{H} \delta \text{C}$	- -	$\text{H} \delta 1 34 \text{ N.}$
	22	16		q	Stationary.		22	12	1	$\Psi \delta \text{C}$	- -	$\Psi \delta 0 8 \text{ N.}$
	23	8	48	$\text{q} \delta \Psi$	- -	$\text{q} \delta 1 10 \text{ N.}$	24	14	6	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 1 28 \text{ S.}$
	25	16		δ	Stationary.		25	15		q	Sup. $\delta \odot$	
28	7	29	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 1 45 \text{ S.}$	27	15	16	$\text{q} \delta \text{h}$	- -	$\text{q} \delta 1 59 \text{ S.}$	
31	7	58	\odot	eclipsed, invis. at Green ^h .		27	18	15	$\text{h} \delta \text{C}$	- -	$\text{h} \delta 2 47 \text{ S.}$	
Aug.	1	5	57	$\Psi \delta \text{C}$	- -	$\Psi \delta 0 35 \text{ N.}$	27	18	36	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 4 47 \text{ S.}$
	2	9	9	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 0 55 \text{ S.}$	28	9		$\text{h} \delta \odot$		
	3	15		q	in Ω		30	14		q	in Ω	
	5	9		δ	greatest Hel. Lat. S.		30	19	9	$\text{z} \delta \text{C}$	- -	$\text{z} \delta 4 7 \text{ S.}$
	6	6	19	$\text{h} \delta \text{C}$	- -	$\text{h} \delta 2 29 \text{ S.}$	Nov. 5	7	51	$\delta \delta \text{C}$	- -	$\delta \delta 0 33 \text{ S.}$
	6	18		z	Stationary.		6	2	43	$\text{H} \delta \text{C}$	- -	$\text{H} \delta 1 42 \text{ N.}$
	6	23		q	at greatest brilliancy.		9	20		q	in Aphelion.	
	9	8	13	$\text{z} \delta \text{C}$	- -	$\text{z} \delta 4 38 \text{ S.}$	10	3		q	in Perihelion.	
	12	3		q	greatest Hel. Lat. S.		14	17		$\Psi \square \odot$		
	12	16		$\Psi \delta \odot$			18	20	42	$\Psi \delta \text{C}$	- -	$\Psi \delta 0 10 \text{ S.}$
13	21		q	in Aphelion.		23	13	34	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 2 56 \text{ S.}$	
14	8	20	C	eclipsed, partly vis. at G ^h .		24	10	29	$\text{h} \delta \text{C}$	- -	$\text{h} \delta 2 53 \text{ S.}$	
14	22		q	at greatest elong. 27 26 E.		24	20		Ψ	Stationary.		
15	6	20	$\delta \delta \text{C}$	- -	$\delta \delta 6 8 \text{ S.}$	27	1		H	Stationary.		
16	9	16	$\text{H} \delta \text{C}$	- -	$\text{H} \delta 1 44 \text{ N.}$	27	3	42	$\delta \delta \text{H}$	- -	$\delta \delta 0 16 \text{ S.}$	
23	5		$\delta \delta \odot$			27	10	19	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 6 26 \text{ S.}$	
25	23	28	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 0 50 \text{ S.}$	27	14	32	$\text{z} \delta \text{C}$	- -	$\text{z} \delta 3 43 \text{ S.}$	
28	1		q	Stationary.		29	12	42	$\text{q} \delta \text{z}$	- -	$\text{q} \delta 2 36 \text{ S.}$	
28	15	15	$\Psi \delta \text{C}$	- -	$\Psi \delta 0 30 \text{ N.}$	30	5		q	greatest Hel. Lat. S.		
29	20	23	\odot	eclipsed, invis at Green ^h .		Dec. 1	22		q	greatest Hel. Lat. N.		
30	4		δ	in Perihelion.		3	7	51	$\text{H} \delta \text{C}$	- -	$\text{H} \delta 1 59 \text{ N.}$	
31	3	13	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 7 35 \text{ S.}$	3	13	57	$\delta \delta \text{C}$	- -	$\delta \delta 2 14 \text{ N.}$	
Sept. 2	15	29	$\text{h} \delta \text{C}$	- -	$\text{h} \delta 2 38 \text{ S.}$	4	20	20	$\text{q} \delta \text{h}$	- -	$\text{q} \delta 0 23 \text{ S.}$	
3	5		q	greatest Hel. Lat. S.		9	5		q	at greatest elong. 20 49 E.		
3	13		$\text{z} \square \odot$			9	12		$\text{H} \square \odot$			
5	16	13	$\text{z} \delta \text{C}$	- -	$\text{z} \delta 4 39 \text{ S.}$	16	3	0	$\Psi \delta \text{C}$	- -	$\Psi \delta 0 23 \text{ S.}$	
9	18		q	at greatest elong. 46 0 W.		17	9		q	Stationary.		
11	1		q	Inf. $\delta \odot$		19	5		q	in Ω		
11	3	55	$\delta \delta \text{C}$	- -	$\delta \delta 5 46 \text{ S.}$	21	14	46	\odot	enters Sign V , Solstice.		
12	2		$\text{H} \delta \odot$			22	1	48	$\text{h} \delta \text{C}$	- -	$\text{h} \delta 3 1 \text{ S.}$	
12	16	38	$\text{H} \delta \text{C}$	- -	$\text{H} \delta 1 37 \text{ N.}$	22	18		$\text{z} \delta \odot$			
19	12		q	Stationary.		23	13	14	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 3 33 \text{ S.}$	
22	6		q	in Ω		23	20		q	in Perihelion.		
22	20	0	\odot	enters Sign = , Equinox.		25	11		$\delta \square \odot$			
24	1		δ	Stationary.		25	12	9	$\text{z} \delta \text{C}$	- -	$\text{z} \delta 3 20 \text{ S.}$	
24	15	23	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 0 31 \text{ S.}$	25	20	2	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 1 2 \text{ S.}$	
25	1	42	$\Psi \delta \text{C}$	- -	$\Psi \delta 0 22 \text{ N.}$	26	21		q	Inf. $\delta \odot$		
26	20		q	in Perihelion.		26	22	26	$\text{q} \delta \text{z}$	- -	$\text{q} \delta 2 41 \text{ N.}$	
26	21		q	at greatest elong. 17 52 W.		30	15	55	$\text{H} \delta \text{C}$	- -	$\text{H} \delta 2 16 \text{ N.}$	
26	21	46	$\text{q} \delta \text{C}$	- -	$\text{q} \delta 1 2 \text{ S.}$	30	17		δ	in Ω		

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE SUN.

Noon.	P	B ₀	L ₀	Noon.	P	B ₀	L ₀
Jan. 1	+ 2.34	- 3.07	266.64	July 4	- 1.20	+ 3.34	344.90
6	- 0.09	3.64	200.79	9	+ 1.07	3.86	278.72
11	2.51	4.18	134.95	14	3.32	4.36	212.55
16	4.89	4.69	69.11	19	5.54	4.82	146.39
21	7.21	5.16	3.28	24	7.69	5.26	80.24
26	- 9.44	- 5.59	297.44	29	+ 9.78	+ 5.66	14.10
Feb. 31	11.58	5.98	231.61	Aug. 3	11.78	6.02	307.98
5	13.61	6.32	165.78	8	13.69	6.33	241.86
10	15.52	6.61	99.95	13	15.49	6.61	175.76
15	17.29	6.85	34.11	18	17.18	6.83	109.67
20	- 18.92	- 7.03	328.27	23	+ 18.75	+ 7.01	43.60
Mar. 25	20.41	7.16	262.41	28	20.19	7.14	337.54
1	21.74	7.23	196.55	Sept. 2	21.50	7.22	271.49
6	22.91	7.25	130.68	7	22.67	7.25	205.46
11	23.92	7.21	64.80	12	23.69	7.23	139.44
16	- 24.77	- 7.12	358.90	17	+ 24.56	+ 7.15	73.43
21	25.44	6.97	292.98	22	25.27	7.02	7.43
26	25.94	6.77	227.04	27	25.81	6.84	301.44
Apr. 31	26.26	6.52	161.09	Oct. 2	26.19	6.60	235.46
5	26.41	6.23	95.12	7	26.38	6.32	169.50
10	- 26.37	- 5.89	29.12	12	+ 26.40	+ 5.99	103.54
15	26.15	5.50	323.11	17	26.23	5.62	37.58
20	25.74	5.08	257.07	22	25.87	5.20	331.63
25	25.15	4.62	191.01	27	25.31	4.74	265.70
30	24.38	4.13	124.94	Nov. 1	24.56	4.25	199.77
May 5	- 23.42	- 3.62	58.85	6	+ 23.61	+ 3.72	133.84
10	22.29	3.08	352.74	11	22.46	3.16	67.92
15	20.99	2.52	286.61	16	21.12	2.57	2.01
20	19.52	1.94	220.47	21	19.60	1.97	296.10
25	17.90	1.35	154.32	26	17.90	1.35	230.20
June 30	- 16.14	- 0.75	88.16	Dec. 1	+ 16.03	+ 0.71	164.31
4	14.25	- 0.14	21.99	6	14.02	+ 0.07	98.42
9	12.24	+ 0.46	315.81	11	11.88	- 0.57	32.54
14	10.14	1.06	249.63	16	9.62	1.20	326.66
19	7.97	1.65	183.44	21	7.29	1.83	260.79
24	- 5.75	+ 2.23	117.26	26	+ 4.89	- 2.45	194.93
29	- 3.48	+ 2.80	51.07	31	+ 2.46	- 3.04	129.08

MEAN EQUATOR, ORBIT, AND MEAN LONGITUDE.

Noon	Mean Equator.			Orbit		Mean Longitude. (	Mean Solar Days.	Motion in Mean Longitude.	
	<i>i</i>	Δ	Ω'	Γ'	Ω				
Jan.	I	24 50.7	336 23.8	-1 32.7	230 53.8	154 59.4	214 43.8	0.1	1 19.06
	11	24 50.4	335 53.7	1 34.5	232 0.7	154 27.6	346 29.7	0.2	2 38.12
	21	24 50.1	335 23.6	1 36.4	233 7.5	153 55.8	118 15.5	0.3	3 57.18
Feb.	31	24 49.7	334 53.6	1 38.2	234 14.4	153 24.0	250 1.3	0.4	5 16.23
	10	24 49.3	334 23.5	1 40.0	235 21.2	152 52.3	21 47.2	0.5	6 35.29
	20	24 49.0	333 53.4	-1 41.9	236 28.0	152 20.5	153 33.0	0.7	7 54.35
Mar.	I	24 48.6	333 23.2	1 43.7	237 34.9	151 48.7	285 18.9	0.8	10 32.47
	11	24 48.2	332 53.1	1 45.5	238 41.7	151 17.0	57 4.7	0.9	11 51.53
	21	24 47.8	332 23.0	1 47.3	239 48.6	150 45.2	188 50.5	1.0	13 10.58
Apr.	31	24 47.4	331 52.8	1 49.1	240 55.4	150 13.4	320 36.4	2.0	26 21.17
	10	24 47.0	331 22.7	-1 50.9	242 2.3	149 41.6	92 22.2	3.0	39 31.75
	20	24 46.6	330 52.5	1 52.7	243 9.1	149 9.9	224 8.0	4.0	52 42.33
May	30	24 46.2	330 22.4	1 54.4	244 15.9	148 38.1	355 53.9	5.0	65 52.92
	10	24 45.8	329 52.2	1 56.2	245 22.8	148 6.3	127 39.7	6.0	79 3.50
	20	24 45.3	329 22.1	1 57.9	246 29.6	147 34.5	259 25.6	7.0	92 14.09
June	30	24 44.9	328 51.9	-1 59.7	247 36.5	147 2.8	31 11.4	8.0	105 24.67
	9	24 44.4	328 21.7	2 1.4	248 43.3	146 31.0	162 57.2	9.0	118 35.25
	19	24 44.0	327 51.5	2 3.1	249 50.1	145 59.2	294 43.1	10.0	131 45.84
July	29	24 43.5	327 21.3	2 4.9	250 57.0	145 27.5	66 28.9	Hrs.	
	9	24 43.1	326 51.1	2 6.6	252 3.8	144 55.7	198 14.8	1	0 32.94
	19	24 42.6	326 20.9	-2 8.3	253 10.7	144 23.9	330 0.6	2	1 5.88
Aug.	29	24 42.1	325 50.7	2 10.0	254 17.5	143 52.1	101 46.4	3	1 38.82
	8	24 41.7	325 20.4	2 11.7	255 24.4	143 20.4	233 32.3	4	2 11.76
	18	24 41.2	324 50.2	2 13.3	256 31.2	142 48.6	5 18.1	5	2 44.70
Sept.	28	24 40.7	324 19.9	2 15.0	257 38.0	142 16.8	137 3.9	6	3 17.65
	7	24 40.2	323 49.7	-2 16.6	258 44.9	141 45.1	268 49.8	7	3 50.59
	17	24 39.7	323 19.4	2 18.3	259 51.7	141 13.3	40 35.6	8	4 23.53
Oct.	27	24 39.2	322 49.1	2 19.9	260 58.6	140 41.5	172 21.5	9	4 56.47
	7	24 38.7	322 18.8	2 21.5	262 5.4	140 9.7	304 7.3	10	5 29.41
	17	24 38.1	321 48.5	2 23.1	263 12.3	139 38.0	75 53.1	11	6 2.35
Nov.	27	24 37.6	321 18.2	-2 24.7	264 19.1	139 6.2	207 39.0	12	6 35.29
	6	24 37.1	320 47.8	2 26.3	265 25.9	138 34.4	339 24.8	13	7 8.23
	16	24 36.5	320 17.5	2 27.9	266 32.8	138 2.6	111 10.6	14	7 41.17
Dec.	26	24 36.0	319 47.2	2 29.5	267 39.6	137 30.9	242 56.5	15	8 14.11
	6	24 35.4	319 16.8	2 31.0	268 46.5	136 59.1	14 42.3	16	8 47.06
	16	24 34.9	318 46.5	-2 32.6	269 53.3	136 27.3	146 28.2	17	9 20.00
	26	24 34.3	318 16.1	2 34.1	271 0.2	135 55.6	278 14.0	18	9 52.94
	36	24 33.7	317 45.8	-2 35.6	272 7.0	135 23.8	49 59.8	19	10 25.88
								20	10 58.82
								21	11 31.76
								22	12 4.70
								23	12 37.64

Daily motion of Γ' +6'.684
 Daily motion of Ω -3'.177

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid-night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		C	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	S	Dec.	"
Jan. 1	-3.22	-5.95	0.00	+0.04	210.86	+1.22	19.20	II.		S.	"
2	1.77	6.48	0.00	0.04	223.04	1.19	14.67				
3	-0.13	6.59	0.00	0.04	235.22	1.17	9.05				
4	+1.57	6.26	0.00	0.04	247.40	1.15	2.72				
5	3.19	5.51	0.00	0.04	259.59	1.14	356.17				
6	4.59	4.40	0.00	0.04	271.78	1.12	349.95				
7	5.64	3.04	0.00	0.04	283.97	1.10	344.55				
8	6.27	-1.53	0.00	0.04	296.16	1.09	340.29				
9	6.46	+0.03	0.00	0.04	308.34	1.08	337.31				
10	6.23	1.54	0.00	0.04	320.52	1.07	335.61	I.		S.	
11	5.63	2.93	0.00	0.04	332.70	1.06	335.14	I.		S.	
12	4.73	4.16	0.00	0.04	344.86	1.05	335.77	I.		S.	
13	3.62	5.18	0.00	0.04	357.02	1.04	337.42	I.		S.	
14	2.37	5.96	0.00	0.04	9.18	1.03	340.00	I.		S.	
15	+1.07	6.48	0.00	0.04	21.33	1.01	343.40	I.		S.	
16	-0.21	6.73	-0.01	0.04	33.48	1.00	347.53	I.		S.	
17	1.40	6.69	0.01	0.04	45.62	0.98	352.28	I.		S.	
18	2.45	6.36	0.01	0.04	57.75	0.96	357.49	I.		S.	
19	3.34	5.73	0.01	0.04	69.89	0.94	2.93	I.		S.	
20	4.05	4.82	0.01	0.04	82.02	0.92	8.33	I.		S.	0.89
21	4.55	3.66	0.01	0.04	94.14	0.89	13.39	I.	0.01	S.	
22	4.85	2.30	0.01	0.04	106.27	0.86	17.80	II.		S.	
23	4.95	+0.79	0.01	0.04	118.40	0.82	21.30	II.		S.	
24	4.86	-0.78	0.01	0.04	130.54	0.79	23.67	II.		S.	
25	4.57	2.33	0.01	0.04	142.68	0.75	24.78	II.		S.	
26	4.08	3.77	0.01	0.04	154.82	0.72	24.56	II.		S.	
27	3.41	5.00	0.01	0.04	166.97	0.68	22.98	II.		S.	
28	2.55	5.95	0.01	0.04	179.12	0.65	20.09	II.		S.	
29	1.53	6.54	0.01	0.04	191.28	0.61	15.97	II.		S.	
30	-0.38	6.74	0.01	0.04	203.45	0.58	10.80	II.		S.	
31	+0.83	6.52	0.01	0.04	215.63	0.55	4.85	II.		S.	
Feb. 1	2.04	5.88	0.01	0.04	227.82	0.52	358.52				
2	3.15	4.88	0.01	0.04	240.00	0.49	352.29				
3	4.09	3.59	0.01	0.04	252.20	0.46	346.62				
4	4.78	2.10	0.01	0.04	264.39	0.44	341.90				
5	5.17	-0.52	0.01	0.04	276.59	0.41	338.38				
6	5.22	+1.06	0.01	0.04	288.78	0.39	336.15				
7	4.95	2.54	0.01	0.04	300.97	0.37	335.20				
8	4.37	3.87	0.01	0.04	313.16	0.35	335.43	I.		S.	
9	3.52	4.99	0.01	0.04	325.34	0.33	336.75	I.		S.	
10	2.47	5.86	0.01	0.04	337.52	0.32	339.04	I.		S.	
11	1.27	6.47	0.01	0.04	349.70	0.30	342.20	I.		S.	
12	+0.01	6.80	0.01	0.04	1.87	0.28	346.11	I.		S.	
13	-1.25	6.84	0.01	0.04	14.03	0.26	350.65	I.		S.	
14	2.43	6.59	0.01	0.04	26.19	0.24	355.68	I.		S.	
15	3.47	6.04	0.02	0.04	38.34	0.22	1.03	I.		S.	
16	4.31	5.21	0.02	0.04	50.49	0.20	6.44	I.		N.	0.01
17	4.89	4.11	0.02	0.04	62.63	0.17	11.65	I.		N.	0.82
18	5.20	2.79	0.02	0.04	74.77	0.14	16.35	I.		N.	1.12
19	5.21	+1.28	0.02	0.04	86.91	0.11	20.23	I.		N.	0.20
20	4.93	-0.32	0.02	0.04	99.04	0.07	23.04	II.	0.18	S.	0.55
21	4.39	1.94	0.02	0.04	111.18	+0.04	24.58	II.		S.	
22	3.62	3.46	0.02	0.04	123.32	0.00	24.74	II.		S.	
23	-2.67	-4.78	-0.02	+0.04	135.47	-0.04	23.48	II.		S.	

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid-night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		C	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	s	Dec.	
Feb. 23	-2.67	-4.78	-0.02	+0.04	135.47	-0.04	23.48	II.		S.	"
24	1.61	5.82	0.02	0.04	147.62	0.08	20.84	II.		S.	
25	-0.49	6.50	0.01	0.04	159.77	0.12	16.95	II.		S.	
26	+0.63	6.78	0.01	0.04	171.94	0.15	12.00	II.		S.	
27	1.68	6.64	0.01	0.04	184.11	0.19	6.26	II.		S.	
28	2.63	6.09	0.01	0.04	196.29	0.22	0.11	II.		S.	
29	3.43	5.19	0.01	0.04	208.47	0.25	353.95	II.		N.	
Mar. 1	4.06	3.99	0.01	0.04	220.66	0.28	348.23				
2	4.50	2.58	0.01	0.04	232.86	0.31	343.31				
3	4.72	-1.04	0.01	0.04	245.06	0.34	339.46				
4	4.72	+0.53	0.01	0.04	257.27	0.37	336.81				
5	4.48	2.04	0.01	0.04	269.47	0.40	335.42				
6	4.01	3.43	0.01	0.04	281.68	0.42	335.23				
7	3.32	4.63	0.01	0.04	293.89	0.44	336.18				
8	2.44	5.59	0.01	0.04	306.09	0.46	338.16				
9	1.38	6.29	0.01	0.04	318.29	0.48	341.05	I.		S.	
10	+0.19	6.70	0.02	0.04	330.49	0.50	344.74	I.		S.	
11	-1.07	6.83	0.02	0.04	342.68	0.52	349.08	I.		S.	
12	2.34	6.66	0.02	0.04	354.87	0.53	353.95	I.		S.	
13	3.55	6.21	0.02	0.04	7.05	0.55	359.16	I.		S.	
14	4.62	5.49	0.02	0.04	19.22	0.57	4.50	I.		N.	0.28
15	5.48	4.50	0.02	0.04	31.39	0.59	9.74	I.		N.	
16	6.06	3.27	0.02	0.04	43.56	0.61	14.60	I.		N.	
17	6.30	1.84	0.02	0.04	55.72	0.64	18.80	I.		N.	
18	6.17	+0.28	0.02	0.04	67.87	0.66	22.05	I.		N.	
19	5.63	-1.34	0.02	0.04	80.03	0.69	24.12	I.	0.02	N.	0.80
20	4.72	2.91	0.02	0.04	92.18	0.72	24.83	I.		N.	0.68
21	3.49	4.33	0.02	0.04	104.33	0.75	24.07	II.		S.	
22	2.04	5.49	0.02	0.04	116.48	0.78	21.82	II.		S.	
23	-0.48	6.29	0.02	0.04	128.64	0.81	18.19	II.		S.	
24	+1.07	6.67	0.02	0.04	140.80	0.84	13.37	II.		S.	
25	2.47	6.61	0.02	0.04	152.97	0.87	7.68	II.		S.	
26	3.66	6.14	0.01	0.04	165.14	0.90	1.49	II.		S.	0.00
27	4.56	5.30	0.01	0.04	177.32	0.92	355.27	II.		N.	
28	5.17	4.17	0.01	0.04	189.51	0.95	349.45	II.		N.	
29	5.49	2.82	0.01	0.04	201.71	0.98	344.38	II.		N.	
30	5.55	-1.34	0.01	0.04	213.92	1.01	340.32				
31	5.37	+0.18	0.01	0.04	226.13	1.03	337.41				
Apr. 1	4.98	1.67	0.01	0.04	238.34	1.06	335.70				
2	4.42	3.06	0.01	0.04	250.56	1.08	335.18				
3	3.69	4.28	0.01	0.04	262.78	1.10	335.80				
4	2.81	5.28	0.01	0.04	275.01	1.12	337.46				
5	1.80	6.03	0.02	0.04	287.23	1.13	340.08				
6	+0.67	6.51	0.02	0.04	299.45	1.15	343.53				
7	-0.55	6.70	0.02	0.04	311.67	1.16	347.70				
8	1.82	6.60	0.02	0.04	323.88	1.17	352.41	I.		S.	
9	3.11	6.22	0.02	0.04	336.09	1.18	357.51	I.		S.	
10	4.36	5.57	0.02	0.04	348.30	1.19	2.79	I.		N.	
11	5.49	4.67	0.02	0.04	0.50	1.20	8.01	I.		N.	
12	6.42	3.54	0.02	0.04	12.69	1.21	12.94	I.		N.	
13	7.07	2.22	0.02	0.04	24.88	1.22	17.31	I.		N.	
14	7.37	+0.76	0.02	0.04	37.07	1.23	20.88	I.		N.	
15	7.23	-0.80	0.02	0.04	49.25	1.25	23.40	I.		N.	
16	-6.63	-2.35	-0.02	+0.04	61.42	-1.26	24.68	I.		N.	

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EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid-night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		0	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	s	Dec.	
Apr. 16	-6°63	-2°35	-0°02	+0°04	61°42	-1°26	24°68	I.		N.	"
17	5°55	3°80	0°02	0°04	73°59	1°28	24°56	I.		N.	
18	4°05	5°04	0°02	0°04	85°76	1°29	22°93	I.		N.	
19	2°23	5°96	0°02	0°04	97°92	1°31	19°79	II.		N.	0°34
20	-0°25	6°47	0°02	0°04	110°09	1°33	15°29	II.		S.	0°34
21	+1°71	6°53	0°02	0°04	122°26	1°34	9°69	II.		S.	0°67
22	3°47	6°14	0°01	0°04	134°43	1°36	3°41	II.		N.	0°00
23	4°91	5°35	0°01	0°04	146°61	1°37	356°95	II.		N.	
24	5°96	4°25	0°01	0°04	158°80	1°39	350°83	II.		N.	
25	6°58	2°92	0°01	0°04	171°00	1°41	345°46	II.		N.	
26	6°81	-1°46	0°01	0°04	183°20	1°42	341°13	II.		N.	
27	6°68	+0°04	0°01	0°04	195°41	1°44	337°96	II.		N.	
28	6°27	1°51	0°01	0°04	207°63	1°45	336°00	II.		N.	
29	5°63	2°88	0°01	0°04	219°85	1°47	335°22				
30	4°81	4°09	0°01	0°04	232°08	1°48	335°57				
May 1	3°85	5°09	0°01	0°04	244°31	1°49	336°96				
2	2°79	5°86	0°01	0°04	256°55	1°50	339°32				
3	1°64	6°36	0°01	0°04	268°78	1°51	342°55				
4	+0°43	6°58	0°01	0°04	281°02	1°52	346°53				
5	-0°84	6°51	0°01	0°04	293°26	1°52	351°11				
6	2°13	6°16	0°01	0°04	305°49	1°52	356°12				
7	3°43	5°55	0°02	0°04	317°72	1°52	1°36				
8	4°68	4°70	0°02	0°04	329°95	1°52	6°59	I.		N.	
9	5°83	3°63	0°02	0°04	342°17	1°52	11°57	I.		N.	
10	6°80	2°37	0°02	0°04	354°39	1°52	16°05	I.		N.	
11	7°52	+0°98	0°02	0°04	6°61	1°52	19°81	I.		N.	
12	7°90	-0°49	0°02	0°04	18°81	1°51	22°63	I.		N.	
13	7°85	1°99	0°02	0°04	31°01	1°51	24°34	I.		N.	
14	7°31	3°42	0°02	0°04	43°20	1°51	24°77	I.		N.	
15	6°27	4°68	0°01	0°04	55°39	1°51	23°80	I.		N.	
16	4°74	5°68	0°01	0°04	67°58	1°51	21°34	I.		N.	
17	2°82	6°31	0°01	0°04	79°76	1°51	17°43	I.		N.	
18	-0°66	6°50	0°01	0°04	91°94	1°51	12°22	II.	0°06	N.	
19	+1°52	6°22	0°01	0°04	104°12	1°51	6°04	II.		N.	0°65
20	3°54	5°51	0°01	0°04	116°30	1°51	359°40	II.		N.	1°30
21	5°22	4°43	0°01	0°04	128°49	1°51	352°89	II.		N.	
22	6°46	3°08	0°01	0°04	140°68	1°51	347°04	II.		N.	
23	7°23	1°59	0°01	0°04	152°88	1°51	342°23	II.		N.	
24	7°52	-0°06	0°01	0°04	165°08	1°51	338°65	II.		N.	
25	7°39	+1°44	0°00	0°04	177°30	1°51	336°36	II.		N.	
26	6°92	2°82	0°00	0°04	189°52	1°51	335°31	II.		N.	
27	6°18	4°04	0°00	0°04	201°74	1°52	335°41	II.		N.	
28	5°23	5°06	0°00	0°04	213°97	1°52	336°58	II.		N.	
29	4°14	5°83	0°00	0°04	226°21	1°52	338°72				
30	2°95	6°34	0°00	0°04	238°45	1°52	341°73				
31	1°71	6°57	0°00	0°04	250°70	1°52	345°52				
June 1	+0°44	6°52	0°01	0°04	262°94	1°52	349°95				
2	-0°85	6°18	0°01	0°04	275°19	1°51	354°88				
3	2°13	5°58	0°01	0°04	287°44	1°50	0°09				
4	3°38	4°74	0°01	0°04	299°69	1°49	5°35				
5	4°57	3°68	0°01	0°04	311°93	1°48	10°41				
6	5°65	2°44	0°01	0°04	324°17	1°47	15°01	I.		N.	
7	-6°57	+1°07	-0°01	+0°04	336°40	-1°46	18°93	I.		N.	

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid-night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		o	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	s	Dec.	
June 7	-6.57	+1.07	-0.01	+0.04	336.40	-1.46	18.93	I.		N.	"
8	7.27	-0.37	0.01	0.04	348.63	1.44	21.97	I.		N.	
9	7.66	1.83	0.01	0.04	0.86	1.42	23.96	I.		N.	
10	7.67	3.23	0.01	0.04	13.08	1.41	24.77	I.		N.	
11	7.24	4.50	0.01	0.04	25.29	1.39	24.29	I.		N.	
12	6.33	5.53	-0.01	0.04	37.49	1.38	22.45	I.		N.	
13	4.95	6.24	0.00	0.04	49.69	1.36	19.20	I.		N.	
14	3.18	6.56	0.00	0.04	61.89	1.35	14.61	I.		N.	
15	-1.14	6.42	0.00	0.04	74.08	1.33	8.87	I.		N.	
16	+1.00	5.82	0.00	0.04	86.27	1.31	2.37	I.	0.08	N.	
17	3.03	4.81	0.00	0.04	98.45	1.30	355.65	II.		N.	
18	4.79	3.48	0.00	0.04	110.64	1.28	349.33	II.		N.	
19	6.15	1.95	0.00	0.04	122.83	1.26	343.92	II.		N.	
20	7.04	-0.34	0.00	0.04	135.03	1.25	339.75	II.		N.	
21	7.45	+1.24	0.00	0.04	147.24	1.24	336.96	II.		N.	
22	7.42	2.70	0.00	0.04	159.45	1.22	335.50	II.		N.	
23	7.00	3.99	0.00	0.04	171.66	1.21	335.29	II.		N.	
24	6.28	5.06	0.00	0.04	183.89	1.20	336.21	II.		N.	
25	5.32	5.87	0.00	0.04	196.12	1.19	338.13	II.		N.	
26	4.19	6.41	0.00	0.04	208.35	1.18	340.94	II.		N.	
27	2.96	6.67	0.00	0.04	220.59	1.17	344.55				
28	1.68	6.64	0.00	0.04	232.84	1.16	348.83				
29	+0.39	6.33	0.00	0.04	245.09	1.15	353.64				
30	-0.88	5.75	0.00	0.04	257.34	1.14	358.80				
July 1	2.10	4.91	0.00	0.04	269.59	1.13	4.08				
2	3.24	3.85	0.00	0.04	281.84	1.11	9.24				
3	4.29	2.60	0.00	0.04	294.09	1.09	14.00				
4	5.20	+1.22	0.00	0.04	306.34	1.07	18.12				
5	5.94	-0.24	0.00	0.04	318.59	1.05	21.37				
6	6.47	1.71	0.00	0.04	330.83	1.02	23.60	I.		N.	
7	6.74	3.12	0.00	0.04	343.06	1.00	24.68	I.		N.	
8	6.68	4.40	0.00	0.04	355.29	0.97	24.53	I.		N.	
9	6.27	5.47	0.00	0.04	7.52	0.95	23.10	I.		N.	
10	5.48	6.24	0.00	0.04	19.73	0.92	20.37	I.		N.	
11	4.31	6.65	0.00	0.04	31.94	0.89	16.35	I.		N.	
12	2.82	6.63	0.00	0.04	44.14	0.86	11.17	I.		N.	
13	-1.09	6.18	+0.01	0.04	56.34	0.83	5.09	I.		N.	
14	+0.74	5.29	0.01	0.04	68.53	0.80	358.51	I.		N.	1.28
15	2.52	4.05	0.01	0.04	80.72	0.78	351.99	I.		N.	0.27
16	4.11	2.54	0.01	0.04	92.91	0.75	346.12	II.		N.	0.99
17	5.39	-0.89	0.01	0.04	105.10	0.72	341.34	II.		N.	
18	6.28	+0.78	0.01	0.04	117.30	0.69	337.91	II.		N.	
19	6.75	2.35	0.01	0.04	129.49	0.66	335.90	II.		N.	
20	6.81	3.75	0.01	0.04	141.69	0.64	335.25	II.		N.	
21	6.48	4.92	0.01	0.04	153.90	0.62	335.82	II.		N.	
22	5.83	5.83	0.01	0.04	166.11	0.60	337.47	II.		N.	
23	4.91	6.45	0.01	0.04	178.33	0.58	340.07	II.		N.	
24	3.81	6.77	0.01	0.04	190.56	0.57	343.49	II.		N.	
25	2.59	6.80	0.01	0.04	202.79	0.55	347.61	II.		N.	
26	1.30	6.54	0.01	0.04	215.03	0.54	352.29	II.		N.	
27	+0.02	5.99	0.01	0.04	227.27	0.52	357.36				
28	-1.20	5.19	0.01	0.04	239.51	0.50	2.64				
29	-2.33	+4.16	+0.01	+0.04	251.76	-0.48	7.87				

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EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid-night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		o	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	s	Dec.	"
July 29	-2.33	+4.16	+0.01	+0.04	251.76	-0.48	7.87				
30	3.33	2.92	0.01	0.04	264.01	0.46	12.79				
31	4.16	1.53	0.01	0.04	276.26	0.44	17.13				
1	4.82	+0.04	0.01	0.04	288.51	0.42	20.66				
2	5.26	-1.47	0.01	0.04	300.75	0.39	23.17				
3	5.48	2.92	0.01	0.04	313.00	0.36	24.53				
4	5.45	4.25	0.01	0.04	325.24	0.33	24.66	I.		N.	
5	5.17	5.37	0.01	0.04	337.47	0.30	23.52	I.		N.	
6	4.63	6.20	0.01	0.04	349.70	0.27	21.11	I.		N.	
7	3.83	6.68	0.01	0.04	1.92	0.24	17.47	I.		N.	
8	2.80	6.76	0.01	0.04	14.13	0.21	12.72	I.		N.	
9	1.58	6.43	0.01	0.04	26.34	0.18	7.05	I.		N.	
10	-0.23	5.68	0.01	0.04	38.54	0.14	0.79	I.		N.	
11	+1.16	4.56	0.01	0.04	50.73	0.10	354.37	I.		S.	0.02
12	2.51	3.14	0.02	0.04	62.92	0.06	348.33	I.		S.	1.24
13	3.72	-1.54	0.02	0.04	75.11	-0.03	343.14	I.		S.	1.15
14	4.72	+0.14	0.02	0.04	87.29	+0.01	339.16	II.	0.04	S.	0.02
15	5.43	1.79	0.02	0.04	99.48	0.04	336.57	II.		N.	
16	5.81	3.29	0.02	0.04	111.66	0.07	335.37	II.		N.	
17	5.85	4.58	0.02	0.04	123.85	0.10	335.49	II.		N.	
18	5.55	5.60	0.02	0.04	136.04	0.13	336.79	II.		N.	
19	4.95	6.32	0.02	0.04	148.24	0.15	339.12	II.		N.	
20	4.08	6.74	0.02	0.04	160.44	0.17	342.32	II.		N.	
21	3.00	6.85	0.02	0.04	172.65	0.19	346.26	II.		N.	
22	1.79	6.67	0.02	0.04	184.86	0.21	350.80	II.		N.	
23	+0.52	6.20	0.02	0.04	197.08	0.23	355.77	II.		N.	
24	-0.75	5.47	0.02	0.04	209.30	0.24	0.99	II.		N.	
25	1.95	4.50	0.02	0.04	221.53	0.26	6.24	II.		S.	
26	3.00	3.31	0.01	0.04	233.77	0.28	11.28				
27	3.86	1.95	0.01	0.04	246.00	0.30	15.84				
28	4.49	+0.48	0.01	0.04	258.24	0.32	19.67				
29	4.85	-1.05	0.01	0.04	270.48	0.34	22.53				
30	4.92	2.55	0.01	0.04	282.72	0.36	24.25				
31	4.72	3.94	0.02	0.03	294.96	0.38	24.72				
Sept. 1	4.27	5.13	0.02	0.03	307.20	0.41	23.89				
2	3.59	6.03	0.02	0.03	319.43	0.44	21.75				
3	2.74	6.59	0.02	0.03	331.65	0.47	18.36	I.		N.	
4	1.77	6.75	0.02	0.03	343.87	0.50	13.85	I.		N.	
5	-0.73	6.50	0.02	0.03	356.08	0.53	8.42	I.		N.	
6	+0.34	5.85	0.02	0.03	8.29	0.56	2.37	I.		N.	
7	1.39	4.84	0.02	0.03	20.48	0.60	356.10	I.		S.	0.04
8	2.37	3.54	0.02	0.03	32.67	0.63	350.07	I.		S.	
9	3.25	2.03	0.02	0.03	44.86	0.67	344.72	I.		S.	
10	4.00	-0.41	0.02	0.03	57.03	0.70	340.41	I.		S.	
11	4.57	+1.22	0.02	0.04	69.21	0.74	337.37	I.		S.	
12	4.95	2.76	0.02	0.04	81.38	0.77	335.68	I.	0.07	S.	
13	5.09	4.11	0.02	0.04	93.55	0.80	335.32	II.		S.	0.00
14	4.98	5.22	0.02	0.04	105.73	0.83	336.20	II.		N.	
15	4.60	6.05	0.02	0.04	117.90	0.86	338.18	II.		N.	
16	3.95	6.56	0.02	0.04	130.08	0.88	341.12	II.		N.	
17	3.07	6.77	0.02	0.04	142.26	0.90	344.86	II.		N.	
18	2.00	6.67	0.02	0.04	154.44	0.91	349.24	II.		N.	
19	+0.78	+6.28	+0.02	+0.04	166.63	+0.93	354.10	II.		N.	

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid-night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		σ	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R. A.	s	Dec.	
Sept. 19	+0.78	+6.28	+0.02	+0.04	166.63	+0.93	354.10	II.		N.	"
20	-0.52	5.63	0.02	0.04	178.83	0.94	359.25	II.		N.	
21	1.81	4.73	0.02	0.04	191.03	0.95	4.49	II.		S.	
22	3.02	3.62	0.02	0.04	203.23	0.96	9.59	II.		S.	
23	4.06	2.34	0.02	0.04	215.44	0.98	14.30	II.		S.	
24	4.86	+0.93	0.02	0.04	227.66	0.99	18.38				
25	5.34	-0.57	0.02	0.04	239.88	1.00	21.60				
26	5.47	2.07	0.02	0.03	252.10	1.01	23.76				
27	5.22	3.49	0.02	0.03	264.33	1.03	24.69				
28	4.60	4.75	0.02	0.03	276.55	1.04	24.29				
29	3.67	5.74	0.02	0.03	288.78	1.06	22.52				
30	2.51	6.39	0.02	0.03	301.00	1.08	19.41				
Oct. 1	-1.21	6.63	0.02	0.03	313.22	1.10	15.09				
2	+0.11	6.45	0.02	0.03	325.43	1.12	9.76	I.		N.	
3	1.35	5.87	0.02	0.03	337.64	1.14	3.75	I.		N.	
4	2.45	4.92	0.02	0.03	349.84	1.17	357.47	I.		S.	
5	3.37	3.68	0.02	0.03	2.03	1.19	351.38	I.		S.	
6	4.08	2.24	0.02	0.03	14.21	1.22	345.91	I.		S.	
7	4.60	-0.68	0.02	0.03	26.39	1.25	341.41	I.		S.	
8	4.94	+0.89	0.02	0.03	38.56	1.27	338.09	I.		S.	
9	5.10	2.40	0.02	0.03	50.72	1.30	336.06	I.		S.	
10	5.09	3.75	0.02	0.03	62.88	1.33	335.32	I.		S.	
11	4.90	4.89	0.02	0.04	75.04	1.35	335.81	I.		S.	
12	4.52	5.76	0.02	0.04	87.20	1.37	337.43	II.	0.10	S.	
13	3.95	6.34	0.02	0.04	99.35	1.39	340.05	II.		S.	0.03
14	3.19	6.61	0.02	0.04	111.51	1.40	343.54	II.		N.	0.55
15	2.23	6.57	0.02	0.04	123.67	1.41	347.74	II.		N.	1.14
16	+1.09	6.24	0.02	0.04	135.83	1.42	352.48	II.		N.	0.63
17	-0.17	5.65	0.02	0.04	147.99	1.43	357.57	II.		S.	0.02
18	1.51	4.81	0.02	0.04	160.16	1.43	2.79	II.		S.	
19	2.85	3.77	0.02	0.04	172.34	1.43	7.92	II.		S.	
20	4.11	2.56	0.02	0.04	184.52	1.43	12.74	II.		S.	
21	5.20	+1.22	0.02	0.03	196.71	1.43	17.00	II.		S.	
22	6.02	-0.21	0.02	0.03	208.90	1.43	20.50	II.		S.	
23	6.49	1.66	0.02	0.03	221.10	1.44	23.04	II.		S.	
24	6.53	3.07	0.02	0.03	233.30	1.44	24.45				
25	6.11	4.35	0.02	0.03	245.50	1.44	24.59				
26	5.22	5.41	0.02	0.03	257.71	1.44	23.37				
27	3.93	6.15	0.02	0.03	269.92	1.44	20.75				
28	2.33	6.50	0.02	0.03	282.13	1.45	16.78				
29	-0.57	6.41	0.02	0.03	294.34	1.45	11.63				
30	+1.17	5.89	0.02	0.03	306.54	1.46	5.62				
Nov. 1	2.76	4.98	0.02	0.03	318.74	1.47	359.18				
2	4.09	3.75	0.02	0.03	330.93	1.48	352.83	I.		S.	
3	5.09	2.31	0.02	0.03	343.12	1.49	347.08	I.		S.	
4	5.77	-0.76	0.02	0.03	355.29	1.50	342.30	I.		S.	
5	6.13	+0.80	0.02	0.03	7.46	1.52	338.72	I.		S.	
6	6.23	2.28	0.02	0.03	19.63	1.53	336.42	I.		S.	
7	6.09	3.62	0.02	0.03	31.79	1.54	335.40	I.		S.	
8	5.75	4.75	0.02	0.03	43.94	1.56	335.60	I.		S.	
9	5.25	5.63	0.02	0.03	56.09	1.57	336.91	I.		S.	
10	4.59	6.23	0.02	0.03	68.23	1.57	339.24	I.		S.	
11	+3.78	+6.52	+0.02	+0.03	80.37	+1.58	342.47	I.	0.18	S.	

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF THE MOON.

Mid-night.	The Earth's Selenographic—		Physical Libration.		The Sun's Selenographic—		0	Illuminated Limbs at Transit at Greenwich, with Corrections to Defective Limbs when Observable.			
	Long.	Lat.	Long.	Lat.	Colong.	Lat.		R.A.	s	Dec.	
Nov. 10	+3.78	+6.52	+0.02	+0.03	80.37	+1.58	342.47	I.	0.18	S.	"
11	2.83	6.52	0.02	0.03	92.51	1.58	346.46	II.		S.	
12	1.74	6.22	0.02	0.03	104.65	1.58	351.05	II.		S.	0.71
13	+0.52	5.66	0.02	0.03	116.79	1.58	356.06	II.		S.	0.60
14	-0.80	4.85	0.02	0.03	128.94	1.57	1.27	II.		S.	
15	2.17	3.83	0.02	0.03	141.09	1.56	6.44	II.		S.	
16	3.55	2.65	0.02	0.03	153.24	1.55	11.34	II.		S.	
17	4.85	+1.35	0.02	0.03	165.40	1.54	15.74	II.		S.	
18	6.00	-0.04	0.01	0.03	177.56	1.53	19.44	II.		S.	
19	6.89	1.45	0.01	0.03	189.72	1.51	22.26	II.		S.	
20	7.43	2.82	0.01	0.03	201.90	1.50	24.05	II.		S.	
21	7.54	4.09	0.01	0.03	214.08	1.49	24.68	II.		S.	
22	7.14	5.18	0.01	0.03	226.26	1.47	24.05	II.		S.	
23	6.23	6.00	0.01	0.03	238.45	1.46	22.06				
24	4.82	6.46	0.01	0.03	250.64	1.45	18.70				
25	3.02	6.49	0.01	0.03	262.84	1.44	14.03				
26	-0.99	6.07	0.01	0.03	275.04	1.43	8.25				
27	+1.09	5.22	0.01	0.03	287.23	1.42	1.75				
28	3.03	4.01	0.01	0.03	299.42	1.41	355.09				
29	4.68	2.53	0.01	0.03	311.61	1.40	348.86				
30	5.94	-0.93	0.02	0.03	323.80	1.40	343.57	I.		S.	
Dec. 1	6.79	+0.69	0.02	0.03	335.97	1.40	339.53	I.		S.	
2	7.22	2.23	0.02	0.03	348.14	1.39	336.86	I.		S.	
3	7.29	3.61	0.02	0.03	0.31	1.39	335.54	I.		S.	
4	7.04	4.76	0.02	0.03	12.46	1.39	335.47	I.		S.	
5	6.53	5.66	0.02	0.03	24.61	1.38	336.55	I.		S.	
6	5.82	6.27	0.02	0.03	36.76	1.38	338.64	I.		S.	
7	4.94	6.59	0.02	0.03	48.90	1.38	341.63	I.		S.	
8	3.93	6.60	0.02	0.03	61.03	1.37	345.41	I.		S.	
9	2.80	6.32	0.01	0.03	73.16	1.36	349.83	I.		S.	
10	1.57	5.77	0.01	0.03	85.30	1.35	354.73	I.	0.08	S.	
11	+0.27	4.96	0.01	0.03	97.43	1.33	359.90	II.		S.	
12	-1.08	3.95	0.01	0.03	109.56	1.31	5.11	II.		S.	
13	2.45	2.77	0.01	0.03	121.69	1.29	10.11	II.		S.	
14	3.80	1.46	0.01	0.03	133.83	1.27	14.66	II.		S.	
15	5.07	+0.07	0.01	0.03	145.97	1.24	18.54	II.		S.	
16	6.19	-1.33	0.01	0.03	158.11	1.22	21.57	II.		S.	
17	7.09	2.70	0.01	0.03	170.26	1.19	23.62	II.		S.	
18	7.68	3.97	0.01	0.03	182.41	1.17	24.59	II.		S.	
19	7.88	5.08	0.01	0.03	194.57	1.14	24.40	II.		S.	
20	7.62	5.94	0.01	0.03	206.74	1.12	22.97	II.		S.	
21	6.87	6.49	0.01	0.03	218.91	1.09	20.26	II.		S.	
22	5.62	6.66	0.01	0.03	231.09	1.06	16.26				
23	3.95	6.39	0.01	0.03	243.28	1.04	11.05				
24	-1.97	5.68	0.01	0.03	255.47	1.02	4.88				
25	+0.16	4.55	0.01	0.03	267.66	0.99	358.18				
26	2.24	3.09	0.01	0.03	279.85	0.97	351.56				
27	4.11	-1.43	0.01	0.03	292.04	0.95	345.65				
28	5.63	+0.29	0.01	0.03	304.22	0.93	340.92				
29	6.73	1.95	0.01	0.03	316.40	0.91	337.63	I.		S.	
30	7.39	3.45	0.01	0.03	328.58	0.90	335.82	I.		S.	
31	7.61	4.70	0.01	0.03	340.75	0.88	335.39	I.		S.	
32	+7.44	+5.68	+0.01	+0.03	352.91	+0.86	336.19	I.		S.	

ILLUMINATED DISC OF MERCURY.

Noon.	<i>k</i>	<i>i</i>	θ	<i>L</i>	Stellar Mag.	Noon.	<i>k</i>	<i>i</i>	θ	<i>L</i>	Stellar Mag.
Jan. 1	0.403	101°	349°	58.6	+0.1	July 4	0.997	6°	224°	65.7	-1.8
6	0.168	132	344	35.1	1.0	9	0.983	15	349	58.1	1.5
11	0.017	165	316	4.2	2.4	14	0.931	30	3	49.1	1.0
16	0.049	155	197	10.9	2.0	19	0.865	43	10	41.7	0.6
21	0.204	126	185	33.5	1.0	24	0.798	53	15	36.7	-0.3
26	0.374	105	181	42.2	+0.5	29	0.733	62	18	33.5	0.0
31	0.512	89	177	40.8	0.3	Aug. 3	0.670	70	21	31.9	+0.2
Feb. 5	0.616	77	173	36.7	0.2	8	0.605	78	24	31.3	0.4
10	0.694	67	169	32.9	+0.1	13	0.536	86	26	31.5	0.5
15	0.756	59	165	30.2	0.0	18	0.457	95	28	32.0	0.6
20	0.805	52	161	28.5	0.0	23	0.365	106	30	31.6	+0.8
25	0.848	46	158	28.0	-0.1	28	0.258	119	33	28.7	1.1
Mar. 1	0.886	40	154	28.6	0.3	Sept. 2	0.142	136	38	20.4	1.6
6	0.921	33	150	30.5	0.5	7	0.042	156	51	7.5	2.3
11	0.954	25	145	34.1	0.8	12	0.008	170	144	1.7	2.9
16	0.982	15	138	39.6	-1.1	17	0.087	146	194	17.2	+1.7
21	0.998	5	99	47.8	1.5	22	0.273	117	202	45.7	+0.6
26	0.987	13	347	58.1	1.6	27	0.508	89	206	65.2	-0.2
31	0.926	32	337	67.6	1.4	Oct. 2	0.717	64	209	66.8	0.7
Apr. 5	0.799	53	335	70.6	1.0	7	0.860	44	211	57.5	0.9
10	0.625	76	335	64.2	-0.5	12	0.941	28	213	46.5	-1.0
15	0.444	96	335	51.7	+0.2	17	0.981	16	216	37.8	1.0
20	0.282	116	336	37.2	0.8	22	0.997	6	222	31.8	1.0
25	0.151	134	335	22.5	1.5	27	1.000	2	355	28.0	1.0
30	0.057	152	335	9.4	2.2	Nov. 1	0.994	9	20	25.7	0.8
May 5	0.007	171	333	1.2	+3.1	6	0.983	15	21	24.8	-0.6
10	0.006	171	153	1.0	3.1	11	0.967	21	20	24.9	0.5
15	0.048	155	152	7.6	2.4	16	0.945	27	18	26.1	0.4
20	0.119	140	153	16.4	1.8	21	0.914	34	15	28.7	0.4
25	0.204	126	153	23.9	1.4	26	0.870	42	12	32.8	0.4
30	0.294	114	155	29.7	+1.0	Dec. 1	0.805	52	8	38.9	-0.4
June 4	0.389	103	157	34.5	0.7	6	0.709	65	4	46.9	0.3
9	0.491	91	159	39.5	+0.4	11	0.565	83	0	54.8	-0.2
14	0.603	78	163	45.7	0.0	16	0.364	106	357	53.7	+0.3
19	0.726	63	167	53.6	-0.5	21	0.138	136	352	29.5	1.2
24	0.850	46	174	62.0	-1.0	26	0.007	170	311	1.8	+2.7
29	0.951	26	184	67.3	-1.5	31	0.074	148	198	16.4	+1.7

ILLUMINATED DISC OF VENUS.

Noon.		<i>k</i>	<i>i</i>	<i>θ</i>	<i>L</i>	Stellar Mag.	Noon.		<i>k</i>	<i>i</i>	<i>θ</i>	<i>L</i>	Stellar Mag.
Jan.	1	0.887	39.2	348.3	57.8	-3.4	July	4	0.006	171.4	142.8	8.9	-3.0
	6	0.877	41.0	346.2	59.2	3.4		9	0.026	161.4	160.7	38.7	3.4
	11	0.867	42.7	344.4	60.7	3.4		14	0.060	151.6	165.8	80.8	3.7
	16	0.856	44.5	342.8	62.3	3.4		19	0.103	142.6	168.4	121.1	3.9
	21	0.845	46.3	341.3	64.0	3.4		24	0.149	134.6	170.4	151.5	4.1
	26	0.833	48.2	340.1	65.8	-3.4		29	0.196	127.5	172.2	170.1	-4.2
Feb.	31	0.821	50.1	339.1	67.8	3.5	Aug.	3	0.241	121.2	174.1	178.9	4.2
	5	0.808	52.0	338.3	69.9	3.5		8	0.284	115.6	176.0	180.5	4.2
	10	0.794	53.9	337.7	72.2	3.5		13	0.324	110.6	178.0	177.4	4.2
	15	0.780	55.9	337.4	74.7	3.5		18	0.361	106.1	180.1	171.6	4.2
	20	0.765	58.0	337.2	77.4	-3.6		23	0.396	102.0	182.3	164.4	-4.1
Mar.	25	0.749	60.1	337.3	80.4	3.6	Sept.	28	0.429	98.2	184.5	156.5	4.1
	1	0.733	62.3	337.6	83.5	3.6		2	0.459	94.6	186.7	148.6	4.0
	6	0.715	64.5	338.1	86.9	3.6		7	0.488	91.3	188.9	141.0	4.0
	11	0.697	66.8	338.7	90.6	3.7		12	0.516	88.2	191.1	133.6	4.0
	16	0.678	69.1	339.6	94.6	-3.7		17	0.541	85.3	193.3	126.8	-3.9
	21	0.658	71.5	340.7	98.9	3.7		22	0.566	82.4	195.3	120.4	3.9
	26	0.638	74.0	342.0	103.7	3.8		27	0.589	79.7	197.2	114.6	3.8
Apr.	31	0.616	76.6	343.4	108.8	3.8	Oct.	2	0.612	77.1	199.0	109.2	3.8
	5	0.593	79.3	345.0	114.4	3.8		7	0.633	74.6	200.5	104.2	3.8
		10	0.568	82.1	346.7	120.4		-3.9		12	0.654	72.1	201.9	99.6	-3.7
	15	0.543	85.1	348.5	127.0	3.9		17	0.673	69.7	203.1	95.4	3.7
	20	0.516	88.2	350.4	134.0	4.0		22	0.692	67.4	204.0	91.5	3.7
	25	0.488	91.4	352.3	141.5	4.0		27	0.710	65.1	204.7	87.9	3.6
	30	0.457	94.9	354.2	149.4	4.0	Nov.	1	0.728	62.9	205.2	84.5	3.6
								6	0.745	60.7	205.4	81.4	-3.6
May	5	0.425	98.6	356.0	157.4	-4.1		11	0.761	58.5	205.3	78.6	3.6
	10	0.391	102.6	357.8	165.2	4.1		16	0.776	56.4	204.9	75.9	3.5
	15	0.355	106.9	359.4	172.3	4.2		21	0.791	54.4	204.3	73.4	3.5
	20	0.316	111.6	0.8	177.6	4.2		26	0.805	52.3	203.4	71.1	3.5
	25	0.274	116.9	2.1	179.6	4.2							
	30	0.229	122.8	3.2	176.3	-4.2	Dec.	1	0.819	50.4	202.3	68.9	-3.5
June	4	0.183	129.4	4.1	164.9	4.1		6	0.832	48.4	200.8	66.9	3.5
	9	0.135	136.8	5.1	142.9	4.0		11	0.844	46.5	199.1	65.0	3.4
	14	0.089	145.2	6.3	109.3	3.9		16	0.856	44.6	197.1	63.3	3.4
	19	0.049	154.5	8.6	67.3	3.6		21	0.867	42.7	194.9	61.6	3.4
	24	0.018	164.5	14.8	27.4	-3.3		26	0.878	40.8	192.5	60.0	-3.4
	29	0.003	174.0	47.2	4.4	-2.8		31	0.888	39.0	189.8	58.6	-3.4

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Midnight.	Light-Time.	Stellar Magnitude.	P	$A_{\oplus} + 180^{\circ}$	D_{\oplus}	$A_{\odot} - A_{\oplus}$	D_{\odot}	$\odot \delta$
	m							
Jan. 1	16.86	+1.7	36.73	322.94	+14.27	-28.94	+22.12	112.13
3	16.72	1.7	36.66	324.18	13.82	29.20	21.96	113.06
5	16.58	1.7	36.57	325.42	13.37	29.45	21.80	113.99
7	16.44	1.7	36.46	326.65	12.92	29.70	21.63	114.92
9	16.30	1.6	36.33	327.88	12.45	29.94	21.45	115.86
11	16.15	+1.6	36.18	329.11	+11.99	-30.18	+21.27	116.79
13	16.01	1.6	36.01	330.33	11.52	30.41	21.08	117.73
15	15.86	1.6	35.82	331.54	11.04	30.64	20.89	118.68
17	15.72	1.6	35.61	332.75	10.56	30.86	20.69	119.62
19	15.57	1.6	35.38	333.96	10.07	31.08	20.48	120.57
21	15.43	+1.5	35.14	335.17	+ 9.58	-31.30	+20.27	121.52
23	15.28	1.5	34.88	336.37	9.09	31.51	20.05	122.47
25	15.13	1.5	34.59	337.56	8.59	31.72	19.83	123.42
27	14.98	1.5	34.29	338.76	8.08	31.93	19.60	124.38
29	14.83	1.5	33.98	339.95	7.58	32.14	19.36	125.34
31	14.68	+1.4	33.64	341.14	+ 7.08	-32.34	+19.12	126.30
Feb. 2	14.53	1.4	33.29	342.32	6.57	32.54	18.87	127.27
4	14.38	1.4	32.92	343.50	6.06	32.73	18.62	128.24
6	14.23	1.4	32.54	344.68	5.54	32.92	18.36	129.21
8	14.08	1.4	32.14	345.86	5.03	33.11	18.09	130.18
10	13.92	+1.3	31.72	347.03	+ 4.51	-33.30	+17.82	131.16
12	13.77	1.3	31.29	348.21	4.00	33.49	17.54	132.14
14	13.62	1.3	30.84	349.38	3.48	33.67	17.26	133.12
16	13.46	1.3	30.38	350.54	2.96	33.86	16.97	134.10
18	13.31	1.2	29.90	351.71	2.44	34.04	16.67	135.09
20	13.16	+1.2	29.41	352.88	+ 1.92	-34.22	+16.37	136.08
22	13.01	1.2	28.90	354.04	1.40	34.39	16.07	137.08
24	12.85	1.2	28.38	355.20	0.89	34.57	15.76	138.08
26	12.70	1.1	27.85	356.36	+ 0.37	34.75	15.44	139.08
28	12.54	1.1	27.31	357.52	- 0.15	34.92	15.12	140.08
Mar. 1	12.39	+1.1	26.75	358.68	- 0.66	-35.09	+14.79	141.09
3	12.24	1.1	26.18	359.84	1.17	35.27	14.46	142.10
5	12.09	1.0	25.61	1.00	1.68	35.44	14.12	143.11
7	11.93	1.0	25.02	2.16	2.19	35.61	13.78	144.13
9	11.78	1.0	24.42	3.32	2.70	35.78	13.43	145.15
11	11.63	+0.9	23.81	4.47	- 3.20	-35.95	+13.08	146.18
13	11.48	0.9	23.19	5.63	3.70	36.12	12.72	147.20
15	11.32	0.9	22.56	6.78	4.20	36.28	12.36	148.23
17	11.17	0.9	21.93	7.94	4.69	36.45	11.99	149.27
19	11.02	0.8	21.28	9.09	5.18	36.61	11.62	150.31
21	10.87	+0.8	20.63	10.25	- 5.67	-36.78	+11.24	151.35
23	10.72	0.8	19.97	11.40	6.15	36.94	10.86	152.39
25	10.57	0.7	19.30	12.56	6.62	37.11	10.47	153.44
27	10.42	0.7	18.63	13.72	7.09	37.27	10.08	154.49
29	10.27	0.7	17.95	14.87	7.56	37.43	9.68	155.55
31	10.13	+0.6	17.27	16.03	- 8.02	-37.59	+ 9.28	156.61

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Mid-night.	k	Diame-ter.	i	q	Q	Central Meridian.		Mean Time of Transit of Zero Meridian.			
						Of Date.	Of Intermedi-ate Date.	Of Date.	Of Intermedi-ate Date.		
Jan.	1	0.939	4.61	28.54	0.28	286.52	88.24	78.52	h m	h m	
	3	0.938	4.65	28.90	0.29	286.10	68.82	59.11	5 57.2	6 37.2	
	5	0.936	4.69	29.25	0.30	285.67	49.40	39.69	7 17.1	7 57.0	
	7	0.935	4.73	29.60	0.31	285.24	29.98	20.28	8 36.9	9 16.8	
	9	0.933	4.77	29.95	0.32	284.80	10.57	0.87	9 56.7	10 36.6	
	11	0.932	4.82	30.30	0.33	284.35	351.17	341.46	11 16.5	11 56.4	
	13	0.930	4.86	30.65	0.34	283.90	331.76	322.07	12 36.3	13 16.2	
	15	0.929	4.90	30.99	0.35	283.43	312.37	302.67	13 56.1	14 35.9	
	17	0.927	4.95	31.33	0.36	282.96	292.98	283.28	15 15.8	15 55.7	
	19	0.926	4.99	31.67	0.37	282.48	273.59	263.90	16 35.5	17 15.4	
	21	0.924	5.04	32.00	0.38	282.00	254.20	244.51	17 55.2	18 35.0	
	23	0.922	5.09	32.33	0.39	281.51	234.82	225.14	19 14.9	19 54.7	
	25	0.921	5.14	32.66	0.41	281.01	215.45	205.76	20 34.6	21 14.4	
	27	0.919	5.19	32.99	0.42	280.51	196.07	186.39	21 54.2	22 34.0	
	29	0.918	5.24	33.31	0.43	280.00	176.70	167.02	23 13.8	23 53.6	
	31	0.916	5.30	33.63	0.44	279.48	157.33	147.65	..	0 33.5	
	Feb.	2	0.915	5.35	33.95	0.46	278.96	137.97	128.29	1 13.3	1 53.1
		4	0.913	5.41	34.27	0.47	278.44	118.61	108.93	2 32.9	3 12.7
		6	0.912	5.47	34.58	0.48	277.91	99.25	89.57	3 52.4	4 32.2
8		0.910	5.53	34.88	0.50	277.37	79.90	70.22	5 12.0	5 51.8	
10		0.909	5.59	35.18	0.51	276.84	60.54	50.87	6 31.6	7 11.4	
12		0.907	5.65	35.48	0.52	276.29	41.19	31.52	7 51.2	8 30.9	
14		0.906	5.71	35.78	0.54	275.75	21.84	12.17	9 10.7	9 50.5	
16		0.904	5.78	36.07	0.55	275.20	2.49	352.82	10 30.2	11 10.0	
18		0.903	5.84	36.36	0.57	274.65	343.15	333.48	11 49.7	12 29.5	
20		0.901	5.91	36.64	0.58	274.10	323.81	314.14	13 9.3	13 49.0	
Mar.	22	0.900	5.98	36.92	0.60	273.54	304.46	294.79	14 28.8	15 8.5	
	24	0.898	6.05	37.19	0.62	272.99	285.12	275.45	15 48.3	16 28.0	
	26	0.897	6.12	37.46	0.63	272.43	265.78	256.11	17 7.8	17 47.5	
	28	0.895	6.20	37.73	0.65	271.87	246.44	236.77	18 27.3	19 7.0	
	1	0.894	6.28	37.99	0.66	271.31	227.10	217.44	19 46.8	20 26.5	
	3	0.893	6.35	38.25	0.68	270.76	207.77	198.10	21 6.2	21 46.0	
	5	0.891	6.44	38.50	0.70	270.20	188.43	178.76	22 25.7	23 5.5	
	7	0.890	6.52	38.75	0.72	269.64	169.09	159.43	23 45.2	..	
9	0.889	6.60	38.99	0.74	269.09	149.76	140.09	0 25.0	1 4.7		
11	0.887	6.69	39.22	0.75	268.54	130.42	120.76	1 44.4	2 24.2		
13	0.886	6.78	39.45	0.77	268.00	111.09	101.42	3 3.9	3 43.6		
15	0.885	6.87	39.68	0.79	267.44	91.76	82.09	4 23.4	5 3.1		
17	0.884	6.96	39.90	0.81	266.90	72.42	62.75	5 42.8	6 22.6		
19	0.882	7.06	40.11	0.83	266.36	53.09	43.42	7 2.3	7 42.1		
21	0.881	7.16	40.31	0.85	265.82	33.75	24.08	8 21.8	9 1.5		
23	0.880	7.26	40.51	0.87	265.29	14.42	4.75	9 41.3	10 21.0		
25	0.879	7.36	40.71	0.89	264.76	355.08	345.41	11 0.7	11 40.5		
27	0.878	7.46	40.90	0.91	264.24	335.75	326.08	12 20.2	13 0.0		
29	0.877	7.57	41.08	0.93	263.72	316.41	306.74	13 39.7	14 19.4		
31	0.876	7.68	41.25	0.95	263.21	297.07	287.41	14 59.2	15 38.9		
								16 18.6	16 58.4		

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Midnight.	Light-Time.	Stellar Magnitude.	P	$A_{\oplus} + 180^{\circ}$	D_{\oplus}	$A_{\odot} - A_{\oplus}$	D_{\odot}	$\odot \delta$
	m							
Mar. 31	10.13	+0.6	17.27	16.03	- 8.02	-37.59	+ 9.28	156.61
Apr. 2	9.98	0.6	16.58	17.19	8.47	37.75	8.88	157.67
4	9.83	0.6	15.89	18.34	8.92	37.91	8.47	158.74
6	9.69	0.5	15.19	19.50	9.36	38.07	8.06	159.81
8	9.54	0.5	14.49	20.65	9.79	38.22	7.65	160.88
10	9.40	+0.5	13.79	21.81	-10.22	-38.37	+ 7.23	161.96
12	9.25	0.4	13.08	22.96	10.64	38.52	6.81	163.04
14	9.11	0.4	12.38	24.11	11.05	38.67	6.38	164.13
16	8.97	0.4	11.67	25.26	11.45	38.82	5.95	165.22
18	8.83	0.3	10.96	26.41	11.85	38.96	5.52	166.31
20	8.69	+0.3	10.25	27.56	-12.23	-39.10	+ 5.08	167.41
22	8.55	0.3	9.54	28.71	12.61	39.23	4.64	168.51
24	8.41	0.2	8.83	29.86	12.98	39.36	4.20	169.62
26	8.27	0.2	8.12	31.00	13.34	39.49	3.76	170.72
28	8.13	0.1	7.41	32.14	13.69	39.61	3.31	171.84
30	8.00	+0.1	6.70	33.28	-14.03	-39.73	+ 2.86	172.95
May 2	7.86	+0.1	5.99	34.41	14.36	39.84	2.41	174.07
4	7.73	0.0	5.29	35.54	14.68	39.94	1.95	175.20
6	7.60	0.0	4.60	36.67	14.98	40.03	1.49	176.32
8	7.47	-0.1	3.90	37.79	15.28	40.11	1.03	177.45
10	7.34	-0.1	3.21	38.90	-15.57	-40.19	+ 0.57	178.59
12	7.21	0.2	2.53	40.01	15.84	40.26	+ 0.11	179.73
14	7.08	0.2	1.85	41.11	16.11	40.31	- 0.35	180.87
16	6.95	0.2	1.18	42.20	16.36	40.36	0.82	182.02
18	6.83	0.3	0.51	43.29	16.60	40.39	1.29	183.17
20	6.70	-0.3	359.85	44.36	-16.83	-40.41	- 1.75	184.32
22	6.58	0.4	359.20	45.43	17.05	40.42	2.22	185.48
24	6.46	0.4	358.56	46.48	17.25	40.41	2.69	186.64
26	6.34	0.5	357.93	47.52	17.44	40.39	3.16	187.80
28	6.22	0.5	357.31	48.55	17.62	40.34	3.63	188.97
30	6.10	-0.6	356.69	49.57	-17.79	-40.28	- 4.10	190.14
June 1	5.98	0.6	356.09	50.56	17.94	40.20	4.58	191.32
3	5.87	0.7	355.51	51.54	18.08	40.10	5.05	192.50
5	5.76	0.7	354.93	52.51	18.21	39.97	5.52	193.68
7	5.64	0.8	354.37	53.45	18.33	39.82	5.99	194.87
9	5.53	-0.8	353.82	54.37	-18.43	-39.64	- 6.45	196.06
11	5.42	0.9	353.29	55.27	18.52	39.44	6.92	197.25
13	5.32	0.9	352.78	56.15	18.60	39.20	7.39	198.44
15	5.21	1.0	352.28	57.01	18.67	38.94	7.85	199.64
17	5.11	1.0	351.79	57.83	18.73	38.65	8.32	200.85
19	5.00	-1.1	351.33	58.63	-18.77	-38.32	- 8.78	202.05
21	4.90	1.1	350.88	59.40	18.80	37.96	9.24	203.26
23	4.80	1.2	350.45	60.14	18.82	37.56	9.69	204.47
25	4.71	1.2	350.04	60.85	18.83	37.12	10.15	205.69
27	4.61	1.3	349.66	61.52	18.83	36.64	10.60	206.91
29	4.52	-1.3	349.30	62.15	-18.81	-36.12	-11.05	208.13
July 1	4.43	-1.4	348.96	62.74	-18.79	-35.55	-11.49	209.35

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Mid-night.	k	Diameter.	i	q	Q	Central Meridian.		Mean Time of Transit of Zero Meridian.			
						Of Date.	Of Intermediate Date.	Of Date.	Of Intermediate Date.		
								h	m	h	m
Mar. 31	0.876	7.68	41.25	0.95	263.21	297.07	287.41	16	18.6	16	58.4
Apr. 2	0.875	7.79	41.42	0.97	262.70	277.74	268.07	17	38.1	18	17.9
4	0.874	7.91	41.58	1.00	262.21	258.40	248.73	18	57.6	19	37.4
6	0.873	8.03	41.73	1.02	261.72	239.06	229.40	20	17.1	20	56.8
8	0.872	8.15	41.87	1.04	261.23	219.73	210.06	21	36.6	22	16.3
10	0.872	8.28	42.00	1.06	260.76	200.40	190.73	22	56.0	23	35.8
12	0.871	8.41	42.13	1.09	260.29	181.06	171.39	..	..	0	15.5
14	0.870	8.54	42.25	1.11	259.83	161.73	152.06	0	55.2	1	35.0
16	0.870	8.67	42.36	1.13	259.39	142.39	132.73	2	14.7	2	54.4
18	0.869	8.81	42.46	1.16	258.95	123.06	113.40	3	34.2	4	13.9
20	0.868	8.95	42.55	1.18	258.52	103.73	94.07	4	53.6	5	33.4
22	0.868	9.10	42.63	1.20	258.10	84.40	74.74	6	13.1	6	52.8
24	0.868	9.25	42.70	1.23	257.69	65.07	55.41	7	32.5	8	12.2
26	0.867	9.40	42.76	1.25	257.29	45.75	36.08	8	52.0	9	31.7
28	0.867	9.56	42.81	1.27	256.90	26.42	16.76	10	11.4	10	51.1
30	0.867	9.72	42.85	1.30	256.52	7.10	357.44	11	30.8	12	10.5
May 2	0.866	9.89	42.87	1.32	256.16	347.78	338.13	12	50.2	13	29.9
4	0.866	10.06	42.89	1.34	255.80	328.47	318.82	14	9.6	14	49.3
6	0.866	10.24	42.89	1.37	255.46	309.16	299.51	15	29.0	16	8.6
8	0.866	10.42	42.88	1.39	255.13	289.86	280.21	16	48.3	17	28.0
10	0.867	10.60	42.85	1.41	254.82	270.56	260.91	18	7.6	18	47.2
12	0.867	10.79	42.81	1.44	254.51	251.27	241.63	19	26.9	20	6.5
14	0.867	10.99	42.75	1.46	254.22	231.98	222.34	20	46.2	21	25.8
16	0.868	11.19	42.68	1.48	253.94	212.71	203.07	22	5.4	22	45.0
18	0.868	11.39	42.60	1.50	253.68	193.44	183.81	23	24.6	..	..
20	0.869	11.60	42.50	1.52	253.43	174.18	164.55	0	4.1	0	43.7
22	0.869	11.82	42.38	1.54	253.19	154.93	145.30	1	23.3	2	2.8
24	0.870	12.04	42.24	1.56	252.97	135.68	126.07	2	42.4	3	21.9
26	0.871	12.27	42.09	1.58	252.77	116.46	106.85	4	1.4	4	40.9
28	0.872	12.51	41.91	1.60	252.58	97.24	87.64	5	20.4	5	59.8
30	0.873	12.75	41.72	1.62	252.40	78.04	68.44	6	39.3	7	18.7
June 1	0.874	13.00	41.50	1.63	252.24	58.85	49.27	7	58.1	8	37.5
3	0.876	13.25	41.26	1.65	252.10	39.68	30.11	9	16.9	9	56.3
5	0.877	13.51	41.00	1.66	251.98	20.53	10.96	10	35.6	11	14.9
7	0.879	13.78	40.72	1.67	251.87	1.40	351.84	11	54.2	12	33.5
9	0.881	14.06	40.41	1.68	251.78	342.29	332.74	13	12.8	13	52.0
11	0.883	14.34	40.07	1.68	251.70	323.20	313.66	14	31.2	15	10.4
13	0.885	14.63	39.71	1.69	251.65	304.13	294.61	15	49.5	16	28.7
15	0.887	14.93	39.32	1.69	251.61	285.09	275.58	17	7.8	17	46.9
17	0.889	15.23	38.89	1.69	251.60	266.07	256.57	18	25.9	19	4.9
19	0.892	15.54	38.44	1.69	251.60	247.08	237.60	19	43.9	20	22.9
21	0.894	15.86	37.96	1.68	251.63	228.12	218.65	21	1.8	21	40.7
23	0.897	16.19	37.44	1.67	251.68	209.19	199.73	22	19.5	22	58.3
25	0.900	16.52	36.89	1.65	251.75	190.29	180.85	23	37.1	..	..
27	0.903	16.86	36.31	1.64	251.85	171.43	162.01	0	15.8	0	54.5
29	0.906	17.21	35.68	1.62	251.98	152.60	143.20	1	33.2	2	11.8
July 1	0.910	17.56	35.01	1.59	252.13	133.82	124.44	2	50.4	3	28.9

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Midnight.	Light-Time.	Stellar Magnitude.	P	$A_{\oplus} + 180^{\circ}$	D_{\oplus}	$A_{\odot} - A_{\oplus}$	D_{\odot}	$\odot \delta$	
	m								
July	1	4.43	-1.4	348.96	62.74	-18.79	-35.55	-11.49	209.35
	3	4.34	1.5	348.64	63.29	18.75	34.93	11.93	210.58
	5	4.25	1.5	348.35	63.80	18.71	34.26	12.37	211.81
	7	4.17	1.6	348.09	64.26	18.66	33.54	12.80	213.04
	9	4.09	1.6	347.85	64.68	18.59	32.77	13.23	214.27
	11	4.01	-1.7	347.63	65.05	-18.52	-31.95	-13.65	215.51
	13	3.93	1.8	347.45	65.37	18.44	31.07	14.07	216.75
	15	3.85	1.8	347.29	65.65	18.36	30.14	14.49	217.99
	17	3.78	1.9	347.16	65.87	18.27	29.14	14.90	219.23
	19	3.71	1.9	347.06	66.04	18.17	28.09	15.30	220.48
	21	3.65	-2.0	346.99	66.15	-18.06	-26.98	-15.70	221.73
	23	3.59	2.0	346.95	66.21	17.95	25.80	16.09	222.98
	25	3.53	2.1	346.94	66.21	17.84	24.56	16.47	224.23
	27	3.47	2.2	346.96	66.16	17.72	23.26	16.85	225.48
	29	3.42	2.2	347.02	66.05	17.60	21.90	17.22	226.74
	31	3.37	-2.3	347.10	65.89	-17.48	-20.48	-17.58	228.00
Aug.	2	3.32	2.3	347.21	65.68	17.35	19.00	17.93	229.25
	4	3.28	2.4	347.35	65.41	17.23	17.46	18.28	230.51
	6	3.24	2.4	347.52	65.10	17.11	15.86	18.62	231.77
	8	3.21	2.5	347.72	64.75	16.99	14.22	18.95	233.04
	10	3.18	-2.5	347.93	64.35	-16.87	-12.53	-19.27	234.30
	12	3.16	2.5	348.17	63.92	16.76	10.80	19.59	235.57
	14	3.14	2.6	348.43	63.45	16.65	9.03	19.89	236.83
	16	3.12	2.6	348.71	62.96	16.55	7.23	20.18	238.10
	18	3.11	2.6	349.00	62.44	16.46	5.40	20.47	239.36
	20	3.10	-2.7	349.30	61.91	-16.37	-3.54	-20.74	240.63
	22	3.10	2.7	349.61	61.37	16.29	-1.67	21.01	241.90
	24	3.10	2.7	349.92	60.83	16.23	+0.21	21.27	243.17
	26	3.11	2.6	350.24	60.28	16.18	2.09	21.51	244.44
	28	3.12	2.6	350.55	59.74	16.14	3.97	21.74	245.71
	30	3.14	-2.6	350.85	59.22	-16.11	+5.84	-21.97	246.98
Sept.	1	3.16	2.6	351.15	58.72	16.10	7.69	22.18	248.25
	3	3.18	2.5	351.43	58.25	16.10	9.51	22.38	249.52
	5	3.21	2.5	351.69	57.80	16.12	11.31	22.57	250.78
	7	3.25	2.4	351.93	57.40	16.15	13.08	22.75	252.05
	9	3.29	-2.4	352.15	57.03	-16.20	+14.81	-22.91	253.32
	11	3.33	2.3	352.35	56.71	16.27	16.50	23.07	254.59
	13	3.38	2.3	352.52	56.44	16.35	18.14	23.21	255.85
	15	3.43	2.2	352.65	56.21	16.44	19.74	23.34	257.12
	17	3.48	2.2	352.76	56.04	16.56	21.29	23.46	258.39
	19	3.54	-2.1	352.84	55.91	-16.68	+22.79	-23.57	259.65
	21	3.60	2.1	352.89	55.84	16.82	24.24	23.66	260.91
	23	3.67	2.0	352.91	55.82	16.98	25.63	23.74	262.18
	25	3.74	1.9	352.90	55.85	17.14	26.97	23.81	263.44
	27	3.81	1.9	352.85	55.94	17.32	28.26	23.87	264.70
	29	3.88	-1.8	352.78	56.08	-17.51	+29.49	-23.92	265.95
Oct.	1	3.96	-1.8	352.67	56.27	-17.72	+30.67	-23.95	267.21

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Mid-night.	k	Diameter.	i	q	Q	Central Meridian.		Mean Time of Transit of Zero Meridian.		
						Of Date.	Of Intermediate Date.	Of Date.	Of Intermediate Date.	
July	1	0·910	17·56	35°01	1·59	252°13	133·82	124·44	h m	h m
	3	0·913	17·92	34·31	1·56	252·31	115·07	105·71	2 50·4	3 28·9
	5	0·917	18·29	33·56	1·52	252·53	96·37	87·03	4 7·4	4 45·9
	7	0·920	18·66	32·76	1·48	252·78	77·71	68·40	5 24·2	6 2·6
	9	0·924	19·04	31·92	1·44	253·07	59·09	49·80	6 40·9	7 19·2
	11	0·928	19·41	31·04	1·39	253·40	40·53	31·26	7 57·4	8 35·5
	13	0·932	19·79	30·11	1·34	253·77	22·01	12·77	9 13·6	9 51·6
	15	0·937	20·18	29·13	1·28	254·20	3·54	354·32	10 29·6	11 7·6
	17	0·941	20·56	28·10	1·21	254·68	345·12	335·93	11 45·5	12 23·3
	19	0·945	20·94	27·03	1·14	255·22	326·75	317·59	13 1·1	13 38·8
	21	0·950	21·32	25·90	1·07	255·84	308·44	299·30	14 16·5	14 54·1
	23	0·954	21·69	24·72	0·99	256·54	290·18	281·06	15 31·6	16 9·1
	25	0·958	22·06	23·49	0·91	257·34	271·97	262·89	16 46·5	17 23·9
	27	0·963	22·42	22·22	0·83	258·25	253·82	244·76	18 1·2	18 38·5
	29	0·967	22·76	20·89	0·75	259·30	235·72	226·70	19 15·7	19 52·8
	31	0·971	23·10	19·52	0·66	260·52	217·68	208·68	20 29·9	21 6·9
Aug.	2	0·975	23·41	18·10	0·58	261·94	199·69	190·72	21 43·9	22 20·8
	4	0·979	23·71	16·65	0·50	263·63	181·75	172·80	22 57·6	23 34·4
	6	0·982	23·98	15·17	0·42	265·65	163·86	154·92	..	0 11·2
	8	0·986	24·23	13·66	0·34	268·14	146·00	137·09	0 47·9	1 24·5
	10	0·989	24·45	12·15	0·27	271·24	128·19	119·30	2 1·1	2 37·7
	12	0·991	24·65	10·64	0·21	275·22	110·42	101·54	3 14·2	3 50·7
	14	0·994	24·81	9·16	0·16	280·51	92·67	83·81	4 27·2	5 3·6
	16	0·995	24·94	7·76	0·11	287·74	74·95	66·10	5 40·0	6 16·3
	18	0·997	25·03	6·50	0·08	297·93	57·25	48·41	6 52·6	7 28·9
	20	0·998	25·09	5·51	0·06	312·33	39·57	30·73	8 5·2	8 41·5
	22	0·998	25·11	4·97	0·05	331·30	21·89	13·06	9 17·8	9 54·0
	24	0·998	25·09	5·04	0·05	351·12	4·22	355·39	10 30·2	11 6·4
	26	0·998	25·03	5·69	0·06	10·25	346·55	337·71	11 42·7	12 18·9
	28	0·997	24·93	6·75	0·09	23·72	328·87	320·02	12 55·2	13 31·4
	30	0·995	24·80	8·04	0·12	33·22	311·17	302·31	14 7·7	14 43·9
Sept.	1	0·993	24·64	9·47	0·17	40·00	293·45	284·58	15 20·2	15 56·6
	3	0·991	24·44	10·96	0·22	44·97	275·70	266·82	16 32·9	17 9·3
	5	0·988	24·21	12·47	0·28	48·76	257·92	249·02	17 45·7	18 22·2
	7	0·985	23·95	13·98	0·35	51·73	240·10	231·18	18 58·7	19 35·2
	9	0·982	23·67	15·47	0·43	54·11	222·24	213·29	20 11·8	20 48·4
	11	0·978	23·36	16·94	0·51	56·06	204·34	195·37	21 25·1	22 1·8
	13	0·975	23·03	18·38	0·59	57·69	186·38	177·39	22 38·6	23 15·4
	15	0·971	22·69	19·78	0·67	59·07	168·38	159·36	23 52·3	..
	17	0·966	22·34	21·13	0·75	60·25	150·33	141·28	0 29·2	1 6·2
	19	0·962	21·97	22·44	0·83	61·27	132·22	123·15	1 43·2	2 20·3
	21	0·958	21·59	23·71	0·91	62·15	114·07	104·97	2 57·4	3 34·7
	23	0·954	21·20	24·92	0·99	62·91	95·85	86·73	4 11·9	4 49·2
	25	0·949	20·81	26·08	1·06	63·58	77·59	68·43	5 26·6	6 4·1
	27	0·945	20·42	27·20	1·13	64·16	59·27	50·09	6 41·6	7 19·1
	29	0·940	20·02	28·26	1·19	64·67	40·89	31·68	7 56·7	8 34·4
Oct.	1	0·936	19·63	29·27	1·25	65·11	22·46	13·23	9 12·1	9 49·9
									10 27·8	11 5·7

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Midnight.	Light-Time.	Stellar Magnitude.	P	$A_{\oplus} + 18^{\circ}$	D_{\oplus}	$A_{\odot} - A_{\oplus}$	D_{\odot}	$\odot \delta$
	m							
Oct. 1	3.96	-1.8	352.67	56.27	-17.72	+30.67	-23.95	267.21
3	4.04	1.7	352.53	56.52	17.93	31.80	23.97	268.46
5	4.13	1.6	352.36	56.82	18.15	32.87	23.98	269.72
7	4.21	1.6	352.16	57.17	18.38	33.89	23.98	270.97
9	4.30	1.5	351.94	57.57	18.61	34.86	23.96	272.22
11	4.39	-1.5	351.69	58.02	-18.85	+35.78	-23.93	273.47
13	4.49	1.4	351.41	58.51	19.10	36.65	23.89	274.71
15	4.58	1.3	351.11	59.04	19.35	37.47	23.84	275.95
17	4.68	1.3	350.79	59.62	19.60	38.24	23.78	277.19
19	4.78	1.2	350.44	60.24	19.86	38.97	23.71	278.43
21	4.89	-1.2	350.07	60.90	-20.11	+39.66	-23.62	279.67
23	4.99	1.1	349.68	61.60	20.37	40.31	23.52	280.90
25	5.10	1.1	349.27	62.34	20.63	40.91	23.41	282.13
27	5.21	1.0	348.85	63.11	20.88	41.47	23.29	283.36
29	5.32	1.0	348.40	63.91	21.14	41.98	23.16	284.59
31	5.43	-0.9	347.94	64.76	-21.39	+42.46	-23.02	285.81
Nov. 2	5.54	0.8	347.47	65.63	21.64	42.90	22.87	287.03
4	5.66	0.8	346.98	66.54	21.88	43.30	22.71	288.25
6	5.78	0.7	346.48	67.47	22.12	43.67	22.53	289.46
8	5.89	0.7	345.96	68.44	22.35	44.00	22.35	290.67
10	6.01	-0.6	345.43	69.43	-22.58	+44.30	-22.16	291.88
12	6.14	0.6	344.90	70.44	22.80	44.57	21.96	293.08
14	6.26	0.5	344.35	71.48	23.01	44.80	21.74	294.29
16	6.38	0.5	343.80	72.55	23.22	45.00	21.52	295.48
18	6.51	0.4	343.24	73.63	23.42	45.18	21.29	296.68
20	6.64	-0.4	342.67	74.74	-23.60	+45.32	-21.06	297.87
22	6.77	0.3	342.10	75.87	23.78	45.43	20.81	299.06
24	6.90	0.3	341.52	77.02	23.95	45.52	20.55	300.24
26	7.03	0.2	340.94	78.19	24.11	45.58	20.29	301.42
28	7.16	0.2	340.35	79.38	24.26	45.62	20.02	302.60
30	7.29	-0.2	339.77	80.58	-24.39	+45.63	-19.74	303.78
Dec. 2	7.43	0.1	339.18	81.80	24.52	45.61	19.46	304.95
4	7.56	-0.1	338.59	83.04	24.63	45.57	19.17	306.12
6	7.70	0.0	338.00	84.29	24.73	45.51	18.87	307.28
8	7.84	0.0	337.41	85.55	24.81	45.43	18.56	308.44
10	7.98	+0.1	336.82	86.82	-24.89	+45.33	-18.25	309.60
12	8.12	0.1	336.24	88.11	24.95	45.21	17.93	310.75
14	8.26	0.1	335.66	89.41	25.00	45.07	17.61	311.90
16	8.40	0.2	335.09	90.71	25.03	44.92	17.28	313.04
18	8.54	0.2	334.52	92.03	25.05	44.74	16.94	314.18
20	8.68	+0.2	333.96	93.35	-25.06	+44.55	-16.60	315.32
22	8.83	0.3	333.40	94.68	25.06	44.35	16.26	316.45
24	8.97	0.3	332.85	96.02	25.04	44.13	15.91	317.58
26	9.12	0.4	332.31	97.36	25.00	43.90	15.56	318.71
28	9.26	0.4	331.78	98.71	24.95	43.65	15.20	319.83
30	9.41	+0.4	331.26	100.06	-24.89	+43.39	-14.84	320.95
32	9.56	+0.5	330.75	101.42	-24.81	+43.12	-14.47	322.07

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF MARS.

Mid-night.	k	Diameter.	i	q	Q	Central Meridian.		Mean Time of Transit of Zero Meridian.	
						Of Date.	Of Intermediate Date.	Of Date.	Of Intermediate Date.
Oct. 1	0.936	19.63	29.27	1.25	65.11	22.46	13.23	h m	h m
3	0.932	19.23	30.23	1.31	65.50	3.98	354.72	10 27.8	11 5.7
5	0.928	18.84	31.15	1.36	65.83	345.44	336.15	11 43.7	12 21.7
7	0.924	18.46	32.01	1.40	66.12	326.85	317.54	12 59.8	13 37.9
9	0.920	18.07	32.83	1.44	66.36	308.22	298.88	14 16.1	14 54.3
11	0.916	17.70	33.61	1.48	66.57	289.53	280.17	15 32.6	16 11.0
13	0.913	17.33	34.34	1.51	66.75	270.80	261.42	16 49.4	17 27.8
15	0.909	16.97	35.03	1.54	66.90	252.03	242.62	18 6.3	18 44.9
17	0.906	16.61	35.68	1.56	67.02	233.21	223.79	19 23.5	20 2.1
19	0.903	16.26	36.29	1.58	67.12	214.35	204.91	20 40.8	21 19.5
21	0.900	15.92	36.86	1.59	67.19	195.45	185.99	21 58.3	22 37.1
23	0.897	15.58	37.40	1.60	67.25	176.51	167.03	23 16.0	23 54.9
25	0.894	15.26	37.90	1.61	67.29	157.53	148.03	..	0 33.8
27	0.892	14.94	38.37	1.61	67.31	138.52	129.00	1 12.8	1 51.8
29	0.890	14.63	38.81	1.61	67.32	119.47	109.93	2 30.9	3 10.0
31	0.887	14.33	39.21	1.61	67.32	100.38	90.83	3 49.1	4 28.3
Nov. 2	0.885	14.03	39.59	1.61	67.31	81.26	71.69	5 7.5	5 46.8
4	0.884	13.75	39.93	1.60	67.29	62.12	52.53	6 26.1	7 5.4
6	0.882	13.47	40.25	1.59	67.26	42.94	33.34	7 44.8	8 24.1
8	0.880	13.20	40.54	1.58	67.23	23.73	14.11	9 3.6	9 43.0
10	0.878	12.93	40.81	1.57	67.19	4.49	354.86	10 22.5	11 2.0
12	0.877	12.68	41.06	1.56	67.15	345.23	335.59	11 41.5	12 21.1
14	0.876	12.43	41.28	1.54	67.10	325.94	316.29	13 0.7	13 40.3
16	0.875	12.18	41.48	1.53	67.05	306.63	296.97	14 20.0	14 59.7
18	0.874	11.95	41.67	1.51	67.00	287.30	277.62	15 39.4	16 19.1
20	0.873	11.72	41.83	1.49	66.95	267.94	258.26	16 58.8	17 38.6
22	0.872	11.50	41.97	1.47	66.90	248.57	238.87	18 18.4	18 58.2
24	0.871	11.28	42.09	1.45	66.85	229.17	219.46	19 38.1	20 17.9
26	0.870	11.07	42.20	1.43	66.80	209.75	200.04	20 57.8	21 37.7
28	0.870	10.86	42.28	1.41	66.76	190.32	180.59	22 17.7	22 57.6
30	0.870	10.66	42.35	1.39	66.72	170.86	161.13	23 37.6	..
Dec. 2	0.869	10.47	42.41	1.37	66.68	151.39	141.65	0 17.6	0 57.6
4	0.869	10.28	42.45	1.35	66.64	131.91	122.16	1 37.6	2 17.6
6	0.869	10.10	42.48	1.33	66.61	112.41	102.66	2 57.7	3 37.7
8	0.869	9.92	42.49	1.30	66.58	92.90	83.14	4 17.8	4 57.9
10	0.869	9.75	42.48	1.28	66.56	73.38	63.61	5 38.0	6 18.2
12	0.869	9.58	42.47	1.26	66.55	53.84	44.07	6 58.3	7 38.5
14	0.869	9.42	42.45	1.23	66.54	34.29	24.52	8 18.6	8 58.8
16	0.869	9.26	42.41	1.21	66.53	14.74	4.96	9 39.0	10 19.2
18	0.870	9.11	42.36	1.19	66.54	355.17	345.39	10 59.4	11 39.6
20	0.870	8.96	42.30	1.17	66.55	335.60	325.81	12 19.9	13 0.1
22	0.870	8.81	42.23	1.14	66.56	316.02	306.22	12 19.9	13 0.1
24	0.871	8.67	42.15	1.12	66.59	296.43	286.63	13 40.3	14 20.6
26	0.871	8.53	42.06	1.10	66.62	276.83	267.03	15 0.9	15 41.1
28	0.872	8.40	41.95	1.08	66.66	257.23	247.43	16 21.4	17 1.7
30	0.872	8.27	41.84	1.05	66.71	237.62	227.82	17 42.0	18 22.3
32	0.873	8.14	41.72	1.03	66.77	218.02	208.21	19 2.6	19 42.9

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER.

Midnight.	Light-Time.	Stellar Magnitude.	P	$A_{\oplus} + 180^{\circ}$	D_{\oplus}	$A_{\odot} + 180^{\circ}$	D_{\odot}	
	m							
Jan.	1	51.28	-1.3	9.01	112.53	-2.84	106.95	-2.94
	8	50.73	1.4	8.40	113.95	2.83	107.50	2.93
	15	50.10	1.4	7.80	115.31	2.83	108.04	2.92
	22	49.41	1.4	7.23	116.61	2.83	108.59	2.91
	29	48.66	1.4	6.68	117.84	2.82	109.14	2.90
Feb.	5	47.85	-1.5	6.17	118.99	-2.82	109.69	-2.89
	12	46.99	1.5	5.70	120.05	2.81	110.24	2.88
	19	46.10	1.6	5.27	121.00	2.81	110.79	2.87
	26	45.18	1.6	4.88	121.85	2.81	111.34	2.86
Mar.	4	44.25	1.7	4.55	122.58	2.81	111.89	2.85
	11	43.30	-1.7	4.28	123.17	-2.81	112.44	-2.84
	18	42.36	1.8	4.07	123.63	2.81	113.00	2.83
	25	41.44	1.8	3.92	123.95	2.81	113.55	2.81
Apr.	1	40.54	1.8	3.85	124.11	2.81	114.10	2.80
	8	39.69	1.9	3.84	124.12	2.81	114.65	2.79
	15	38.89	-1.9	3.90	123.98	-2.82	115.21	-2.78
	22	38.16	2.0	4.04	123.69	2.82	115.76	2.76
	29	37.50	2.0	4.24	123.26	2.82	116.31	2.75
May	6	36.94	2.1	4.49	122.70	2.82	116.87	2.74
	13	36.48	2.1	4.80	122.02	2.82	117.42	2.72
	20	36.12	-2.1	5.15	121.24	-2.82	117.98	-2.71
	27	35.88	2.1	5.53	120.40	2.82	118.54	2.70
June	3	35.76	2.1	5.93	119.52	2.81	119.09	2.68
	10	35.76	2.1	6.33	118.63	2.80	119.65	2.67
	17	35.88	2.1	6.72	117.76	2.79	120.21	2.65
	24	36.11	-2.1	7.09	116.94	-2.77	120.76	-2.64
July	1	36.46	2.1	7.42	116.19	2.76	121.32	2.62
	8	36.91	2.1	7.70	115.54	2.74	121.88	2.61
	15	37.46	2.0	7.93	115.02	2.71	122.44	2.59
	22	38.09	2.0	8.11	114.63	2.69	123.00	2.57
	29	38.80	-2.0	8.22	114.38	-2.67	123.56	-2.56
Aug.	5	39.56	1.9	8.26	114.28	2.65	124.12	2.54
	12	40.38	1.9	8.24	114.33	2.62	124.68	2.52
	19	41.23	1.8	8.15	114.53	2.60	125.24	2.51
	26	42.10	1.8	8.00	114.88	2.58	125.80	2.49
Sept.	2	42.99	-1.7	7.79	115.36	-2.55	126.37	-2.47
	9	43.88	1.7	7.52	115.99	2.53	126.93	2.45
	16	44.76	1.7	7.19	116.74	2.51	127.49	2.44
	23	45.62	1.6	6.81	117.60	2.48	128.06	2.42
	30	46.46	1.6	6.37	118.57	2.46	128.62	2.40
Oct.	7	47.26	-1.5	5.89	119.65	-2.44	129.19	-2.38
	14	48.01	1.5	5.36	120.81	2.42	129.75	2.36
	21	48.71	1.5	4.80	122.05	2.39	130.32	2.34
	28	49.35	1.4	4.20	123.37	2.37	130.89	2.32
Nov.	4	49.93	1.4	3.56	124.75	2.34	131.45	2.30
	11	50.44	-1.4	2.90	126.19	-2.31	132.02	-2.28
	18	50.87	-1.4	2.21	127.68	-2.29	132.59	-2.26

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EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER.

Midnight.	Equatorial Diameter.	Excess of Equat. Diam. over Polar.	δ	α	ϱ	Central Meridian.		Correction for Phase.
						System I.	System II.	
Jan. 1	31·91	2·12	5·58	0·08	280·15	257·53	351·41	+0·14
8	32·26	2·14	6·44	0·10	279·38	281·75	322·22	0·18
15	32·66	2·17	7·26	0·13	278·68	306·07	293·12	0·23
22	33·12	2·20	8·01	0·16	278·02	330·49	264·13	0·28
29	33·63	2·24	8·69	0·19	277·41	355·02	235·24	0·33
Feb. 5	34·20	2·27	9·29	0·22	276·84	19·66	206·47	+0·38
12	34·82	2·31	9·79	0·25	276·32	44·43	177·82	0·42
19	35·50	2·36	10·20	0·28	275·84	69·31	149·29	0·45
26	36·22	2·41	10·50	0·30	275·41	94·33	120·89	0·48
Mar. 4	36·98	2·46	10·67	0·32	275·03	119·47	92·62	0·49
11	37·79	2·51	10·71	0·33	274·70	144·75	64·49	+0·50
18	38·63	2·57	10·62	0·33	274·43	170·16	36·49	0·49
25	39·49	2·62	10·39	0·32	274·21	195·71	8·62	0·47
Apr. 1	40·36	2·68	10·00	0·31	274·04	221·39	340·88	0·44
8	41·23	2·74	9·46	0·28	273·93	247·20	313·28	0·39
15	42·08	2·80	8·77	0·25	273·87	273·13	285·79	+0·33
22	42·89	2·85	7·92	0·21	273·84	299·17	258·42	0·27
29	43·63	2·90	6·94	0·16	273·83	325·30	231·14	0·21
May 6	44·30	2·94	5·82	0·11	273·80	351·51	203·93	0·15
13	44·87	2·98	4·59	0·07	273·68	17·77	176·78	0·09
20	45·31	3·01	3·26	0·04	273·29	44·06	149·66	+0·05
27	45·61	3·03	1·87	0·01	271·88	70·35	122·54	+0·02
June 3	45·77	3·04	0·45	0·00	259·26	96·60	95·38	0·00
10	45·77	3·04	1·03	0·01	103·73	122·79	68·16	-0·01
17	45·61	3·03	2·45	0·02	99·82	148·89	40·85	0·03
24	45·31	3·01	3·83	0·05	99·02	174·87	13·42	-0·06
July 1	44·88	2·98	5·13	0·09	98·78	200·70	345·85	0·11
8	44·33	2·95	6·33	0·13	98·72	226·37	318·11	0·17
15	43·68	2·90	7·42	0·18	98·71	251·86	290·19	0·24
22	42·96	2·85	8·37	0·23	98·71	277·17	262·09	0·31
29	42·18	2·80	9·17	0·27	98·69	302·29	233·81	-0·37
Aug. 5	41·36	2·75	9·83	0·30	98·64	327·23	205·33	0·42
12	40·53	2·69	10·34	0·33	98·54	351·98	176·68	0·46
19	39·69	2·64	10·70	0·35	98·40	16·56	147·86	0·50
26	38·87	2·58	10·92	0·35	98·21	40·98	118·87	0·52
Sept. 2	38·07	2·53	10·99	0·35	97·97	65·25	89·73	-0·53
9	37·29	2·48	10·93	0·34	97·68	89·38	60·46	0·52
16	36·56	2·43	10·75	0·32	97·34	113·40	31·07	0·50
23	35·87	2·38	10·45	0·30	96·95	137·31	1·58	0·47
30	35·22	2·34	10·04	0·27	96·52	161·13	331·99	0·44
Oct. 7	34·63	2·30	9·53	0·24	96·05	184·87	302·32	-0·40
14	34·09	2·27	8·94	0·21	95·53	208·54	272·60	0·35
21	33·60	2·23	8·26	0·18	94·98	232·17	242·82	0·30
28	33·16	2·20	7·51	0·14	94·39	255·76	213·00	0·25
Nov. 4	32·78	2·18	6·69	0·11	93·77	279·33	183·16	0·20
11	32·45	2·16	5·82	0·08	93·10	302·88	153·31	-0·15
18	32·17	2·14	4·91	0·06	92·40	326·43	123·45	-0·11

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER.
SYSTEM I.

Transit of Zero Meridian.			Interval between Successive Transits.		Transit of Zero Meridian.			Interval between Successive Transits.				
	d	h	m	h	m		d	h	m	h	m	
Jan.	1	14	47.89	9	50.60	Mar.	21	14	3.94	9	50.47	
	3	16	0.90				23	15	16.32			
	5	17	13.90				25	16	28.69			
	7	18	26.89				27	17	41.05			
	9	19	39.86				29	18	53.38			
	11	20	52.82	9	50.58		31	20	5.70	9	50.45	
	13	22	5.76				Apr.	2	21	18.00		
	15	23	18.69					4	22	30.29		
	18	0	31.60					6	23	42.56		
	20	1	44.50					9	0	54.82		
22	2	57.38	9	50.57	11	2	7.06	9	50.44			
24	4	10.25			13	3	19.28					
26	5	23.10			15	4	31.49					
28	6	35.94			17	5	43.68					
30	7	48.76			19	6	55.86					
Feb.	1	9	1.57	9	50.55	21	8	8.03	9	50.43		
	3	10	14.36			23	9	20.18				
	5	11	27.13			25	10	32.32				
	7	12	39.89			27	11	44.45				
	9	13	52.63			29	12	56.57				
	11	15	5.35	9	50.54	May	1	14	8.68	9	50.42	
13	16	18.06			3		15	20.77				
15	17	30.76			5		16	32.85				
17	18	43.43			7		17	44.93				
19	19	56.09			9		18	57.00				
21	21	8.73	9	50.52	11		20	9.06	9	50.41		
23	22	21.36			13	21	21.12					
25	23	33.97			15	22	33.17					
28	0	46.56			17	23	45.21					
Mar.	1	1	59.13			20	0	57.26				
3	3	11.69	9	50.50	22	2	9.30	9	50.41			
5	4	24.23			24	3	21.34					
7	5	36.76			26	4	33.38					
9	6	49.26			28	5	45.42					
11	8	1.75			30	6	57.46					
13	9	14.22	9	50.49	June	1	8	9.51	9	50.42		
15	10	26.68				3	9	21.56				
17	11	39.12				5	10	33.63				
19	12	51.54				7	11	45.70				

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER. SYSTEM I.—*continued.*

Transit of Zero Meridian.			Interval between Successive Transits.		Transit of Zero Meridian.			Interval between Successive Transits.	
June	d	h m	h	m	Aug.	d	h m	h	m
	9	12 57.78	9	50.44		28	12 6.60	9	50.61
	11	14 9.88				30	13 19.59		
	13	15 21.99			Sept.	1	14 32.61		
	15	16 34.12				3	15 45.64		
	17	17 46.27				5	16 58.68		
	19	18 58.44	9	50.46		7	18 11.75	9	50.63
	21	20 10.63				9	19 24.83		
	23	21 22.85				11	20 37.92		
	25	22 35.08				13	21 51.03		
	27	23 47.34				15	23 4.15		
	30	0 59.62	9	50.48		18	0 17.29	9	50.64
July	2	2 11.92				20	1 30.44		
	4	3 24.25				22	2 43.60		
	6	4 36.61				24	3 56.77		
	8	5 48.99				26	5 9.96		
	10	7 1.39	9	50.51		28	6 23.16	9	50.65
	12	8 13.82				30	7 36.37		
	14	9 26.28			Oct.	2	8 49.58		
	16	10 38.76				4	10 2.81		
	18	11 51.27				6	11 16.04		
	20	13 3.80	9	50.53		8	12 29.29	9	50.65
	22	14 16.36				10	13 42.54		
	24	15 28.95				12	14 55.80		
	26	16 41.56				14	16 9.07		
	28	17 54.20				16	17 22.34		
	30	19 6.86	9	50.55		18	18 35.62	9	50.66
Aug.	1	20 19.55				20	19 48.90		
	3	21 32.26				22	21 2.19		
	5	22 45.00				24	22 15.49		
	7	23 57.76				26	23 28.79		
	10	1 10.55	9	50.57		29	0 42.09	9	50.66
	12	2 23.36				31	1 55.39		
	14	3 36.19			Nov.	2	3 8.70		
	16	4 49.04				4	4 22.02		
	18	6 1.92				6	5 35.33		
	20	7 14.81	9	50.59		8	6 48.65	9	50.66
	22	8 27.73				10	8 1.97		
	24	9 40.67				12	9 15.29		
	26	10 53.63				14	10 28.61		

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER.
SYSTEM II.

Transit of Zero Meridian.			Interval between Successive Transits.		Transit of Zero Meridian.			Interval between Successive Transits.				
	d	h	m	h	m		d	h	m	h	m	
Jan.	1	12	13.99	9	55.78	Mar.	22	4	19.74	9	55.65	
	3	13	52.90				24	5	58.01			
	5	15	31.80				26	7	36.26			
	7	17	10.68				28	9	14.49			
	9	18	49.55				30	10	52.71			
	11	20	28.40	9	55.76		Apr.	1	12	30.91	9	55.63
	13	22	7.24					3	14	9.09		
	15	23	46.06					5	15	47.25		
	18	1	24.87					7	17	25.40		
	20	3	3.66					9	19	3.53		
22	4	42.44	9	55.75	11	20	41.65	9	55.61			
24	6	21.20			13	22	19.75					
26	7	59.94			15	23	57.84					
28	9	38.67			18	1	35.91					
30	11	17.39			20	3	13.96					
Feb.	1	12	56.09	9	55.73	22	4	52.01	9	55.60		
	3	14	34.77			24	6	30.04				
	5	16	13.43			26	8	8.05				
	7	17	52.08			28	9	46.06				
	9	19	30.71			30	11	24.05				
11	21	9.33	9	55.72	May	2	13	2.03	9	55.59		
13	22	47.93				4	14	40.00				
16	0	26.51				6	16	17.96				
18	2	5.07				8	17	55.91				
20	3	43.62				10	19	33.85				
22	5	22.15	9	55.70	12	21	11.79	9	55.58			
24	7	0.67			14	22	49.72					
26	8	39.16			17	0	27.65					
28	10	17.64			19	2	5.57					
Mar.	1	11	56.10			21	3	43.50				
	3	13	34.54	9	55.68	23	5	21.42	9	55.59		
	5	15	12.97			25	6	59.33				
	7	16	51.38			27	8	37.25				
	9	18	29.77			29	10	15.17				
	11	20	8.14			31	11	53.09				
13	21	46.50	9	55.66	June	2	13	31.02	9	55.60		
15	23	24.83				4	15	8.96				
18	1	3.15				6	16	46.91				
20	2	41.46				8	18	24.86				

EPHEMERIS FOR PHYSICAL OBSERVATIONS OF JUPITER. SYSTEM II.—*continued.*

Transit of Zero Meridian.			Interval between Successive Transits.		Transit of Zero Meridian.			Interval between Successive Transits							
	d	h	m	h	m		d	h	m	h	m				
June	10	20	2·83	9	55·62	Aug.	30	12	1·89	Sept.	1	13	40·80		
	12	21	40·82				3	15	19·72		3	15	19·72		
	14	23	18·82				5	16	58·66		5	16	58·66		
	17	0	56·85				7	18	37·62		7	18	37·62		
	19	2	34·89												
	21	4	12·95	9	55·64			9	20		16·59	9	20	16·59	
	23	5	51·04					11	21		55·58				
	25	7	29·15					13	23		34·58				
	27	9	7·28					16	1		13·60				
	29	10	45·43					18	2		52·63				
July	1	12	23·61	9	55·66		20	4	31·68	9	55·82				
	3	14	1·81				22	6	10·74						
	5	15	40·04				24	7	49·81						
	7	17	18·30				26	9	28·89						
	9	18	56·58				28	11	7·98						
	11	20	34·88	9	55·69	Oct.	30	12	47·08	9	55·83				
	13	22	13·22				2	14	26·20						
	15	23	51·58				4	16	5·32						
	18	1	29·97				6	17	44·46						
	20	3	8·38				8	19	23·60						
22	4	46·82	9	55·72			10	21	2·75	9	55·84				
24	6	25·29					12	22	41·91						
26	8	3·78					15	0	21·07						
28	9	42·30					17	2	0·24						
30	11	20·85					19	3	39·42						
Aug.	1	12	59·42	9	55·73		21	5	18·60	9	55·84				
	3	14	38·02				23	6	57·79						
	5	16	16·64				25	8	36·99						
	7	17	55·29				27	10	16·18						
	9	19	33·96				29	11	55·38						
	11	21	12·65	9	55·75	Nov.	31	13	34·59	9	55·84				
	13	22	51·37				2	15	13·80						
	16	0	30·11				4	16	53·01						
	18	2	8·87				6	18	32·23						
	20	3	47·66				8	20	11·44						
22	5	26·47	9	55·77			10	21	50·66	9	55·84				
24	7	5·29					12	23	29·88						
26	8	44·14					15	1	9·10						
28	10	23·01					17	2	48·32						

TABLES.

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.			
	h	m	s		m	s		m	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.
0.01	^s 0.01003	0.21	^s 0.21057	0.41	^s 0.41112	0.61	^s 0.61167	0.81	^s 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^h 25^m 18^s.96 Mean Time at Greenwich, Jan. 20, 1924, into Sidereal Time.

		h	m	s
Sidereal Time at the <i>preceding</i> Mean Noon, viz., January 20	-	19	54	24.28
For Mean Intervals $\left\{ \begin{array}{l} 2^h \\ 25^m \\ 18^s \\ 0.96 \end{array} \right.$ the Table gives the Equivalent Sidereal Intervals $\left\{ \begin{array}{l} 2 \\ 25 \\ 18.049 \\ 0.963 \end{array} \right.$	+	2	0	19.713
		25	4.107	18.049
		0.963		0.963
The Sum is the Sidereal Time required		22	20	7.11

TABLES.

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.			
	h	m	s	m	s	m	s	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.
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

Mean Solar Time *required* = Mean Time at the *preceding* Sidereal Noon (Mean Time of Transit of the First Point of Aries, page III) + the Equivalent to the *given* Sidereal Time.

EXAMPLE.—To convert 22^h 20^m 7^s.11 Sidereal Time at Greenwich, Jan. 20, 1924, into Mean Time.

Mean Time at the <i>preceding</i> Sidereal Noon, viz., January 19 For Sidereal Intervals { 22 ^h 0 ^m 0 ^s } { 20 0 } { 7 } { 0.11 }	the Table gives the Equivalent Mean Intervals {	h m s 4 8 51.39 21 56 23.750 19 56.724 6.981 0.110 <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> 2 25 18.96
The Sum is the Mean Time required, Jan. 20		

586 DAY OF THE YEAR, &c., 1924.

DAY AND FRACTION OF THE YEAR FROM MEAN NOON OF JAN. 1.

Day of the Month.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*
1	0	.0000	31	.0849	60	.1643	91	.2492	121	.3313	152	.4162
2	1	.0027	32	.0876	61	.1670	92	.2519	122	.3340	153	.4189
3	2	.0055	33	.0904	62	.1698	93	.2546	123	.3368	154	.4216
4	3	.0082	34	.0931	63	.1725	94	.2574	124	.3395	155	.4244
5	4	.0110	35	.0958	64	.1752	95	.2601	125	.3422	156	.4271
6	5	.0137	36	.0986	65	.1780	96	.2628	126	.3450	157	.4299
7	6	.0164	37	.1013	66	.1807	97	.2656	127	.3477	158	.4326
8	7	.0192	38	.1040	67	.1834	98	.2683	128	.3504	159	.4353
9	8	.0219	39	.1068	68	.1862	99	.2711	129	.3532	160	.4381
10	9	.0246	40	.1095	69	.1889	100	.2738	130	.3559	161	.4408
11	10	.0274	41	.1123	70	.1917	101	.2765	131	.3587	162	.4435
12	11	.0301	42	.1150	71	.1944	102	.2793	132	.3614	163	.4463
13	12	.0329	43	.1177	72	.1971	103	.2820	133	.3641	164	.4490
14	13	.0356	44	.1205	73	.1999	104	.2847	134	.3669	165	.4518
15	14	.0383	45	.1232	74	.2026	105	.2875	135	.3696	166	.4545
16	15	.0411	46	.1259	75	.2053	106	.2902	136	.3724	167	.4572
17	16	.0438	47	.1287	76	.2081	107	.2930	137	.3751	168	.4600
18	17	.0465	48	.1314	77	.2108	108	.2957	138	.3778	169	.4627
19	18	.0493	49	.1342	78	.2136	109	.2984	139	.3806	170	.4654
20	19	.0520	50	.1369	79	.2163	110	.3012	140	.3833	171	.4682
21	20	.0548	51	.1396	80	.2190	111	.3039	141	.3860	172	.4709
22	21	.0575	52	.1424	81	.2218	112	.3066	142	.3888	173	.4737
23	22	.0602	53	.1451	82	.2245	113	.3094	143	.3915	174	.4764
24	23	.0630	54	.1478	83	.2272	114	.3121	144	.3943	175	.4791
25	24	.0657	55	.1506	84	.2300	115	.3149	145	.3970	176	.4819
26	25	.0684	56	.1533	85	.2327	116	.3176	146	.3997	177	.4846
27	26	.0712	57	.1561	86	.2355	117	.3203	147	.4025	178	.4873
28	27	.0739	58	.1588	87	.2382	118	.3231	148	.4052	179	.4901
29	28	.0767	59	.1615	88	.2409	119	.3258	149	.4079	180	.4928
30	29	.0794			89	.2437	120	.3285	150	.4107	181	.4956
31	30	.0821			90	.2464			151	.4134		

*Subtract .0003 if Fraction of the Year be required from the time when the Sun's Mean Longitude is 280°.

DAY AND FRACTION OF THE YEAR FROM MEAN NOON
OF JAN. 1.

Day of the Month.	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*	Day of the Year.	Fraction of the Year.*
1	182	.4983	213	.5832	244	.6681	274	.7502	305	.8351	335	.9172
2	183	.5010	214	.5859	245	.6708	275	.7529	306	.8378	336	.9199
3	184	.5038	215	.5887	246	.6735	276	.7557	307	.8405	337	.9227
4	185	.5065	216	.5914	247	.6763	277	.7584	308	.8433	338	.9254
5	186	.5093	217	.5941	248	.6790	278	.7611	309	.8460	339	.9282
6	187	.5120	218	.5969	249	.6817	279	.7639	310	.8488	340	.9309
7	188	.5147	219	.5996	250	.6845	280	.7666	311	.8515	341	.9336
8	189	.5175	220	.6023	251	.6872	281	.7694	312	.8542	342	.9364
9	190	.5202	221	.6051	252	.6900	282	.7721	313	.8570	343	.9391
10	191	.5229	222	.6078	253	.6927	283	.7748	314	.8597	344	.9418
11	192	.5257	223	.6106	254	.6954	284	.7776	315	.8624	345	.9446
12	193	.5284	224	.6133	255	.6982	285	.7803	316	.8652	346	.9473
13	194	.5312	225	.6160	256	.7009	286	.7830	317	.8679	347	.9501
14	195	.5339	226	.6188	257	.7036	287	.7858	318	.8707	348	.9528
15	196	.5366	227	.6215	258	.7064	288	.7885	319	.8734	349	.9555
16	197	.5394	228	.6242	259	.7091	289	.7913	320	.8761	350	.9583
17	198	.5421	229	.6270	260	.7119	290	.7940	321	.8789	351	.9610
18	199	.5448	230	.6297	261	.7146	291	.7967	322	.8816	352	.9637
19	200	.5476	231	.6325	262	.7173	292	.7995	323	.8843	353	.9665
20	201	.5503	232	.6352	263	.7201	293	.8022	324	.8871	354	.9692
21	202	.5531	233	.6379	264	.7228	294	.8049	325	.8898	355	.9720
22	203	.5558	234	.6407	265	.7255	295	.8077	326	.8926	356	.9747
23	204	.5585	235	.6434	266	.7283	296	.8104	327	.8953	357	.9774
24	205	.5613	236	.6461	267	.7310	297	.8132	328	.8980	358	.9802
25	206	.5640	237	.6489	268	.7338	298	.8159	329	.9008	359	.9829
26	207	.5667	238	.6516	269	.7365	299	.8186	330	.9035	360	.9856
27	208	.5695	239	.6544	270	.7392	300	.8214	331	.9062	361	.9884
28	209	.5722	240	.6571	271	.7420	301	.8241	332	.9090	362	.9911
29	210	.5750	241	.6598	272	.7447	302	.8268	333	.9117	363	.9939
30	211	.5777	242	.6626	273	.7474	303	.8296	334	.9145	364	.9966
31	212	.5804	243	.6653			304	.8323			365	.9993

* Subtract .0003 if Fraction of the Year be required from the time when the Sun's Mean Longitude is 280°.

Days elapsed at Mean Noon of Jan. 1 of each year of the Table.											Days elapsed at Mean Noon.		
A.D.	0	200	400	600	800	1000	1200	1400	1600	1800	Date.	1924.	
	I7	I7	I8	I9	20	20	2I	22	23	23			
0	21058	94108	67158	40208	13258	86308	59358	32408	05448	78497*			
4	22519	95569	68619	41669	14719	87769	60819	33869	06909	79957	Jan.	1	242
8	23980	97030	70080	43130	16180	89230	62280	35330	08370	81418		11	3786
12	25441	98491	71541	44591	17641	90691	63741	36791	09831	82879		21	3796
16	26902	99952	73002	46052	19102	92152	65202	38252	11292	84340		31	3806
20	28363	01413	74463	47513	20563	93613	66663	39713	12753	85801		31	3816
24	29824	02874	75924	48974	22024	95074	68124	41174	14214	87262	Feb.	10	3826
28	31285	04335	77385	50435	23485	96535	69585	42635	15675	88723		20	3836
32	32746	05796	78846	51896	24946	97996	71046	44096	17136	90184	Mar.	1	3846
36	34207	07257	80307	53357	26407	99457	72507	45557	18597	91645		11	3856
40	35668	08718	81768	54818	27868	00918	73968	47018	20058	93106		21	3866
44	37129	10179	83229	56279	29329	02379	75429	48479	21519	94567		31	3876
48	38590	11640	84690	57740	30790	03840	76890	49940	22980	96028	Apr.	10	3886
52	40051	13101	86151	59201	32251	05301	78351	51401	24441	97489		20	3896
56	41512	14562	87612	60662	33712	06762	79812	52862	25902	98950		30	3906
60	42973	16023	89073	62123	35173	08223	81273	54323	27363	00411		30	3916
64	44434	17484	90534	63584	36634	09684	82734	55784	28824	01872	May	10	3926
68	45895	18945	91995	65045	38095	11145	84195	57245	30285	03333		20	3936
72	47356	20406	93456	66506	39556	12606	85656	58706	31746	04794		30	3946
76	48817	21867	94917	67967	41017	14067	87117	60167	33207	06255	June	9	3956
80	50278	23328	96378	69428	42478	15528	88578	61628	34668	07716		19	3966
84	51739	24789	97839	70889	43939	16989	90039	63089	36129	09177		29	3976
88	53200	26250	99300	72350	45400	18450	91500	64550	37590	10638	July	9	3986
92	54661	27711	00761	73811	46861	19911	92961	66011	39051	12099		19	3996
96	56122	29172	02222	75272	48322	21372	94422	67472	40512	13560		29	4006
100	57583	30633	03683	76733	49783	22833	95883	68933	41973*	15021*	Aug.	8	4016
104	59044	32094	05144	78194	51244	24294	97344	70394	43433	16481		18	4026
108	60505	33555	06605	79655	52705	25755	98805	71855	44894	17942		28	4036
112	61966	35016	08066	81116	54166	27216	00266	73316	46355	19403	Sept.	7	4046
116	63427	36477	09527	82577	55627	28677	01727	74777	47816	20864		17	4056
120	64888	37938	10988	84038	57088	30138	03188	76238	49277	22325		27	4066
124	66349	39399	12449	85499	58549	31599	04649	77699	50738	23786	Oct.	7	4076
128	67810	40860	13910	86960	60010	33060	06110	79160	52199	25247		17	4086
132	69271	42321	15371	88421	61471	34521	07571	80621	53660	26708		27	4096
136	70732	43782	16832	89882	62932	35982	09032	82082	55121	28169	Nov.	6	4106
140	72193	45243	18293	91343	64393	37443	10493	83543	56582	29630		16	4116
144	73654	46704	19754	92804	65854	38904	11954	85004	58043	31091		26	4126
148	75115	48165	21215	94265	67315	40365	13415	86465	59504	32552	Dec.	6	4136
152	76576	49626	22676	95726	68776	41826	14876	87926	60965	34013		16	4146
156	78037	51087	24137	97187	70237	43287	16337	89387	62426	35474		26	4156
160	79498	52548	25598	98648	71698	44748	17798	90848	63887	36935		36	4166
164	80959	54009	27059	00109	73159	46209	19259	92309	65348	38396		36	4176
168	82420	55470	28520	01570	74620	47670	20720	93770	66809	39857		36	4186
172	83881	56931	29981	03031	76081	49131	22181	95231	68270	41318		36	4196
176	85342	58392	31442	04492	77542	50592	23642	96692	69731	42779			
180	86803	59853	32903	05953	79003	52053	25103	98153	71192	44240			
184	88264	61314	34364	07414	80464	53514	26564	99604	72653	45701	A.D.	1580	2298153
188	89725	62775	35825	08875	81925	54975	28025	01065	74114	47162		1581	8519
192	91186	64236	37286	10336	83386	56436	29486	02526	75575	48623		1582	8884
196	92647	65697	38747	11797	84847	57897	30947	03987	77036	50084		1583	9239
	I7	I8	I9	20	20	2I	22	23	23	24		1584	9604

* denotes a common year.

FOR COMPUTING THE GEOCENTRIC CO-ORDINATES OF A PLACE.

ϕ	log. X.	log. Y.	ϕ	log. X.	log. Y.
°			°		
± 0	9·9970705 <small>diff. 4</small>	0·0000000 <small>diff. 4</small>	± 40	9·9976745 <small>diff. 252</small>	0·0006040 <small>diff. 252</small>
1	·9970709 <small>14</small>	·0000004 <small>14</small>	41	·9976997 <small>254</small>	·0006292 <small>254</small>
2	·9970723 <small>22</small>	·0000018 <small>22</small>	42	·9977251 <small>255</small>	·0006546 <small>255</small>
3	·9970745 <small>31</small>	·0000040 <small>31</small>	43	·9977506 <small>255</small>	·0006801 <small>255</small>
4	·9970776 <small>40</small>	·0000071 <small>40</small>	44	·9977761 <small>255</small>	·0007056 <small>255</small>
5	9·9970816 <small>49</small>	0·0000111 <small>49</small>	45	9·9978016 <small>256</small>	0·0007311 <small>256</small>
6	·9970865 <small>57</small>	·0000160 <small>57</small>	46	·9978272 <small>255</small>	·0007567 <small>255</small>
7	·9970922 <small>66</small>	·0000217 <small>66</small>	47	·9978527 <small>255</small>	·0007822 <small>255</small>
8	·9970988 <small>74</small>	·0000283 <small>74</small>	48	·9978782 <small>254</small>	·0008077 <small>254</small>
9	·9971062 <small>83</small>	·0000357 <small>83</small>	49	·9979036 <small>252</small>	·0008331 <small>252</small>
10	9·9971145 <small>92</small>	0·0000440 <small>92</small>	50	9·9979288 <small>252</small>	0·0008583 <small>252</small>
11	·9971237 <small>99</small>	·0000532 <small>99</small>	51	·9979540 <small>249</small>	·0008835 <small>249</small>
12	·9971336 <small>108</small>	·0000631 <small>108</small>	52	·9979789 <small>247</small>	·0009084 <small>247</small>
13	·9971444 <small>116</small>	·0000739 <small>116</small>	53	·9980036 <small>245</small>	·0009331 <small>245</small>
14	·9971560 <small>123</small>	·0000855 <small>123</small>	54	·9980281 <small>242</small>	·0009576 <small>242</small>
15	9·9971683 <small>131</small>	0·0000978 <small>131</small>	55	9·9980523 <small>239</small>	0·0009818 <small>239</small>
16	·9971814 <small>139</small>	·0001109 <small>139</small>	56	·9980762 <small>235</small>	·0010057 <small>235</small>
17	·9971953 <small>146</small>	·0001248 <small>146</small>	57	·9980997 <small>232</small>	·0010292 <small>232</small>
18	·9972099 <small>154</small>	·0001394 <small>154</small>	58	·9981229 <small>228</small>	·0010524 <small>228</small>
19	·9972253 <small>160</small>	·0001548 <small>160</small>	59	·9981457 <small>224</small>	·0010752 <small>224</small>
20	9·9972413 <small>168</small>	0·0001708 <small>168</small>	60	9·9981681 <small>220</small>	0·0010976 <small>220</small>
21	·9972581 <small>174</small>	·0001876 <small>174</small>	61	·9981901 <small>215</small>	·0011196 <small>215</small>
22	·9972755 <small>180</small>	·0002050 <small>180</small>	62	·9982116 <small>209</small>	·0011411 <small>209</small>
23	·9972935 <small>187</small>	·0002230 <small>187</small>	63	·9982325 <small>205</small>	·0011620 <small>205</small>
24	·9973122 <small>192</small>	·0002417 <small>192</small>	64	·9982530 <small>199</small>	·0011825 <small>199</small>
25	9·9973314 <small>198</small>	0·0002609 <small>198</small>	65	9·9982729 <small>193</small>	0·0012024 <small>193</small>
26	·9973512 <small>204</small>	·0002807 <small>204</small>	66	·9982922 <small>188</small>	·0012217 <small>188</small>
27	·9973716 <small>209</small>	·0003011 <small>209</small>	67	·9983110 <small>181</small>	·0012405 <small>181</small>
28	·9973925 <small>214</small>	·0003220 <small>214</small>	68	·9983291 <small>175</small>	·0012586 <small>175</small>
29	·9974139 <small>219</small>	·0003434 <small>219</small>	69	·9983466 <small>168</small>	·0012761 <small>168</small>
30	9·9974358 <small>223</small>	0·0003653 <small>223</small>	70	9·9983634 <small>161</small>	0·0012929 <small>161</small>
31	·9974581 <small>227</small>	·0003876 <small>227</small>	71	·9983795 <small>154</small>	·0013090 <small>154</small>
32	·9974808 <small>232</small>	·0004103 <small>232</small>	72	·9983949 <small>147</small>	·0013244 <small>147</small>
33	·9975040 <small>235</small>	·0004335 <small>235</small>	73	·9984096 <small>140</small>	·0013391 <small>140</small>
34	·9975275 <small>238</small>	·0004570 <small>238</small>	74	·9984236 <small>132</small>	·0013531 <small>132</small>
35	9·9975513 <small>241</small>	0·0004808 <small>241</small>	75	9·9984368 <small>124</small>	0·0013663 <small>124</small>
36	·9975754 <small>245</small>	·0005049 <small>245</small>	76	·9984492 <small>117</small>	·0013787 <small>117</small>
37	·9975999 <small>246</small>	·0005294 <small>246</small>	77	·9984609 <small>108</small>	·0013904 <small>108</small>
38	·9976245 <small>249</small>	·0005540 <small>249</small>	78	·9984717 <small>100</small>	·0014012 <small>100</small>
39	·9976494 <small>251</small>	·0005789 <small>251</small>	79	·9984817 <small>92</small>	·0014112 <small>92</small>
± 40	9·9976745	0·0006040	± 80	9·9984909	0·0014204

Let ϕ' and ρ be the geocentric latitude and radius of the place, ϕ being the geographical latitude, then :—

$$\begin{aligned} \rho \sin \phi' &= X \sin \phi, \\ \rho \cos \phi' &= Y \cos \phi. \end{aligned}$$

OBSERVATORIES.

* * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Place and Altitude.	Longitude.	Latitude.	Reduction to Geocentric Latitude.
		h m s		
1	ADELAIDE, 141 ft. - - - - -	9 14 20.30 E.	34 55 38.5 S.	+10 52.4
2	ALBANY, U.S.A., 220 ft. - - - - -	4 55 6.8 W.	42 39 12.7 N.	-11 33.1
3	ALGIERS, 1123 ft. - - - - -	0 12 8.38 E.	36 47 50 N.	-11 6.7
4	ALLEGHENY, 1145 ft. - - - - -	5 20 2.93 W.	40 27 41.6 N.	-11 26.6
5	AMHERST, U.S.A., (New Obs.), 363 ft. -	4 50 5.93 W.	42 21 56.5 N.	-11 32.5
6	ANN-ARBOR, Mich., 926 ft. . - - - -	5 34 55.27 W.	42 16 48.7 N.	-11 32.3
7	AREQUIPA, 8041 ft. - - - - -	4 46 11.73 W.	16 22 28.0 S.	+ 6 15.2
8	ARMAGH, 200 ft. - - - - -	0 26 35.4 W.	54 21 12.7 N.	-10 59.6
9	ATHENS, 351 ft. - - - - -	1 34 52.92 E.	37 58 19.7 N.	-11 14.3
10	BAMBERG, 984 ft. - - - - -	0 43 33.57 E.	49 53 6.0 N.	-11 26.0
11	BERLIN, 154 ft. - - - - -	0 53 34.80 E.	52 30 16.7 N.	-11 12.5
12	BESANÇON, 1024 ft. - - - - -	0 23 57.1 E.	47 14 59.0 N.	-11 33.7
13	BIRR CASTLE (Earl of Rosse), 184 ft. - -	0 31 40.9 W.	53 5 47 N.	-11 8.7
14	BOLOGNA, 275 ft. - - - - -	0 45 24.48 E.	44 29 54 N.	-11 35.5
15	BOMBAY (Colaba), 63 ft. . - - - - -	4 51 15.15 E.	18 53 36.2 N.	- 7 5.1
16	BONN, 203 ft. - - - - -	0 28 23.17 E.	50 43 45.0 N.	-11 22.3
17	BORDEAUX, 240 ft. - - - - -	0 2 5.51 W.	44 50 7.3 N.	-11 35.6
18	BRESLAU, 482 ft. - - - - -	1 8 8.72 E.	51 6 55.8 N.	-11 20.4
19	BRISBANE - - - - -	10 12 6.40 E.	27 28 0.0 S.	+ 9 28.3
20	BRUSSELS (UCCLE), 328 ft. - - - - -	0 17 26.05 E.	50 47 55.5 N.	-11 21.9
21	BUDA PESTH - - - - -	1 16 13.7 E.	47 28 49 N.	-11 33.3
22	CAMBRIDGE. 92 ft. - - - - -	0 0 22.75 E.	52 12 51.6 N.	-11 14.3
23	CAMBRIDGE, U.S.A., Harvard Coll. Obs.,	4 44 31.05 W.	42 22 47.6 N.	-11 32.5
24	CAPE OF GOOD HOPE, 42 ft. - - [79 ft.	1 13 54.76 E.	33 56 3.5 S.	+10 43.6
25	CATANIA, 154 ft. - - - - -	1 0 20.6 E.	37 30 13.3 N.	-11 11.4
26	CHARKOW, 451 ft. - - - - -	2 24 55.77 E.	50 0 9.6 N.	-11 25.5
27	CHARLOTTESVILLE, Va., Leander McCor-	5 14 5.22 W.	38 2 1.2 N.	-11 14.7
28	CHRISTIANIA, 82 ft. -[mick Obs., 820 ft.	0 42 53.50 E.	59 54 44.0 N.	-10 4.5
29	CINCINNATI, 863 ft. - - - - -	5 37 41.29 W.	39 8 19.5 N.	-11 20.7
30	CLEVELAND, OHIO, Case Obs., 696 ft. - -	5 26 25.82 W.	41 30 14.5 N.	-11 30.2
31	CLINTON, U.S.A., Hamilton Coll., 906 ft.	5 1 37.45 W.	43 3 17.0 N.	-11 33.9
32	COIMBRA, 325 ft. - - - - -	0 33 43.1 W.	40 12 24.5 N.	-11 25.6
33	COPENHAGEN, 46 ft. - - - - -	0 50 18.69 E.	55 41 12.6 N.	-10 48.6
34	CORDOBA, 1440 ft. - - - - -	4 16 48.22 W.	31 25 15.5 S.	+10 18.0
35	CRACOW, 725 ft. - - - - -	1 19 50.27 E.	50 3 51.9 N.	-11 25.2
36	DEHRA DÛN, 2236 ft. - - - - -	5 12 13.47 E.	30 18 51.8 N.	-10 5.2
37	DORPAT, 215 ft. - - - - -	1 46 53.22 E.	58 22 46.8 N.	-10 22.1
38	DUBLIN (DUNSINK), 283 ft. - - - - -	0 25 21.1 W.	53 23 13.1 N.	-11 6.7
39	DURHAM, 351 ft. - - - - -	0 6 19.75 W.	54 46 6.2 N.	-10 56.4
40	DUSSELDORF, 85 ft. - - - - -	0 27 5.0 E.	51 12 25.0 N.	-11 19.9

* * * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Log. ρ .	Authority for Longitude.	Authority for Latitude.
1	9.999524	Tel. Determination by Ellery, Russell and Todd.	Adelaide Astronomical Obs.
2	9.999331	<i>Astronomical Journal</i> , No. 334	<i>Astronomical Journal</i> , No. 334.
3	9.999478	Albrecht's <i>Compensation</i> .	Triangulation by Trépied.
4	9.999387	U.S. Coast and Geodetic Survey.	Zenith Telescope Observations.
5	9.999339	Communicated by Prof. Todd.	Communicated by Prof. Todd.
6	9.999341	Publications of Obs., Vol. I., 1915.	Publications of Obs., Vol. I., 1915.
7	9.999885	<i>Harvard Annals</i> , 1903.	<i>Harvard Annals</i> , 1903.
8	9.999036	Armagh Catalogue of Stars, 1840.	Armagh Catalogue of Stars, 1840.
9	9.999449	Determination by Hartl.	<i>Annals</i> , Vol. VI., 1912.
10	9.999147	Albrecht's <i>Compensation</i> .	Communicated by Dr. Hartwig.
11	9.999082	Albrecht's <i>Compensation</i> .	<i>Beobachtungs-Ergebnisse</i> , Heft 3.
12	9.999214	Telegraphic connection with Paris.	Meridian Observations.
13	9.999067	Ordnance Survey.	Ordnance Survey.
14	9.999284	Albrecht's <i>Compensation</i> .	Determination by Respighi.
15	9.999848	Great Trigonometrical Survey of India.	Great Trigonometrical Survey of India.
16	9.999127	Albrecht's <i>Compensation</i> .	Communicated by Prof. Küstner.
17	9.999275	Telegraphic connection with Paris.	Zenith Distances of Fundamental Stars
18	9.999116	Albrecht's <i>Compensation</i> .	Geodätisches Institut of Berlin.
19	9.999690	Telegraphic connection with Sydney.	Zenith Telescope Observations.
20	9.999124	<i>Annuaire Astronomique</i> , 1919.	<i>Annuaire Astronomique</i> , 1919.
21	9.999208	Berliner Jahrbuch.	Berliner Jahrbuch.
22	9.999089	Cambridge Observations.	Cambridge Observations.
23	9.999338	U.S. Coast and Geodetic Survey.	<i>Annals of the Observatory</i> , Vol. XVII.
24	9.999547	<i>Annals of Cape Observatory</i> , Vol. I., part 2.	Cape General Catalogue of Stars, 1885.
25	9.999461	Determination by Zona and Ricco.	Determination by Zona.
26	9.999144	Communicated by Prof. Lewitzky.	Communicated by Prof. Lewitzky.
27	9.999448	<i>Publications of Observatory</i> , Vol. I., part 1.	<i>Publications of Observatory</i> , Vol. I., part 1.
28	9.998906	Albrecht's <i>Compensation</i> .	<i>Astron. Nachrichten</i> , No. 3193.
29	9.999420	U.S. Coast and Geodetic Survey.	U.S. Coast and Geodetic Survey.
30	9.999361	Communicated by Prof. Howe.	Communicated by Prof. Howe.
31	9.999321	The American Ephemeris.	The American Ephemeris.
32	9.999394	Ephemerides Astron. de Coimbra, 1889.	Ephemerides Astron. de Coimbra, 1889.
33	9.999004	Albrecht's <i>Compensation</i> .	Communicated by Prof. Strömgren.
34	9.999605	Observatory and U.S. Naval Expeditions.	Meridian Observations of Circumpolar Stars.
35	9.999143	Albrecht's <i>Compensation</i> .	Austrian Gradmessungen-Commission.
36	9.999629	Great Trigonometrical Survey of India.	Great Trigonometrical Survey of India.
37	9.998941	Albrecht's <i>Compensation</i> .	Determination by Schwarz.
38	9.999060	<i>Transactions Royal Irish Academy</i> , 1838.	<i>Transactions Royal Dublin Society</i> , Vol. IV.
39	9.999026	Transport of Chronometers.	Meridian Observations of Circumpolar Stars.
40	9.999114	<i>Astron. Nachrichten</i> , No. 643.	<i>Astron. Nachrichten</i> , No. 643.

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No.	Place and Altitude.	Longitude.	Latitude.	Reduction to Geocentric Latitude.
		h m s		
41	EDINBURGH (Blackford Hill), 441 ft. - -	0 12 44.2 W.	55 55 30.0 N.	- 10 46.5
42	EVANSTON, Ill., Dearborn Obs., 574 ft. -	5 50 42.3 W.	42 3 33.4 N.	- 11 31.8
43	FLAGSTAFF, ARIZONA, (Mr. Lowell),	7 26 44.58 W.	35 12 30.5 N.	- 10 54.7
44	FLORENCE, Arcetri, 604 ft. - - [7250 ft.	0 45 1.30 E.	43 45 14.6 N.	- 11 34.9
45	GENEVA, 1335 ft. - - - - -	0 24 36.61 E.	46 11 59.3 N.	- 11 35.2
46	GEORGETOWN COLL., D.C., U.S.A., 151 ft.	5 8 18.24 W.	38 54 26.0 N.	- 11 19.5
47	GLASGOW, 180 ft. - - - - -	0 17 10.55 W.	55 52 42.1 N.	- 10 46.9
48	GLASGOW, U.S.A., Morrison Obs., 748 ft. -	6 11 18.08 W.	39 13 45.6 N.	- 11 21.1
49	GOTHA, 1083 ft. - - - - -	0 42 50.44 E.	50 56 37.9 N.	- 11 21.1
50	GÖTTINGEN, 532 ft. - - - - -	0 39 46.22 E.	51 31 48.2 N.	- 11 18.2
51	GREENWICH, 154 ft. - - - - -	0 0 0	51 28 38.2 N.	- 11 18.5
52	HAMBURG (Bergedorf), 131 ft. - - - -	0 40 57.74 E.	53 28 46.7 N.	- 11 6.1
53	HAVERFORD COLLEGE, Pa. - - - - -	5 1 12.70 W.	40 0 40.1 N.	- 11 24.7
54	HEIDELBERG, 1870 ft. - - - - -	0 34 53.13 E.	49 23 54.9 N.	- 11 27.8
55	HELSINGFORS, 125 ft. - - - - -	1 39 49.10 E.	60 9 42.3 N.	- 10 1.5
56	HELWAN, 390 ft. - - - - -	2 5 22 E.	29 51 33 N.	- 9 59.7
57	HERÉNY (Herr von Gothard), 751 ft. - -	1 6 24.7 E.	47 15 47.4 N.	- 11 33.7
58	HONG KONG, 112 ft. - - - - -	7 36 41.86 E.	22 18 13.2 N.	- 8 7.4
59	HYDERABAD, Nizamiah Obs., 1818 ft. -	5 13 48.98 E.	17 25 54.3 N.	- 6 36.6
60	JAMAICA, MONTEGO BAY (Mr. Hall) - -	5 11 29.48 W.	18 24 51 N.	- 6 55.9
61	JENA, 512 ft. - - - - -	0 46 21.25 E.	50 55 34.9 N.	- 11 21.3
62	JOHANNESBURG, Union Obs., 5924 ft. - -	1 52 18.0 E.	26 10 55.2 S.	+ 9 9.8
63	KASAN, Engelhardt Observatory, 322 ft.	3 15 16.5 E.	55 50 20.0 N.	- 10 47.3
64	KASAN, University Observatory, 259 ft. -	3 16 29.01 E.	55 47 24.3 N.	- 10 47.7
65	KEW, 33 ft. - - - - -	0 1 15.1 W.	51 28 6 N.	- 11 18.5
66	KIEL, 154 ft. - - - - -	0 40 35.57 E.	54 20 28.5 N.	- 10 59.7
67	KIEW, 587 ft. - - - - -	2 2 0.56 E.	50 27 11.8 N.	- 11 23.5
68	KODAIKANAL, 7688 ft. - - - - -	5 9 52.0 E.	10 13 50 N.	- 4 2.3
69	KÖNIGSBERG, 72 ft. - - - - -	1 21 58.97 E.	54 42 50.4 N.	- 10 56.8
70	KREMSMÜNSTER, 1260 ft. - - - - -	0 56 31.58 E.	48 3 23.1 N.	- 11 31.9
71	LA PLATA, 52 ft. - - - - -	3 51 44.8 W.	34 54 30.5 S.	+ 10 52.2
72	LEIPZIG, 390 ft. - - - - -	0 49 33.93 E.	51 20 5.9 N.	- 11 19.2
73	LEYDEN, 20 ft. - - - - -	0 17 56.15 E.	52 9 20.0 N.	- 11 14.6
74	LISBON, Tapada, 308 ft. - - - - -	0 36 44.68 W.	38 42 30.5 N.	- 11 18.5
75	LIVERPOOL (BIDSTON, BIRKENHEAD), 200ft.	0 12 17.33 W.	53 24 4.8 N.	- 11 6.6
76	LORENZO MARQUES, Campos Roderigues	2 10 22.63 E.	25 58 5.5 S.	+ 9 6.6
77	LUND, 112 ft. - - - - - [Obs., 195 ft.	0 52 44.97 E.	55 41 51.6 N.	- 10 48.5
78	LYONS, 981 ft. - - - - -	0 19 8.52 E.	45 41 40.9 N.	- 11 35.5
79	MADISON, Wis., Washburn Obs., 961 ft. -	5 57 37.90 W.	43 4 36.7 N.	- 11 33.9
80	MADRAS 23 ft. - - - - -	5 20 59.62 E.	13 4 8.0 N.	- 5 5.5

* * * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Log. ρ .	Authority for Longitude.	Authority for Latitude.
41	9.998999	Communicated by Prof. Copeland.	<i>M.N.R.A.S.</i> , January 1907.
42	9.999347	Standard Time comparison by Telegraph.	Meridian Observations.
43	9.999517	Communicated by Mr. P. Lowell.	Communicated by Mr. P. Lowell.
44	9.999303	Albrecht's <i>Compensation</i> .	Commissione Italiana, Milan, 1886.
45	9.999241	Albrecht's <i>Compensation</i> .	Determination by Pidoux.
46	9.999426	<i>Annals of Observatory, No. 1.</i>	<i>The Photochronograph and its applications</i> , 1894.
47	9.998999	<i>M.N.R.A.S.</i> , December 1865.	<i>M.N.R.A.S.</i> , October 1917.
48	9.999418	The American Ephemeris.	The American Ephemeris.
49	9.999121	Albrecht's <i>Compensation</i> .	Communicated by Prof. Harzer.
50	9.999106	Albrecht's <i>Compensation</i> .	Communicated by Prof. Schur.
51	9.999107		Greenwich Observations.
52	9.999057	Albrecht's <i>Compensation</i> .	Observations by Talcott's Method, 1909.
53	9.999398	Communicated by Prof. Collins.	Determination by Sharpless.
54	9.999159	Determination by Becker and Valentiner.	Determination by Becker and Valentiner.
55	9.998901	Albrecht's <i>Compensation</i> .	Determination by Donner.
56	9.999640	Communicated by Mr. Keeling.	Communicated by Mr. Keeling.
57	9.999214	Determination by Von Konkoly and Tetens.	Determination by Von Sterneck.
58	9.999791	Determination by Green, U.S.N.	Determination by Doberek.
59	9.999870	Communicated by Director, 1916.	Communicated by Director, 1916.
60	9.999855	Report on Transit of Venus, 1882.	Report on Transit of Venus, 1882.
61	9.999122	Preussische Landesaufnahme, 1900.	Meridian Observations.
62	9.999717	Observatory Circular, 1916.	Observatory Circular, 1916.
63	9.999001	Communicated by Prof. Dubiago.	Communicated by Prof. Dubiago.
64	9.999001	Bakhuyzen's <i>Compensation</i> .	Observations by Talcott's Method.
65	9.999107	Determination by Balfour Stewart.	Determination by Balfour Stewart.
66	9.999037	Albrecht's <i>Compensation</i> .	Geodätisches Institut of Berlin.
67	9.999133	Albrecht's <i>Compensation</i> .	<i>Annales de l'Observatoire</i> , Tome III.
68	9.999954	Communicated by Director, 1912.	Communicated by Director, 1912.
69	9.999028	Albrecht's <i>Compensation</i> .	<i>Astron. Beobachtungen</i> , Band 38.
70	9.999194	Albrecht's <i>Compensation</i> .	Determination by Tinter.
71	9.999524	Publications of Obs., Vol. V., 1919.	Publications of Obs., Vol. V., 1919.
72	9.999111	Albrecht's <i>Compensation</i> .	Observations with Universal Instrument.
73	9.999090	Albrecht's <i>Compensation</i> .	<i>Annalen der Sternwarte</i> , Band II.
74	9.999431	Determination by Green, U.S.N.	Communicated by Director, July 1911.
75	9.999059	<i>M.N.R.A.S.</i> , November 1894.	<i>M.N.R.A.S.</i> , November 1894.
76	9.999721	Publications of Obs., Vol. II., 1911.	Publications of Obs., Vol. IV., 1912.
77	9.999004	Albrecht's <i>Compensation</i> .	Determination by Engstrom.
78	9.999254	Bakhuyzen's <i>Compensation</i> .	<i>Bulletin Astronomique</i> , Tome XI.
79	9.999320	Communicated by Prof. Comstock.	<i>Publications of Observatory</i> , Vol. VI.
80	9.999926	Great Trigonometrical Survey of India.	Great Trigonometrical Survey of India.

OBSERVATORIES.

* * * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Place and Altitude.	Longitude.	Latitude.	Reduction to Geocentric Latitude.
		h m s		
81	MADRID, 2149 ft. - - - - -	0 14 45.09 W.	40° 24' 30.0" N.	-11 26.4
82	MARSEILLES, 246 ft. - - - - -	0 21 34.55 E.	43 18 17.5 N.	-11 34.3
83	MAURITIUS, Royal Alfred Obs., 177 ft. - - -	3 50 12.6 E.	20 5 39 S.	+ 7 27.8
84	MELBOURNE, 92 ft. - - - - -	9 39 54.15 E.	37 49 53.2 S.	+11 13.4
85	MILAN, Brera, 394 ft. - - - - -	0 36 45.88 E.	45 27 59.2 N.	-11 35.6
	[79 ft.			
86	MONTEVIDEO, Obs. Inst. Meteorológico, - - -	3 44 51.4 W.	34 54 33 S.	+10 52.2
87	MONTREAL, McGill College, 187 ft. - - -	4 54 18.88 W.	45 30 19.1 N.	-11 35.6
88	MOSCOW, 466 ft. - - - - -	2 30 17.03 E.	55 45 19.5 N.	-10 48.0
89	MOUNT HAMILTON, Lick Obs., 4209 ft. - - -	8 6 34.89 W.	37 20 25.6 N.	-11 10.4
90	MOUNT WILSON OBS., 5900 ft. - - - - -	7 52 14 33 W.	34 12 59.5 N.	-10 46.2
91	MUNICH, Bogenhausen, 1736 ft. - - - - -	0 46 26.02 E.	48 8 45.5 N.	-11 31.7
92	NAPLES, Capo di Monte, 538 ft. - - - - -	0 57 1.70 E.	40 51 46.3 N.	-11 28.1
93	NEUCHATEL, 1601 ft. - - - - -	0 27 49.90 E.	46 59 50.6 N.	-11 34.1
94	NEW HAVEN, Yale University, 131 ft. - - -	4 51 40.58 W.	41 19 22.3 N.	-11 29.7
95	NEW YORK, Columbia University - - - - -	4 55 53.64 W.	40 45 23.1 N.	-11 27.7
96	NICE, 1240 ft. - - - - -	0 29 12.15 E.	43 43 16.9 N.	-11 34.9
97	NICOLAIEFF, 180 ft. - - - - -	2 7 53.78 E.	46 58 22.1 N.	-11 34.2
98	NORTHFIELD, Carleton College, 938 ft. - - -	6 12 35.81 W.	44 27 41.6 N.	-11 35.5
99	ODESSA, 180 ft. - - - - -	2 3 2.04 E.	46 28 36.7 N.	-11 34.9
100	O'GYALLA (Dr. Von Konkoly), 371 ft. - - -	1 12 45.60 E.	47 52 27.3 N.	-11 32.4
101	OTTAWA, 276 ft. - - - - -	5 2 51.98 W.	45 23 39.1 N.	-11 35.6
102	OXFORD, Radcliffe Observatory, 213 ft. - - -	0 5 2.6 W.	51 45 35.6 N.	-11 16.9
103	OXFORD, University Observatory, 210 ft. - - -	0 5 0.4 W.	51 45 34.2 N.	-11 16.9
104	PADUA, 102 ft. - - - - -	0 47 29.15 E.	45 24 1.0 N.	-11 35.6
105	PAISLEY, Coats Observatory, 107 ft. - - -	0 17 43.3 W.	55 50 43.8 N.	-10 47.2
106	PALERMO, 249 ft. - - - - -	0 53 25.87 E.	38 6 44.5 N.	-11 15.1
107	PARIS, 194 ft. - - - - -	0 9 20.93 E.	48 50 11.2 N.	-11 29.7
108	PEKIN, Central Observatory - - - - -	7 45 52.87 E.	39 54 23.0 N.	-11 24.3
109	PERTH, Western Australia, 197 ft. - - - - -	7 43 21.74 E.	31 57 7.4 S.	+10 23.8
110	PETROGRAD, Academy of Sciences, 10 ft. - - -	2 1 13.40 E.	59 56 29.7 N.	-10 4.2
111	POLA, 105 ft. - - - - -	0 55 23.07 E.	44 51 48.7 N.	-11 35.7
112	POTSDAM, 318 ft. - - - - -	0 52 15.86 E.	52 22 56.0 N.	-11 13.3
113	PRAGUE, 646 ft. - - - - -	0 57 40.28 E.	50 5 15.8 N.	-11 25.1
114	PRINCETON, New Jersey, 213 ft. - - - - -	4 58 37.61 W.	40 20 57.8 N.	-11 26.2
115	PULKOWA, 246 ft. - - - - -	2 1 18.57 E.	59 46 18.7 N.	-10 6.2
116	QUEBEC (Time Ball on Cavalier Building)	4 44 49.38 W.	46 48 31.2 N.	-11 34.4
117	RIO DE JANEIRO, 207 ft. - - - - -	2 52 41.4 W.	22 54 23.7 S.	+ 8 17.7
118	ROME, Capitol, 207 ft. - - - - -	0 49 56.34 E.	41 53 33.6 N.	-11 31.3
119	ROME, Roman College, 194 ft. - - - - -	0 49 55.36 E.	41 53 53.6 N.	-11 31.3
120	ROME, Vatican - - - - -	0 49 49.28 E.	41 54 4.8 N.	-11 31.3

* * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Log. ρ .	Authority for Longitude.	Authority for Latitude.
81	9.999389	<i>Anuario</i> , 1916.	<i>Anuario</i> , 1916.
82	9.999315	Albrecht's <i>Compensation</i> .	Meridian Observations.
83	9.999829	Communicated by Mr. Meldrum.	Communicated by Mr. Meldrum.
84	9.999452	<i>Astronomical Results</i> , Vol. VII.	<i>Astronomical Results</i> , Vol. VII.
85	9.999260	Albrecht's <i>Compensation</i> .	<i>Publications</i> , No. 51, 1914.
86	9.999524	Communicated by Director, 1919.	Communicated by Director, 1919.
87	9.999259	U.S. Coast and Geodetic Survey.	U.S. Coast and Geodetic Survey.
88	9.999003	Albrecht's <i>Compensation</i> .	Determination by Sternberg.
89	9.999465	U.S. Coast and Geodetic Survey.	Determination by Tucker.
90	9.999540	<i>Contributions from Solar Observatory</i> , No. 9.	<i>Contributions from Solar Observatory</i> , No. 9.
91	9.999192	Albrecht's <i>Compensation</i> .	Communicated by Prof. Seeliger.
92	9.999377	Bakhuyzen's <i>Compensation</i> .	Determination by Fergola.
93	9.999220	Bakhuyzen's <i>Compensation</i> .	Berliner Jahrbuch.
94	9.999366	The American Ephemeris.	The American Ephemeris.
95	9.999380	Triangulation from Rutherford's Observatory.	Triangulation from Rutherford's Observatory.
96	9.999304	Albrecht's <i>Compensation</i> .	<i>Annales de l'Observatoire</i> , Tome II.
97	9.999221	Bakhuyzen's <i>Compensation</i> .	Communicated by Prof. Kortazzi.
98	9.999285	Telegraphic connection with Washington.	<i>Publications of Observatory</i> , No. 1.
99	9.999234	Albrecht's <i>Compensation</i> .	Observations in the Prime Vertical.
100	9.999197	Determination by Von Konkoly.	Determination by Lakits.
101	9.999261	Communicated by Director, 1919.	Communicated by Director, 1919.
102	9.999100	Radcliffe Observations, 1842.	Radcliffe Catalogue of Stars, 1900.
103	9.999100	Ordnance Survey.	Ordnance Survey.
104	9.999261	Albrecht's <i>Compensation</i> .	Determination by Ciscato.
105	9.998999	Communicated by Observatory Committee.	Communicated by Observatory Committee.
106	9.999446	Bakhuyzen's <i>Compensation</i> .	Determination by Zona.
107	9.999174	Albrecht's <i>Compensation</i> .	Determination by Laugier.
108	9.999401	Communicated by Director, 1920.	Communicated by Director, 1920.
109	9.999593	Government Lands and Survey Office, Perth.	Communicated by Mr. W. E. Cooke.
110	9.998906	Triangulation from Pulkowa.	Triangulation from Pulkowa.
111	9.999275	Austrian Gradmessungen-Commission.	Austrian Gradmessungen-Commission.
112	9.999084	Albrecht's <i>Compensation</i> .	<i>Publications of Observatory</i> , Vol. VI.
113	9.999142	Albrecht's <i>Compensation</i> .	<i>Astron. Beobachtungen</i> , 1888-1891.
114	9.999390	The American Ephemeris.	The American Ephemeris.
115	9.998909	Albrecht's <i>Compensation</i> .	<i>Description de l'Observatoire</i> .
116	9.999225	Communicated by Hydrographer, Ottawa, 1919.	Communicated by Hydrographer, Ottawa, 1919.
117	9.999780	Determination by Green, U.S.N.	Determination by Green, U.S.N.
118	9.999350	Albrecht's <i>Compensation</i> .	Determination by Rispighi.
119	9.999350	Albrecht's <i>Compensation</i> .	Determination by Millosevich.
120	9.999350	Albrecht's <i>Compensation</i> .	Communicated by Sig. Denza.

* * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Place and Altitude.	Longitude.	Latitude.	Reduction to Geocentric Latitude.
		h m s		
121	ROUSDON, Devon, 516 ft. - - - - -	0 11 58.94 W.	50° 42' 38" N.	- 11 22.3
122	RUGBY, Temple Obs., 384 ft. - - - - -	0 5 2.0 W.	52 22 7 N.	- 11 13.4
123	SAN FERNANDO, near CADIZ, 101 ft. - - - - -	0 24 49.30 W.	36 27 42.0 N.	- 11 4.3
124	SANTIAGO DE CHILE, 1704 ft. - - - - -	4 42 46.3 W.	33 26 42.0 S.	+ 10 39.0
125	SOUTH KENSINGTON, London, S.W. - - - - -	0 0 41.54 W.	51 29 48.0 N.	- 11 18.4
126	STOCKHOLM, 144 ft. - - - - -	1 12 13.97 E.	59 20 32.7 N.	- 10 11.3
127	STONYHURST, 381 ft. - - - - -	0 9 52.68 W.	53 50 40 N.	- 11 3.5
128	STRASBURG, 472 ft. - - - - -	0 31 4.52 E.	48 35 0.3 N.	- 11 30.5
129	SUTTON, SURREY (Mr. Doberck), 167 ft. - - - - -	0 0 44.53 W.	51 22 19.8 N.	- 11 19.0
130	SYDNEY, 144 ft. - - - - -	10 4 49.54 E.	33 51 41.1 S.	+ 10 42.9
131	TACUBAYA, MEXICO, 7619 ft. - - - - -	6 36 46.67 W.	19 24 17.9 N.	- 7 14.9
132	TASCHKENT, 1499 ft. - - - - -	4 37 10.82 E.	41 19 31.4 N.	- 11 29.7
133	TOKYO - - - - -	9 18 58.02 E.	35 39 17.5 N.	- 10 58.3
134	TORONTO, 350 ft. - - - - -	5 17 34.65 W.	43 39 35.9 N.	- 11 34.8
135	TOULOUSE, 636 ft. - - - - -	0 5 51.23 E.	43 36 44.0 N.	- 11 34.7
136	TRIESTE, 220 ft. - - - - - [197 ft.	0 55 5.4 E.	45 38 35.5 N.	- 11 35.5
137	TRIVANDRUM, Maharaja's Observatory,	5 7 59 E.	8 30 32 N.	- 3 22.9
138	TULSE HILL, London (Sir W. Huggins),	0 0 27.7 W.	51 26 47 N.	- 11 18.6
139	TURIN, Pino Torinese, 2028 ft. - [174 ft.	0 31 5.95 E.	45 2 16.3 N.	- 11 35.7
140	UPSALA, 69 ft. - - - - -	1 10 30.12 E.	59 51 29.4 N.	- 10 5.2
141	URBANA, University of Illinois, 774 ft. -	5 52 53.93 W.	40 6 20.2 N.	- 11 25.2
142	UTRECHT, 39 ft. - - - - - [730 ft.	0 20 30.97 E.	52 5 9.5 N.	- 11 15.1
143	VICTORIA, B.C., Astrophysical Obs.,	8 13 40.17 W.	48 31 15.7 N.	- 11 30.7
144	VENICE, Istituto di Marina, 49 ft. - - - - -	0 49 22.12 E.	45 26 10.5 N.	- 11 35.6
145	VIENNA, Imperial Observatory, 787 ft. -	1 5 21.35 E.	48 13 55.4 N.	- 11 31.5
146	VIENNA, Ottakring (Herr Kuffner),	1 5 10.96 E.	48 12 46.7 N.	- 11 31.6
147	WARSAW, 361 ft. - - - - - [935 ft.	1 24 7.25 E.	52 13 4.6 N.	- 11 14.3
148	WASHINGTON, Georgetown Heights, 269 ft.	5 8 15.78 W.	38 55 14.0 N.	- 11 19.6
149	WELLINGTON, N.Z., Hector Obs., 416 ft.	11 39 4.27 E.	41 17 3.8 S.	+ 11 29.5
150	WILHELMSHAVEN, 30 ft. - - - - -	0 32 35.06 E.	53 31 52.2 N.	- 11 4.7
	[1099 ft.			
151	WILLIAMS BAY, Wis., Yerkes Obs.,	5 54 13.24 W.	42 34 12.6 N.	- 11 33.0
152	WINDSOR, N.S.W. (Mr. Tebbutt), 52 ft.	10 3 20.51 E.	33 36 30.8 S.	+ 10 40.6
153	ZURICH, 1536 ft. - - - - -	0 34 12.26 E.	47 22 38.3 N.	- 11 33.5

NOTES.—

Albrecht's Compensation. The reference is to Prof. Albrecht's paper in *Astron. Nachrichten*, No. 3993.

Bakhuyzen's Compensation. The reference is to Prof. Bakhuyzen's paper in *Astron. Nachrichten*, No. 3202, the adopted difference of longitude Paris—Greenwich being 9^m 20^s.93.

* * The Longitudes are reckoned from the Meridian of Greenwich.

No.	Log. ρ .	Authority for Longitude.	Authority for Latitude.
121	9.999127	Ordnance Survey.	Ordnance Survey.
122	9.999084	Ordnance Survey.	Ordnance Survey.
123	9.999486	Telegraphic connection with Madrid.	Transit-Circle Observations.
124	9.999558	Anuario del Observatorio, 1919.	Anuario del Observatorio, 1919.
125	9.999107	Communicated by Sir J. Norman Lockyer.	Communicated by Sir J. Norman Lockyer.
126	9.998919	Communicated by Director, 1913.	Communicated by Director, 1917.
127	9.999049	Chronometrical connection with Liverpool.	Meridian Observations.
128	9.999180	Albrecht's <i>Compensation</i> .	Meridian Observations of Circumpolar Stars.
129	9.999110	Ordnance Survey.	Ordnance Survey.
130	9.999549	Tel. Determination by Ellery, Russell and Todd.	Sydney Astronomical Observations.
131	9.999840	Boletin del Observatorio, No. 4, 1914.	Boletin del Observatorio, No. 4, 1914.
132	9.999366	Communicated by Prof. Gedeonof.	Communicated by Prof. Gedeonof.
133	9.999506	University Calendar, 1892.	University Calendar, 1892.
134	9.999306	Determination by Carpmael.	Determination by Blake.
135	9.999307	Communicated by M. Cosserat.	Determination by Petit.
136	9.999255	Communicated by Director, 1919.	Communicated by Director, 1919.
137	9.999968	Communicated by Director, 1915.	Communicated by Director, 1915.
138	9.999108	Ordnance Survey.	Ordnance Survey.
139	9.999270	<i>Anuario Astronomico</i> , 1917.	<i>Anuario Astronomico</i> , 1917.
140	9.998908	Albrecht's <i>Compensation</i> :	<i>Astron. Nachrichten</i> , No. 2565.
141	9.999396	Communicated by Prof. Joel Stebbins.	Communicated by Prof. Joel Stebbins.
142	9.999092	Triangulation from Leyden.	<i>Astron. Nachrichten</i> , No. 2411.
143	9.999182	Communicated by Director, 1920.	Communicated by Director, 1920.
144	9.999260	Determination by Millosevich.	Determination by Millosevich.
145	9.999189	Albrecht's <i>Compensation</i> .	K. K. Gradmessungs-Bureau.
146	9.999190	Albrecht's <i>Compensation</i> .	<i>Publicationen der Sternwarte</i> , I. und II.
147	9.999089	Albrecht's <i>Compensation</i> .	<i>Astron. Nachrichten</i> , No. 4666 (July 1913).
148	9.999426	U.S. Coast and Geodetic Survey.	American Ephemeris, 1922.
149	9.999366	Transactions of New Zealand Institute, 1914.	Transactions of New Zealand Institute, 1914.
150	9.999057	Albrecht's <i>Compensation</i> .	Zenith Distances of Zenithal Stars.
151	9.999333	Observatory Bulletin, No. 18.	Observatory Bulletin, No. 18.
152	9.999555	Report of Windsor Observatory, 1888.	Observations in the Prime Vertical.
153	9.999211	Bakhuyzen's <i>Compensation</i> .	Communicated by Prof. A. Wolfer.

Directors are requested to notify H.M. *Nautical Almanac* Office if they desire any change made in the information given above concerning their Observatories.

STANDARD TIMES.

STANDARD TIMES.

The following Standard Times, referred to the Meridian of Greenwich, have been adopted for railway and other purposes:—

h	m	
11	30 E.	New Zealand.
11	0 E.	New Caledonia.
10	0 E.	Tasmania, Victoria, New South Wales, Queensland, New Guinea.
9	30 E.	South Australia.
9	0 E.	Japan, Corea.
8	0 E.	Western Australia, Portuguese Timor, British North Borneo, Philippine Islands, Macao, Hong Kong, China (Coast), Formosa.
7	0 E.	Straits Settlements, Federated Malay States, French Indo-China,
6	30 E.	Burma. [Siam.
5	30 E.	India.
5	0 E.	Chagos Archipelago, Portuguese India.
4	0 E.	Mauritius, Seychelles.
3	0 E.	Somaliland, Madagascar.
2	30 E.	East African Protectorate.
2	0 E.	(East Europe).—Roumania, Bulgaria, Turkey, Greece. Egypt, Portuguese East Africa, South Africa.
1	0 E.	(Mid-Europe).—Germany, Luxembourg, Denmark, Sweden, Norway, Switzerland, Italy, Austria-Hungary, Bosnia, Serbia, Malta, Portuguese West Africa, South-west Africa, Nigeria.
0	0	(Greenwich).—Great Britain, Ireland, France, Belgium, Spain, Portugal, Gibraltar, Algeria, Farøe Islands, Gold Coast Colony.*
1	0 W.	Iceland, Madeira, Portuguese Guinea, Sierra Leone.
2	0 W.	Azores and Cape Verde Islands.
3	0 W.	Eastern Brazil. [Brazil, Chile.
4	0 W.	(Atlantic).—Part of Canada, Leeward Islands, Uruguay, Central
5	0 W.	(Eastern).—Parts of Canada and United States, Western Brazil, Peru, Panama, Jamaica, Bahamas.
6	0 W.	(Central).—Parts of Canada and United States, Honduras.
7	0 W.	(Mountain).—Parts of Canada and United States.
8	0 W.	(Pacific).—British Columbia and Part of United States.
9	0 W.	Yukon, Alaska.
10	30 W.	Sandwich Islands.
11	30 W.	Samoa.

* For Jan. 1–Sept. 1 only: 20^m E. for rest of year.

EXPLANATION OF THE ARTICLES

CONTAINED IN

THE NAUTICAL ALMANAC AND ASTRONOMICAL EPHEMERIS FOR THE YEAR 1924.

THE necessarily concise headings in the body of the Almanac in many cases leave the precise meaning of the quantity tabulated in some uncertainty. Very little further explanation is likely to be required by a reader who consults (*a*) the tables of the Sun, Moon, and Planets, and the Star Catalogues quoted in the Preface ; (*b*) the explanation given in foreign almanacs of the matter supplied by them to this Almanac ; (*c*) a section at the end of the Almanac for 1918, which will be here quoted as " Derivation." This section will be reprinted at intervals with changes incorporated.

Ephemeris of Sun and Moon. (Pages 1 to 145.)

" Derivation," Nos. 1 to 25, may be consulted.

Planetary Ephemerides. (Pages 146 to 189.)

In the " Derivation," Nos. 26 to 31, Mars is taken for purposes of illustration. Further statements are necessary as follows :—

Heliocentric places for the planets from Venus to Neptune are to be found in Appendices to the Almanacs for 1915 to 1917.

In the case of Jupiter and Saturn the times of passage over the meridian and the polar semidiameters have been calculated on the assumption, only approximately true, that the extremities of the axes of rotation are the north and south points of the discs.

The transit ephemerides for Mars, Jupiter, and Saturn extend from transit at 20^h to transit at 4^h ; for Uranus and Neptune from transit at 15^h to transit at 4^h ; for Venus the transit is given for every day, the apparent solar day being intended.

Sun's Co-ordinates. (Pages 190 to 197.)

" Derivation," Nos. 32 and 33, may be consulted.

Precession, Nutation, etc. (Pages 198 to 201.)

" Derivation," Nos. 34 to 39, may be consulted.

Stars. (Pages 202 to 431.)

"Derivation," Nos. 40 to 51, may be consulted, and also the explanations of other Almanacs.

The magnitudes have been determined on the assumption that the average magnitude of α Ursæ Minoris, if observed in the Zenith, would be 2.15, and that the light given by a star of magnitude m is r times that given by one of magnitude $m+1$, where $\log r=0.4$.

The magnitudes of the two stars α Argûs and Sirius are indicated by negative quantities, showing that they are brighter than a star whose magnitude is 0.0.

The Spectra have been taken from a manuscript list forwarded by Professor Pickering. The system of classification is that of *Revised Harvard Photometry* (*Annals of Harvard College Observatory*, vol. 50), from which the following explanation is taken:—

"The nomenclature adopted is that first used in the *Draper Catalogue, H.A.*, vol. 27, modified and extended to satisfy the facts, as the study of the spectrum of the stars developed. Stars of Types I., II., and III., according to the designations of Secchi, are here denoted by the letters A, K, and M. Two well-marked classes between A and K are called F and G. Stars of the Orion or helium type, which contain well-marked helium lines in addition to the Orion lines, are called B. Nearly all the stars can be arranged in a sequence, according to the classes B, A, F, G, K, and M. Peculiar spectra are indicated by Pec. A more detailed study of the spectra showed that many of them fell between these classes. They are indicated by a number following the first class. Thus, B₂A, abridged to B₂, denotes a spectrum nearly like that of class B, but estimated to be two-tenths of the way from B to A. K₅ denotes a star midway between K and M. Stars of the fourth and fifth type are designated by the letters N and O respectively. Class M has been divided into the sub-classes Ma, Mb, Mc, and Md Class O has been divided into the sub-classes Oa, Ob, Oc, Od, and Oe O really precedes B in the sequence, so that Oe₅ denotes Oe₅B. This classification is fully described in Volume 28, p. 146 For stars having a slight peculiarity, the Class followed by the letter p is used instead of Pec."

Bo, Ao are, however, now usually employed for B, A.

At the foot of each page of Apparent Places of Stars are inserted the respective mean places, together with the natural secant and tangent of the mean declination of each star. Additional facility is thus afforded for the reduction of observations.

At the foot of the column on pages 277 to 431 are given quantities designated L_α , L_δ , ω_α , ω_δ to facilitate the calculation of the small parts of the star correction arising from the nutations, dL , $d\omega$, tabulated on pages 198 to 201.

The formulæ for these four quantities are

$$\begin{aligned} L_\alpha &= \sin \alpha \sin \omega \tan \delta \div 15 \\ L_\delta &= \sin \omega \cos \alpha \\ \omega_\alpha &= -\cos \alpha \tan \delta \div 15 \\ \omega_\delta &= \sin \alpha. \end{aligned}$$

The formulæ to be used for further correction to the apparent places are

$$\begin{aligned}d\alpha &= dL \times L\alpha + d\omega \times \omega\alpha + f' \\d\delta &= dL \times L\delta + d\omega \times \omega\delta.\end{aligned}$$

The numerical values of f' are given on pages 223 to 230.

Moon-culminating Stars. (Pages 432 to 460.)

“Derivation,” No. 52, may be consulted.

The Right Ascension of the Moon’s bright limb and Declination of the centre are given.

The Moon’s age in days is given in the same column with the magnitudes of the stars.

Eclipses. (Pages 461 to 468.)

The explanations of the American Ephemeris and the *Connaissance des Temps* may be consulted.

The Besselian Solar Eclipse Elements have the following geometrical signification:—

The fundamental plane is the plane passing through the centre of the Earth perpendicular to the axis of the Moon’s shadow, *i.e.* to the right line joining the centres of the Sun and Moon. The intersection of the fundamental plane with the Earth’s Equator is taken as the axis of x , and the axis of y is perpendicular to it and directed towards the North, the Earth’s centre being the origin of co-ordinates; so that x and y are the co-ordinates of the point in which the axis of the shadow intersects the fundamental plane. The angle d is the declination of the point in which the axis of the shadow (in the direction Earth, Moon, Sun) intersects the celestial sphere. The angle μ is the Greenwich hour-angle of this same point.

The quantities l_1 , l_2 are the radii of the shadow-cones upon the fundamental plane, l_1 corresponding to the penumbra and l_2 to the umbra or shadow. The latter is regarded as positive for an annular, and negative for a total Eclipse.

The values of the log tangents of the semi-angles of the shadow-cones of the penumbra and shadow respectively are also given.

The remaining quantities x' , y' , and μ' are, respectively, the changes of x , y , and μ in one minute of mean time.

Transit of Mercury across the Sun’s Disc. (Page 469.)

This page contains the times of external and internal contact of Mercury at ingress and egress, referred to the centre of the Earth, with equations for reduction to the surface.

Occultations. (Pages 470 to 519.)

The explanation of the American Ephemeris should be consulted, and also Derivation," No. 53.

Satellites of Jupiter. (Pages 521 to 545.)

The explanation of the *Connaissance des Temps* should be consulted.

In the Tables of Configurations the direction of the motion of the satellites is towards the numerals. White circles at the side of the tables denote transits in progress ; black circles, occultations or eclipses.

Satellites of Mars, Saturn, Uranus, and Neptune. (Pages 520, 546 to 550, and 552 to 554.)

The explanation of the American Ephemeris should be consulted.

Rings of Saturn. (Page 551.)

This page gives the apparent size and orientation of Saturn's Rings and the planetocentric position of the Earth and Sun relatively to the plane of the Rings.

a and b are the axes of the outer ellipse of the outer ring.

P is the angle which the minor axis of the Ring-ellipse makes with the Declination circle passing through the middle point of Saturn ; + East, - West.

B is the angular elevation of the Earth above the plane of the Rings, as seen from Saturn ; + North, - South.

B' is the angular elevation of the Sun above the plane of the Rings, as seen from Saturn ; + North, - South.

U is the Geocentric Longitude of Saturn reckoned on the plane of the Rings from the Ascending Node of the Ring on the Equator.

U' is the Heliocentric Longitude of Saturn, reckoned on the plane of the Rings, from the ascending Node of the Ring on the Ecliptic.

ω is the angular distance in the plane of the Rings from their ascending Node on the Earth's Equator to their Ascending Node on the Ecliptic.

The factor to be multiplied by a and b to obtain the axes of—

The inner ellipse of the outer ring = 0.8801	log factor = 9.9445.
The outer ellipse of the inner ring = 0.8599	log factor = 9.9344.
The inner ellipse of the inner ring = 0.6650	log factor = 9.8228.
The inner ellipse of the dusky ring = 0.5486	log factor = 9.7392.

Phenomena. (Pages 555 and 556.)

The conjunction of planet with planet is given only when the difference of declination does not exceed 3° ; that of planet with star when the difference does not exceed $10'$.

In computing the time of greatest brilliancy of Venus it is assumed that the brilliancy varies as $\frac{(r+\Delta+R)(r+\Delta-R)}{r^3\Delta^3}$, where r and R are the radii vectores of Venus and of the Earth respectively, and Δ is the distance of Venus from the Earth.

Physical Ephemeris of the Sun. (Page 557.)

P is the position-angle of the Sun's axis, B_0 the heliographical latitude of the Earth and L_0 the heliographical longitude of the centre of the disc.

Moon's Equator, Orbit, and Mean Longitude. (Page 558.)

The Moon's Equator descends upon the ecliptic at a constant angle at the point where the Moon's Orbit ascends upon the ecliptic.

Ω is the longitude of this point.

Ω' is the right ascension of the Ascending Node of the Moon's Equator upon the Earth's Equator.

i is the inclination of the two equators.

$\Delta + 180^\circ$ is the distance from the Ascending Node of the Moon's Equator upon the Earth's Equator to the Ascending Node of the Moon's Orbit upon the ecliptic.

The mean longitude of the Moon's Perigee Γ' and the Moon's mean longitude are given in a slightly different manner upon page 1.

Physical Ephemeris of the Moon. (Pages 559 to 565.)

"Derivation," No. 54, may be consulted.

C is the position-angle of the northern extremity of the Moon's axis.

Physical Ephemerides of Mercury and Venus. (Pages 566 and 567.)

k the fraction of the whole disc illuminated.

i the angle between Earth and Sun as seen from the planet.

θ the position-angle of the line of cusps.

L the brilliancy of the disc.

Physical Ephemeris of Mars. (Pages 568 to 575.)

P is the position-angle of the axis of rotation, $A\oplus$, $A\odot$, the planetocentric Right Ascension of the Earth and Sun respectively, reckoned in the plane of the planet's Equator from the vernal Equinox of the planet's Northern Hemisphere,

$D\oplus$, $D\odot$ are the planetocentric declinations of the Earth and Sun,

$\odot \text{ } \mathcal{L}$ the planetocentric longitude of the Sun in the plane of the planet's orbit,

k the fraction of the whole disc illuminated,

i the angular distance of Earth and Sun as seen from the planet,

q , Q the amount and position-angle of the greatest defect of illumination.

Physical Ephemeris of Jupiter. (Pages 576 to 581.)

The correction for phase is applicable to the central meridian.

Days elapsed of the Julian Period at Mean Noon. (Page 588.)

The Julian Period is a period of 7980 years, the year A.D. 1 corresponding to the year 4714 of the period, or the year 0 (B.C. 1) to the year 4713 of the period. The year 1924, therefore, corresponds to the year 6637 of the Julian Period.

As the year 0 corresponds to the year 4713 of the period, *at the commencement* of the year 0, there have elapsed 4712 years, or 1,721,058 days of the period. It is on this basis that the Table has been calculated. The Table gives the number of days of the period elapsed at the commencement of each fourth year of our era, from the year 0 to the year 1996. In the construction of the Table it has been assumed that the Gregorian reformation of the Calendar was introduced in the year 1582.

Geocentric Co-ordinates. (Page 589.)

This page contains a Table for computing the geocentric latitude and log. radius of a place on the Earth's surface, the geographical latitude of which is known. The

Table is adapted to a compression of $\frac{1}{297.0}$.

Observatories. (Pages 590 to 597.)

These pages contain a list of the *Longitudes and Latitudes of the principal Public and Private Observatories*, together with the Reduction of the Geographical to the Geocentric Latitude and the logarithm of the Earth's Radius for sea level for the position of each Observatory, computed with an assumed compression of one part in 297.0.

Standard Times. (Page 598.)

A list of Standard Times in use at various places is given.

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Following the publication of the catalogue, a weekly list is printed of additional charts and sailing directions issued from the Hydrographic Department. These weekly lists can also be obtained free of charge from J. D. Potter.

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