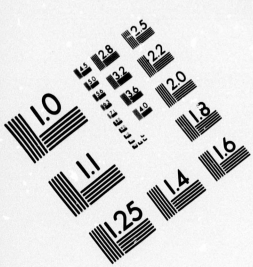


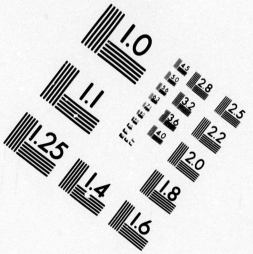
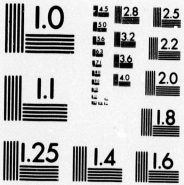
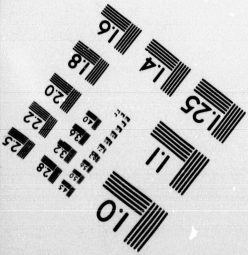
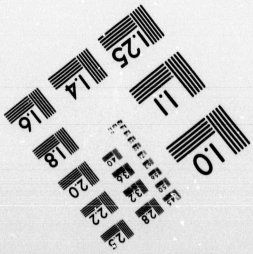


IMAGE EVALUATION
TEST TARGET (MT-3)







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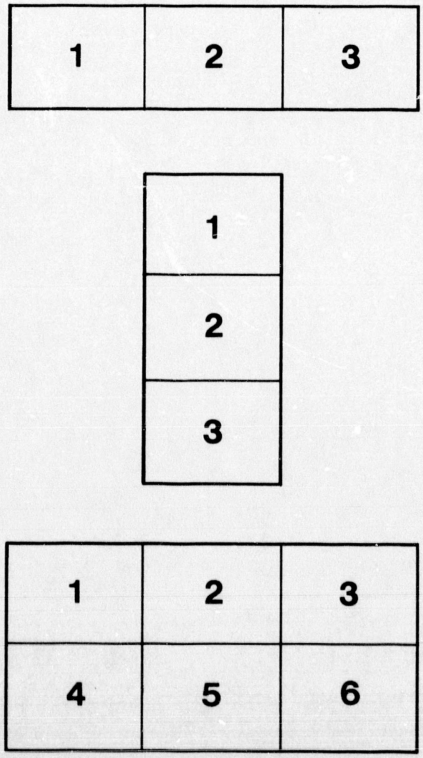

E

EPHEMERIS OF STARS

ERRATA.

PAGE.	
X.	20th line, for 3h. 52m. read 3h. 53m.
XI.	3rd line, for 44·55s. read 14·55s.
1	4th line, for 46·76 read 41.76.
2	5th line, for 39·90 read 29·90.
2	Last line, for 44 read 14.
5	15th line, for 40·45 read 49·45.
16	18th line, for 26 read 20.
16	27th line, for 29·80 read 39·80.
18	19th line, for 1115 read 1155.
23	32nd line, for 1240 read 1248.
30	Signs for column b read ×
36	Signs for column t' read ×
36	Signs for right column S. T. read —
44	17th line, for 72 read 76.
46	Sign for right column c read —
55	Sign for left column b read —
60	Sign for left column S. T. read —
61	20th line, for 129·80 read 128·80.
61	28th line, for 74·20 read 75·20.
61	29th line, for 689 read 669.
62	Sign for column c read —
65	9th line, for 29 read 39.
70	For Z 22°, 28′ S. read Z, 36° 25′ S.
71	17th line, for 60·28 read 61·28.
74	Last line, for 1598 read 1578.
75	Columns c read same as on page 34.
76	28th line, for 577 read 557.
77	20th line, for 119·27 read 110·27.
77	21st line, for 114·93 read 104·93.

TORONTO, ONTARIO:
PUBLISHED BY KLEIN & McLIVER, 16 JORDAN STREET,
1889.

E

W

PRIC

The E

EPHEMERIS OF STARS

IN THE

VERTICAL OF "POLARIS"

1889

BY

F. L. BLAKE, P.L.S.

PRICE—Limp Cloth Flush, $2.00. May be had post free on application to the Compiler, Meteorological Office, Toronto, Canada.

The Ephemeris for **1890** is in preparation and will be published during December, 1889.

TORONTO, ONTARIO:
PUBLISHED BY KLEIN & McLIVER, 16 JORDAN STREET,
1889.

EPHEMERIS OF STARS

IN THE

VERTICAL OF THE POLE STAR

1889

BY

F. L. BLAKE, P.L.S.

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The Ephemeris for 1890 is in preparation and will be published during December, 1889.

TORONTO, ONTARIO:
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1889.

EPHEMERIS OF STARS

IN THE

VERTICAL OF "POLARIS"

—BY—

F. L. BLAKE, P.L.S. AND D.L.S.,

Astronomical Assistant at Toronto Observatory.

This original and convenient Ephemeris by Mr. Blake is the first and only pulication of the kind ever attempted.

These tables give the *Time* and *Azimuth* by mere inspection.

They have been compiled after a good deal of labor for the use and benefit of surveyors and engineers generally.

It is intended to do away with calculations altogether, and to afford a ready means of at once determining the *Time* and *Azimuth* of *Polaris* at the moment of observation, thereby giving the astronomical deviation of any line from the meridian by simply noting the readings of the Azimuth plate of the instrument at the time of observation.

This compilation affords by far the easiest and shortest as well as the simplest method of obtaining *Time* and *Azimuth*.

In the calculations necessary for compiling the tables the positions of the stars are those given in the *Berliner Jahrbuch*, and for those that are not found in it the *American Almanac* positions have been used reduced to the Berlin meridian.

The *Siderial Times and Azimuth of Polaris* are given for every 20th day throughout the year for the 45th degree of latitude, and the corrections rigidly obtained to the nearest second of arc for the other latitudes, viz.: from 28 to 56° are tabulated under latitude corrections. The other tabulated corrections are very close approximations, rarely giving an error of more than three tenths of a second of time, or three seconds in azimuth.

Great care has been taken in the necessary calculations which have been carefully made and revised, and the selection of stars, consisting of 60 at the upper and 24 at the lower culmination, has been made with due regard to their suitability for observing purposes. For in-

stance, a great many southern stars as also the lower culmination ones have been taken, owing to their low altitude coming within the range of telescopes having no rectangular eye pieces. The stars are the brightest in the brightest in the heavens, and can be observed in twilight with the ordinary glass, thus doing away with night work. All the interpolations required (which are no more than in an ordinary almanac) can be made before the observation with the exception of the time interval corrections in columns *b* and *c*.

With carefully adjusted collimation and axis well levelled no corrections need be applied for these, but in case of doubt as to the collimation error pairs of stars have been inserted of nearly the same declination, and of sufficient interval of time so as to allow of reversal of telescope between the observations thus practically eliminating the collimation error.

METHOD OF OBSERVATION.

The best method of observing would be to select your stars beforehand and make the necessary interpolations, getting your instrument into position a few minutes before the time required, sight on *Polaris* and then swing the telescope to the time star and wait till it appears in the field of view, turn on to *Polaris* again, clamp and bisect accurately by means of tangent screw, noting the time by watch and again revolving the telescope to the time star, note the time of its crossing the wire. The observation is then complete, and the time interval corrections can then be applied and you have the *sidereal time* and *azimuth* of *Polaris*, which may be used in determining the deviation of any line you may be running by noting the readings of the azimuth plate of the instrument at the time of observation.

As a rule with surveyors the *azimuth* is only required which can be taken out without going through the interpotation for *time* thus simplifying matters.

The deviation by this observation can be determined in less than five minutes.

An ordinary watch capable of keeping good time for the interval of two or three minutes between the observations is all that is necessary. No calculations involving the use of logarithms are required, and no other book or almanac is needed, as the tables for converting the sidereal time into mean time are inserted before the star tables. These are Table II., containing the sidereal time of mean noon at Greenwich for every day of the year, and Table III. for converting sidereal intervals into mean time intervals after the manner of the table in the American Ephemeris.

EXPLANATIONS.

In the first column, under Z, will be found the zenith distance of the *time star* followed by the dates.

t and t' are corrections of decimals of a second of the time for each degree of latitude differing from 45, and to be applied with its proper sign to the *S. T.* after multiplying by the difference in latitude. t being used for latitudes south of 45 and t' for places north of 45.

a and a' are similar corrections to be applied to the Azimuth.

LATITUDE CORRECTIONS.

The column *L* is for the latitude.

S. T. and *Az.* are corrections to be applied to the Sid. Time and Azimuth according to their signs.

b contains the corrections to be applied for the interval of time between the observations on polaris and the time star. They are decimals of a second and require to be multiplied by the interval in seconds.

c are similar corrections for the Azimuth.

The corrections require the interval between the observations not to be extended much over three minutes.

At the foot of each page of the Star Tables will be found the Zenith Distance of *Polaris* for finding purposes. This distance is for latitude 45 and is not corrected for refraction.

NOTE.—All the above corrections are to be applied to the Sid., T. and Az. columns immediately under the stars name as the different signs are arranged for that purpose.

EXAMPLE I.

Jan. 20th, 1889.—At a place in latitude 52° 36′ and longitude 90° west. *Polaris* was supposed to be observed at 10h. 33m. 30s. watch time, and Sirius at 10h. 36m. 0s. in the same vertical plane—required the watch error and azimuth of Polaris.

Time interval, 150 seconds. Difference of latitude from 45 is 7°.6.

$t' = +0{\cdot}093 \times 7{\cdot}6 = +0''{\cdot}71$. $b = +0.007 \times 150 = +1{\cdot}05$.

	h.	m.	s.
Jan. 20th, 1889 ..... S.T. =	6	33	43·58
Cor. S. T. for Lat. 52° 36 ..... =		—	93·93
Cor. t' ..... =		+	0·71
Time interval Cor. b ..... =		+	1·05
Sideral Time ..... =	6	32	11·41
Sidereal Time, M. Noon, 90th Mer ..... =	20	1	12·25
Sidereal interval from Noon ..... =	10	30	59·16
Retardation Table III ..... =		0	43·37
Standard Time, 90th Mer ..... =	10	29	15·79
Watch Time ..... =	10	36	0·
Watch Fast ..... =		6	44·21

FOR *AZIMUTH*.

$a' = -1{\cdot}08 \times 7{\cdot}6 = -8''{\cdot}2$. $c = -0.102 \times 150 = -15{\cdot}3$.

Az ..... =	1°	47′	0·″
Cor. Az. for Lat. 52° 36 ..... = +		17	43·0
Cor. a' ..... = —		0	8·2
Time interval cor. c ..... = —		0	15·3
Az. *Polaris* ..... =	2	4	19·5 W

A rigid solution gives ..... S. T., = 6h. 32m. 11·55s. Az., = 2° 4′ 20″ W.

EXAMPLE II.

Jan. 20th, 1889.—At a place in latitude 30° 12′ and longitude 90° W. *Polaris* was supposed to be observed at 10h. 57m. 10. watch time, and δ *Draconis* S. P. in same vertical at 10h. 58m. 42s. required the sidereal time and azimuth of *Polaris*.

Time interval, 92 seconds. Difference of latitude from 45 is 14·8.

$t = -0{\cdot}067 \times 14{\cdot}8 = -0{\cdot}99$s. $b = +0{\cdot}005 \times 92{\cdot} = +0{\cdot}46$.

	h.	m.	s.
Jan. 20th, 1889 ..... S. T. =	6	55	4·03
Cor. S. T. for Lat. 30° 12′ ..... = +		2	8·88
Cor. t ..... =		—	0·99
Time interval Cor. b ..... =		+	0·46
Sidereal Time ..... =	6	57	12·38

FOR *AZIMUTH*.

$a = +0{\cdot}67 \times 14{\cdot}8 = +9''{\cdot}9$. $c = -0{\cdot}029 \times 92{\cdot} = -2{\cdot}8$.

Az	1°	48′	15·″
Cor. Az. for Lat. 30·12 ..... = —		19	50·
Cor. a ..... = +		0	9·9
Time interval cor. c ..... = —		0	2·8
Az. of *Polaris* ..... =	1	28	32·1 W

A rigid solution gives ..... S. T., = 6h. 57m. 12·43s. = Az. 1° 28′ 31″ W.

TABLE I.

No.	NAMES OF STARS.	Sideral Time.		Azimuth of Polaris.
		h.	*m.*	° ′
1	*α* Cassiopeiæ	0	33	0·21 E
2	*γ* Cassiopeiæ	0	49	0·13 E
3	*ε* Ursæ Majoris ..... S. P.	0	50	0·12 E
4	*ζ* Ursæ Majoris ..... S. P.	1	19	0· 0 W
5	*α* Eridani	1	32	0· 6 W
6	*β* Arietis	1	48	0·13 W
7	*α* Arietis	2	0	0·19 W
8	*β* Ursæ Minoris ..... S. P.	2	42	0·39 W
9	*γ* Ursæ Minoris ..... S. P.	3	10	0·51 W
10	*α* Persei	3	16	0·54 W
11	*δ* Persei	3	35	1· 1 W
12	*γ* Eridani	3	48	1· 7 W
13	*η* Draconis ..... S. P.	4	12	1·15 W
14	*α* Tauri (*Aldebaran*)	4	26	1·20 W
15	*β* Orionis (*Rigel*)	5	4	1·31 W
16	*α* Aurigæ (*Capella*)	5	8	1·32 W
17	*β* Draconis ..... S. P.	5	17	1·34 W
18	*δ* Orionis	5	21	1·35 W
19	*ε* Orionis	5	25	1·36 W
20	*α* Columbæ	5	27	1·36 W
21	*γ* Draconis ..... S. P.	5	43	1·39 W
22	*α* Orionis	5	44	1·40 W
23	*β* Aurigæ	5	51	1·41 W
24	*α* Argus (*Canopus*)	6	9	1·44 W
25	*α* Lyræ (*Vega*) ..... S. P.	6	24	1·45 W
26	*α* Canis Majoris (*Sirius*)	6	33	1·46 W
27	*ε* Canis Majoris	6	46	1·47 W
28	*δ* Draconis ..... S. P.	6	55	1·47 W
29	*α* Canis Minoris (*Procyon*)	7	28	1·47 W
30	*ε* Draconis ..... S. P.	7	29	1·47 W
31	*α* Cygni ..... S. P.	8	27	1·42 W
32	*η* Cephei ..... S. P.	8	29	1·42 W
33	*ι* Ursæ Majoris	8	52	1·38 W
34	*α* Cephei ..... S. P.	9	2	1·36 W
35	*α* Hydræ	9	17	1·33 W
36	*α* Leonis (*Regulus*)	9	59	1·21 W
37	*β* Ursæ Majoris	10	56	1· 1 W
38	*α* Ursæ Majoris	10	59	1· 0 W
39	*γ* Cephei ..... S. P.	11	21	0·51 W
40	*λ* Draconis	11	28	0·48 W
41	*γ* Corvi	12	8	0·31 W
42	*δ* Corvi	12	22	0·25 W

TABLE I.—*Concluded.*

No.	NAMES OF STARS.	SIDERAL TIME.		AZIMUTH OF POLARIS.
		h.	*m.*	° ′
43	α Cassiopeiæ.....S. P.	12	31	0·21 W
44	γ Cassiopeiæ.....S. P.	12	48	0·13 W
45	ϵ Ursæ Majoris.....	12	49	0·12 W
46	α Virginis (*Spica*).....	13	19	0· 0 E
47	ζ Ursæ Majoris.....	13	19	0· 0 E
48	β Centauri	13	58	0·18 E
49	α Bootis (*Arcturus*)	14	11	0·23 E
50	β Ursæ Minoris.....	14	46	0·39 E
51	β Libræ	15	13	0·51 E
52	γ_2 Ursæ Minoris.....	15	15	0·51 E
53	α Persei .....S. P.	15	22	0·54 E
54	δ Persei .....S. P.	15	41	1· 1 E
55	β Scorpii	16	3	1·10 E
56	δ Ophiuchi.....	16	12	1·13 E
57	η Draconis	16	19	1·15 E
58	α Scorpii (*Antares*)	16	28	1·18 E
59	α Aurigæ (*Capella*) .....S. P.	17	17	1·32 E
60	β Draconis.....	17	26	1·34 E
61	α Ophiuchi.....	17	33	1·35 E
62	γ Draconis	17	52	1·39 E
63	β Aurigæ .....S. P.	18	0	1·41 E
64	λ Sagittarii	18	28	1·45 E
65	α Lyræ (*Vega*)	18	34	1·45 E
66	α Sagitarii	18	55	1·47 E
67	δ Draconis	19	5	1·47 E
68	ϵ Draconis	19	39	1·47 E
69	γ Aquilæ.....	19	45	1·47 E
70	α Aquilæ (*Altair*)	19	49	1·47 E
71	α^2 Capricorni	20	17	1·45 E
72	α Cygni	20	37	1·42 E
73	n Cephei	20	38	1·42 E
74	ι Ursæ Majoris.....S. P.	21	1	1·38 E
75	α Cephei	21	11	1·36 E
76	β Aquarii	21	30	1·31 E
77	α Aquarii	22	3	1·22 E
78	α Gruis	22	9	1·20 E
79	α Piscis Aust. (*Fomalhaut*).....	22	56	1· 3 E
80	α Pegasis.....	23	1	1· 1 E
81	β Ursæ Majoris.....S. P.	23	2	1· 1 E
82	α Ursæ Majoris.....S. P.	23	5	1· 0 E
83	γ Cephei	23	26	0·51 E
84	λ Draconis.....S. P.	23	33	0·38 E

TABLE II.

AT GREENWICH, MEAN NOON, 1889.

JANUARY.					FEBRUARY.					MARCH.				
Day of the week.	Day of the month.	Sidereal Time or Right Ascension of Mean Sun.			Day of the week.	Day of the month.	Sidereal Time or Right Ascension of Mean Sun.			Day of the week.	Day of the Month.	Sidereal Time or Right Ascension of Mean Sun.		
		h.	*m.*	*s.*			*h.*	*m.*	*s.*			*h.*	*m.*	*s.*
Tuesday	1	18	45	18·52	Friday	1	20	47	31·78	Friday	1	22	37	55·29
Wednes	2	18	49	15·08	Satur	2	20	51	28·34	Satur	2	22	41	51·85
Thurs	3	18	53	11·64	Sunday	3	20	55	24·89	Sunday	3	22	45	48·40
Friday	4	18	57	8·20	Monday	4	20	59	21·45	Monday	4	22	49	44·95
Satur	5	19	1	4·76	Tuesday	5	21	3	18·00	Tuesday	5	22	53	41·50
Sunday	6	19	5	1·31	Wednes	6	21	7	14·56	Wednes	6	22	57	38·06
Monday	7	19	8	57·87	Thurs	7	21	11	11·12	Thurs	7	23	1	34·62
Tuesday	8	19	12	54·43	Friday	8	21	15	7·67	Friday	8	23	5	31·17
Wednes	9	19	16	50·99	Satur	9	21	19	4·22	Satur	9	23	9	27·72
Thurs	10	19	20	47·54	Sunday	10	21	23	0·77	Sunday	10	23	13	24·27
Friday	11	19	24	44·10	Monday	11	21	26	57·33	Monday	11	23	17	20·82
Satur	12	19	28	40·66	Tuesday	12	21	30	53·89	Tuesday	12	23	21	17·37
Sunday	13	19	32	37·22	Wednes	13	21	34	50·45	Wednes	13	23	25	13·93
Monday	14	19	36	33·77	Thurs	14	21	38	47·00	Thurs	14	23	29	10·48
Tuesday	15	19	40	30·33	Friday	15	21	42	43·55	Friday	15	23	33	7·03
Wednes	16	19	44	26·88	Satur	16	21	46	40·10	Satur	16	23	37	3·59
Thurs	17	19	48	23·44	Sunday	17	21	50	36·66	Sunday	17	23	41	0·14
Friday	18	19	52	20·00	Monday	18	21	54	33·21	Monday	18	23	44	56·69
Satur	19	19	56	16.56	Tuesday	19	21	58	29·76	Tuesday	19	23	48	53·24
Sunday	20	20	0	13·11	Wednes	20	22	2	26·32	Wednes	20	23	52	49·79
Monday	21	20	4	9·66	Thurs	21	22	6	22·87	Thurs	21	23	56	46·34
Tuesday	22	20	8	6·22	Friday	22	22	10	19·43	Friday	22	0	0	42·89
Wednes	23	20	12	2·78	Satur	23	22	14	15·98	Satur	23	0	4	39·45
Thurs	24	20	15	59·34	Sunday	24	22	18	12·53	Sunday	24	0	8	36·01
Friday	25	20	19	55·90	Monday	25	22	22	9·08	Monday	25	0	12	32.56
Satur	26	20	23	52·45	Tuesday	26	22	26	5·63	Tuesday	26	0	16	29·1a
Sunday	27	20	27	49·00	Wednes	27	22	30	2·19	Wednes	27	0	20	25·66
Monday	28	20	31	45·56	Thurs	28	22	33	58·74	Thurs	28	0	24	22·22
Tuesday	29	20	35	42.12						Friday	29	0	28	18·77
Wednes	30	20	39	38·67						Satur	30	0	32	15·32
Thurs	31	20	43	35·2[illegible]						Sunday	31	0	36	11·87

Difference for one hour + 9s.8565

TABLE II.—*Continued.*

AT GREENWICH, MEAN NOON, 1889.

April.			May.			June.		
Day of the week.	Day of the month.	Sidereal Time or Right Ascension of Mean Sun.	Day of the week.	Day of the month.	Sidereal Time or Right Ascension of Mean Sun.	Day of the week.	Day of the Month.	Sidereal Time or Right Ascension of Mean Sun.
		h. *m.* *s.*			*h.* *m.* *s.*			*h.* *m.* *s.*
Monday	1	0 40 8·62	Wednes	1	2 38 25·03	Satur	1	4 40 38·27
Tuesday	2	0 44 4·98	Thurs	2	2 42 21·58	Sunday	2	4 44 34·82
Wednes	3	0 48 1·53	Friday	3	2 46 18·13	Monday	3	4 48 31·38
Thurs	4	0 51 58·08	Satur	4	2 50 14·69	Tuesday	4	4 52 27·94
Friday	5	0 55 54.64	Sunday	5	2 54 11·24	Wednes	5	4 56 24·49
Satur	6	0 59 51·19	Monday	6	2 58 7·80	Thurs	6	5 0 21·05
Sunday	7	1 3 47·74	Tuesday	7	3 2 4·36	Friday	7	5 4 17·61
Monday	8	1 7 44·29	Wednes	8	3 6 0·92	Satur	8	5 8 14·17
Tuesday	9	1 11 40·85	Thurs	9	3 9 57·47	Sunday	9	5 12 10·72
Wednes	10	1 15 37·40	Friday	10	3 13 54·03	Monday	10	5 16 7·28
Thurs	11	1 19 33·96	Satur	11	3 17 50·59	Tuesday	11	5 20 3·84
Friday	12	1 23 30·51	Sunday	12	3 21 47·14	Wednes	12	5 24 0·40
Satur	13	1 27 27·06	Monday	13	3 25 43·70	Thurs	13	5 27 56·96
Sunday	14	1 31 23·61	Tuesday	14	3 29 40·25	Friday	14	5 31 53·52
Monday	15	1 35 20·17	Wednes	15	3 33 36·81	Satur	15	5 35 50·07
Tuesday	16	1 39 16·72	Thurs	16	3 37 33·36	Sunday	16	5 39 46·63
Wednes	17	1 43 13·28	Friday	17	3 41 29·92	Monday	17	5 43 43·19
Thurs	18	1 47 9·84	Satur	18	3 45 26·47	Tuesday	18	5 47 39·75
Friday	19	1 51 6·39	Sunday	19	3 49 23·03	Wednes	19	5 51 36·30
Satur	20	1 55 2·94	Monday	26	3 52 19·58	Thurs	20	5 55 32·86
Sunday	21	1 58 59·49	Tuesday	21	3 57 16·14	Friday	21	5 59 29·42
Monday	22	2 2 56·04	Wednes	22	4 1 12·70	Satur	22	6 3 25·98
Tuesday	23	2 6 52·60	Thurs	23	4 5 9·25	Sunday	23	6 7 22·53
Wednes	24	2 10 49·16	Friday	24	4 9 5·81	Monday	24	6 11 19·09
Thurs	25	2 14 45·71	Satur	25	4 13 2·37	Tuesday	25	6 15 15·65
Friday	26	2 18 42·26	Sunday	26	4 16 58·92	Wednes	26	6 19 12·21
Saturdy	27	2 22 38·81	Monday	27	4 20 55·48	Thurs	27	6 23 8·76
Sunday	28	2 26 35·37	Tuesday	28	4 24 52·04	Friday	28	6 27 5·32
Monday	29	2 30 31·92	Wednes	29	4 28 48·60	Satur	29	6 31 1·88
Tuesday	30	2 34 28·47	Thurs	30	4 32 45·15	Sunday	30	6 34 58·44
			Friday	31	4 36 41·71			

Difference for one hour + 9s. 8565.

TABLE II.—*Continued.*

AT GREENWICH, MEAN NOON, 1889.

July.			August.			September.		
Day of the week.	Day of the month.	Sidereal Time or Right Ascension of Mean Sun.	Day of the week.	Day of the month.	Sidereal Time or Right Ascension of Mean Sun.	Day of the week.	Day of the Month.	Sidereal Time or Right Ascension of Mean Sun.
		h. m. s.			*h. m. s.*			*h. m. s.*
Monday	1	6 38 54·99	Thurs	1	8 41 8·26	Sunday	1	10 43 21·45
Tuesday	2	6 42 51·55	Friday	2	8 45 4·82	Monday	2	10 47 18.00
Wednes	3	6 46 48·11	Satur	3	8 49 1·37	Tuesday	3	10 51 44·55
Thurs	4	6 50 44·67	Sunday	4	8 52 57·92	Wednes	4	10 55 11·11
Friday	5	6 54 41.22	Monday	5	8 56 54·48	Thurs	5	10 59 7·66
Satur	6	6 58 37·78	Tuesday	6	9 0 51·03	Friday	6	11 3 4·21
Sunday	7	7 2 34·34	Wednes	7	9 4 47·58	Satur	7	11 7 0·76
Monday	8	7 6 30·90	Thurs	8	9 8 44·14	Sunday	8	11 10 57·32
Tuesday	9	7 10 27·45	Friday	9	9 12 40·70	Monday	9	11 14 53·87
Wednes	10	7 14 24·01	Satur	10	9 16 37·25	Tuesday	10	11 18 50·42
Thurs	11	7 18 20·57	Sunday	11	9 20 33·81	Wednes	11	11 22 46·97
Friday	12	7 22 17·13	Monday	12	9 24 30·37	Thurs	12	11 26 43·52
Satur	13	7 26 13·68	Tuesday	13	9 28 26·92	Friday	13	11 30 40·07
Sunday	14	7 30 10·24	Wednes	14	9 32 23·47	Satur	14	11 34 36·63
Monday	15	7 34 6·80	Thurs	15	9 36 20·03	Sunday	15	11 38 33·18
Tuesday	16	7 38 3·36	Friday	16	9 40 16·59	Monday	16	11 42 29·74
Wednes	17	7 41 59·92	Satur	17	9 44 13·14	Tuesday	17	11 46 26·30
Thurs	18	7 45 56·47	Sunday	18	9 48 9·69	Wednes	18	11 50 22·85
Friday	19	7 49 53·02	Monday	19	9 52 6·24	Thurs	19	11 54 19·40
Satur	20	7 53 49·58	Tuesday	20	9 56 2·80	Friday	20	11 58 15·95
Sunday	21	7 57 46·14	Wednes	21	9 59 59·36	Satur	21	12 2 12·51
Monday	22	8 1 42·70	Thurs	22	10 3 55·91	Sunday	22	12 6 9·06
Tuesday	23	8 5 39·25	Friday	23	10 7 52·47	Monday	23	12 10 5·61
Wednes	24	8 9 35·80	Satur	24	10 11 49·02	Tuesday	24	12 14 2·16
Thurs	25	8 13 32·36	Sunday	25	10 15 45·58	Wednes	25	12 17 58·71
Friday	26	8 17 28·92	Monday	26	10 19 42·13	Thurs	26	12 21 55·27
Satur	27	8 21 25·48	Tuesday	27	10 23 38·68	Friday	27	12 25 51·82
Sunday	28	8 25 22·04	Wednes	28	10 27 35·23	Satur	28	12 29 48·37
Monday	29	8 29 18·59	Thurs	29	10 31 31·78	Sunday	29	12 33 44·92
Tuesday	30	8 33 15·14	Friday	30	10 35 28·34	Monday	30	12 37 41·47
Wednes	31	8 37 11·70	Satur	31	10 39 24·90			

Difference for one hour + 9s.8565

TABLE II.—*Concluded.*

AT GREENWICH, MEAN NOON, 1889.

October.					November.					December.				
Day of the week.	Day of the month.	Sidereal Time or Right Ascension of Mean Sun.			Day of the week.	Day of the month.	Sidereal Time or Right Ascension of Mean Sun.			Day of the week.	Day of the Month.	Sidereal Time or Right Ascension of Mean Sun.		
		h.	*m.*	*s.*			*h.*	*m.*	*s.*			*h.*	*m.*	*s.*
Tuesday	1	13	41	38·03	Friday	1	14	43	51·19	Sunday	1	16	42	7·37
Wednes	2	13	45	34·58	Satur	2	14	47	47·74	Monday	2	16	46	4·43
Thurs	3	13	49	31·13	Sunday	3	14	51	44·30	Tuesday	3	16	50	0·99
Friday	4	13	53	27·69	Monday	4	14	55	40·86	Wednes	4	16	53	57·54
Satur	5	13	57	24.24	Tuesday	5	14	59	37·41	Thurs	5	16	57	54·10
Sunday	6	13	1	20·80	Wednes	6	15	3	33·96	Friday	6	17	1	50·66
Monday	7	13	5	17·35	Thurs	7	15	7	30·51	Satur	7	17	5	47·21
Tuesday	8	13	9	13·90	Friday	8	15	11	27·07	Sunday	8	17	9	43·77
Wednes	9	13	13	10·45	Satur	9	15	15	23·63	Monday	9	17	13	40·33
Thurs	10	13	17	7·01	Sunday	10	15	19	20·18	Tuesday	10	17	17	36·89
Friday	11	13	21	3·56	Monday	11	15	23	16·74	Wednes	11	17	21	33·45
Satur	12	13	25	0·11	Tuesday	12	15	27	13·29	Thurs	12	17	25	30.00
Sunday	13	13	28	56·66	Wednes	13	15	31	9·85	Friday	13	17	29	26·56
Monday	14	13	32	53·22	Thurs	14	15	35	6·41	Satur	14	17	33	23·12
Tuesday	15	13	36	49·77	Friday	15	15	39	2·97	Sunday	15	17	37	19·68
Wednes	16	13	40	46·32	Satur	16	15	42	59·53	Monday	16	17	41	16·24
Thurs	17	13	44	42·88	Sunday	17	15	46	56·08	Tuesday	17	17	45	12·80
Friday	18	13	48	39·43	Monday	18	15	50	52·62	Wednes	18	17	49	9·35
Satur	19	13	52	35·98	Tuesday	19	15	54	49·19	Thurs	19	17	53	5·91
Sunday	20	13	56	32·54	Wednes	20	15	58	45·75	Friday	20	17	57	2·47
Monday	21	14	0	29·09	Thurs	21	16	2	42·30	Satur	21	18	0	59·03
Tuesday	22	14	4	25·65	Friday	22	16	6	38·86	Sunday	22	18	4	55·58
Wednes	23	14	8	22·20	Satur	23	16	10	35·42	Monday	23	18	8	52·14
Thurs	24	14	12	18·76	Sunday	24	16	14	31·98	Tuesday	24	18	12	48·70
Friday	25	14	16	15.31	Monday	25	16	18	28·53	Wednes	25	18	16	45·26
Satur	26	14	20	11·87	Tuesday	26	16	22	25·08	Thurs	26	18	20	41·82
Sunday	27	14	24	8·42	Wednes	27	16	26	21·64	Friday	27	18	24	38·38
Monday	28	14	28	4·97	Thurs	28	16	30	18·20	Satur	28	18	28	34·93
Tuesday	29	14	32	1·52	Friday	29	16	34	14·76	Sunday	29	18	32	31·49
Wednes	30	14	35	58·07	Satur	30	16	38	11·31	Monday	30	18	36	28·05
Thurs	31	14	39	54·63						Tuesday	31	18	40	24·61

Difference for one hour + 9s.8565

TABLE III.—SIDEREAL INTO MEAN SOLAR TIME.

To be Subtracted from a Sidereal Time Interval.

Sidereal.	0h.	1h.	2h.	3h.	4h.	5h.	For Seconds.	
m.	m. s.	m. s.	m. s.	m. s.	m. s.	m. s.	s.	s.
0	0 0·00	0 9·83	0 19·65	0 29·48	0 39·31	0 49·14	0	0·000
1	0·16	9·99	19·82	29·65	39·48	49·31	1	0·003
2	0·32	10·15	19·98	29·81	39·64	49·47	2	0·005
3	0·49	10·32	20·15	29·98	39·81	49·63	3	0·008
4	0·65	10·48	20·31	30·14	39·97	49·80	4	0·011
5	0·81	10·64	20·47	30·30	40·13	49·96	5	0·014
6	0·98	10·81	20·64	30·47	40·30	50·13	6	0·016
7	1·14	10·97	20·80	30·63	40·46	50·29	7	0·019
8	1·31	11·14	20·97	30·79	40·62	50·45	8	0·022
9	1·47	11·30	21·13	30·96	40·79	50·62	9	0·025
10	1·63	11·46	21·29	31·12	40·95	50·78	10	0·027
11	1·80	11·63	21·46	31·29	41·12	50·95	11	0·030
12	1·96	11·79	21·62	31·45	41·28	51·11	12	0·033
13	2·13	11·95	21·78	31·61	41·44	51·27	13	0·035
14	2·29	12·12	21·95	31·78	41·61	51·44	14	0·038
15	2·45	12·28	22·11	31·94	41·77	51·60	15	0·041
16	2·62	12·45	22·28	32·11	41·93	51·76	16	0·044
17	2·78	12·61	22·44	32·27	42·10	51·93	17	0·046
18	2·94	12·77	22·60	32·43	42·26	52·09	18	0·049
19	3·11	12·94	22·77	32·60	42·43	52·26	19	0·052
20	3·27	13·10	22·93	32·76	42·59	52·42	20	0·055
21	3·44	13·27	23·09	32·92	42·75	52·58	21	0·057
22	3·60	13·43	23·26	33·09	42·92	52·75	22	0·060
23	3·76	13·59	23·42	33·25	43·08	52·91	23	0·063
24	3·93	13·76	23·59	33·42	43·25	53·08	24	0·066
25	4·09	13·92	23·75	33·58	43·41	53·24	25	0·068
26	4·25	14·08	23·91	33·74	43·57	53·40	26	0·071
27	4·42	14·25	24·08	33·91	43·74	53·57	27	0·074
28	4·58	14·41	24·24	34·07	43·90	53·73	28	0·076
29	4·75	14·58	24·41	34·24	44·06	53·89	29	0·079
30	4·91	14·74	24·57	34·40	44·23	54·06	30	0·082
31	5·07	14·90	24·73	34·56	44·39	54·22	31	0·085
32	5·24	15·07	24·90	34·73	44·56	54·39	32	0·087
33	5·40	15·23	25·06	34·89	44·72	54·55	33	0·090
34	5·57	15·40	25·22	35·05	44·88	54·71	34	0·093
35	5·73	15·56	25·39	35·22	45·05	54·88	35	0·096
36	5·89	15·72	25·55	35·38	45·21	55·04	36	0·098
37	6·06	15·89	25·72	35·55	45·38	55·20	37	0·101
38	6·22	16·05	25·88	35·71	45·54	55·37	38	0·104
39	6·38	16·21	26·04	35·87	45·70	55·53	39	0·106
40	6·55	16·38	26·21	36·04	45·87	55·70	40	0·109
41	6·71	16·54	26·37	36.20	46·03	55·86	41	0·112
42	6·88	16·71	26·54	36.36	46 19	56·02	42	0·115
43	7·04	16·87	26·70	36.53	46·36	56·19	43	0·117
44	7·20	17 03	26·86	36·69	46·52	56·35	44	0·120
45	7·37	17·20	27·03	36·86	45·69	56·52	45	0·123
46	7·53	17·36	27·19	37·02	46·85	56·68	46	0·126
47	7·70	17·52	27·35	37·18	47·01	56·84	47	0·128
48	7·86	17·69	27·52	37·35	47·18	57·01	48	0·131
49	8·02	17·85	27·68	37·51	47·34	57·17	49	0·134
50	8·19	18·02	27·85	37·68	47·51	57·33	50	0·137
51	8·35	18·18	28·01	37·84	47·67	57·50	51	0·139
52	8·51	18·34	28·17	38·00	47·83	57·66	52	0·142
53	8·68	18·51	28·34	38·17	48·00	57·83	53	0·145
54	8·84	18·67	28·50	38·33	48·16	57·99	54	0·147
55	9·01	18·84	28·67	38·49	48·32	58·15	55	0·150
56	9·17	19·00	28·83	38·66	48·49	58·32	56	0·153
57	9·33	19·16	28·99	38·82	48·65	58·48	57	0·156
58	9·50	19·33	29·16	38·99	48·82	58·65	58	0·158
59	9·66	19·49	29·32	39·15	48·98	58·81	59	0·161

XIV.

TABLE III.—SIDEREAL INTO MEAN SOLAR TIME.

To be Subtracted from a Sidereal Time Interval.

Sidereal.	6h.	7h.	8h.	9h.	10h.	11h.	For Seconds.	
m.	m. s.	m. s.	m. s.	m. s.	m. s.	m. s.	s.	s.
0	0 58·97	1 8·80	1 18·63	1 28·46	1 38·29	1 48·12	0	0·000
1	0 59·14	8·97	18·80	28·63	38·45	48·28	1	0·003
2	0 59·30	9·13	18·96	28·79	38·62	48·45	2	0·005
3	0 59·46	9·29	19·12	28·95	38·78	48·61	3	0·008
4	0 59·63	9·46	19·29	29·12	38·95	48·78	4	0·011
5	0 59·79	9·62	19·45	29·28	39·11	48·94	5	0·014
6	0 59·96	9·79	19·61	29·44	39·27	49·10	6	0·016
7	1 0·12	9·95	19·78	29·61	39·44	49·27	7	0·019
8	1 0·28	10·11	19·94	29·77	39·60	49·43	8	0·022
9	1 0·45	10·28	20·11	29·94	39·77	49·60	9	0·025
10	1 0·61	10·44	20·27	30·10	39·93	49·76	10	0·027
11	1 0·77	10·60	20·43	30·26	40·09	49·92	11	0·030
12	1 0·94	10·77	20·60	30·43	40·26	50·09	12	0·033
13	1 1·10	10·93	20·76	30·59	40·42	50·25	13	0·035
14	1 1·27	11·10	20·93	30·76	40·58	50·41	14	0·038
15	1 1·43	11·26	21·09	30·92	40·75	50·58	15	0·041
16	1 1·59	11·42	21·25	31·08	40·91	50·74	16	0·044
17	1 1·76	11·59	21·42	31·25	41·08	50·91	17	0·046
18	1 1·92	11·75	21·58	31·41	41·24	51·07	18	0·049
19	1 2·09	11·92	21·74	31·57	41·40	51·23	19	0·052
20	1 2·25	12·08	21·91	31·74	41·57	51·40	20	0·055
21	1 2·41	12·24	22·07	31·90	41·73	51·56	21	0·057
22	1 2·58	12·41	22·24	32·07	41·90	51·72	22	0·060
23	1 2·74	12·57	22·40	32·23	42·06	51·89	23	0·063
24	1 2·90	12·73	22·56	32·39	42·22	52·05	24	0·066
25	1 3·07	12·90	22·73	32·56	42·39	52·22	25	0·068
26	1 3·23	13·06	22·89	32·72	42·55	52·38	26	0·071
27	1 3·40	13·23	23·06	32·88	42·71	52·54	27	0·074
28	1 3·56	13·39	23·22	33·05	42·88	52·71	28	0·076
29	1 3·72	13·55	23·38	33·21	43·04	52·87	29	0·079
30	1 3·89	13·72	23·55	33·38	43·21	53·04	30	0·082
31	1 4·05	13·88	23·71	33·54	43·37	53·20	31	0·085
32	1 4·22	14·04	23·87	33·70	43·53	53·36	32	0·087
33	1 4·38	14·21	24·04	33·87	43·70	53·53	33	0·090
34	1 4·54	14·37	24·20	34·03	43·86	53·69	34	0·093
35	1 4·71	14·54	24·37	34·20	44·02	53·85	35	0·096
36	1 4·87	14·70	24·53	34·36	44·19	54·02	36	0·098
37	1 5·03	14·86	24·69	34·52	44·35	54·18	37	0·101
38	1 5·20	15·03	24·86	34·69	44·52	54·35	38	0·104
39	1 5·36	15·19	25·02	34·85	44·68	54·51	39	0·106
40	1 5·53	15·36	25·19	35·01	44·84	54·67	40	0·109
41	1 5·69	15·52	25·35	35·18	45·01	54·84	41	0·112
42	1 5·85	15·68	25·51	35·34	45·17	55·00	42	0·115
43	1 6·02	15·84	25·68	35·51	45·34	55·17	43	0·117
44	1 6·18	16·01	25·84	35·67	45·50	55·33	44	0·120
45	1 6·35	16·17	26·00	35·83	45·66	55·49	45	0·123
46	1 6·51	16·34	26·17	36·00	45·83	55·66	46	0·126
47	1 6·67	16·50	26·33	36·16	45·99	55·82	47	0·128
48	1 6·84	16·67	26·50	36.33	46·15	55·98	48	0·131
49	1 7·00	16·83	26·66	36.49	46 32	56·15	49	0·134
50	1 7·16	16 99	26·82	36.65	46·48	56·31	50	0·137
51	1 7·33	17·16	26·99	36·82	46·65	56·48	51	0·139
52	1 7·49	17·32	27·15	36·98	46·81	56·64	52	0·142
53	1 7·66	17·49	27·31	37·14	46·97	56·80	53	0·145
54	1 7·82	17·65	27·48	37·31	47·14	56·97	54	0·147
55	1 7·98	17·81	27·64	37·47	47·30	57·13	55	0·150
56	1 8·15	17·98	27·81	37·64	47·47	57·29	56	0·153
57	1 8·31	18·14	27·97	37·80	47·63	57·46	57	0·156
58	1 8·47	18·30	28·13	37·96	47·79	57·62	58	0·158
59	1 8·64	18·47	28·30	38·13	47·96	57·79	59	0·161

TABLE III.—SIDEREAL INTO MEAN SOLAR TIME.

To be Subtracted from a Sidereal Time Interval.

Sidereal.	12h.	13h.	14h.	15h.	16h.	17h.	For Seconds.	
m.	m. s.	m. s.	m. s.	m. s.	m. s.	m. s.	s.	s.
0	1 57·95	2 7·78	2 17·61	2 27·44	2 37·27	2 47·10	0	0·000
1	1 58·11	7·94	17·77	27·60	37·43	47·26	1	0·003
2	1 58·28	8·11	17·94	27·77	37·60	47·43	2	0·005
3	1 58·44	8·27	18·10	27·93	37·76	47·59	3	0·008
4	1 58·61	8·44	18·26	28·09	37·92	47·75	4	0·011
5	1 58·77	8·60	18·43	28·26	38·09	47·92	5	0·014
6	1 58·93	8·76	18·59	28·42	38·25	48·08	6	0·016
7	1 59·10	8·93	18·76	28·59	38·42	48·24	7	0·019
8	1 59·26	9·09	18·92	28·75	38·58	48·41	8	0·022
9	1 59·42	9·25	19·08	28·91	38·74	48·57	9	0·025
10	1 59·59	9·42	19·25	29·08	38·91	48·74	10	0·027
11	1 59·75	9·58	19·41	29·24	39·07	48·90	11	0·030
12	1 59·92	9·75	19·58	29·40	39·23	49·06	12	0·033
13	2 0·08	9·91	19·74	29·57	39·40	49·23	13	0·035
14	2 0·24	10·07	19·90	29·73	39·55	49·39	14	0·038
15	2 0·41	10·24	20·07	29·90	39·73	49·56	15	0·041
16	2 0·57	10·40	20·23	30·06	39·89	49·72	16	0·044
17	2 0·74	10·56	20·39	30·22	40·05	49·88	17	0·046
18	2 0·90	10·73	20·56	30·39	40·22	50·05	18	0·049
19	2 1·06	10·89	20·72	30·55	40·38	50·21	19	0·052
20	2 1·23	11·06	20·89	30·72	40·54	50·37	20	0·055
21	2 1·39	11·22	21·05	30·88	40·71	50·54	21	0·057
22	2 1·55	11·38	21·21	31·04	40·87	50·70	22	0·060
23	2 1·72	11·55	21·38	31·21	41·04	50·87	23	0·063
24	2 1·88	11·71	21·54	31·37	41·20	51·03	24	0·066
25	2 2·05	11·88	21·70	31·53	41·36	51·19	25	0·068
26	2 2·21	12·04	21·87	31·70	41·53	51·36	26	0·071
27	2 2·37	12·20	22·03	31·86	41·69	51·52	27	0·074
28	2 2·54	12·37	22·20	32·03	41·86	51·69	28	0·076
29	2 2·70	12·53	22·36	32·19	42·02	51·85	29	0·079
30	2 2·86	12·69	22·52	32·35	42·18	52·01	30	0·082
31	2 3·03	12·85	22·69	32·52	42·35	52·18	31	0·085
32	2 3·19	13·02	22·85	32·68	42·51	52·34	32	0·087
33	2 3·36	13·19	23·02	32·85	42·67	52·50	33	0·090
34	2 3·52	13·35	23·18	33·01	42·84	52·67	34	0·093
35	2 3·68	13·51	23·34	33·17	43·00	52·83	35	0·096
36	2 3·85	13·68	23·51	33·34	43·17	53·00	36	0·098
37	2 4·01	13·84	23·67	33·50	43·33	53·16	37	0·101
38	2 4·18	14·01	23·83	33·66	43·49	53·32	38	0·104
39	2 4·34	14·17	24·00	33·83	43·66	53·49	39	0·106
40	2 4·50	14·33	24·16	33·99	43·82	53·65	40	0·109
41	2 4·67	14·50	24·33	34·16	43·99	53·81	41	0·112
42	2 4·83	14·66	24·49	34·32	44·15	53·98	42	0·115
43	2 4·99	14·82	24·65	34·48	44·31	54·14	43	0·117
44	2 5·16	14·99	24·82	34·65	44·48	54·31	44	0·120
45	2 5·32	15·15	24·98	34·81	44·64	54·47	45	0·123
46	2 5·49	15·32	25·15	34·97	44·80	54·63	46	0·126
47	2 5·65	15·48	25·31	35·14	44·97	54·80	47	0·128
48	2 5·81	15·64	25·47	35·30	45·13	54·96	48	0·131
49	2 5·98	15·81	25·64	35·47	45·30	55·13	49	0·134
50	2 6·14	15·97	25·80	35·63	45·46	55·29	50	0·137
51	2 6·31	16·13	25·96	35·79	45·62	55·45	51	0·139
52	2 6·47	16·30	26·13	35·96	45·79	55·62	52	0·142
53	2 6·63	16·46	26·29	36·12	45·95	55·78	53	0·145
54	2 6·80	16·63	26·46	36.29	46·12	55·94	54	0·147
55	2 6·96	16·79	26·62	36.45	46·28	56·11	55	0·150
56	2 7·12	16·95	26·78	36.61	46·44	56·27	56	0·153
57	2 7·29	17·12	26·95	36.78	46·61	56·44	57	0·156
58	2 7·45	17·28	27·11	36·94	46·77	56·60	58	0·158
59	2 7·62	17·45	27·28	37.10	46·93	56·76	59	0·161

TABLE III.—SIDEREAL INTO MEAN SOLAR TIME.

To be Subtracted from a Sidereal Time Interval.

Sidereal.	18h.	19h.	20h.	21h.	22h.	23h.	For Seconds.	
m.	m. s.	m. s.	m. s.	m. s.	m. s.	m. s.	s.	s.
0	2 56.93	3 6.76	3 16.59	3 26.42	3 36.25	3 46·08	0	0·000
1	2 57.09	6.92	16.75	26.58	36.41	46.24	1	0·003
2	2 57·25	7.08	16 91	26.74	36.57	46.40	2	0·005
3	2 57.42	7.25	17.08	26.91	36.74	46.57	3	0·008
4	2 57.58	7.41	17.24	27.07	36·90	46.73	4	0·011
5	2 57.75	7·58	17.41	27.24	37.06	46·89	5	0·014
6	2 57.91	7·74	17·57	27·40	37·23	47·06	6	0·016
7	2 58·07	7·90	17·73	27·56	37·39	47·22	7	0·019
8	2 58·24	8·07	17·90	27·73	37·56	47·39	8	0·022
9	2 58·40	8·23	18·06	27·89	37·72	47·55	9	0·025
10	2 58·57	8.40	18·22	28·05	37·88	47·71	10	0·027
11	2 58·73	8·56	18·39	28·22	38·05	47·88	11	0·030
12	2 58·89	8·72	18·55	28·38	38·21	48·04	12	0·033
13	2 59·06	8·89	13·72	28·55	38·38	48·21	13	0·035
14	2 59·22	9·05	18·88	28·71	38·54	48·37	14	0·038
15	2 59·38	9·21	19·04	28·87	38·70	48·53	15	0·041
16	2 59·55	9·33	19·21	29·04	38·87	48·70	16	0·044
17	2 59·71	9·54	19·37	29·20	39·03	48·86	17	0·046
18	2 59·88	9·71	19·54	29·37	39·19	49·02	18	0·049
19	3 0·04	9·87	19·70	29·53	39·36	49·19	19	0·052
20	3 0·20	10·03	19·86	29·69	39·52	49·35	20	0·055
21	3 0·37	10·20	20·03	29·86	39·69	49·52	21	0·057
22	3 0·53	10·36	20·19	30·02	49·85	49·68	22	0·060
23	3 0·70	10·53	20·35	30·18	40·01	49·84	23	0·063
24	3 0·86	10·69	20·52	30·35	40·18	50·01	24	0·066
25	3 1·02	10·85	20·68	30·51	40·34	50·17	25	0·068
26	3 1·19	11·02	20·85	30·68	40·51	50·33	26	0·071
27	3 1·35	11·18	21·01	30·84	40·67	50·50	27	0·074
28	3 1·51	11·34	21·17	31·00	40·83	50·66	28	0·076
29	3 1·68	11·51	21·34	31·17	46·00	50·83	29	0·079
30	3 1·84	11·67	21·50	31·33	41·16	50·99	30	0·082
31	3 2·01	11·84	21·67	31·49	41·32	51·15	31	0·085
32	3 2·17	12·00	21·83	31·66	41·49	51·32	32	0·087
33	3 2·33	12·16	21·99	31·82	41·65	51·48	33	0·090
34	3 2·50	12·33	22·16	31·99	41·82	51·65	34	0·093
35	3 2·66	12·49	22·32	32·15	41·98	51·81	35	0·096
36	3 2·83	12.65	22·48	32·31	42·14	51·97	36	0·098
37	3 2·99	12·82	22·65	32·48	42·31	52·14	37	0·101
38	3 3·15	12·98	22·81	32·64	42·47	52·30	38	0·104
39	3 3·32	13·15	22·98	32·81	42·63	52·46	39	0·106
40	3 3·48	13·31	23·14	32·97	42·80	52·63	40	0·109
41	3 3·64	13·47	23·30	33·13	42·96	52·79	41	0·112
42	3 3·81	13·64	23·47	33·30	43·13	52·96	42	0·115
43	3 3·97	13·80	23·63	33·46	43·29	53·12	43	0·117
44	3 4·14	13·97	23·80	33·62	43·45	53·28	44	0·120
45	3 4·30	14·13	23·96	33·79	43·62	53·45	45	0·123
46	3 4·46	14·29	24·12	33·95	43·78	53·61	46	0·126
47	3 4·63	14·46	24·29	34·12	43·95	53·78	47	0·128
48	3 4·79	14·62	24·45	34·28	44·11	53·94	48	0·131
49	3 4·96	14·78	24·61	34·44	44·27	54·10	49	0·134
50	3 5·12	14·95	24·78	34·61	44·44	54·27	50	0·137
51	3 5·28	15·11	24·94	34·77	44·60	54·43	51	0·139
52	3 5·45	15·28	25·11	34·94	44·76	54·59	52	0·142
53	3 5·61	15·44	25·27	35·10	44·93	54·76	53	0·145
54	3 5·77	15·60	25·43	35·26	45·09	54·92	54	0·147
55	3 5·94	15·77	25·60	35·43	45·26	55·09	55	0·150
56	3 6·10	15·93	25·76	35·59	45·42	55·25	56	0·153
57	3 6·27	16·10	25·92	35·75	45·58	55·41	57	0·156
58	3 6·43	16·26	26·09	35·92	45·75	55·58	58	0·158
59	3 6·59	16·42	26·25	36·08	45·91	55·74	59	0·161

1889.	*a* CASSIOPEIÆ.					
Z.	S. T.			Az. E.		
10° 56′ N.	0ʰ 33ᵐ			0° 21′		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	+·033	**42·74**	—·053	+·32	**30**	—·64
" 20	·020	**42·35**	·033	·19	**21**	·40
February 9	·013	**42·07**	·013	·13	**12**	·16
March 1	·000	**46·76**	·007	·00	**6**	·08
" 21	·000	**41·69**	·000	·00	**3**	·00
April 10	·000	**41·84**	·000	·00	**3**	·00
" 30	·000	**42·23**	·007	·00	**8**	·08
May 20	·007	**42·80**	·020	·06	**14**	·24
June 9	·020	**43·57**	·033	·19	**22**	·40
" 29	·040	**44·28**	·047	·38	**30**	·56
July 19	·047	**45·19**	·067	·45	**39**	·80
August 8	·060	**45·66**	·080	·57	**46**	·96
" 28	·080	**46·21**	·080	·70	**51**	·96
September 17	·073	**46·41**	·100	·70	**55**	1·20
October 7	·073	**46·58**	·100	·70	**55**	1·20
" 27	·073	**46·61**	·093	·70	**53**	1·12
November 16	·060	**46·42**	·087	·57	**48**	1·04
December 6	·053	**46·15**	·073	·51	**41**	·88
" 26	+·040	**45·89**	—·053	+·38	**32**	—·64

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
		s.	″						
28	—·021	— **27·87**	— **251**	+·370					
29	·021	**26·53**	**242**	·377					
30	·020	**25·13**	**232**	·383	°		*s.*	″	
31	·019	**23·73**	**221**	·390	45	—·011	+ **0·00**	+ **0**	+·483
32	·019	**22·33**	**210**	·397	46	·010	**2·13**	**23**	·494
33	·018	**20·87**	**199**	·403	47	·009	**4·33**	**47**	·504
34	·017	**19·40**	**186**	·410	48	·008	**6·60**	**72**	·516
35	·017	**17·87**	**173**	·417	49	·007	**8·93**	**98**	·527
36	·016	**16·27**	**159**	·423	50	·006	**11·40**	**126**	·537
37	·015	**14·67**	**145**	·430	51	·005	**14·00**	**155**	·548
38	·015	**13·00**	**130**	·437	52	·004	**16·67**	**188**	·559
39	·014	**11·33**	**114**	·443	53	·003	**19·47**	**221**	·570
40	·013	**9·60**	**97**	·450	54	·002	**22·44**	**257**	·581
41	·013	**7·80**	**80**	·457	55	·001	**25·73**	**294**	·592
42	·012	**5·93**	**61**	·463	56	—·000	+ **28·73**	+ **334**	+·602
43	·011	**4·00**	**42**	·470					
44	—·011	— **2·00**	— **21**	+·477					

Polaris Z. Dist. = 43° 45′.

1889.	γ CASSIOPEIÆ.						
Z.	S. T.			Az. E.		
15° 7′ N.	0h 49m			0° 13′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	+·040	**30·96**	—·060	+ ·48	**57**	— ·64
" 20	·027	**30·60**	·040	·32	**47**	·42
February 9	·013	**30·22**	·027	·16	**39**	·28
March 1	·000	**29·93**	·013	·00	**32**	·14
" 21	·000	**29·90**	·000	·00	**29**	·00
April 10	·000	**30·07**	·000	·00	**28**	·00
" 30	·000	**30·37**	·013	·00	**32**	·14
May 20	·007	**30·90**	·020	·08	**38**	·21
June 9	·020	**31·58**	·033	·24	**45**	·35
" 29	·033	**32·27**	·053	·40	**52**	·56
July 19	·047	**33·03**	·073	·56	**63**	·78
August 8	·053	**33·61**	·093	·64	**71**	·99
" 28	·067	**34·20**	·100	·80	**76**	1·06
September 17	·073	**34·50**	·107	·88	**81**	1·13
October 7	·067	**34·72**	·113	·80	**82**	1·20
" 27	·067	**34·68**	·113	·80	**80**	1·20
November 16	·050	**34·58**	·107	·72	**76**	1·13
December 6	·053	**34·41**	·087	·64	**70**	·92
" 26	+·047	**34·15**	—·067	+ ·56	**61**	— ·71

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*		°		*s.*	*″*	
28	—·029	— **17·87**	— **161**	+·378					
29	·028	**17·00**	**155**	·385					
30	·027	**16·13**	**148**	·392					
31	·027	**15·27**	**141**	·398	45	—·017	+ **0·00**	+ **0**	+·492
32	·026	**14·33**	**134**	·405	46	·016	**1·33**	**15**	·503
33	·025	**13·40**	**127**	·412	47	·015	**2·73**	**30**	·515
34	·025	**12·40**	**119**	·418	48	·014	**4·20**	**46**	·527
35	·024	**11·47**	**110**	·425	49	·013	**5·67**	**63**	·538
36	·023	**10·47**	**102**	·432	50	·012	**7·27**	**81**	·550
37	·024	**9·40**	**93**	·438	51	·011	**8·93**	**99**	·562
38	·022	**8·33**	**83**	·445	52	·010	**10·67**	**120**	·573
39	·021	**7·27**	**73**	·452	53	·009	**12·40**	**142**	·585
40	·021	**6·13**	**62**	·458	54	·008	**14·33**	**164**	·597
41	·020	**5·00**	**51**	·465	55	·007	**16·37**	**188**	·608
42	·019	**3·80**	**39**	·472	56	—·006	+ **18·33**	+ **214**	+·620
43	·019	**2·60**	**27**	·478					
44	—·018	— **1·33**	— **14**	+·485					

Polaris Z. Dist. = 43° 44′.

1889.	ε URSÆ MAJORIS, S. P.					
Z.	S. T.			Az. E.		
78° 26′ N.	0h 50m.			0° 12′.		
	l.	*s.*	*l′.*	*a.*	*″*	*a′.*
January 0	+·033	**42·49**	—·060	+ ·36	**82**	— ·65
" 20	·047	**42·24**	·080	·51	**73**	·87
February 9	·060	**42·15**	·093	·65	**64**	1·01
March 1	·067	**42·10**	·113	·72	**57**	1·23
" 21	·073	**42·06**	·120	·79	**54**	1·30
April 10	·073	**42·19**	·120	·79	**53**	1·30
" 30	·073	**42·45**	·113	·79	**59**	1·23
May 20	·060	**42·79**	·100	·65	**63**	1·08
June 9	·047	**43·32**	·087	·51	**69**	·94
" 29	·040	**43·86**	·067	·43	**79**	·72
July 19	·027	**44·32**	·047	·29	**88**	·51
August 8	·013	**44·76**	·033	·14	**96**	·36
" 28	·007	**45·11**	·020	·07	**102**	·22
September 17	·000	**45·35**	·000	·00	**106**	·00
October 7	·000	**45·48**	·007	·00	**107**	·07
" 27	·000	**45·61**	·013	·00	**106**	·14
November 16	·007	**45·62**	·020	·07	**102**	·22
December 6	·013	**45·68**	·040	·14	**82**	·43
" 26	+·027	**45·51**	—·053	+ ·29	**87**	— ·50

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°									
28									
29		Invisible							
30					°		*s.*	*″*	
31		*s.*	*″*		45	+·054	+ **0·00**	+ **0**	+·458
32	+·045	+ **14·60**	— **137**	+·372	46	·055	**1·40**	**15**	·468
33	·046	**13·67**	**129**	·378	47	·056	**2·87**	**31**	·478
34	·047	**12·67**	**121**	·385	48	·057	**4·33**	**47**	·488
35	·047	**11·67**	**113**	·392	49	·058	**5·87**	**65**	·498
36	·048	**10·67**	**104**	·398	50	·059	**7·47**	**83**	·508
37	·049	**9·60**	**95**	·405	51	·060	**9·13**	**102**	·518
38	·049	**8·53**	**85**	·412	52	·061	**10·93**	**123**	·528
39	·050	**7·40**	**74**	·418	53	·061	**12·73**	**145**	·538
40	·051	**6·27**	**63**	·425	54	·062	**14·67**	**168**	·548
41	·051	**5·07**	**52**	·432	55	·063	**16·67**	**193**	·558
42	·052	**3·87**	**40**	·438	56	+·064	+ **18·80**	+ **219**	+·568
43	·053	**2·60**	**27**	·445					
44	+·053	+ **1·33**	— **14**	+·452					

Polaris Z. Dist. = 43° 44′.

1889.	ζ URSÆ MAJORIS, S. P.					
Z.	S. T.			Az. W.		
79° 30′ N.	1h 19m.			0° 0′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	—·040	22·42	+·067	+ ·35	29	— ·78
“ 20	·033	22·33	·047	·29	39	·54
February 9	·020	22·12	·027	·17	48	·31
March 1	·007	22·07	·013	·06	55	·16
“ 21	·000	21·97	·007	·00	60	·08
April 10	·000	22·12	·000	·00	61	·00
“ 30	·000	22·29	·007	·00	59	·08
May 20	·013	22·85	·007	·12	54	·08
June 9	·020	23·12	·033	·17	47	·39
“ 29	·033	23·62	·053	·29	38	·62
July 19	·047	24·15	·967	·41	29	·78
August 8	·060	24·62	·087	·52	20	1·01
“ 28	·073	24·96	·100	·64	13	1·17
September 17	·073	25·24	·113	·64	8	1·32
October 7	·080	25·45	·120	·70	5	1·40
“ 27	·080	25·60	·120	·70	5	1·40
November 16	·073	25·69	·113	·64	8	1·32
December 6	·067	25·72	·100	·58	14	1·17
“ 26	—·060	25·94	+·087	+ ·52	22	—1·01

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°					°				
28					28				
29		Invisible			29				
30					30				
31					31	+·053	— 0·00	+ 0	—·458
32					32	·054	0·13	2	·469
33		s.	″		33	·055	0·27	3	·480
34	+·045	+ 0·94	— 9	—·394	34	·056	0·33	4	·491
35	·046	0·87	8	·400	35	·057	0·47	5	·502
36	·047	0·74	7	·406	36	·058	0·60	7	·512
37	·047	0·67	7	·412	37	·059	0·73	8	·523
38	·048	0·60	6	·418	38	·060	0·87	10	·534
39	·049	0·53	5	·423	39	·061	1·00	11	·545
40	·059	0·47	4	·429	40	·062	1·13	13	·556
41	·050	0·33	4	·435	41	·063	1·26	15	·567
42	·051	0·27	3	·441	42	+·064	— 1·40	+ 17	—·577
43	·051	0·13	2	·447	43				
44	+·052	+ 0·07	— 1	—·453	44				

Polaris Z. Dist. = 43° 43′.

1889.	*a* ERIDANI *(Achernar)*.					
Z.	S. T.			Az. W.		
102° 48′ S.	1h 32m			0° 6′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	—·047	**43·09**	....	+ ·41	**57**	....
" 20	·033	**41·37**	....	·29	**66**	....
February 9	·020	**39·67**	....	·17	**74**	....
March 1	·013	**38·34**	....	·12	**81**	....
" 21	·007	**37·45**	....	·06	**88**	....
April 10	·000	**37·05**	....	·06	**88**	....
" 30	·007	**37·47**	....	·06	**86**	....
May 20	·013	**38·42**	....	·12	**82**	....
June 9	·013	**39·90**	....	·12	**75**	....
" 29	·027	**41·76**	....	·23	**67**	....
July 19	·040	**43·73**	....	·35	**59**	....
August 8	·053	**45·88**	....	·47	**51**	....
" 28	·067	**47·40**	....	·58	**44**	....
September 17	·073	**48·72**	....	·64	**38**	....
October 7	·080	**40·45**	....	·70	**35**	....
" 27	·073	**49·63**	....	·64	**34**	....
November 16	·073	**49·28**	....	·64	**37**	....
December 6	·067	**48·23**	....	·58	**41**	....
" 26	—·053	**46·89**	....	+ ·47	**48**	....

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*						
28	+ ·045	+ **9·93**	— **89**	—·291					
29	·045	**9·47**	**86**	·301					
30	·046	**8·93**	**82**	·311	°				
31	·047	**8·47**	**79**	·321	45				
32	+ ·047	+ **7·93**	— **75**	—·331	46				
33					47				
34					48				
35					49		Invisible		
36					50				
37					51				
38		Invisible			52				
39					53				
40					54				
41					55				
42					56				
43									
44									

Polaris Z. Dist. = 43° 43′.

1889.	β ARIETIS.					
	S. T.			Az. W.		
L. 24° 44′	1h 48m			0° 13′		
	l.	*s.*	*l′.*	*a.*	*″*	*a′.*
January 0	—·053	**4·36**	+·067	+ ·49	**82**	— ·82
" 20	·040	**3·83**	·047	·37	**91**	·58
February 9	·020	**3·28**	·033	·18	**100**	·41
March 1	·007	**2·74**	·020	·06	**108**	·25
" 21	·000	**2·37**	·007	·00	**113**	·08
April 10	·000	**2·35**	·000	·00	**115**	·00
" 30	·007	**2·53**	·000	·06	**114**	·00
May 20	·013	**3·01**	·007	·12	**110**	·08
June 9	·013	**3·66**	·027	·12	**103**	·33
" 29	·027	**4·47**	·040	·25	**95**	·49
July 19	·047	**5·53**	·053	·43	**86**	·66
August 8	·053	**6·34**	·073	·49	**77**	·91
" 28	·067	**7·15**	·093	·62	**70**	1·15
September 17	·073	**7·77**	·107	·68	**63**	1·32
October 7	·080	**8·24**	·113	·74	**59**	1·40
" 27	·087	**8·48**	·113	·80	**57**	1·40
November 16	·087	**8·48**	·113	·80	**59**	1·40
December 6	·080	**8·22**	·100	·74	**63**	1·24
" 26	—·067	**7·86**	+·187	+ ·62	**70**	—1·07

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
		s.	″						
28	+·002	+ **19·73**	— **178**	—·362					
29	·003	**18·80**	**171**	·368					
30	·004	**17·80**	**164**	·375	°		*s.*	″	
31	·004	**16·87**	**157**	·382	45	+·014	— **0·00**	+ **0**	—·475
32	·005	**15·80**	**148**	·388	46	·015	**1·53**	**17**	·486
33	·006	**14·80**	**140**	·395	47	·016	**3·07**	**34**	·497
34	·006	**13·73**	**131**	·402	48	·017	**4·67**	**52**	·507
35	·007	**12·67**	**123**	·408	49	·018	**6·33**	**70**	·518
36	·008	**11·53**	**112**	·415	50	·019	**8·13**	**90**	·529
37	·008	**10·40**	**102**	·422	51	·020	**9·93**	**111**	·540
38	·009	**9·20**	**91**	·428	52	·021	**11·88**	**131**	·551
39	·000	**8·00**	**80**	·435	53	·021	**13·80**	**156**	·562
40	·001	**6·80**	**68**	·442	54	·022	**15·93**	**182**	·572
41	·001	**5·53**	**56**	·448	55	·023	**18·07**	**209**	·583
42	·012	**4·20**	**43**	·455	56	+·024	— **20·33**	+ **237**	—·594
43	·013	**2·87**	**29**	·462					
44	+·013	+ **1·47**	— **15**	—·468					

Polaris Z. Dist. = 43° 44′.

1889.	α ARIETIS.						
Z.	S. T.			Az. W.		
22° 4′ S.	2h 0m			0° 19′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	−·047	**21·46**	+·073	+ ·47	**74**	— ·79
" 20	·033	**20·99**	·053	·33	**83**	·58
February 9	·027	**20·43**	·033	·27	**92**	·36
March 1	·003	**19·94**	·013	·13	**100**	·14
" 21	·017	**19·67**	·000	·07	**106**	·00
April 10	·000	**19·49**	·000	·00	**109**	·00
" 30	·000	**19·64**	·000	·00	**111**	·00
May 20	·007	**20·04**	·007	·07	**105**	·07
June 9	·003	**20·64**	·020	·13	**98**	·22
" 29	·017	**21·55**	·040	·27	**90**	·43
July 19	·020	**22·41**	·060	·40	**81**	·65
August 8	·043	**23·39**	·073	·53	**72**	·79
" 28	·057	**24·16**	·087	·67	**64**	·94
September 17	·060	**24·82**	·100	·80	**57**	1·08
October 7	·080	**25·29**	·113	·80	**52**	1·23
" 27	·080	**25·51**	·120	·80	**50**	1·30
November 16	·080	**25·59**	·120	·80	**51**	1·30
December 6	·080	**25·49**	·107	·80	**55**	1·16
" 26	−·067	**25·14**	+·093	+ ·67	**66**	−1·01

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b′	S. T.	Az.	c.
°		*s.*	*″*						
28	+·002	+ **27·53**	— **249**	—·368					
29	·003	**26·20**	**240**	·373					
30	·004	**24·87**	**229**	·379	°		*s.*	*″*	
31	·004	**23·47**	**218**	·385	45	+·013	— **0·00**	+ **0**	—·467
32	·005	**22·07**	**207**	·391	46	·014	**2·13**	**22**	·478
33	·005	**20·60**	**196**	·397	47	·015	**4·27**	**46**	·490
34	·006	**19·13**	**184**	·403	48	·016	**6·53**	**71**	·502
35	·007	**17·60**	**171**	·408	49	·017	**8·87**	**96**	·513
36	·007	**16·07**	**157**	·414	50	·017	**11·33**	**125**	·525
37	·008	**14·47**	**143**	·420	51	·018	**13·87**	**154**	·537
38	·008	**12·87**	**128**	·426	52	·019	**16·47**	**186**	·548
39	·009	**11·20**	**112**	·432	53	·020	**19·27**	**219**	·560
40	·010	**9·47**	**96**	·438	54	·021	**22·20**	**254**	·572
41	·010	**7·67**	**78**	·443	55	·022	**25·20**	**291**	·583
42	·011	**5·87**	**60**	·449	56	+·023	— **28·40**	+ **332**	—·595
43	·012	**3·93**	**41**	·455					
44	+·012	+ **2·00**	— **21**	—·461					

Polaris Z. Dist. = 43° 44′.

1889.	β URSÆ MINORIS, S. P.					
Z.	S. T.			Az. W.		
60° 23′ N.	2h 42m			0° 39′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	—·060	**18·22**	+·080	+ ·53	**43**	— ·88
" 20	·047	**18·14**	·067	·45	**52**	·74
February 9	·033	**17·87**	·053	·32	**61**	·59
March 1	·020	**17·59**	·027	·19	**70**	·29
" 21	·013	**17·40**	·013	·13	**77**	·15
April 10	·000	**17·26**	·013	·00	**82**	·15
" 30	·000	**17·43**	·000	·00	**83**	·00
May 20	·007	**17·83**	·007	·06	**80**	·07
June 9	·013	**18·06**	·020	·13	**75**	·22
" 29	·027	**18·68**	·033	·26	**67**	·37
July 19	·033	**19·23**	·053	·32	**58**	·59
August 8	·047	**19·83**	·073	·45	**48**	·81
" 28	·067	**20·47**	·087	·64	**39**	·96
September 17	·080	**20·92**	·107	·77	**31**	1·18
October 7	·087	**21·77**	·127	·84	**32**	1·40
" 27	·093	**21·54**	·127	·90	**20**	1·40
November 16	·093	**21·75**	·127	·90	**19**	1·40
December 6	·087	**21·84**	·127	·84	**21**	1·40
" 26	—·087	**21·90**	+·113	+ ·84	**27**	—1·25

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b·	S. T.	Az.	c.
°		*s.*	″						
28	+·080	+ **53·47**	— **483**	—·318					
29	·080	**50·87**	**464**	·323					
30	·081	**48·27**	**445**	·329	°		*s.*	″	
31	·082	**45·60**	**424**	·335	45	+·089	— **0·00**	+ **0**	—·417
32	·082	**42·87**	**403**	·341	46	·090	**4·07**	**43**	·426
33	·083	**40·07**	**380**	·347	47	·091	**8·27**	**89**	·435
34	·083	**37·20**	**357**	·353	48	·092	**12·67**	**137**	·444
35	·084	**34·20**	**332**	·358	49	·093	**17·20**	**188**	·453
36	·084	**31·20**	**306**	·364	50	·094	**21·93**	**240**	·462
37	·085	**28·13**	**278**	·370	51	·095	**26·87**	**298**	·472
38	·086	**25·00**	**249**	·376	52	·096	**32·00**	**359**	·481
39	·086	**21·73**	**218**	·382	53	·096	**37·33**	**423**	·490
40	·087	**18·04**	**187**	·388	54	·097	**43·00**	**491**	·499
41	·087	**14·93**	**153**	·393	55	·098	**48·93**	**564**	·508
42	·088	**11·40**	**118**	·399	56	+·099	— **55·13**	+ **641**	—·517
43	·088	**7·73**	**81**	·405					
44	+·089	+ **3·93**	— **42**	—·411					

Polaris Z. Dist. =43° 48′.

1889. Z. 62° 46′ N.	γ² URSÆ MINORIS, S. P. S. T. 3h 10m.			Az. W. 0° 51′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	—·060	**43·40**	+·087	+ ·58	**70**	—·99
" 20	·047	**43·42**	·073	·45	**78**	·84
February 9	·033	**43·04**	·053	·32	**87**	·61
March 1	·020	**42·86**	·040	·19	**96**	·46
" 21	·007	**42·65**	·020	·06	**104**	·23
April 10	·000	**42·49**	·013	·00	**109**	·15
" 30	·000	**42·59**	·000	·00	**111**	·00
May 20	·000	**43·01**	·013	·00	**110**	·15
June 9	·007	**43·15**	·013	·06	**105**	·15
" 29	·020	**43·75**	·033	·19	**98**	·38
July 19	·027	**44·35**	·047	·26	**89**	·53
August 8	·040	**44·98**	·067	·39	**79**	·76
" 28	·060	**45·46**	·087	·53	**70**	·99
September 17	·067	**45·90**	·113	·64	**60**	1·30
October 7	·080	**46·35**	·120	·77	**53**	1·37
" 27	·087	**46·76**	·133	·84	**48**	1·52
November 16	·093	**46·97**	·140	·90	**46**	1·60
December 6	·087	**47·09**	·140	·84	**47**	1·60
" 26	—·080	**47·19**	+·133	+ ·77	**51**	—1·52

LATITUDE CORRECTIONS.

L.	b.	S. T. *s.*	Az. *″*	c.	L.	b.	S. T. *s.*	Az. *″*	c.
°									
28	+·067	**70·00**	— **631**	—·293					
29	·067	**66·60**	**607**	·298					
30	·068	**63·41**	**582**	·304	°		*s.*	*″*	
31	·068	**59·67**	**555**	·310	45	+·076	— **0·00**	+ **0**	—·392
32	·069	**56·07**	**527**	·316	46	·077	**5·33**	**57**	·402
33	·069	**52·40**	**497**	·322	47	·078	**10·87**	**118**	·412
34	·070	**48·60**	**466**	·328	48	·079	**16·60**	**180**	·422
35	·071	**44·80**	**434**	·333	49	·079	**22·53**	**247**	·432
36	·071	**40·87**	**399**	·339	50	·080	**28·73**	**318**	·442
37	·072	**36·80**	**363**	·345	51	·081	**35·13**	**392**	·452
38	·072	**32·67**	**325**	·351	52	·082	**41·87**	**471**	·462
39	·073	**28.40**	**285**	·357	53	·083	**48·93**	**555**	·472
40	·073	**24·00**	**244**	363	54	·084	**56·33**	**644**	·482
41	·074	**19·53**	**200**	·368	55	·084	**64·06**	**739**	·492
42	·074	**14·87**	**154**	·374	56	+·085	— **72·13**	+ **839**	—·502
43	·074	**10·07**	**105**	·380					
44	+·076	+ **5·07**	— **54**	—·386					

Polaris Z. Dist = 43° 52′.

1889.	*a* PERSEI.						
Z.	S. T.			Az. W.		
4° 28′ N.	3h 16m.			0° 54′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	—·053	**50·44**	+·030	+ ·51	**45**	— ·95
" 20	·047	**50·15**	·060	·45	**52**	·71
February 9	·033	**49·73**	·047	·32	**61**	·55
March 1	·027	**49·26**	·020	·16	**70**	·23
" 21	·013	**48·86**	·007	·13	**78**	·08
April 10	·000	**48·57**	·000	·00	**83**	·00
" 30	·000	**48·59**	·000	·00	**86**	·00
May 20	·007	**48·77**	·000	·06	**84**	·00
June 9	·007	**49·25**	·007	·06	**80**	·08
" 29	·013	**49·82**	·020	·13	**73**	·24
July 19	·027	**50·64**	·040	·26	**65**	·47
August 8	·040	**51·43**	·060	·39	**55**	·71
" 28	·060	**52·15**	·070	·58	**45**	·87
September 17	·073	**52·85**	·093	·71	**36**	1·10
October 7	·080	**53·45**	·107	·77	**28**	1·26
" 27	·087	**53·95**	·120	·84	**23**	1·42
November 16	·093	**54·27**	·127	·90	**20**	1·50
December 6	·087	**54·20**	·127	·84	**21**	1·50
" 26	—·083	**54·38**	+·113	+ ·84	**23**	—1·34

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	″						
28	—·013	+ **73·40**	— **663**	—·326					
29	·012	**69·87**	**638**	·322					
30	·012	**66·27**	**611**	·338	°		*s.*	″	
31	·011	**62·60**	**583**	·343	45	—·004	— **0·00**	+ **0**	—·425
32	·011	**58·80**	**553**	·349	46	·003	**5·47**	**59**	·434
33	·010	**55·00**	**522**	·355	47	·003	**11·20**	**122**	·443
34	·010	**51·06**	**490**	·361	48	·002	**17·13**	**188**	·453
35	·009	**47·00**	**455**	·367	49	·001	**23·40**	**258**	·462
36	·008	**42·87**	**419**	·373	50	—·001	**29·87**	**332**	·471
37	·008	**38·67**	**382**	·378	51	+·000	**36·67**	**411**	·481
38	·007	**34·33**	**342**	·384	52	·001	**43·73**	**494**	·489
39	·007	**29·87**	**300**	·390	53	·001	**51·07**	**582**	·498
40	·006	**25·27**	**256**	·396	54	·002	**58·80**	**675**	·508
41	·006	**20·53**	**210**	·403	55	·003	**66·93**	**774**	·517
42	·005	**15·67**	**162**	·408	56	+·003	— **75·47**	+ **879**	—·526
43	·005	**10·60**	**111**	·413					
44	—·004	+ **5·40**	— **57**	—·419					

Polaris Z. Dist. = 43° 53′.

1889.	δ PERSEI.					
Z. 2° 26′ N.	S. T. 3h 35m			Az. W. 1° 1′		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	—·060	**17·20**	+·080	+ ·64	**75**	— ·90
" 20	·053	**16·97**	·067	·57	**82**	·75
February 9	·040	**16·52**	·053	·43	**90**	·60
March 1	·027	**16·06**	·027	·29	**99**	·30
" 21	·013	**15·66**	·013	·14	**108**	·15
April 10	·007	**15·35**	·000	·07	**113**	·00
" 30	·000	**15·19**	·000	·00	**117**	·00
May 20	·000	**15·44**	·000	·00	**116**	·00
June 9	·007	**15·81**	·007	·07	**112**	·08
" 29	·020	**16·45**	·021	·21	**106**	·23
July 19	·027	**17·22**	·039	·29	**98**	·38
August 8	·047	**18·00**	·050	·50	**88**	·60
" 28	·060	**18·83**	·074	·64	**78**	·83
September 17	·073	**19·53**	·099	·79	**68**	1·05
October 7	·080	**20·13**	·116	·86	**60**	1·28
" 27	·093	**20·68**	·120	1·00	**54**	1·35
November 16	·093	**21·04**	·130	1·00	**50**	1·50
December 6	·093	**21·23**	·130	1·00	**50**	1·50
" 26	—·093	**21·19**	+·120	+ 1·00	**53**	—1·43

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
		s.	*″*						
28	—·011	+ **83·40**	— **753**	—·234					
29	·010	**79·40**	**724**	·240					
30	·010	**75·26**	**693**	·246	°		*s.*	*″*	
31	·009	**71·07**	**661**	·252	45	—·002	— **0·00**	+ **0**	—·333
32	·009	**66·80**	**628**	·258	46	·001	**6·40**	**67**	·343
33	·008	**62·47**	**593**	·263	47	—·000	**12·87**	**139**	·352
34	·008	**58·00**	**556**	·269	48	+ ·000	**19·67**	**214**	·361
35	·007	**53·40**	**517**	·275	49	·000	**26·73**	**293**	·370
36	·007	**48·73**	**476**	·281	50	·001	**34·13**	**378**	·379
37	·006	**43·93**	**433**	·287	51	·002	**41·80**	**466**	·388
38	·006	**38·93**	**388**	·293	52	·002	**49·80**	**561**	·398
39	·005	**33·87**	**341**	·298	53	·003	**58·20**	**660**	·407
40	·004	**28·67**	**291**	·304	54	·004	**67·00**	**766**	·416
41	·004	**23·33**	**239**	·310	55	·005	**76·20**	**879**	·425
42	·003	**17·73**	**184**	·316	56	+ ·006	— **85·89**	+ **999**	—·434
43	·003	**12·07**	**126**	·322					
44	—·002	+ **6·13**	— **65**	—·328					

Polaris Z. Dist. = 43° 57′.

1889.	γ ERIDANI.						
Z.	S. T.			Az. W.		
58° 49′ S.	$3^h\ 48^m$			1° 7′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	—·067	**53·23**	+·080	+ ·71	**30**	— ·86
" 20	·053	**52·70**	·073	·57	**37**	·79
February 9	·040	**51·75**	·060	·43	**45**	·64
March 1	·027	**51·00**	·040	·29	**54**	·43
" 21	·013	**50·12**	·020	·14	**62**	·21
April 10	·007	**49·54**	·007	·07	**68**	·07
" 30	·000	**49·24**	·000	·00	**72**	·00
May 20	·007	**49·38**	·000	·07	**72**	·00
June 9	·013	**49·77**	·000	·14	**69**	·00
" 29	·020	**50·58**	·020	·21	**63**	·21
July 19	·033	**51·58**	·033	·36	**56**	·36
August 8	·040	**52·69**	·060	·43	**44**	·64
" 28	·053	**53·81**	·073	·57	**35**	·79
September 17	·067	**54·97**	·093	·71	**25**	1·00
October 7	·080	**56·00**	·113	·86	**17**	1·21
" 27	·093	**56·79**	·120	1·00	**10**	1·29
November 16	·093	**57·28**	·133	1·00	**6**	1·43
December 6	·093	**57·41**	·140	1·00	**5**	1·50
" 26	—·093	**57·35**	+·133	+1·00	**8**	—1·43

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*		°		*s.*	*″*	
28	+·013	+ **90·33**	— **815**	—·276					
29	·013	**86·00**	**784**	·282					
30	·014	**81·53**	**751**	·288					
31	·014	**77·00**	**716**	·293	45	+·022	— **0·00**	+ **0**	—·375
32	·015	**72·40**	**680**	·299	46	·023	**6·80**	**73**	·383
33	·016	**67·67**	**642**	·305	47	·024	**13·93**	**151**	·392
34	·016	**62·80**	**602**	·311	48	·024	**21·33**	**232**	·400
35	·017	**57·87**	**560**	·317	49	·025	**29·00**	**318**	·408
36	·017	**52·80**	**515**	·323	50	·026	**37·00**	**410**	·417
37	·018	**47·60**	**469**	·328	51	·027	**45·27**	**506**	·425
38	·018	**42·20**	**420**	·334	52	·027	**54·00**	**608**	·433
39	·019	**36·73**	**369**	·340	53	·028	**63·07**	**716**	·442
40	·019	**31·07**	**315**	·346	54	·029	**72·60**	**831**	·450
41	·020	**25·27**	**258**	·353	55	·029	**82·60**	**953**	·458
42	·021	**19·28**	**198**	·358	56	+·030	— **93·07**	+**1083**	—·467
43	·021	**13·07**	**135**	·363					
44	+·022	+ **6·67**	— **70**	—·369					

Polaris Z. Dist. = 43° 59′.

1889.	η DRACONIS, S. P.					
Z.	S. T.			Az. W.		
73° 14′ N.	4h 12m			1° 15′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	—·060	**11·94**	+·093	+ ·64	**56**	—1·02
" 20	·053	**12·12**	·080	·57	**61**	·87
February 9	·040	**11·82**	·067	·43	**70**	·73
March 1	·027	**11·66**	·047	·29	**79**	·51
" 21	·020	**11·53**	·020	·21	**88**	·22
April 10	·007	**11·36**	·007	·07	**95**	·07
" 30	·000	**11·36**	·000	·00	**99**	·00
May 20	·000	**11·67**	·000	·00	**100**	·00
June 9	·007	**11·81**	·000	·07	**98**	·00
" 29	·007	**12·28**	·020	·07	**92**	·29
July 19	·020	**12·80**	·033	·21	**84**	·44
August 8	·033	**13·32**	·053	·36	**75**	·65
" 28	·053	**13·79**	·073	·50	**65**	·87
September 17	·060	**14·29**	·093	·64	**54**	1·09
October 7	·073	**14·74**	·113	·79	**43**	1·31
" 27	·087	**15·11**	·127	·93	**37**	1·45
November 16	·093	**15·48**	·140	1·00	**32**	1·60
December 6	·093	**15·83**	·147	1·00	**30**	1·67
" 26	—·093	**16·00**	+·140	+1·00	**32**	—1·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″						
28	+·036	+**101·53**	— **916**	—·262					
29	·036	**96·60**	**881**	·267					
30	·037	**91·60**	**844**	·271	°		*s.*	″	
31	·037	**86·53**	**806**	·275	45	+·044	— **0·00**	+ **0**	—·333
32	·038	**81·33**	**765**	·279	46	·045	**7·73**	**82**	·341
33	·038	**76·00**	**723**	·283	47	·046	**15·73**	**169**	·348
34	·039	**70·53**	**677**	·287	48	·046	**24·00**	**261**	·356
35	·039	**65·00**	**629**	·292	49	·047	**32·60**	**358**	·363
36	·040	**59·27**	**580**	·296	50	·048	**41·60**	**460**	·371
37	·040	**53·40**	**528**	·300	51	·048	**50·93**	**569**	·378
38	·041	**47·40**	**472**	·304	52	·049	**60·73**	**683**	·386
39	·041	**41·20**	**415**	·308	53	·050	**70·93**	**805**	·393
40	·042	**34·87**	**354**	·312	54	·050	**81·60**	**934**	·401
41	·042	**28·33**	**290**	·317	55	·051	**92·87**	**1071**	·408
42	·043	**21·60**	**223**	·321	56	+·052	—**104·67**	+**1217**	—·416
43	·043	**14·60**	**153**	·325					
44	+·044	+ **7·40**	— **78**	—·329					

Polaris Z. Dist. = 44° 4′.

1889.	*a* TAURI (*Aldebaran*).					
Z.	S. T.			Az. W.		
28° 43′ S.	4h 26m			1° 20′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	−·060	**51·41**	+·087	+ ·54	**49**	−1·04
" 20	·053	**51·18**	·080	·48	**54**	·96
February 9	·040	**50·59**	·060	·36	**61**	·72
March 1	·033	**49·99**	·040	·30	**70**	·48
" 21	·020	**49·37**	·020	·18	**79**	·24
April 10	·013	**48·82**	·007	·12	**86**	·08
" 30	·000	**48·48**	·000	·00	**91**	·00
May 20	·000	**48·52**	·000	·00	**92**	·00
June 9	·000	**48·75**	·000	·00	**91**	·00
" 29	·007	**49·35**	·007	·06	**86**	·08
July 19	·020	**50·14**	·027	·18	**78**	·32
August 8	·033	**51·06**	·040	·30	**69**	·48
" 28	·047	**52·01**	·060	·42	**59**	·72
September 17	·060	**52·94**	·087	·54	**49**	1·04
October 7	·073	**53·82**	·107	·66	**39**	1·28
" 27	·087	**54·58**	·120	·78	**31**	1·44
November 16	·093	**55·17**	·107	·84	**25**	1·52
December 6	·093	**55·44**	·140	·84	**22**	1·60
" 26	−·100	**55·58**	+·133	+ ·90	**24**	−1·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	+·003	+**108·00**	− **974**	−·246					
29	·004	**102·80**	**936**	·250					
30	·004	**97·47**	**897**	·254	°		*s.*	*″*	
31	·004	**92·07**	**856**	·258	45	+·011	− **0·00**	+ **0**	−·317
32	·005	**86·53**	**813**	·262	46	·011	**8·20**	**88**	·324
33	·005	**80·87**	**767**	·267	47	·012	**16·67**	**180**	·332
34	·006	**75·07**	**719**	·271	48	·012	**25·53**	**278**	·339
35	·006	**69·13**	**669**	·275	49	·013	**34·65**	**381**	·347
36	·007	**63·07**	**616**	·279	50	·014	**44·18**	**490**	·354
37	·007	**56·80**	**560**	·283	51	·014	**54·18**	**605**	·362
38	·007	**50·47**	**502**	·287	52	·015	**64·51**	**727**	·369
39	·008	**43·87**	**441**	·292	53	·015	**75·38**	**856**	·377
40	·008	**37·13**	**376**	·296	54	·016	**86·78**	**994**	·384
41	·009	**30·13**	**308**	·300	55	·016	**98·71**	**1139**	·392
42	·009	**23·00**	**237**	·304	56	+·017	−**111·31**	+**1295**	−·399
43	·010	**15·53**	**162**	·308					
44	+·010	+ **7·93**	− **83**	−·313					

Polaris Z. Dist. = 44° 8′.

1889.	β ORIONIS (*Rigel*).					
Z.	S. T.			Az. W.		
53° 20′ S.	5h 4m			1° 31′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	—·067	**15·28**	+·083	+ ·64	**39**	—1·11
" 20	·060	**15·08**	·086	·57	**43**	1·11
February 9	·047	**14·38**	·074	·43	**50**	·94
March 1	·033	**13·60**	·051	·39	**58**	·69
" 21	·027	**12·75**	·035	·21	**67**	·43
April 10	·020	**12·10**	·019	·17	**75**	·17
" 30	·007	**11·48**	·006	·00	**81**	·09
May 20	·000	**11·36**	·000	·00	**84**	·00
June 9	·007	**11·39**	·006	·07	**83**	·00
" 29	·013	**11·80**	·003	·17	**79**	·09
July 19	·020	**12·49**	·029	·11	**73**	·26
August 8	·027	**13·43**	·045	·26	**64**	·51
" 28	·053	**14·50**	·064	·40	**55**	·77
September 17	·060	**15·67**	·086	·54	**44**	1·03
October 7	·073	**16·78**	·109	·69	**34**	1·29
" 27	·086	**17·77**	·121	·73	**25**	1·54
November 16	·100	**18·70**	·134	·90	**18**	1·71
December 6	·100	**19·20**	·144	·90	**14**	1·80
" 26	—·107	**19·50**	+·140	+1·00	**13**	—1·80

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b′	S. T.	Az.	c.
°		*s.*	*″*						
28	+·007	+**122·40**	—**1105**	—·187					
29	·008	**116·47**	**1063**	·192					
30	·008	**110·44**	**1019**	·196	°		*s.*	*″*	
31	·008	**104·34**	**971**	·200	45	+·014	— **0·00**	+ **0**	—·258
32	·009	**98·07**	**922**	·204	46	·014	**9·27**	**99**	·264
33	·009	**91·67**	**870**	·208	47	·015	**18·87**	**204**	·270
34	·010	**85·07**	**816**	·212	48	·015	**28·87**	**314**	·276
35	·010	**78·70**	**759**	·217	49	·016	**39·27**	**431**	·282
36	·010	**71·47**	**699**	·221	50	·016	**50·07**	**555**	·287
37	·011	**64·40**	**636**	·225	51	·017	**61·40**	**685**	·293
38	·011	**57·20**	**570**	·229	52	·017	**73·13**	**823**	·299
39	·012	**49·73**	**500**	·233	53	·018	**85.47**	**970**	·305
40	·012	**42.07**	**427**	·237	54	·018	**98·33**	**1125**	·311
41	·012	**34·20**	**350**	·242	55	·019	**111·87**	**1291**	·317
42	·013	**26·07**	**269**	·246	56	+·019	—**126·07**	+**1467**	—·322
43	·015	**17·67**	**184**	·250					
44	+·014	+ **9·00**	— **95**	—·254					

Polaris Z. Dist. = 44° 18′.

1889.	*a* AURIGÆ (*Capella*).					
Z.	S. T.			Az. W.		
0° 53′ N.	5h 8m			1° 32′		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	—·067	**38·13**	+·087	+ ·56	**45**	—1·05
" 20	·060	**38·10**	·087	·51	**49**	1·05
February 9	·047	**37·66**	·073	·39	**56**	·89
March 1	·040	**37·27**	·053	·34	**64**	·65
" 21	·027	**36·75**	·033	·23	**73**	·41
April 10	·020	**36·36**	·013	·17	**81**	·16
" 30	·007	**36·02**	·007	·06	**88**	·08
May 20	·000	**35·96**	·000	·00	**90**	·00
June 9	·000	**36·16**	·007	·00	**91**	·08
" 29	·007	**36·59**	·007	·06	**86**	·08
July 19	·013	**37·19**	·020	·11	**80**	·24
August 8	·027	**37·86**	·040	·23	**71**	·49
" 28	·040	**38·66**	·060	·34	**61**	·73
September 17	·060	**39·46**	·080	·51	**51**	·97
October 7	·073	**40·28**	·100	·62	**40**	1·22
" 27	·087	**41·01**	·113	·73	**31**	1·38
November 16	·093	**41·63**	·133	·79	**24**	1·62
December 6	·100	**42·08**	·140	·84	**26**	1·70
" 26	—·107	**42·34**	+·140	+ ·90	**19**	—1·70

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
		s.	″						
28	—·006	+**123·87**	—**1117**	—·199					
29	·006	**117·87**	**1074**	·202					
30	·006	**111·80**	**1029**	·204	°		*s.*	″	
31	·005	**105·33**	**982**	·207	45	+·000	— **0·00**	+ **0**	—·242
32	·005	**99·20**	**932**	·209	46	·000	**9·40**	**101**	·248
33	·005	**92·73**	**880**	·212	47	·001	**19·13**	**207**	·255
34	·004	**86·06**	**825**	·214	48	·002	**29·27**	**319**	·262
35	·004	**79·27**	**767**	·217	49	·002	**29·80**	**437**	·268
36	·004	**72·33**	**706**	·219	50	·003	**50·73**	**562**	·275
37	·003	**65·20**	**642**	·222	51	·003	**62·13**	**694**	·282
38	·003	**57·87**	**575**	·224	52	·004	**74·07**	**834**	·288
39	·003	**50·33**	**505**	·227	53	·004	**86·53**	**983**	·295
40	·002	**42·53**	**431**	·229	54	·005	**99·53**	**1140**	·302
41	·002	**34·60**	**353**	·232	55	·006	**113·27**	**1307**	·308
42	·002	**26·33**	**271**	·234	56	+·006	—**127·67**	+**1485**	—·315
43	·001	**17·87**	**185**	·237					
44	—·001	+ **9·07**	— **95**	—·239					

Polaris Z. Dist. = 44° 19′.

1889.	β DRACONIS, S. P.						
Z.	S. T.			Az. W.		
82° 37′ N.	5h 17m			1° 34′		
	t.	*s.*	*t′.*	*a.*	*″*	*a.*
January 0	—·060	**35·92**	+·093	+ ·48	**56**	—1·15
" 20	·060	**36·20**	·087	·48	**59**	1·06
February 9	·047	**36·00**	·073	·37	**65**	·90
March 1	·033	**35·93**	·060	·27	**74**	·74
" 21	·027	**35·88**	·033	·21	**82**	·41
April 10	·013	**35·65**	·020	·11	**91**	·25
" 30	·000	**35·23**	·013	·00	**98**	·16
May 20	·000	**35·77**	·007	·00	**101**	·08
June 9	·000	**35·89**	·000	·00	**101**	·00
" 29	·000	**36·24**	·013	·00	**98**	·16
July 19	·013	**36·69**	·020	·11	**92**	·25
August 8	·027	**37·19**	·040	·21	**83**	·49
" 28	·040	**39·59**	·053	·32	**73**	·65
September 17	·053	**38·03**	·080	·43	**62**	·98
October 7	·067	**38·54**	·100	·53	**52**	1·23
" 27	·080	**38·95**	·127	·64	**42**	1·55
November 16	·090	**39·41**	·133	·80	**35**	1·64
December 6	·100	**39·79**	·147	·80	**30**	1·80
" 26	—·100	**40·12**	+·147	+ ·80	**30**	—1·80

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
28									
29									
30					°		*s.*	*″*	
31		Invisible			45	+·024	— **0·00**	+ **0**	—·225
32					46	·025	**9·60**	**103**	·231
33					47	·025	**19·60**	**211**	·237
34					48	·026	**29·93**	**326**	·242
35					49	·026	**40·73**	**447**	·248
36		*s.*	*″*		50	·027	**51·93**	**575**	·254
37	+·022	+ **66·73**	— **658**	—·205	51	·027	**63·60**	**710**	·260
38	·022	**59·20**	**590**	·208	52	·028	**75·80**	**853**	·266
39	·023	**51·47**	**517**	·210	53	·028	**88·53**	**1005**	·272
40	·023	**43·53**	**441**	·213	54	·029	**101·87**	**1166**	·277
41	·023	**35·40**	**361**	·215	55	·029	**115·93**	**1337**	·283
42	·024	**26·97**	**278**	·218	56	+·030	—**130·67**	+**1519**	—·289
43	·024	**18·27**	**190**	·220					
44	+·024	+ **9·27**	— **98**	—·223					

Polaris Z. Dist. = 44° 21′.

1889.	δ ORIONIS.					
Z.	S. T.			Az. W.		
45° 23′ S.	5h 21m.			1° 35′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	—·060	**47·39**	+·093	+ ·66	**53**	—1·07
" 20	·060	**47·36**	·087	·66	**56**	·99
February 9	·053	**46·77**	·073	·59	**63**	·84
March 1	·033	**46·06**	·053	·37	**71**	·61
" 21	·027	**45·30**	·033	·29	**80**	·33
April 10	·013	**44·58**	·020	·15	**88**	·28
" 30	·000	**44·02**	·007	·00	**94**	·08
May 20	·000	**43·87**	·000	·00	**98**	·00
June 9	·000	**43·92**	·000	·00	**98**	·00
" 29	·000	**44·46**	·007	·00	**95**	·08
July 19	·007	**45·00**	·020	·07	**89**	·23
August 8	·020	**45·89**	·040	·22	**80**	·46
" 28	·033	**46·90**	·053	·37	**71**	·61
September 17	·053	**48·02**	·073	·59	**60**	·84
October 7	·067	**49·04**	·100	·73	**50**	1·14
" 27	·080	**50·03**	·113	·88	**40**	1·30
November 16	·093	**50·82**	·133	1·03	**32**	1·52
December 6	·093	**51·36**	·140	1·03	**29**	1·60
" 26	—·100	**51·70**	+·140	+1·10	**26**	—1·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	″		°		*s.*	″	
28	+·005	+**127·93**	—**1115**	—·183					
29	·005	**121·73**	**1112**	·185					
30	·006	**115·40**	**1065**	·188	°		*s.*	″	
31	·006	**109·00**	**1015**	·190	45	+·010	— **0·00**	+ **0**	—·225
32	·006	**102·52**	**964**	·193	46	·011	**9·73**	**103**	·230
33	·007	**95·80**	**910**	·195	47	·012	**19·80**	**213**	·235
34	·007	**88·93**	**853**	·198	48	·012	**30·27**	**329**	·240
35	·007	**81·93**	**794**	·200	49	·013	**41·13**	**451**	·245
36	·008	**74·73**	**730**	·203	50	·013	**52·40**	**580**	·250
37	·008	**67·33**	**665**	·205	51	·014	**64·20**	**716**	·255
38	·008	**59·80**	**596**	·208	52	·014	**76·53**	**861**	·260
39	·009	**52·00**	**523**	·210	53	·015	**89·40**	**1014**	·265
40	·009	**44·00**	**447**	·213	54	·015	**102·87**	**1177**	·270
41	·009	**35·73**	**366**	·215	55	·016	**117·07**	**1350**	·275
42	·010	**27·20**	**282**	·218	56	+·016	—**131·94**	+**1534**	—·280
43	·010	**18.47**	**193**	·220					
44	+·010	+ **9·40**	— **99**	—·223					

Polaris Z. Dist = 44° 43′.

1889.	ε ORIONIS.					
Z.	S. T.			Az. W.		
46° 16′ S.	5h 25m			1° 36′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	—·067	**55·30**	+·093	+ ·67	**48**	—1 08
" 20	·053	**55·03**	·087	·53	**51**	1·00
February 9	·047	**54·57**	·073	·47	**57**	·85
March 1	·040	**53·93**	·053	·40	**65**	·62
" 21	·027	**53·10**	·040	·27	**74**	·46
April 10	·013	**52·38**	·027	·13	**82**	·31
" 30	·007	**51·87**	·007	·07	**89**	·08
May 20	·000	**51·67**	·007	·00	**92**	·08
June 9	·000	**51·69**	·000	·00	**93**	·00
" 29	·007	**52·09**	·013	·07	**90**	·15
July 19	·013	**52·81**	·020	·13	**84**	·23
August 8	·027	**53·63**	·027	·27	**76**	·31
" 28	·040	**54·71**	·053	·40	**66**	·62
September 17	·053	**55·57**	·080	·53	**55**	·93
October 7	·067	**56·85**	·100	·67	**45**	1·16
" 27	·087	**57·84**	·113	·87	**35**	1·31
November 16	·093	**58·64**	·133	·93	**27**	1·55
December 6	·100	**59·25**	·140	1·00	**23**	1·62
" 26	—·100	**59·54**	+·147	+1·00	**21**	—1·70

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	+·005	**+129·20**	**—1166**	—·160					
29	·005	**123·00**	**1121**	·163					
30	·006	**116·60**	**1074**	·167	°		*s.*	*″*	
31	·006	**110·14**	**1025**	·170	45	+·010	**—0·00**	**+ 0**	—·217
32	·006	**103·51**	**973**	·173	46	·011	**9·80**	**105**	·222
33	·007	**96·74**	**919**	·177	47	·011	**20·00**	**215**	·227
34	·007	**89·80**	**861**	·180	48	·012	**30·53**	**332**	·232
35	·007	**82·47**	**801**	·183	49	·012	**41·53**	**455**	·237
36	·007	**75·47**	**738**	·187	50	·013	**52·93**	**586**	·242
37	·008	**68·00**	**671**	·190	51	·013	**64·87**	**723**	·247
38	·008	**60·33**	**601**	·193	52	·014	**77·27**	**869**	·252
39	·008	**52·47**	**528**	·197	53	·014	**90·27**	**1024**	·257
40	·009	**44·40**	**451**	·200	54	·015	**103·87**	**1188**	·262
41	·009	**36·06**	**370**	·203	55	·015	**118·20**	**1363**	·267
42	·009	**27·47**	**284**	·207	56	+·016	**—133·20**	**+1549**	—·272
43	·009	**18·60**	**194**	·210					
44	+·010	**+ 9·47**	**— 100**	—·213					

Polaris Z. Dist. = 44° 24′.

1889.	*a* COLUMBÆ.					
Z.	S. T.			Az. W.		
79° 8′ S.	$5^h\ 27^m$			1° 36′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	—·060	**57·19**	+·093	+ ·64	**74**	—1 03
" 20	·060	**56·95**	·087	·64	**77**	·96
February 9	·047	**56·06**	·073	·50	**83**	·81
March 1	·033	**55·10**	·060	·36	**91**	·67
" 21	·027	**53·82**	·040	·29	**100**	·44
April 10	·013	**52·69**	·027	·14	**108**	·30
" 30	·000	**51·80**	·013	·00	**115**	·15
May 20	·000	**51·47**	·007	·00	**118**	·07
June 9	·000	**51·39**	·000	·00	**119**	·00
" 29	·000	**51·77**	·007	·00	**115**	·07
July 19	·013	**52·59**	·020	·14	**110**	·22
August 8	·027	**53·74**	·033	·29	**102**	·37
" 28	·033	**55·06**	·060	·36	**92**	·67
September 17	·053	**56.55**	·080	·57	**82**	·89
October 7	·060	**57·99**	·100	·64	**71**	1·11
" 27	·080	**59·37**	·120	·86	**62**	1·33
November 16	·087	**60·41**	·140	·93	**54**	1·55
December 6	·093	**61·16**	·147	1·00	**49**	1·63
" 26	—·093	**61·45**	+·153	+1·00	**47**	—1·70

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*		°		*s.*	*″*	
28	+·013	+**129·80**	—**1171**	—·163	45	+·017	—**0·00**	+**0**	—·217
29	·013	**123·53**	**1127**	·163	46	·017	**9·87**	**105**	·222
30	·013	**117·13**	**1079**	·167	47	·018	**20·07**	**216**	·227
31	·014	**110·60**	**1030**	·170	48	·018	**30·67**	**333**	·232
32	·014	**103·93**	**978**	·173	49	·018	**41·73**	**457**	·237
33	·014	**97·13**	**923**	·177	50	·019	**53·20**	**588**	·242
34	·014	**90·20**	**865**	·180	51	·019	**65·13**	**726**	·247
35	·014	**83·07**	**805**	·183	52	·020	**77·60**	**873**	·252
36	·015	**75·80**	**741**	·187	53	·020	**90·67**	**1028**	·257
37	·015	**68·27**	**674**	·190	54	·021	**104·34**	**1193**	·262
38	·015	**60·60**	**604**	·193	55	·021	**118·74**	**1369**	·267
39	·015	**52·67**	**530**	·197	56	+·022	—**133·80**	+**1555**	—·272
40	·016	**44·60**	**453**	·200					
41	·016	**36·20**	**371**	·203					
42	·016	**27·60**	**286**	·207					
43	·016	**18·67**	**195**	·210					
44	+·016	+ **9·47**	— **100**	—·213					

Polaris Z. Dist. = 44° 24′.

1889.	γ DRACONIS, S. P.					
Z.	S. T.			Az. W.		
77° 38′ N.	5h 43m			1° 39′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	—·073	**18·81**	+·087	+ ·69	**77**	—1·06
" 20	·067	**19·06**	·087	·63	**79**	1·06
February 9	·053	**18·93**	·073	·50	**85**	·90
March 1	·047	**18·94**	·053	·44	**93**	·65
" 21	·033	**18·68**	·040	·31	**101**	·49
April 10	·020	**18·59**	·020	·19	**111**	·25
" 30	·013	**18·87**	·007	·13	**118**	·08
May 20	·007	**18·74**	·007	·06	**122**	·08
June 9	·000	**18·73**	·000	·00	**123**	·00
" 29	·007	**19·09**	·007	·06	**120**	·08
July 19	·013	**19·48**	·013	·13	**115**	·16
August 8	·020	**19·91**	·033	·19	**107**	·41
" 28	·040	**20·36**	·053	·38	**98**	·65
September 17	·053	**20·90**	·067	·50	**87**	·82
October 7	·060	**21·35**	·093	·56	**76**	1·15
" 27	·080	**21·79**	·113	·75	**66**	1·39
November 16	·093	**22·20**	·133	·88	**58**	1·64
December 6	·100	**22·65**	·133	·94	**52**	1·64
" 26	—·107	**22·97**	+·147	+1·00	**50**	—1·80

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b′	S. T.	Az.	c.
°									
28									
29									
30					°		*s.*	*″*	
31		Invisible			45	+·020	— **0·00**	+ **0**	—·183
32					46	·020	**10·13**	**108**	·188
33					47	·020	**20·67**	**223**	·192
34					48	·021	**31·60**	**344**	·196
35					49	·021	**43·00**	**472**	·200
36					50	·021	**54·80**	**607**	·204
37		*s.*	*″*		51	·022	**67·13**	**749**	·208
38	+·018	+ **62·53**	— **623**	—·166	52	·022	**80·00**	**901**	·213
39	·018	**54·40**	**547**	·168	53	·022	**93·47**	**1061**	·217
40	·018	**46·00**	**467**	·171	54	·023	**107·60**	**1231**	·221
41	·019	**37·40**	**382**	·173	55	·023	**122·40**	**1412**	·225
42	·019	**28·47**	**294**	·176	56	+·023	—**137·93**	+**1604**	—·229
43	·019	**19·33**	**201**	·178					
44	+·019	+ **9·80**	— **103**	—·181					

Polaris Z. Dist. = 44° 28′.

1889.	*a* ORIONIS.					
Z.	S. T.			Az. W.		
37° 37′ S.	$5^h 44^m$			1° 40′		
	t.	*s.*	*t′.*	*a.*	″	*a.*
January 0	—·067	**62·33**	+·087	+ ·63	**36**	— ·99
" 20	·067	**62·35**	·080	·63	**38**	·91
February 9	·060	**61·92**	·067	·56	**44**	·76
March 1	·040	**61·31**	·060	·38	**51**	·69
" 21	·033	**60·55**	·040	·31	**60**	·46
April 10	·020	**59·88**	·020	·19	**69**	·23
" 30	·013	**59·37**	·007	·13	**76**	·08
May 20	·007	**59·14**	·000	·05	**80**	·00
June 9	·000	**59·09**	·000	·00	**81**	·00
" 29	·007	**59·45**	·000	·05	**79**	·00
July 19	·013	**60·09**	·007	·13	**73**	·08
August 8	·027	**60·84**	·027	·25	**66**	·30
" 28	·040	**61·78**	·047	·38	**56**	·53
September 17	·053	**62·76**	·067	·50	**46**	·76
October 7	·067	**63·80**	·087	·63	**35**	·99
" 27	·080	**64·77**	·107	·75	**25**	1·22
November 16	·093	**65·67**	·127	·88	**17**	1·45
December 6	·100	**66·27**	·133	·94	**11**	1·52
" 26	—·107	**66·66**	+·140	+ 1·00	**8**	—1·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
		s.	″						
28	+·002	+**134·33**	—**1211**	—·127					
29	·002	**127·87**	**1165**	·130					
30	·003	**121·27**	**1116**	·133	°		*s.*	″	
31	·003	**114·53**	**1065**	·137	45	+·008	—**0·00**	+ **0**	—·183
32	·003	**107·67**	**1011**	·140	46	·008	**10·13**	**109**	·187
33	·004	**100·60**	**954**	·143	47	·008	**20·73**	**224**	·190
34	·004	**93·40**	**894**	·147	48	·009	**31·67**	**345**	·193
35	·004	**86·07**	**832**	·150	49	·009	**43·06**	**473**	·197
36	·005	**78·53**	**766**	·153	50	·009	**54·93**	**609**	·200
37	·005	**70·73**	**694**	·157	51	·010	**67·33**	**752**	·203
38	·005	**62·80**	**624**	·160	52	·010	**80·27**	**904**	·207
39	·006	**54·67**	**549**	·163	53	·010	**93·73**	**1064**	·210
40	·006	**46·20**	**468**	·167	54	·011	**107·93**	**1235**	·213
41	·006	**37·53**	**383**	·170	55	·011	**122·73**	**1416**	·217
42	·007	**28·60**	**295**	·173	56	+·011	—**138·33**	+**1609**	—·220
43	·007	**19·40**	**202**	·177					
44	+·007	+ **9·87**	— **103**	—·180					

Polaris Z. Dist. = 44° 30′.

1889.	β AURIGÆ.					
	Z.	S. T.			Az. W.	
	0° 4′ S.	5h 51m			1° 41′.	
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	—·067	**23·05**	+·087	+·63	**42**	—·99
" 20	·067	**23·08**	·087	·63	**43**	·99
February 9	·053	**22·86**	·073	·50	**49**	·84
March 1	·053	**22·39**	·047	·50	**57**	·61
" 21	·027	**22·02**	·040	·25	**66**	·38
April 10	·020	**21·54**	·027	·19	**74**	·23
" 30	·007	**21·12**	·007	·06	**82**	·08
May 20	·007	**20·97**	·000	·06	**86**	·00
June 9	·000	**21·05**	·000	·00	**88**	·00
" 29	·007	**21·38**	·000	·06	**85**	·00
July 19	·020	**21·82**	·007	·18	**80**	·15
August 8	·027	**22·54**	·027	·25	**73**	·31
" 28	·040	**23·23**	·040	·37	**63**	·53
September 17	·053	**24·09**	·067	·50	**53**	·76
October 7	·073	**24·91**	·087	·69	**42**	·99
" 27	·087	**25·69**	·113	·81	**32**	1·30
November 16	·093	**26·39**	·120	·87	**23**	1·37
December 6	·100	**26·94**	·133	·94	**17**	1·52
" 26	—·107	**27·29**	+·140	+1·00	**15**	—1·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	+·005	+**135·74**	—**1225**	—·118					
29	·004	**129·20**	**1178**	·122					
30	·004	**122·54**	**1129**	·125	°		*s.*	*″*	
31	·004	**115·74**	**1077**	·128	45	+·000	—**0·00**	+**0**	—·175
32	·004	**108.74**	**1022**	·132	46	·001	**10·27**	**110**	·178
33	·003	**101·67**	**965**	·135	47	·001	**20·93**	**226**	·182
34	·003	**94·40**	**905**	·138	48	·001	**32·07**	**348**	·185
35	·003	**86·93**	**842**	·142	49	·001	**43·53**	**478**	·188
36	·002	**79·27**	**775**	·145	50	·002	**55·53**	**615**	·192
37	·002	**71·47**	**706**	·148	51	·002	**68·07**	**760**	·195
38	·002	**63·40**	**632**	·152	52	·002	**81·13**	**913**	·198
39	·002	**55·13**	**555**	·155	53	·003	**94.80**	**1075**	·202
40	·001	**46·67**	**474**	·158	54	·003	**109·07**	**1240**	·205
41	·001	**37·93**	**389**	·162	55	·003	**124·07**	**1431**	·208
42	·001	**28·93**	**299**	·165	56	+·003	—**139·86**	+**1626**	—·212
43	·001	**19·60**	**204**	·168					
44	+·000	+**10·00**	—**105**	—·172					

Polaris Z. Dist. = 44° 32′.

1889.	α ARGUS (*Canopus*).					
Z.	S. T.			Az. W.		
97° 38′ S.	6h 9m.			1° 44′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	—·060	**68·41**	....	+ ·60	**30**	....
" 20	·053	**68·28**	....	·53	**31**	....
February 9	·047	**67·23**	....	·47	**35**	....
March 1	·040	**65·90**	....	·40	**42**	....
" 21	·027	**64·27**	....	·27	**51**	....
April 10	·013	**62·61**	....	·13	**59**	....
" 30	·000	**61·06**	....	·00	**67**	....
May 20	·000	**60·32**	....	·00	**72**	....
June 9	·000	**59·75**	....	·00	**74**	....
" 29	·000	**59·94**	....	·00	**72**	....
July 19	·007	**60·65**	....	·07	**68**	....
August 8	·013	**61·90**	....	·13	**61**	....
" 28	·027	**63·53**	....	·27	**52**	....
September 17	·040	**65·35**	....	·40	**42**	....
October 7	·053	**67·36**	....	·53	**31**	....
" 27	·067	**69·29**	....	·67	**21**	....
November 16	·080	**70·91**	....	·80	**12**	....
December 6	·093	**72·08**	....	·93	**7**	....
" 26	—·100	**72·73**	....	+1·00	**2**	....

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″						
28	+·011	+**139·47**	—**1257**	—·091					
29	·011	**132·73**	**1209**	·093					
30	·011	**125·87**	**1158**	·096	°				
31	·011	**118·87**	**1105**	·098	45				
32	·011	**111·73**	**1049**	·101	46				
33	·012	**104·40**	**990**	·103	47				
34	·012	**96·93**	**929**	·106	48				
35	·012	**89·27**	**864**	·108	49		Invisible		
36	·012	**81·47**	**796**	·111	50				
37	·013	**73·33**	**723**	·113	51				
38	+·013	+ **65·07**	— **647**	—·116	52				
39					53				
40					54				
41					55				
42					56				
43									
44									

Polaris Z. Dist. = 44° 37′.

1889.	*a* LYRÆ (*Vega*), S. P.					
Z.	S. T.			Az. W.		
96° 19′ N.	6h 24m			1° 45′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	....	**7·96**	+·093	....	**67**	—1·02
" 20	....	**8·38**	·093	....	**78**	1·02
February 9	....	**8·36**	·080	....	**72**	·87
March 1	....	**8·35**	·067	....	**79**	·73
" 21	....	**8·27**	·047	....	**87**	·51
April 10	....	**8·21**	·033	....	**95**	·36
" 30	....	**8·17**	·013	....	**104**	·15
May 20	....	**8·31**	·007	....	**109**	·07
June 9	....	**8·38**	·000	....	**112**	·00
" 29	....	**8·66**	·000	....	**111**	·00
July 19	....	**9·02**	·007	....	**107**	·07
August 8	....	**9·45**	·020	....	**100**	·22
" 28	....	**9·76**	·040	....	**92**	·44
September 17	....	**10·16**	·060	....	**81**	·65
October 7	....	**10·57**	·080	....	**70**	·87
" 27	....	**10·96**	·107	....	**60**	1·16
November 16	....	**11·46**	·120	....	**51**	1·31
December 6	....	**11·86**	·133	....	**44**	1·45
" 26	....	**12·28**	+·147	....	**39**	—1·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*						
28									
29									
30					°				
31					45				
32					46				
33					47		Invisible		
34					48				
35		Invisible			49				
36					50		*s.*	*″*	
37					51	+·010	— **71·00**	+ **793**	—·116
38					52	·010	**84·60**	**953**	·118
39					53	·011	**98·82**	**1122**	·120
40					54	·011	**113·80**	**1302**	·123
41					55	·011	**129·47**	**1493**	·125
42					56	+·011	—**145·93**	+**1697**	—·128
43									
44									

Polaris Z. Dist. = 45° 19′.

1889.	α CANIS MAJORIS (*Sirius*).					
Z.	S. T.			Az. W.		
61° 34′ S.	6h 33m			1° 46′		
	t.	*s.*	*t′.*	*a.*	*″*	*a.*
January 0	—·067	**43·46**	+·087	+ ·60	**60**	—1·00
" 20	·067	**43·58**	·093	·60	**60**	1·08
February 9	·060	**43·13**	·080	·54	**64**	·93
March 1	·047	**42·38**	·073	·42	**70**	·85
" 21	·033	**41·41**	·053	·30	**79**	·62
April 10	·027	**40·62**	·040	·24	**87**	·46
" 30	·020	**39·82**	·013	·18	**95**	·15
May 20	·013	**39·36**	·007	·12	**101**	·08
June 9	·007	**39·04**	·000	·06	**104**	·00
" 29	·000	**39·14**	·000	·00	**103**	·00
July 19	·007	**39·60**	·013	·06	**100**	·15
August 8	·020	**40·45**	·020	·18	**93**	·23
" 28	·027	**41·46**	·040	·24	**84**	·46
September 17	·040	**42·60**	·060	·36	**75**	·70
October 7	·060	**43·85**	·080	·54	**64**	·93
" 27	·073	**45·04**	·107	·66	**54**	1·24
November 16	·087	**46·18**	·120	·78	**44**	1·39
December 6	·093	**47·09**	·140	·84	**37**	1·62
" 26	—·100	**47·60**	+·147	+ ·90	**32**	—1·70

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
		s.	*″*						
28	+·003	+**142·73**	—**1287**	—·069					
29	·003	**135·80**	**1238**	·070					
30	·003	**128·80**	**1186**	·071	°		*s.*	*″*	
31	·003	**121·67**	**1131**	·072	45	+·006	—**0·00**	+**0**	—·083
32	·003	**114·33**	**1074**	·073	46	·006	**10·80**	**116**	·086
33	·004	**106·87**	**1014**	·073	47	·006	**22·07**	**238**	·088
34	·004	**99·20**	**951**	·074	48	·006	**33·73**	**367**	·091
35	·004	**91·40**	**884**	·075	49	·006	**45·80**	**503**	·093
36	·004	**83·34**	**815**	·076	50	·007	**58·47**	**647**	·096
37	·004	**75·14**	**741**	·077	51	·007	**71·60**	**799**	·098
38	·004	**66·68**	**664**	·078	52	·007	**85·33**	**961**	·101
39	·005	**58·00**	**583**	·078	53	·007	**99·67**	**1131**	·103
40	·005	**49·08**	**497**	·079	54	·008	**114·73**	**1313**	·106
41	·005	**39·87**	**407**	·080	55	·008	**130·53**	**1506**	·108
42	·005	**30·33**	**313**	·081	56	+·008	—**147·07**	+**1711**	—·111
43	·005	**20·60**	**214**	·082					
44	+·005	+**10·47**	—**110**	—·083					

Polaris Z. Dist. = 44° 45′.

1889.	ε CANIS MAJORIS.					
Z.	S. T.			Az. W.		
73° 49′ S.	6h 46m			1° 47′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	—.067	**23·63**	+·087	+ ·67	**52**	—1·05
" 20	.067	**23·77**	·093	·67	**52**	1·13
February 9	.060	**23·30**	·080	·60	**55**	·97
March 1	.053	**22·59**	·067	·53	**61**	·81
" 21	.033	**21·45**	·053	·33	**69**	·65
April 10	.027	**20·40**	·033	·27	**78**	·41
" 30	.020	**19·49**	·013	·20	**86**	·16
May 20	·007	**18·81**	·013	·07	**92**	·16
June 9	·000	**18·34**	·000	·00	**95**	·00
" 29	·000	**18·44**	·000	·00	**95**	·00
July 19	·007	**18·85**	·007	·07	**92**	·08
August 8	·013	**19·60**	·020	·13	**86**	·24
" 28	·027	**20·73**	·033	·27	**78**	·41
September 17	·040	**22·02**	·053	·40	**69**	·65
October 7	·060	**23·43**	·073	·60	**58**	·89
" 27	·067	**24·78**	·093	·67	**47**	1·13
November 16	·080	**26·10**	·120	·80	**37**	1·46
December 6	·100	**27·12**	·127	1·00	**30**	1·54
" 26	—·100	**27·79**	+·140	+1·00	**24**	—1·70

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*						
28	+·002	+**143·87**	—**1297**	—·036					
29	·002	**136·93**	**1247**	·037					
30	·002	**129·86**	**1195**	·038	°		*s.*	*″*	
31	·002	**122·60**	**1140**	·038	45	+·004	— **0·00**	+ **0**	—·050
32	·003	**115·26**	**1082**	·039	46	·004	**10.93**	**117**	·053
33	·003	**107·73**	**1021**	·030	47	·004	**22·20**	**240**	·055
34	·003	**100·00**	**958**	·041	48	·004	**34·00**	**370**	·058
35	·003	**92·13**	**891**	·042	49	·004	**46·20**	**508**	·060
36	·003	**84·00**	**821**	·043	50	·004	**58·93**	**653**	·063
37	·003	**75·73**	**746**	·043	51	·005	**72·13**	**806**	·065
38	·003	**67·20**	**669**	·044	52	·005	**86·00**	**969**	·068
39	·003	**58·47**	**586**	·045	53	·005	**100.47**	**1141**	·070
40	·003	**49·46**	**499**	·046	54	·005	**115·60**	**1324**	·073
41	·003	**40.20**	**409**	·047	55	·005	**131·53**	**1518**	·075
42	·004	**30·60**	**316**	·048	56	+·005	—**148·27**	+**1725**	—·078
43	·004	**20·73**	**216**	·048					
44	+·004	+ **10·53**	— **110**	—·049					

Polaris Z. Dist. = 44° 49′.

1889.	δ DRACONIS, S. P.					
Z.	S. T.			Az. W.		
67° 32′ N.	6h 55m			1° 47′		
	t.	*s.*	*t′.*	*a.*	″	*a.*
January 0	—·067	**3·56**	+·087	+ ·67	**76**	— ·95
" 20	·067	**4·03**	·093	·67	**75**	1·02
February 9	·060	**3·87**	·087	·60	**79**	·95
March 1	·053	**3·85**	·073	·57	**84**	·80
" 21	·040	**3·61**	·060	·40	**93**	·65
April 10	·027	**3·48**	·040	·27	**101**	·43
" 30	·013	**3·18**	·020	·13	**110**	·21
May 20	·013	**3·43**	·013	·17	**116**	·15
June 9	·000	**3·21**	·000	·03	**120**	·00
" 29	·000	**3·50**	·000	·07	**120**	·00
July 19	·007	**3·78**	·007	·07	**117**	·07
August 8	·013	**4·23**	·020	·10	**112**	·22
" 28	·020	**4·66**	·033	·23	**104**	·36
September 17	·040	**5·16**	·053	·40	**94**	·58
October 7	·053	**5·72**	·074	·53	**83**	·80
" 27	·067	**6·25**	·100	·60	**72**	1·09
November 16	·087	**6·84**	·113	·80	**62**	1·24
December 6	·093	**7·35**	·133	·93	**54**	1·45
" 26	—·100	**7·81**	+·147	+ 1·00	**49**	—1·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
		s.	″						
28	+·005	+**144·40**	—**1303**	—·027					
29	·005	**137·40**	**1254**	·028					
30	·005	**130·33**	**1201**	·029	°		*s.*	″	
31	·005	**123·07**	**1146**	·030	45	+·006	— **0·00**	+ **0**	—·042
32	·005	**115·67**	**1087**	·031	46	·006	**10·93**	**117**	·045
33	·005	**108·13**	**1026**	·032	47	·006	**22·33**	**241**	·048
34	·005	**100·33**	**962**	·033	48	·006	**34·13**	**371**	·051
35	·006	**92·47**	**895**	·033	49	·007	**46·40**	**509**	·054
36	·006	**84·33**	**824**	·034	50	·007	**59·13**	**654**	·057
37	·006	**76·00**	**750**	·035	51	·007	**72·47**	**808**	·060
38	·006	**67·47**	**672**	·036	52	·007	**86·33**	**972**	·063
39	·006	**58·67**	**590**	·037	53	·007	**100·87**	**1144**	·066
40	·006	**49·60**	**504**	·038	54	·007	**116·07**	**1328**	·069
41	·006	**40·33**	**412**	·038	55	·007	**132·07**	**1523**	·072
42	·006	**30·73**	**317**	·039	56	+·007	—**148·87**	+**1830**	—·075
43	·006	**20·80**	**217**	·040					
44	+·006	+ **10·60**	— **111**	—·041					

Polaris Z. Dist. = 44° 52′.

1889.	*α* CANIS MINORIS *(Procyon)*.						
Z.	S. T.			Az. W.		
39° 29′ S.	$7^h\ 28^m$			1° 47′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	—·053	**52.85**	+·087	+ ·55	**82**	— 93
" 20	·060	**53·19**	·093	·62	**79**	1·00
February 9	·053	**53·08**	·087	·55	**81**	·93
March 1	·053	**52·79**	·073	·55	**86**	·79
" 21	·033	**52·10**	·067	·35	**94**	·71
April 10	·027	**51·42**	·047	·28	**102**	·50
" 30	·013	**50·71**	·027	·14	**111**	·29
May 20	·007	**50·29**	·020	·17	**118**	·21
June 9	·000	**49·93**	·000	·00	**123**	·00
" 29	·000	**49·90**	·000	·00	**124**	·00
July 19	·000	**50·16**	·000	·00	**123**	·00
August 8	·007	**50·66**	·013	·07	**118**	·14
" 28	·013	**51·40**	·027	·14	**111**	·29
September 17	·027	**52·22**	·047	·28	**102**	·50
October 7	·047	**53·25**	·060	·48	**92**	·64
" 27	·053	**54·25**	·087	·55	**81**	·93
November 16	·073	**55·39**	·107	·76	**71**	1·14
December 6	·087	**56·28**	·127	·90	**62**	1·36
" 26	—·087	**56·99**	+·140	+ ·90	**55**	—1·50

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	—·001	+**144·47**	—**1304**	+·019					
29	·001	**137·53**	**1253**	·020					
30	·001	**130·40**	**1201**	·021	°		*s.*	*″*	
31	·001	**123·13**	**1146**	·022	45	—·001	— **0·00**	+ **0**	+·033
32	·001	**115·73**	**1088**	·023	46	·001	**1100**	**116**	·034
33	·001	**108·20**	**1027**	·023	47	·001	**22·33**	**241**	·035
34	·001	**100·40**	**963**	·024	48	·001	**34·13**	**372**	·036
35	·001	**92·47**	**895**	·025	49	·001	**46·40**	**509**	·037
36	001	**84·40**	**525**	·026	50	·001	**59·20**	**654**	·037
37	·001	**76·07**	**749**	·027	51	·001	**72·53**	**809**	·038
38	·001	**67·40**	**671**	·028	52	·001	**86·40**	**973**	·039
39	·001	**58·67**	**589**	·028	53	·002	**100·93**	**1145**	·040
40	·001	**49·67**	**502**	·029	54	·002	**116·20**	**1329**	·041
41	·001	**40·33**	**411**	·030	55	·002	**132·13**	**1524**	·042
42	·001	**30·73**	**317**	·031	56	—·002	—**148·93**	+**1732**	+·042
43	·001	**20·80**	**217**	·032					
44	—·001	+ **10·60**	— **111**	+·033					

Polaris Z. Dist. = 45° 4′.

1889.	ε DRACONIS, S. P.					
Z.	S. T.			Az. W.		
65° 1′ N.	7h 29m			1° 47′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	—·060	**20·94**	+·087	+·58	**81**	—1·05
" 20	·060	**21·45**	·093	·58	**79**	1·13
February 9	·060	**21·32**	·087	·58	**80**	1·05
March 1	·053	**21·36**	·073	·51	**85**	·89
" 21	·040	**21·13**	·067	·39	**94**	·81
April 10	·027	**20·95**	·047	·26	**101**	·57
" 30	·020	**20·67**	·027	·19	**110**	·32
May 20	·007	**20·92**	·020	·06	**117**	·24
June 9	·000	**20·64**	·000	·00	**121**	·00
" 29	·000	**20·86**	·000	·00	**121**	·00
July 19	·000	**21·11**	·000	·00	**122**	·00
August 8	·007	**21·46**	·013	·06	**117**	·16
" 28	·020	**21·94**	·027	·19	**110**	·32
September 17	·027	**22.36**	·047	·26	**101**	·57
October 7	·040	**22·90**	·067	·39	**91**	·81
" 27	·060	**23·28**	·087	·58	**80**	1·05
November 16	·073	**24·00**	·113	·71	**70**	1·38
December 6	·080	**24·54**	·127	·77	**61**	1·54
" 26	—·093	**25·09**	+·140	+·90	**55**	—1·70

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*						
28	—·005	+**144·47**	—**1303**	+·036					
29	·005	**137·48**	**1254**	·037					
30	·005	**130·40**	**1201**	·038	°		*s.*	*″*	
31	·005	**123·13**	**1146**	·038	45	—·006	—**0·00**	+**0**	+·050
32	·005	**115·73**	**1088**	·039	46	·006	**11·00**	**117**	·051
33	·005	**108·13**	**1027**	·040	47	·006	**22·33**	**241**	·052
34	·005	**100·40**	**963**	·041	48	·006	**34·13**	**372**	·052
35	·005	**92·47**	**895**	·042	49	·006	**46·40**	**509**	·053
36	·005	**84·33**	**824**	·043	50	·006	**59·20**	**655**	·054
37	·005	**76·00**	**750**	·044	51	·006	**72·53**	**809**	·055
38	·006	**67·47**	**672**	·045	52	·006	**86·40**	**972**	·057
39	·006	**58·67**	**590**	·046	53	·006	**100·93**	**1145**	·057
40	·006	**49·60**	**504**	·047	54	·006	**116·20**	**1329**	·057
41	·006	**40·33**	**412**	·048	55	·006	**132·13**	**1524**	·058
42	·006	**30·73**	**317**	·048	56	—·006	—**148·93**	+**1732**	+·059
43	·006	**20·80**	**217**	·049					
44	—·006	+**10·53**	—**111**	+·049					

Polaris Z. Dist. = 45° 3′.

1889.	α CYGNI, S. P.					
Z.	S. T.			Az. W.		
90° 7′ N.	8h 27m.			1° 42′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	....	55·48	+·073	....	56	—·87
" 20	....	56·02	·087	....	52	1·03
February 9	....	56·16	·087	....	51	1·03
March 1	....	56·25	·080	....	54	·95
" 21	....	56·22	·067	....	60	·79
April 10	....	56·07	·053	....	67	·63
" 30	....	56·00	·033	....	77	·39
May 20	....	56·12	·027	....	84	·32
June 9	....	56·02	·007	....	91	·08
" 29	....	56·16	·000	....	94	·00
July 19	....	56·35	·000	....	95	·00
August 8	....	56·65	·000	....	93	·00
" 28	....	56·92	·013	....	89	·16
September 17	....	57·25	·027	....	81	·32
October 7	....	57·73	·040	....	72	·47
" 27	....	58·26	·067	....	62	·79
November 16	....	58·53	·087	....	51	1·03
December 6	....	59·04	·107	....	42	1·26
" 26	....	59·54	+·127	....	33	—1·50

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	″						
28									
29									
30					°		*s.*	″	
31					45	—·014	— 0·00	+ 0	+·150
32					46	·014	10·40	112	·151
33					47	·014	21·20	229	·152
34					48	·014	32·40	353	·152
35		Invisible			49	·014	44·07	484	·153
36					50	·014	56·20	622	·154
37					51	·014	69·10	769	·155
38					52	·014	82·30	924	·156
39					53	·015	96·10	1088	·157
40					54	·015	110·57	1263	·157
41					55	·015	125·77	1448	·158
42					56	—·015	—141·70	+1645	+·159
43									
44									

Polaris Z. Dist. = 45° 22′.

1889.	η CEPHEI, S. P.					
Z.	S. T.			Az. W.		
73° 36′ N.	8h 29m			1° 42′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 9	—·053	**15·44**	+·080	+·55	**44**	—·88
" 20	·060	**15·85**	·093	·62	**40**	1·03
February 9	·060	**16·00**	·093	·62	**39**	1·03
March 1	·053	**16·07**	·087	·55	**42**	·96
" 21	·047	**15·95**	·073	·48	**48**	·81
April 10	·040	**15·89**	·060	·42	**55**	·66
" 30	·020	**15·62**	·040	·21	**64**	·44
May 20	·013	**15·80**	·027	·14	**72**	·29
June 9	·000	**15·53**	·013	·00	**78**	·15
" 29	·000	**15·65**	·000	·00	**82**	·00
July 19	·000	**15·88**	·000	·00	**83**	·00
August 8	·000	**16·07**	·007	·00	**81**	·07
" 28	·007	**16·47**	·013	·07	**77**	·15
September 17	·020	**16·87**	·027	·21	**69**	·29
October 7	·020	**17·27**	·053	·21	**60**	·59
" 27	·040	**17·74**	·073	·42	**50**	·81
November 16	·060	**18·33**	·093	·62	**39**	·96
December 6	·073	**18·89**	·107	·76	**30**	1·18
" 26	—·093	**19·94**	+·127	+·90	**21**	—1·40

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b′	S. T.	Az.	*c.*
°		*s.*	″						
28	—·020	+**137·00**	—**1236**	+·130					
29	·020	**130·73**	**1188**	·135					
30	·020	**123·60**	**1138**	·130	°		*s.*	″	
31	·020	**116·73**	**1086**	·135	45	—·021	— **0·00**	+ **0**	+·158
32	·020	**109·73**	**1031**	·130	46	·021	**10.40**	**111**	·161
33	·020	**102·53**	**973**	·135	47	·022	**21·20**	**229**	·164
34	·021	**95·20**	**912**	·140	48	·022	**32·33**	**352**	·167
35	·021	**87·67**	**849**	·145	49	·022	**44·00**	**483**	·170
36	·021	**80·00**	**781**	·140	50	·023	**56·07**	**621**	·173
37	·021	**72·08**	**710**	·145	51	·023	**68·73**	**767**	·176
38	·021	**64·00**	**637**	·140	52	·023	**81·87**	**922**	·179
39	·021	**55·67**	**559**	·145	53	·023	**95·67**	**1086**	·182
40	·021	**47·07**	**477**	·150	54	·024	**110.13**	**1260**	·185
41	·021	**38.27**	**391**	·155	55	·024	**125·27**	**1445**	·188
42	·021	**29·13**	**301**	·150	56	—·024	—**141·13**	+**1642**	+·191
43	·021	**19·73**	**206**	·155					
44	—·021	+ **10·07**	— **105**	+·150					

Polaris Z. Dist. = 45° 23′.

1889.	ι URSÆ MAJORIS.						
	Z.	S. T.			Az. W.		
	3° 29′ N.	8h 52m			1° 38′.		
	t.	s.	t'.	a.	$''$	a'.
January 0	—·047	**12·70**	+·080	+·49	**44**	—·88
" 20	·060	**13·23**	·093	·63	**39**	·03
February 9	·060	**13·48**	·093	·63	**37**	1·03
March 1	·060	**13·49**	·093	·63	**39**	1·03
" 21	·047	**13·27**	·080	·49	**44**	1·88
April 10	·047	**12·84**	·067	·49	**51**	·74
" 30	·033	**12·43**	·047	·35	**60**	·52
May 20	·020	**12·06**	·033	·21	**69**	·37
June 9	·007	**11·75**	·020	·07	**75**	·22
" 29	·000	**11·67**	·007	·00	**80**	·07
July 19	·000	**11·70**	·000	·00	**82**	·00
August 8	·000	**11·87**	·007	·00	**81**	·07
" 28	·007	**12·27**	·013	·07	**77**	·14
September 17	·013	**12·77**	·027	·14	**71**	·29
October 7	·027	**13·42**	·040	·28	**62**	·44
" 27	·047	**14·25**	·060	·49	**53**	·66
November 16	·053	**15·02**	·087	·56	**42**	·96
December 6	·067	**15·85**	·107	·70	**32**	1·18
" 26	—·080	**16·58**	+·127	+·84	**23**	1·40

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		s.	$''$		°		s.	$''$	
28	+·006	+**131·60**	—**1188**	+·149					
29	·005	**125·27**	**1142**	·152					
30	·005	**118·80**	**1092**	·154					
31	·005	**112·20**	**1044**	·157	45	+·001	—**0·00**	+**0**	+·192
32	·005	**105·40**	**991**	·159	46	·001	**10·00**	**105**	·196
33	·004	**98·53**	**936**	·162	47	·000	**20·33**	**219**	·200
34	·004	**91·46**	**877**	·164	48	+·000	**31·13**	**338**	·204
35	·004	**84·27**	**816**	·167	49	—·000	**42·47**	**464**	·208
36	·004	**76·87**	**751**	·169	50	·001	**53·93**	**597**	·213
37	·003	**69·27**	**683**	·172	51	·001	**66·07**	**737**	·217
38	·003	**61·47**	**612**	·174	52	·001	**78·73**	**886**	·221
39	·003	**53·47**	**538**	·177	53	·002	**92·00**	**1043**	·225
40	·002	**45·20**	**459**	·179	54	·002	**105·87**	**1211**	·229
41	·002	**36·73**	**376**	·182	55	·003	**120·40**	**1389**	·233
42	·002	**28·00**	**289**	·184	56	—·003	—**135·67**	+**1578**	+·238
43	·002	**18·93**	**198**	·187					
44	+·001	+**9·60**	—**101**	+·189					

Polaris Z. Dist. = 45° 13′.

1889.	*a* CEPHEI, S.P.					
Z.	S. T.			Az. W.		
72° 53′ N.	9h 2m.			1° 36′		
	t.	*s*.	*t′*.	*a*.	*″*	*a*.
January 0	—·053	**43·82**	+·073	+·53	**35**	—·79
" 20	·067	**44·45**	·087	·67	**29**	·94
February 9	·067	**44·53**	·093	·67	**27**	1·01
March 1	·067	**44·66**	·087	·67	**28**	·94
" 21	·060	**44·59**	·080	·60	**33**	·87
April 10	·047	**44·45**	·067	·47	**40**	·72
" 30	·033	**44·34**	·053	·33	**49**	·51
May 20	·027	**44·36**	·033	·27	**57**	·36
June 9	·013	**44·18**	·013	·13	**64**	·14
" 29	·007	**44·27**	·000	·07	**69**	·00
July 19	·007	**44·37**	·000	·07	**71**	·00
August 8	·000	**44·56**	·000	·00	**71**	·00
" 28	·013	**44·89**	·007	·13	**67**	·07
September 17	·020	**45·19**	·020	·20	**62**	·22
October 7	·033	**45·66**	·033	·33	**52**	·36
" 27	·040	**46·05**	·060	·40	**44**	·65
November 16	·060	**46·65**	·073	·60	**33**	·79
December 6	·073	**47·23**	·100	·73	**23**	1·08
" 26	—·080	**47·75**	+·120	+·80	**14**	—1·30

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c*.	L.	b.	S. T.	Az.	*c*.
°		*s*.	*″*						
28	—·025	+**128·80**	—**1162**	+·174					
29	·025	**122·54**	**1117**	·177					
30	·025	**116·20**	**1070**	·179	°		*s*.	*″*	
31	·026	**109·74**	**1021**	·182	45	—·029	—**0·00**	+**0**	+·217
32	·026	**103·14**	**969**	·184	46	·030	**9·73**	**104**	·222
33	·026	**96·40**	**915**	·187	47	·030	**19·87**	**215**	·227
34	·026	**89·53**	**858**	·189	48	·031	**30·40**	**331**	·232
35	·027	**82·47**	**798**	·192	49	·031	**41·33**	**454**	·237
36	·027	**75·20**	**735**	·194	50	·032	**52·67**	**583**	·242
37	·027	**67·80**	**668**	·197	51	·032	**64·53**	**721**	·247
38	·027	**60·13**	**599**	·199	52	·033	**76·93**	**866**	·252
39	·028	**52·33**	**525**	·202	53	·033	**89·86**	**1020**	·257
40	·028	**44·27**	**449**	·204	54	·034	**103·47**	**1184**	·262
41	·028	**36·00**	**367**	·207	55	·034	**117·67**	**1358**	·267
42	·029	**27·40**	**283**	·209	56	—·035	—**132·67**	+**1543**	+·272
43	·029	**18·60**	**194**	·212					
44	—·029	+**9·47**	—**99**	+·214					

Polaris Z. Dist. = 45° 37′.

1889.		α HYDRÆ.					
Z.		S. T.			Az. W.		
53° 11′ S.		9h 17m			1° 33′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	—·053	**6·26**	+·073	+ ·47	**19**	— ·78
" 20	·067	**7·06**	·093	·58	**12**	·99
February 9	·067	**7·34**	·093	·58	**10**	·99
March 1	·060	**7·30**	·093	·52	**11**	·99
" 21	·060	**6·89**	·087	·52	**15**	·92
April 10	·047	**6·24**	·073	·41	**22**	·78
" 30	·033	**5·55**	·053	·29	**31**	·56
May 20	·027	**4·88**	·040	·23	**39**	·42
June 9	·013	**4·19**	·020	·12	**47**	·21
" 29	·007	**3·80**	·007	·06	**52**	·07
July 19	·000	**3·57**	·007	·00	**54**	·07
August 8	·000	**3·65**	·000	·00	**55**	·00
" 28	·007	**4·05**	·007	·06	**52**	·07
September 17	·013	**4·64**	·020	·12	**47**	·21
October 7	·020	**5·48**	·040	·17	**39**	·42
" 27	·040	**6·55**	·053	·35	**30**	·56
November 16	·047	**7·77**	·080	·41	**19**	·85
December 6	·067	**8·94**	·093	·58	**9**	·90
" 26	—·080	**9·99**	+·113	+ ·70	**0**	—1·29

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″						
28	—·007	+**124·40**	—**1122**	+·185					
29	·007	**118·39**	**1079**	·188					
30	·008	**112·27**	**1034**	·192	°		*s.*	″	
31	·008	**106·07**	**987**	·195	45	—·013	— **0·00**	+ **0**	+·242
32	·008	**99·67**	**937**	·198	46	·013	**9·47**	**101**	·249
33	·009	**93·13**	**885**	·202	47	·014	**19·20**	**208**	·257
34	·009	**86·47**	**829**	·205	48	·014	**29·40**	**320**	·264
35	·009	**79·67**	**771**	·208	49	·015	**39·93**	**439**	·272
36	·010	**72·67**	**710**	·212	50	·015	**50·93**	**564**	·279
37	·010	**65·47**	**647**	·215	51	·015	**62·40**	**697**	·287
38	·010	**58·13**	**579**	·218	52	·016	**74·40**	**837**	·294
39	·011	**50·53**	**509**	·222	53	·016	**86·93**	**986**	·302
40	·011	**42·73**	**434**	·225	54	·017	**100·00**	**1144**	·309
41	·011	**34·73**	**356**	·228	55	·017	**113·80**	**1310**	·317
42	·012	**26·47**	**273**	·232	56	—·018	—**128·27**	+**1491**	+·324
43	·012	**17·93**	**187**	·235					
44	—·012	+ **9·13**	— **96**	+·238					

Polaris Z. Dist. = 45° 38′.

1889.	*a* LEONIS (*Regulus*).					
Z.	S. T.			Az. W.		
32° 29′ S.	9h 59m			1° 21′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	—·053	**27·67**	—·067	+ ·40	**41**	— ·87
" 20	·060	**28·41**	·087	·45	**33**	1·13
February 9	·073	**28·91**	·087	·55	**29**	1·13
March 1	·067	**29·06**	·093	·50	**28**	1·21
" 21	·067	**28·86**	·087	·50	**31**	1·13
April 10	·060	**28·47**	·073	·45	**37**	·95
" 30	·047	**27·89**	·060	·35	**45**	·78
May 20	·033	**27·43**	·047	·25	**53**	·61
June 9	·027	**26·89**	·020	·20	**62**	·26
" 29	·013	**26·36**	·013	·10	**68**	·17
July 19	·007	**26·26**	·000	·05	**73**	·00
August 8	·000	**26·15**	·000	·10	**74**	·00
" 28	·007	**26·37**	·000	·05	**74**	·00
September 17	·013	**26·76**	·007	·10	**70**	·09
October 7	·020	**27.35**	·020	·15	**64**	·26
" 27	·033	**28·20**	·033	·25	**56**	·43
November 16	·047	**29·15**	·053	·35	**46**	·69
December 6	·060	**30·21**	·080	·45	**36**	1·04
" 26	—·073	**31·19**	—·100	+ ·35	**26**	—1·30

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*		°		*s.*	*″*	
28	—·004	+ **109 00**	— **982**	—·246					
29	·004	**103·73**	**945**	·250					
30	·005	**98·33**	**905**	·254	45	—·011	+ **0·00**	+ **0**	+ ·317
31	·005	**92·87**	**863**	·258	46	·012	**8·20**	**89**	·323
32	·005	**87·33**	**820**	·262	47	·012	**16·80**	**182**	·330
33	·006	**81·60**	**774**	·267	48	·013	**25·73**	**281**	·337
34	·006	**75·73**	**725**	·271	49	·014	**34·93**	**384**	·343
35	·007	**69·80**	**675**	·275	50	·014	**44·60**	**494**	·350
36	·007	**63·67**	**621**	·279	51	·015	**54·60**	**610**	·357
37	008	**57·33**	**565**	·283	52	·016	**65·13**	**734**	·363
38	·008	**50·93**	**506**	·287	53	·016	**76·07**	**864**	·370
39	·008	**44·27**	**444**	·292	54	·017	**87·53**	**1002**	·377
40	·009	**37·47**	**379**	·296	55	·018	**99·60**	**1150**	·383
41	·009	**30·53**	**311**	·300	56	—·018	+ **112·27**	+ **1306**	+ ·390
42	·010	**23·27**	**239**	·304					
43	·010	**15·73**	**163**	·308					
44	—·011	+ **8·00**	— **83**	—·313					

Polaris Z. Dist. = 45°49′.

1889.	β URSÆ MAJORIS.					
Z.	S. T.			Az. W.		
11° 59′ N.	10h 56m			1° 1′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	—·040	**42·14**	+·060	+ ·36	**49**	— ·71
" 20	·060	**42·81**	·080	·54	**40**	·94
February 9	·067	**43·41**	·087	·60	**34**	1·02
March 1	·073	**43·70**	·093	·66	**31**	1·10
" 21	·073	**43·80**	·093	·66	**32**	1·10
April 10	·067	**43·63**	·086	·60	**35**	1·02
" 30	·053	**43·39**	·073	·48	**42**	·86
May 20	·047	**43·06**	·060	·42	**50**	·71
June 9	·027	**42·72**	·040	·24	**59**	·47
" 29	·020	**42·45**	·020	·18	**67**	·24
July 19	·007	**42·24**	·013	·06	**73**	·16
August 8	·000	**42·12**	·000	·00	**77**	·00
" 28	·000	**42·18**	·000	·00	**79**	·00
September 17	·007	**42·34**	·000	·06	**78**	·00
October 7	·013	**42·73**	·007	·12	**74**	·08
" 27	·020	**42·86**	·020	·18	**68**	·24
November 16	·033	**43·84**	·040	·30	**59**	·47
December 6	·047	**44·68**	·060	·42	**50**	·71
" 26	—·060	**45·49**	+·073	+ ·54	**40**	— ·86

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b′	S. T.	Az.	c.
°		*s.*	″						
28	+·018	+ **82·47**	— **744**	+·284					
29	·018	**78·47**	**716**	·290					
30	·017	**74·40**	**686**	·296	°		*s.*	″	
31	·017	**70·33**	**654**	·302	45	+·010	— **0·00**	+ **0**	+·383
32	·016	**66·13**	**621**	·308	46	·009	**6·27**	**67**	·392
33	·016	**61·80**	**586**	·313	47	·008	**12·73**	**138**	·400
34	·015	**57·33**	**550**	·319	48	·008	**19·47**	**212**	·408
35	·015	**52·87**	**511**	·325	49	·007	**26·47**	**291**	·417
36	·014	**48·20**	**471**	·331	50	·006	**33·80**	**374**	·425
37	·014	**43·47**	**428**	·337	51	·005	**41·40**	**462**	·433
38	·013	**38·53**	**384**	·348	52	·005	**49·33**	**555**	·442
39	·013	**33·53**	**337**	·348	53	·004	**57·60**	**654**	·450
40	·012	**28·40**	**287**	·354	54	·003	**66·27**	**759**	·458
41	·012	**23·07**	**236**	·360	55	·002	**75·40**	**870**	·467
42	·011	**17·53**	**181**	·366	56	+·001	— **85·00**	+ **989**	+·475
43	·011	**11·93**	**124**	·372					
44	+·010	+ **6·07**	— **63**	+·378					

Polaris Z. Dist. = 46° 3′.

1889.	*a* URSÆ MAJORIS.					
Z.	S. T.			Az. W.		
16° 21′ N.	10h 59m			1° 0′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	—·040	**28·20**	+·067	+ ·36	**45**	— ·87
" 20	·053	**28·79**	·080	·48	**36**	1·04
February 9	·080	**29·37**	·093	·54	**30**	1·21
March 1	·067	**30·11**	·100	·60	**27**	1·30
" 21	·067	**30·21**	·100	·60	**28**	1·30
April 10	·060	**29·64**	·093	·54	**31**	1·21
" 30	·047	**29·43**	·080	·42	**38**	1·04
May 20	·040	**29·12**	·060	·36	**46**	·78
June 9	·027	**28·78**	·047	·24	**55**	·61
" 29	·013	**28·60**	·027	·12	**62**	·35
July 19	·013	**28·42**	·013	·12	**69**	·17
August 8	·007	**28·37**	·000	·06	**73**	·00
" 28	·000	**28·40**	·000	·00	**75**	·00
September 17	·000	**28·50**	·007	·00	**74**	·09
October 7	·007	**28·81**	·007	·06	**70**	·09
" 27	·013	**29·23**	·013	·12	**64**	·17
November 16	·027	**29·93**	·040	·24	**56**	·52
December 6	·040	**30·65**	·060	·36	**46**	·78
" 26	—·053	**31·40**	+·080	+ ·48	**36**	—1·04

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	″						
28	+·026	+ **81·06**	— **732**	+·290					
29	·026	**77·19**	**704**	·295					
30	·025	**73·19**	**675**	·300	°		*s.*	″	
31	·025	**69·12**	**644**	·305	45	+·016	— **0·00**	+ **0**	+·375
32	·024	**64·92**	**611**	·310	46	·015	**6.20**	**65**	·383
33	·024	**60·72**	**577**	·315	47	·015	**12·60**	**135**	·390
34	·023	**56·32**	**541**	·320	48	·014	**19·20**	**208**	·398
35	·022	**51.92**	**503**	·325	49	·013	**26·07**	**286**	·405
36	·021	**47·32**	**463**	·330	50	·013	**33·27**	**367**	·413
37	·021	**42·66**	**421**	·335	51	·012	**40·73**	**454**	·420
38	·020	**37·86**	**378**	·340	52	·011	**48·53**	**545**	·428
39	·020	**32·92**	**331**	·345	53	·010	**56·67**	**643**	·435
40	·019	**27·86**	**283**	·350	54	·010	**65·27**	**746**	·443
41	·018	**22·60**	**232**	·355	55	·009	**74·20**	**857**	·450
42	·018	**17·20**	**179**	·360	56	+·008	— **83·67**	+ **572**	+·498
43	·017	**11·67**	**122**	·365					
44	+·017	+ **5·93**	— **63**	+·370					

Polaris Z. Dist. = 46° 3′.

1889.	γ CEPHEI, S. P.						
Z.	S. T.			Az. W.		
57° 59′ N.	11ʰ 21ᵐ			0° 51′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	—·040	**42.53**	+·060	+ ·38	**55**	— 78
" 20	·053	**43·28**	·080	·51	**46**	1·04
February 9	·067	**43·49**	·093	·64	**39**	1·21
March 1	·073	**43·59**	·100	·70	**35**	1·30
" 21	·073	**44·09**	·093	·70	**35**	1·21
April 10	·067	**44·03**	·093	·54	**38**	1·04
" 30	·060	**43·89**	·080	·57	**44**	0·87
May 20	·053	**43·86**	·067	·45	**52**	·61
June 9	·040	**43·56**	053	·28	**60**	·17
" 29	·027	**43·39**	·033	·25	**68**	·43
July 19	·013	**43·31**	·020	·13	**75**	·26
August 8	·013	**43·36**	·007	·13	**80**	·09
" 28	·000	**43·37**	·000	·00	**83**	·00
September 17	·000	**43·35**	·007	·00	**83**	·09
October 7	·007	**43·61**	·013	·06	**80**	·17
" 27	·013	**43·94**	·020	·13	**75**	·26
November 16	·027	**44·29**	·033	·25	**68**	·43
December 6	·040	**44·90**	·047	·38	**59**	·61
" 26	—·053	**45·41**	+·067	+ ·51	**49**	— ·87

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	—·103	+ **69·40**	— **626**	+·351					
29	·104	**66·00**	**602**	·357					
30	·104	**62·60**	**577**	·360	°		*s.*	*″*	
31	·105	**59·13**	**550**	·368	45	—·114	— **0·00**	+ **0**	+·450
32	·106	**55·53**	**523**	·374	46	·115	**5·27**	**56**	·467
33	·106	**51·93**	**493**	·380	47	·116	**10·73**	**115**	·483
34	·107	**48·20**	**463**	·386	48	·117	**16·40**	**178**	·500
35	·108	**44·40**	**430**	·392	49	·118	**22·33**	**244**	·517
36	108	**40·47**	**396**	·498	50	·119	**28·40**	**314**	·535
37	·109	**36·47**	**360**	·403	51	·120	**34·80**	**388**	·550
38	·110	**32·40**	**323**	·409	52	·121	**41·47**	**467**	·567
39	·110	**28·13**	**283**	·415	53	·122	**48·47**	**550**	·585
40	·111	**23·80**	**242**	·421	54	·122	**55·80**	**638**	·600
41	·112	**19·33**	**198**	·427	55	·123	**63·47**	**731**	·617
42	·112	**14·73**	**153**	·433	56	—·124	— **71·54**	+ **831**	+·633
43	·113	**10·00**	**104**	·438					
44	—·114	+ **5·07**	— **54**	+·444					

Polaris Z. Dist. = 46° 8′.

1889.	λ DRACONIS.					
Z.	S. T.			Az. W.		
22° 57′ N.	11h 28m			0° 48′		
	t.	*s.*	*t′.*	*a.*	″	*a.*
January 0	—·033	**48·97**	+·060	+ ·30	**60**	— ·62
" 20	·053	**49·60**	·080	·48	**50**	·83
February 9	·060	**50·17**	·093	·54	**43**	·96
March 1	·067	**50·56**	·100	·60	**39**	1·03
" 21	·067	**50·72**	·107	·60	**39**	1·10
April 10	·060	**50·68**	·100	·54	**39**	1·03
" 30	·053	**50·61**	·087	·48	**47**	·89
May 20	·047	**50·20**	·073	·42	**55**	·76
June 9	·027	**49·96**	·060	·24	**63**	·62
" 29	·020	**49·76**	·033	·18	**72**	·34
July 19	·013	**49·54**	·020	·12	**79**	·21
August 8	·007	**49·40**	·013	·06	**84**	·14
" 28	·000	**49·35**	·007	·00	**87**	·07
September 17	·000	**49·51**	·000	·00	**88**	·00
October 7	·000	**49·66**	·013	·00	**84**	·14
" 27	·013	**50·11**	·013	·12	**80**	·14
November 16	·020	**50·64**	·033	·18	**73**	·34
December 6	·033	**51·44**	·053	·30	**64**	·55
" 26	—·047	**52·13**	+·067	+ ·42	**54**	— ·62

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″						
28	+·042	+ **65·47**	— **592**	+·301					
29	·042	**62·33**	**569**	·307					
30	·041	**59·13**	**545**	·312	°		*s.*	″	
31	·041	**55·80**	**520**	·318	45	+·033	— **0·00**	+ **0**	+·400
32	·040	**52·47**	**494**	·324	46	·032	**5·00**	**53**	·410
33	·040	**49·00**	**466**	·330	47	·031	**10·13**	**109**	·420
34	·039	**45·53**	**437**	·336	48	·030	**15·47**	**168**	·430
35	·038	**41·93**	**406**	·342	49	·030	**21·07**	**230**	·440
36	·038	**38·20**	**374**	·348	50	·029	**26·87**	**296**	·450
37	·037	**34·47**	**340**	·353	51	·028	**32·87**	**366**	·460
38	·037	**30·60**	**305**	·359	52	·027	**39·20**	**440**	·470
39	·036	**26·60**	**268**	·365	53	·027	**45·80**	**519**	·480
40	·036	**22·47**	**229**	·371	54	·026	**52·67**	**602**	·490
41	·035	**18·27**	**187**	·377	55	·025	**59·93**	**690**	·500
42	·035	**13·93**	**144**	·383	56	+·024	— **67·53**	+ **784**	+·510
43	·034	**9·40**	**99**	·388					
44	+·033	+ **4·80**	— **51**	+·394					

Polaris Z. Dist. = 46° 8′.

1889.	γ CORVI.						
Z.	S. T.			Az. W.		
61° 54′ S.	12h 8m			0° 31′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	—·033	**6·77**	+·053	+ ·29	**66**	— ·69
" 20	·053	**8·08**	·073	·47	**56**	·95
February 9	·067	**9·08**	·087	·58	**48**	1·13
March 1	·073	**9·77**	·100	·64	**42**	1·30
" 21	·080	**10·10**	·100	·70	**40**	1·30
April 10	·037	**10·02**	·100	·58	**41**	1·30
" 30	·067	**9·69**	·093	·78	**46**	1·21
May 20	·053	**9.07**	·080	·47	**53**	1·04
June 9	·040	**8·35**	·066	·35	**62**	·78
" 29	·033	**7·60**	·040	·29	**71**	·52
July 19	·020	**6·90**	·027	·17	**79**	·35
August 8	·007	**6·24**	·013	·06	**84**	·17
" 28	·007	**5·85**	·007	·06	**90**	·09
September 17	·000	**5·62**	·000	·00	**93**	·00
October 7	·000	**5.87**	·000	·00	**92**	·00
" 27	·007	**6·36**	·007	·06	**89**	·09
November 16	·013	**7·16**	·020	·12	**83**	·26
December 6	·027	**8·30**	·033	·23	**75**	·43
" 26	—·040	**9·58**	+·053	+ ·35	**65**	— ·79

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	—·017	+ **43·13**	— **389**	+·345					
29	·018	**41·07**	**374**	·352					
30	·018	**38·93**	**358**	·358	°		*s.*	*″*	
31	·019	**36·73**	**341**	·365	45	—·028	— **0·00**	+ **0**	+·458
32	·020	**34·53**	**324**	·372	46	·029	**3·27**	**35**	·468
33	·020	**32·27**	**306**	·378	47	·030	**6·67**	**72**	·478
34	·021	**30·00**	**287**	·385	48	·031	**10·20**	**111**	·488
35	·022	**27·60**	**267**	·392	49	·032	**13·80**	**152**	·498
36	·022	**25·20**	**246**	·398	50	·033	**17·67**	**196**	·508
37	·023	**22·67**	**223**	·405	51	·034	**21·60**	**242**	·518
38	·024	**20·13**	**200**	·412	52	·035	**25·73**	**290**	·528
39	·024	**17·53**	**175**	·418	53	·035	**30·07**	**342**	·538
40	·025	**14·80**	**150**	·425	54	·036	**34.67**	**397**	·548
41	·026	**12·07**	**123**	·432	55	·037	**39·40**	**455**	·558
42	·026	**9·20**	**95**	·438	56	—·038	— **44·40**	+ **517**	+·568
43	·027	**6·20**	**65**	·445					
44	—·028	+ **3·20**	— **33**	+·452					

Polaris Z. Dist. = 46° 13′.

1889.	δ CORVI.					
Z. 60° 54′ S.	S. T. 12h 22m			Az. W. 0° 25′		
	t.	*s.*	*t′.*	*a.*	″	*a.*
January 0	—·033	**33·31**	+·060	+·32	**38**	—1·68
" 20	·047	**34·61**	·073	·45	**28**	·83
February 9	·053	**35·62**	·093	·51	**22**	1·05
March 1	·067	**36·41**	·100	·64	**14**	1·13
" 21	·067	**36·83**	·107	·70	**11**	1·20
April 10	·073	**36·85**	·107	·64	**12**	1·20
" 30	·067	**36·54**	·100	·64	**16**	1·13
May 20	·053	**35·94**	·087	·51	**23**	·98
June 9	·047	**35·36**	·073	·45	**33**	·83
" 29	·033	**34·44**	·053	·32	**40**	·53
July 19	·020	**33·79**	·033	·19	**49**	·38
August 8	·007	**33·18**	·020	·06	**56**	·23
" 28	·000	**32·71**	·007	·00	**61**	·08
September 17	·000	**32·46**	·000	·00	**64**	·00
October 7	·000	**32·57**	·000	·00	**64**	·00
" 27	·000	**33·05**	·007	·00	**62**	·08
November 16	·013	**33·83**	·013	·13	**56**	·15
December 6	·020	**34·83**	·033	·19	**49**	·38
" 26	—·033	**36·11**	+·053	+·32	**39**	—·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″						
28	—·018	+ **34·43**	— **311**	+·353					
29	·019	**32·87**	**299**	·360					
30	·019	**31·13**	**287**	·367	°		*s.*	″	
31	·020	**29·40**	**274**	·373	45	—·029	— **0·00**	+ **0**	+·467
32	·021	**27·67**	**260**	·380	46	·030	**2·60**	**28**	·478
33	·021	**25·87**	**245**	·387	47	·031	**5·33**	**58**	·489
34	·022	**24·00**	**230**	·393	48	·032	**8·13**	**89**	·498
35	·023	**22·07**	**214**	·400	49	·033	**11·07**	**122**	·510
36	·023	**20·13**	**197**	·407	50	·034	**14·13**	**157**	·521
37	·024	**18·20**	**179**	·443	51	·035	**17·33**	**194**	·532
38	·025	**16·13**	**161**	·420	52	·036	**20·67**	**233**	·542
39	·025	**14·00**	**141**	·427	53	·037	**24·13**	**274**	·553
40	·026	**11·87**	**120**	·433	54	·038	**27·73**	**318**	·564
41	·027	**9·60**	**98**	·440	55	·039	**31·60**	**364**	·575
42	·027	**7·33**	**76**	·447	56	—·040	— **35·60**	+ **414**	+·586
43	·028	**5·05**	**52**	·453					
44	—·029	+ **2·53**	— **26**	+·460					

Polaris Z. Dist. = 46° 15′.

1889.	α CASSIOPEIÆ, S. P.					
Z.	S. T.			Az. W.		
79° 4′ N.	12h 31m			0° 21′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	—·033	**41·14**	+·053	+ ·32	**30**	— ·64
" 20	·020	**41·68**	·033	·19	**21**	·40
February 9	·013	**42·07**	·013	·13	**12**	·16
March 1	·000	**42·43**	·007	·00	**6**	·08
" 21	·000	**42·62**	·000	·00	**3**	·00
April 10	·000	**42·77**	·000	·00	**3**	·00
" 30	·007	**42·76**	·007	·00	**8**	·08
May 20	·020	**42·80**	·020	·06	**14**	·24
June 9	·040	**42·67**	·033	·19	**22**	·40
" 29	·047	**42·55**	·047	·38	**30**	·56
July 19	·060	**42.79**	·067	·45	**39**	·80
August 8	·080	**42·46**	·080	·57	**46**	·96
" 28	·073	**42·35**	·080	·70	**51**	·96
September 17	·073	**42·31**	·100	·70	**55**	1·20
October 7	·073	**42·58**	·100	·70	**55**	1·20
" 27	·060	**42.74**	·93	·70	**53**	1·12
November 16	·053	**43·08**	·87	·57	**48**	1·04
December 6	·040	**43·48**	·73	·51	**41**	·88
" 26	—·040	**44·02**	+ ·53	+ ·38	**32**	— ·64

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	—·043	+ **27·87**	— **251**	+·370					
29	·044	**26·53**	**242**	·377					
30	·044	**25·13**	**232**	·383	°		*s.*	*″*	
31	·045	**23·73**	**222**	·390	45	—·056	— **0·00**	+ **0**	+·483
32	·046	**22·33**	**210**	·397	46	·057	**2·13**	**23**	·494
33	·047	**20·87**	**199**	·403	47	·058	**4·33**	**47**	·504
34	·048	**19·40**	**186**	·410	48	·059	**6·60**	**72**	·516
35	·048	**17·87**	**173**	·417	49	·060	**8·93**	**98**	·527
36	·049	**16·27**	**159**	·423	50	·061	**11·40**	**126**	·537
37	·050	**14·67**	**145**	·430	51	·062	**14·00**	**153**	·548
38	·051	**13·00**	**130**	·437	52	·063	**16.67**	**188**	·559
39	·051	**11·33**	**114**	·443	53	·064	**19·47**	**221**	·570
40	·053	**9·60**	**97**	·450	54	·065	**22·40**	**257**	·581
41	·054	**7·80**	**80**	·457	55	·066	**25·53**	**294**	·592
42	·055	**5·93**	**61**	·463	56	—·067	— **28·73**	+ **334**	+·602
43	·055	**4·00**	**42**	·470					
44	—·056	+ **2·00**	— **21**	+·477					

Polaris Z. Dist. = 46° 15′.

1889.	γ CASSIOPEIÆ, S. P.					
Z.	S. T.			Az. W.		
74° 53′ N.	12h 48m			0° 13′		
	t.	*s.*	*t′.*	*a.*	*″*	*a.*
January 0	—·040	**12·03**	+·060	+ ·48	**57**	—1·64
" 20	·027	**12·60**	·040	·32	**47**	·42
February 9	·013	**13·02**	·027	·16	**39**	·28
March 1	·000	**13·40**	·013	·00	**32**	·14
" 21	·000	**13·63**	·000	·00	**29**	·00
April 10	·000	**13·80**	·000	·00	**28**	·00
" 30	·000	**13·84**	·013	·00	**32**	·14
May 20	·007	**13·84**	·020	·08	**38**	·21
June 9	·020	**13·71**	·033	·24	**45**	·35
" 29	·033	**13·61**	·053	·40	**52**	·56
July 19	·047	**13·56**	·073	·56	**63**	·78
August 8	·053	**13·48**	·093	·64	**71**	·99
" 28	·067	**13·40**	·100	·80	**76**	1·06
September 17	·073	**13·30**	·107	·88	**81**	1·13
October 7	·067	**13·42**	·113	·80	**82**	1·20
" 27	·067	**13·62**	·113	·80	**80**	1·20
November 16	·060	**13·91**	·107	·72	**72**	1·13
December 6	·053	**14·35**	·087	·64	**70**	·92
" 26	—·047	**14·81**	+·067	+ ·56	**61**	— ·71

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″						
28	—·052	+ **17·87**	— **161**	+·378					
29	·052	**17·00**	**155**	·385					
30	·053	**16·15**	**148**	·392	°		*s.*	″	
31	·054	**15·27**	**142**	·398	45	—·063	— **0·00**	+ **0**	+·492
32	·054	**14·33**	**134**	·405	46	·064	**1·33**	**15**	·503
33	·054	**13·40**	**127**	·412	47	·065	**2·73**	**30**	·515
34	·055	**12·40**	**119**	·418	48	·066	**4·20**	**46**	·527
35	·056	**11·47**	**110**	·425	49	·067	**5·67**	**62**	·538
36	·056	**10·47**	**102**	·432	50	·068	**7·27**	**81**	·550
37	·057	**9·40**	**93**	·438	51	·069	**8·93**	**98**	·562
38	·057	**8·33**	**83**	·445	52	·070	**10·67**	**120**	·573
39	·058	**7·27**	**73**	·452	53	·071	**12·40**	**142**	·585
40	·059	**6·13**	**62**	·458	54	·072	**14·33**	**164**	·597
41	·060	**5·00**	**52**	·465	55	·075	**16·27**	**188**	·608
42	·061	**3·80**	**39**	·472	56	—·074	— **18·33**	+ **214**	+·620
43	·061	**2·60**	**27**	·478					
44	—·062	+ **1·33**	— **14**	+·485					

Polaris Z. Dist. = 46° 16′.

1889.	ε URSÆ MAJOR.					
Z.	S. T.			Az. W.		
11° 34′ N.	12h 49m			0° 12′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	—·033	**26·89**	+·060	+ ·36	**82**	— ·65
" 20	·047	**27·57**	·080	·51	**73**	·87
February 9	·060	**28·15**	·093	·65	**64**	1·01
March 1	·067	**28·77**	·013	·72	**57**	1·23
" 21	·073	**29·12**	·120	·79	**54**	1·30
April 10	·073	**29·25**	·120	·79	**53**	1·30
" 30	·073	**29·25**	·113	·79	**59**	1·23
May 20	·060	**29·06**	·100	·65	**63**	1·08
June 9	·047	**28·79**	·187	·51	**69**	·94
" 29	·040	**28·53**	·067	·43	**79**	·72
July 19	·027	**28·19**	·047	·29	**88**	·51
August 8	·013	**27·38**	·033	·14	**96**	·36
" 28	·007	**27·64**	·020	·07	**102**	·22
September 17	·000	**27·49**	·000	·00	**106**	·00
October 7	·000	**27·48**	·007	·00	**107**	·07
" 27	·000	**27·75**	·013	·00	**106**	·14
November 16	·007	**28·15**	·020	·07	**102**	·22
December 6	·013	**28·74**	·040	·14	**92**	·43
" 26	—·027	**29·51**	+·053	+ ·29	**87**	— ·50

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	+·022	+ **18·20**	— **164**	+·345					
29	·021	**17·33**	**158**	·352					
30	·021	**16·47**	**151**	·358	°		*s.*	*″*	
31	·020	**15·53**	**144**	·365	45	+·011	— **0·00**	+ **0**	+·458
32	·019	**14·60**	**137**	·372	46	·010	**1·40**	**15**	·468
33	·019	**13·67**	**129**	·378	47	·009	**2·87**	**31**	·478
34	·018	**12·67**	**121**	·385	48	·008	**4·33**	**47**	·488
35	·017	**11·67**	**113**	·392	49	·007	**5·87**	**65**	·498
36	·017	**10·67**	**104**	·398	50	·006	**7·47**	**83**	·508
37	·016	**9·60**	**95**	·405	51	·005	**9·13**	**102**	·518
38	·015	**8·53**	**85**	·412	52	·004	**10·93**	**123**	·528
39	·015	**7·40**	**74**	·418	53	·003	**12·73**	**145**	·538
40	·014	**6·27**	**63**	·425	54	·002	**14·67**	**168**	·548
41	·013	**5·07**	**52**	·432	55	·001	**16·67**	**193**	·558
42	·013	**3·87**	**40**	·438	56	+·000	— **18·80**	+ **219**	+·568
43	·012	**2·60**	**27**	·445					
44	+·011	+ **1·33**	— **14**	+·442					

Polaris Z. Dist. = 45° 58′.

1889.	α VIRGINIS (*Spica*).					
Z.	S. T.			Az. E.		
55° 35′ S.	13h 19m			0° 0′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	+·053	**21·06**	—·060	+ ·49	**27**	— ·70
" 20	·033	**22·26**	·040	·31	**37**	·47
February 9	·020	**23·38**	·027	·18	**46**	·31
March 1	·007	**24·26**	·007	·06	**54**	·08
" 21	·000	**24·92**	·007	·00	**59**	·08
April 10	·000	**25·18**	·000	·00	**60**	·00
" 30	·007	**25·14**	·007	·06	**58**	·08
May 20	·013	**24·75**	·013	·12	**53**	·16
June 9	·020	**24·25**	·027	·18	**45**	·31
" 29	·033	**23·61**	·053	·31	**36**	·62
July 19	·047	**22·85**	·067	·43	**31**	·78
August 8	·060	**22·08**	·073	·35	**18**	1·01
" 28	·073	**21·54**	·100	·68	**9**	1·17
September 17	·073	**21·06**	·107	·68	**6**	1·24
October 7	·087	**20·92**	·113	·80	**3**	1·32
" 27	·087	**21·08**	·120	·80	**2**	1·40
November 16	·080	**21·57**	·107	·74	**6**	1·24
December 6	·073	**22·44**	·093	·68	**11**	1·09
" 26	—·060	**23·47**	—·080	+ ·55	**20**	— ·93

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*		°		*s.*	*″*	
28	—·014	— **1·34**	— **12**	—·362					
29	·015	**1·27**	**12**	·368					
30	·015	**1·20**	**11**	·375					
31	·016	**1·14**	**11**	·382	45	—·027	+ **0·00**	+ **0**	+ ·475
32	·017	**1·07**	**10**	·388	46	·028	**0·07**	**1**	·486
33	·018	**1·00**	**10**	·395	47	·029	**0·20**	**3**	·497
34	·018	**0.94**	**9**	·402	48	·029	**0·27**	**4**	·507
35	·019	**0·87**	**8**	·408	49	·030	**0·40**	**5**	·518
36	·020	**0·80**	**7**	·415	50	·031	**0·53**	**6**	·529
37	·021	**0·73**	**7**	·422	51	·032	**0·67**	**8**	·540
38	·021	**0·67**	**6**	·428	52	·033	**0·73**	**9**	·551
39	·022	**0·60**	**5**	·435	53	·034	**0·93**	**11**	·562
40	·023	**0·47**	**4**	·442	54	·035	**1·07**	**13**	·572
41	·024	**0·40**	**4**	·448	55	·036	**1·24**	**14**	·583
42	·024	**0·33**	**3**	·455	56	—·037	+ **1·33**	+ **16**	+ ·594
43	·025	**0·20**	**2**	·462					
44	—·026	— **0·13**	— **1**	—·468					

Polaris Z. Dist. = 46° 17′.

1889.	ζ URSÆ MAJORIS.					
Z.	S. T.			Az. E.		
10° 30′ N.	13h 19m			0° 0′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+·040	25·22	—·067	+·35	29	—·78
" 20	·033	25·93	·047	·25	39	·74
February 9	·020	26·65	·027	·17	48	·51
March 1	·007	27·27	·013	·06	55	·36
" 21	·000	27·70	·007	·00	60	·18
April 10	·000	27·86	·000	·00	61	·00
" 30	·000	27·89	·007	·00	59	·08
May 20	·013	27·79	·007	·12	54	·08
June 9	·020	27·52	·033	·17	47	·39
" 29	·033	27·22	·053	·19	38	·62
July 19	·047	26·81	·067	·41	29	·78
August 8	·060	26·45	·087	·52	20	1·01
" 28	·073	26·16	·100	·64	13	1·17
September 17	·073	26·04	·113	·64	8	1·32
October 7	·080	25·98	·120	·70	5	1·40
" 27	·080	26·13	·120	·70	5	1·40
November 16	·073	26·49	·113	·64	8	1·32
December 6	·067	27·05	·100	·58	14	1·17
" 26	+·060	27·74	·087	+·52	22	1·01

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	″						
28	+·021	— 1·34	— 12	—·359					
29	·021	1·27	12	·365					
30	·020	1·20	11	·371	°		*s.*	″	
31	·019	1·14	11	·377	45	+·010	+ 0·00	+ 0	—·458
32	·019	1·07	10	·383	46	·009	0·13	2	·469
33	·018	1·00	10	·388	47	·008	0·27	3	·480
34	·017	0·94	9	·394	48	·007	0·33	4	·491
35	·017	0·87	8	·400	49	·006	0·47	5	·502
36	·016	0·74	7	·406	50	·005	0·60	7	·512
37	·015	0·67	7	·412	51	·004	0·73	8	·523
38	·015	0·60	6	·418	52	·003	0·87	10	·534
39	·014	0·53	5	·423	53	·002	1·00	11	·545
40	·013	0·47	4	·429	54	·002	1·13	13	·556
41	·013	0·33	3	·435	55	·001	1·26	15	·567
42	·012	0·27	2	·441	56	+·000	+ 1·40	+ 17	·577
43	·011	0·13	1	·447					
44	+·011	— 0·07	— 0	—·453					

Polaris Z. Dist. = 46° 17′.

1889.	β CENTAURI.					
Z.	S. T.			Az. E.		
104° 50′ S.	13h 58m			0° 18′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	+·060	**19·53**	....	+·58	**26**	....
" 20	·047	**21·85**	....	·45	**36**	....
February 9	·033	**24·24**	....	·32	**46**	....
March 1	·013	**26·34**	....	·13	**55**	....
" 21	·007	**27·84**	....	·06	**62**	....
April 10	·000	**28·69**	....	·00	**65**	....
" 30	·000	**28·85**	....	·00	**64**	....
May 20	·007	**28·28**	....	·06	**59**	....
June 9	·020	**27·18**	....	·19	**53**	....
" 29	·033	**25·49**	....	·32	**43**	....
July 19	·047	**23·64**	....	·45	**34**	....
August 8	·060	**21·72**	....	·58	**24**	....
" 28	·073	**19·96**	....	·71	**15**	....
September 17	·080	**18·44**	....	·77	**7**	....
October 7	·087	**17·68**	....	·84	**3**	....
" 27	·093	**17·49**	....	·90	**1**	....
November 16	·093	**18·73**	....	·90	**2**	....
December 6	·087	**19·42**	....	·84	**6**	....
" 26	+·073	**21·43**	....	+·71	**14**	....

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″						
28	—·051	— **25·27**	— **228**	—·364					
29	·052	**24·00**	**219**	·372					
30	·052	**22·80**	**210**	·379	°				
31	—·053	— **21·53**	— **201**	—·387	45	—·044			
32					46	·040			
33					47	·041			
34					48	·042			
35					49	·043			
36					50	·043			
37					51	·044			
38		Invisible			52	·045	Invisible		
39					53	·046			
40					54	·046			
41					55	·047			
42					56	—·048			
43									
44									

Polaris Z. Dist. = 46° 16′.

1889.	*a* BOOTIS (*Arcturus*).					
Z.	S. T.			Az. E.		
25° 14′ S.	14h 11m			0° 23′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+·053	**18·53**	—·080	+ ·51	**84**	—·88
" 20	·040	**19·46**	·060	·39	**89**	·66
February 9	·027	**20·36**	·047	·26	**99**	·52
March 1	·013	**21·18**	·027	·13	**107**	·29
" 21	·013	**21·80**	·013	·13	**114**	·15
April 10	·000	**22·23**	·007	·00	**117**	·07
" 30	·000	**22·31**	·000	·00	**117**	·00
May 20	·007	**22·27**	·013	·06	**113**	·15
June 9	·020	**21·93**	·020	·19	**107**	·22
" 29	·033	**21·49**	·040	·32	**98**	·44
July 19	·040	**21·04**	·060	·39	**89**	·66
August 8	·060	**20·43**	·080	·58	**80**	·88
" 28	·067	**19·87**	·100	·64	**71**	1·11
September 17	·080	**19·43**	·113	·77	**64**	1·25
October 7	·087	**19.17**	·120	·84	**59**	1·33
" 27	·093	**19·06**	·127	·90	**56**	1·40
November 16	·087	**19·36**	·127	·84	**57**	1·40
December 6	·080	**19·92**	·120	·77	**60**	1·33
" 26	+·073	**20·69**	—·107	+ ·71	**67**	—1·18

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*						
28	—·002	— **33·00**	— **298**	—·359					
29	·002	**31·40**	**287**	·365					
30	·003	**29·80**	**275**	·371	°		*s.*	*″*	
31	·004	**28·13**	**262**	·377	45	—·014	+ **0·00**	+ **0**	—·458
32	·005	**26·47**	**249**	·383	46	·015	**2·53**	**27**	·470
33	·005	**24·73**	**235**	·388	47	·016	**5·13**	**55**	·482
34	·006	**22·93**	**220**	·394	48	·017	**7·87**	**85**	·493
35	·007	**21·13**	**205**	·400	49	·018	**10·67**	**118**	·505
36	·007	**19·27**	**189**	·406	50	·019	**13·53**	**152**	·517
37	·008	**17·33**	**172**	·412	51	·020	**16·60**	**185**	·528
38	·009	**15·40**	**154**	·418	52	·020	**19·80**	**222**	·540
39	·010	**13·40**	**135**	·423	53	·021	**23.13**	**262**	·552
40	·010	**11·33**	**115**	·429	54	·022	**26·60**	**204**	·563
41	·011	**9·20**	**94**	·435	55	·023	**30·27**	**348**	·575
42	·011	**7·00**	**73**	·441	56	—·024	+ **34·07**	+ **396**	—·587
43	·012	**4·73**	**51**	·447					
44	—·013	— **2·40**	— **26**	—·453					

Polaris Z. Dist. = 46° 15′.

1889.	β URSÆ MINORIS.					
Z.	S. T.			Az. E.		
29° 37′ N.	14h 46m			0° 39′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+·060	2·89	—·080	+·58	43	—·88
" 20	·047	3·61	·067	·45	52	·74
February 9	·033	4·27	·053	·32	61	·59
March 1	·020	4·79	·027	·19	70	·29
" 21	·013	5·27	·013	·13	77	·15
April 10	·000	5·66	·013	·00	82	·15
" 30	·000	5·83	·000	·00	83	·00
May 20	·007	5·96	·007	·06	80	·07
June 9	·013	5·79	·020	·13	75	·22
" 29	·027	5·62	·033	·26	67	·37
July 19	·033	5·36	·053	·32	58	·59
August 8	·047	5·03	·073	·45	48	·81
" 28	·067	4·63	·087	·64	39	·96
September 17	·080	4·39	·107	·77	31	1·18
October 7	·037	4·44	·127	·84	22	1·40
" 27	·093	4·08	·127	·90	20	1·40
November 16	·093	4·15	·127	·90	19	1·40
December 6	·087	4·51	·127	·84	21	1·40
" 26	+·087	4·96	—·113	+·84	27	—1·25

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	″						
28	+·060	— 53·47	— 483	—·318					
29	·059	50·87	464	·323					
30	·059	48·27	445	·329	°		*s.*	″	
31	·058	45·60	424	·335	45	+·049	+ 0·00	+ 0	—·417
32	·057	42·87	403	·341	46	·049	4·07	43	·426
33	·057	40·07	380	·347	47	·048	8·27	89	·435
34	·056	37·20	357	·353	48	·047	12·67	137	·444
35	·056	34·20	332	·358	49	·046	17·25	188	·453
36	·055	31·20	306	·364	50	·045	21·93	240	·462
37	·054	28·13	278	·370	51	·044	26·87	298	·472
38	·054	25·00	249	·376	52	·043	32·00	359	·481
39	·053	21·73	218	·382	53	·042	37·33	423	·490
40	·052	18·40	187	·388	54	·041	43.00	491	·499
41	·052	15·93	153	·393	55	·040	48·93	564	·508
42	·051	11·40	118	·399	56	+·039	+ 55·13	+ 641	—·517
43	·051	7·73	81	·405					
44	+·050	— 3·93	— 42	—·411					

Polaris Z. Dist. = 46° 11′.

1889.	β LIBRÆ.					
Z.	S. T.			Az. E.		
53° 59′ S.	15h 13m			0° 51′		
	t.	*s.*	*t′.*	*a.*	*″*	*a.*
January 0	+·060	**49·24**	—·087	+ ·58	**25**	—1·04
" 20	·047	**49·64**	·073	·45	**33**	·88
February 9	·033	**50·81**	·053	·32	**42**	·64
March 1	·027	**51·86**	·033	·26	**52**	·40
" 21	·013	**52·84**	·013	·13	**60**	·16
April 10	·000	**53·58**	·007	·00	**65**	·08
" 30	·000	**53·94**	·000	·00	**67**	·00
May 20	·000	**54·04**	·007	·00	**66**	·08
June 9	·007	**53·84**	·013	·06	**61**	·16
" 29	·020	**53·45**	·027	·19	**54**	·32
July 19	·027	**52·83**	·053	·26	**45**	·56
August 8	·047	**51·92**	·067	·45	**35**	·80
" 28	·060	**51·08**	·087	·58	**25**	1·04
September 17	·073	**50·34**	·107	·71	**15**	1·29
October 7	·087	**49·74**	·120	·84	**8**	1·44
" 27	·087	**49·41**	·133	·84	**3**	1·60
November 16	·093	**49·42**	·133	·90	**1**	1·60
December 6	·093	**49·82**	·133	·90	**2**	1·60
" 26	+·087	**50·52**	—·127	+ ·84	**6**	—1·52

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*		°		*s.*	*″*	
28	—·013	— **69 00**	— **623**	—·318					
29	·013	**65·67**	**599**	·323					
30	·014	**62·27**	**574**	·329					
31	·015	**58·80**	**547**	·335	45	—·022	+ **0·00**	+ **0**	—·417
32	·015	**55·27**	**520**	·341	46	·023	**5·27**	**56**	·427
33	·016	**51·67**	**490**	·347	47	·024	**10·67**	**115**	·437
34	·016	**47·93**	**460**	·353	48	·025	**16·33**	**178**	·447
35	·017	**44·19**	**428**	·358	49	·026	**22·20**	**244**	·457
36	·017	**40·27**	**394**	·364	50	·027	**28·27**	**313**	·467
37	·018	**36·33**	**358**	·370	51	·028	**34·67**	**387**	·477
38	·018	**32·20**	**321**	·376	52	·028	**41·27**	**465**	·487
39	·019	**28·00**	**280**	·382	53	·029	**48·27**	**547**	·497
40	·020	**23·67**	**240**	·388	54	·030	**55·54**	**635**	·507
41	·020	**19·27**	**196**	·393	55	·031	**63·14**	**728**	·517
42	·021	**14·67**	**151**	·399	56	—·032	+ **71·20**	+ **827**	—·527
43	·021	**9·93**	**104**	·405					
44	—·022	— **5·07**	— **53**	—·411					

Polaris Z. Dist. = 46° 7′.

1889.	γ^2 URSÆ MINORIS.					
Z.	S. T.			Az. E.		
27° 14′ N.	15h 15m			0° 51′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	+·060	**38·46**	—·087	+ ·58	**70**	—·99
" 20	·047	**39·16**	·073	·45	**78**	·84
February 9	·033	**39·71**	·053	·32	**87**	·61
March 1	·020	**40·46**	·040	·19	**96**	·46
" 21	·007	**40·92**	·020	·06	**104**	·23
April 10	·000	**41·29**	·013	·00	**109**	·15
" 30	·000	**41·66**	·000	·00	**111**	·00
May 20	·000	**41·81**	·013	·00	**110**	·15
June 9	·007	**41 65**	·013	·06	**105**	·15
" 29	·020	**41·48**	·033	·19	**98**	·38
July 19	·027	**41·29**	·047	·26	**89**	·53
August 8	·040	**40 98**	·067	·39	**79**	·76
" 28	·060	**40·53**	·087	·58	**70**	·99
September 17	·067	**40·16**	·113	·64	**60**	1·30
October 7	·080	**39·82**	·120	·77	**53**	1·37
" 27	·087	**39·76**	·133	·84	**48**	1·52
November 16	·093	**39·72**	·140	·90	**46**	1·60
December 6	·087	**40·02**	·140	·84	**47**	1·60
" 26	+·080	**40·52**	—·134	+ ·77	**51**	—1·52

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*						
28	+·048	— **70·00**	— **631**	—·293					
29	·047	**66·60**	**607**	·298					
30	·047	**63·14**	**582**	·304	°		*s.*	*″*	
31	·046	**59·67**	**555**	·310	45	+·038	+ **0·00**	+ **0**	—·392
32	·045	**56·07**	**527**	·316	46	·037	**5·33**	**57**	·402
33	·045	**52·40**	**497**	·322	47	·035	**10·87**	**118**	·412
34	·044	**48·60**	**466**	·328	48	·034	**16·60**	**180**	·422
35	·044	**44·80**	**434**	·333	49	·032	**22·53**	**247**	·432
36	·043	**40·87**	**399**	·339	50	·031	**28·73**	**318**	·442
37	·043	**36·80**	**363**	·345	51	·030	**35·13**	**392**	·452
38	·042	**32·67**	**325**	·351	52	·028	**41·87**	**471**	·462
39	·042	**28·40**	**285**	·357	53	·027	**48·93**	**555**	·472
40	·041	**24·00**	**244**	·363	54	·025	**56·33**	**644**	·482
41	·041	**19·53**	**200**	·368	55	·024	**64·06**	**739**	·492
42	·040	**14·87**	**154**	·374	56	+·022	+ **72·13**	+ **839**	—·502
43	·039	**10·07**	**105**	·380					
44	+·039	— **5·07**	— **54**	—·386					

Polaris Z. Dist. = 46° 7′.

1889.	α PERSEI, S. P.					
Z.	S. T.			Az. E.		
85° 32′ N.	$15^h\ 22^m$			0° 54′.		
	t.	s.	t'.	a.	$''$	a'.
January 0	+·053	**0·17**	—·080	+·51	**45**	—·95
" 20	·047	**0·42**	·060	·45	**52**	·71
February 9	·033	**0·93**	·047	·32	**61**	.55
March 1	·027	**1·26**	·020	·26	**70**	·23
" 21	·013	**1·73**	·007	·13	**78**	·08
April 10	·000	**1·77**	·000	·00	**83**	·00
" 30	·000	**2·06**	·000	·00	**86**	·00
May 20	·007	**2·11**	·000	·06	**84**	·00
June 9	·007	**2·19**	·007	·06	**80**	·08
" 29	·013	**2·35**	·020	·13	**73**	·24
July 19	·027	**2·24**	·040	·26	**65**	·47
August 8	·040	**2·03**	·060	·39	**55**	·71
" 28	·060	**2·02**	·070	·58	**45**	·87
September 17	·073	**1·79**	·093	·71	**36**	1·12
October 7	·080	**1·65**	·107	·77	**28**	1·26
" 27	·087	**1·55**	·120	·84	**23**	1·44
November 16	·093	**1·60**	·127	·90	**20**	1·50
December 6	·087	**1·86**	·127	·84	**21**	1·50
" 26	+·087	**2·12**	—·113	+·84	**23**	—1·30

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°									
28									
29									
30					°		s.	$''$	
31					45	—·043	+ **0·00**	+ **0**	—·425
32		Invisible			46	·043	**5·47**	**59**	·434
33					47	·044	**11·20**	**122**	·443
34					48	·045	**17·13**	**188**	·453
35					49	·045	**23·40**	**258**	·462
36					50	·046	**29·87**	**332**	·471
37					51	·047	**36·67**	**411**	·480
38					52	·047	**43·73**	**494**	·489
39		s.	$''$		53	·048	**51·07**	**582**	·498
40	—·040	— **25·27**	— **256**	—·396	54	·049	**58·80**	**675**	·508
41	·040	**20·53**	**210**	·402	55	·049	**66·93**	**774**	·517
42	·041	**15·67**	**162**	·408	56	—·050	+ **75·47**	+ **879**	—·526
43	·042	**10·60**	**111**	·413					
44	—·042	— **5·40**	— **57**	—·419					

Polaris Z. Dist. = 46° 7′.

1889.	δ PERSEI, S. P.					
Z.	S. T.			Az. E.		
87° 34′ N.	$15^h\ 41^m$			1° 1′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+·060	**9·33**	—·080	+ ·64	**75**	— ·90
" 20	·053	**9·63**	·067	·57	**82**	·75
February 9	·040	**10·13**	·053	·43	**90**	.60
March 1	·027	**10·46**	·027	·29	**99**	·30
" 21	·013	**10·86**	·013	·14	**108**	·15
April 10	·007	**11·08**	·000	·07	**113**	·00
" 30	·000	**11·33**	·000	·00	**117**	·00
May 20	·000	**11·44**	·000	·00	**116**	·00
June 9	·007	**11·53**	·007	·07	**112**	·08
" 29	·020	**11·52**	·020	·21	**106**	·23
July 19	·027	**11·49**	·033	·29	**98**	·38
August 8	·047	**11·33**	·053	·50	**88**	·60
" 28	·060	**11·23**	·073	·64	**78**	·83
September 17	·073	**11·00**	·093	·79	**68**	1·05
October 7	·080	**10·93**	·113	·86	**60**	1·28
" 27	·093	**10·81**	·120	1·00	**54**	1·35
November 16	·093	**10·96**	·133	1·00	**50**	1·50
December 6	·093	**11·10**	·133	1·00	**50**	1·50
" 26	+·093	**11·33**	—·127	+1·00	**53**	—1·43

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°									
28									
29									
30					°		*s.*	*″*	
31					45	—·044	+ **0·00**	+ **0**	—·333
32		Invisible			46	·040	**6·40**	**67**	·343
33					47	·041	**12·87**	**139**	·352
34					48	·042	**19·67**	**214**	·361
35					49	·043	**26·73**	**293**	·370
36					50	·043	**34·13**	**378**	·379
37					51	·044	**41·80**	**466**	·388
38					52	·045	**49·80**	**561**	·398
39					53	·046	**58·20**	**660**	·407
40					54	·046	**67·00**	**766**	·416
41		*s.*	*″*		55	·047	**76·20**	**879**	·425
42	—·038	— **17·73**	— **184**	—·316	56	—·048	+ **85·89**	+ **999**	—·434
43	·038	**12·07**	**126**	·322					
44	—·039	— **6·13**	— **65**	—·328					

Polaris Z. Dist. = 46° 4′.

1889.	β SCORPII.					
Z. 64° 30′ S.	S. T. 16h 3m			Az. E. 1° 10′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	+·067	**26·63**	—·093	+ ·56	**27**	—1·13
" 20	·060	**27·63**	·080	·51	**34**	·97
February 9	·047	**28·89**	·067	·39	**42**	·81
March 1	·027	**30·20**	·047	·23	**52**	·57
" 21	·020	**31·31**	·027	·17	**60**	·32
April 10	·007	**32·21**	·013	·06	**67**	·16
" 30	·007	**32·88**	·000	·06	**71**	·00
May 20	·000	**33·17**	·000	·00	**71**	·00
June 9	·007	**33 19**	·013	·06	**69**	·16
" 29	·020	**32·82**	·020	·17	**62**	·24
July 19	·027	**32·17**	·040	·23	**54**	·49
August 8	·047	**31·27**	·053	·39	**44**	·65
" 28	·060	**30·30**	·080	·51	**34**	·97
September 17	·067	**29·37**	·100	·56	**24**	1·22
October 7	·082	**28·42**	·113	·73	**15**	1·38
" 27	·098	**27·88**	·133	·79	**7**	1·62
November 16	·105	**27·65**	·140	·84	**3**	1·70
December 6	·109	**27·79**	·140	·90	**2**	1·70
" 26	+·104	**28·44**	—·140	+ ·84	**4**	—1·70

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	+·015	— **94·27**	— **850**	—·287					
29	·015	**89·73**	**818**	·292					
30	·013	**85·07**	**783**	·296	°		*s.*	*″*	
31	·016	**80·33**	**748**	·300	45	—·023	+ **0·00**	+ **0**	—·358
32	·017	**75·53**	**709**	·304	46	·024	**7·13**	**77**	·368
33	·017	**70·60**	**670**	·308	47	·025	**14·60**	**158**	·377
34	·018	**65·53**	**628**	·312	48	·026	**22·27**	**243**	·386
35	·018	**60·33**	**584**	·317	49	·026	**30·27**	**333**	·395
36	·019	**55·07**	**538**	·321	50	·027	**38·60**	**428**	·404
37	·019	**49·60**	**490**	·325	51	·028	**47·27**	**529**	·413
38	·020	**44·07**	**438**	·329	52	·028	**56·33**	**635**	·423
39	·020	**38·33**	**385**	·333	53	·029	**65·87**	**748**	·432
40	·021	**32·40**	**328**	·337	54	·030	**75·80**	**868**	·441
41	·021	**26·33**	**269**	·342	55	·031	**86·20**	**995**	·450
42	·022	**20·07**	**207**	·346	56	—·031	+ **97·13**	+ **1131**	—·459
43	·022	**13·70**	**141**	·350					
44	+·023	— **6·93**	— **72**	—·354					

Polaris Z. Dist. = 45° 58′.

1889.	δ OPHIUCHI.					
Z. 48° 24′ S.	S. T. 16h 12m			Az. E. 1° 13′		
	t.	*s.*	*t′.*	*a.*	″	*a.*
January 0	+·073	**9·93**	—·087	+·69	**30**	—·87
" 20	·060	**10·75**	·080	·56	**36**	·80
February 9	·047	**11·82**	·067	·44	**44**	·67
March 1	·033	**12·90**	·040	·34	**54**	·40
" 21	·020	**13·92**	·027	·19	**63**	·27
April 10	·013	**14·67**	·007	·13	**69**	·07
" 30	·000	**15·38**	·007	·00	**74**	·07
May 20	·000	**15·61**	·000	·00	**74**	·00
June 9	·007	**15·63**	·007	·13	**72**	·07
" 29	·013	**15·39**	·020	·16	**66**	·20
July 19	·027	**14·89**	·033	·28	**58**	·33
August 8	·047	**14·14**	·053	·48	**48**	·53
" 28	·053	**13·38**	·073	·58	**38**	·73
September 17	·067	**12·59**	·100	·67	**27**	1·00
October 7	·087	**11·78**	·113	·81	**18**	1·13
" 27	·093	**11·28**	·133	·88	**11**	1·33
November 16	·107	**11·04**	·133	1·06	**6**	1·33
December 6	·107	**11·19**	·140	1·04	**4**	1·40
" 26	+·100	**11·73**	—·140	+·96	**6**	—1·40

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″						
28	—·009	— **98·33**	— **887**	—·279					
29	·010	**93·53**	**854**	·283					
30	·010	**88·73**	**817**	·287	°		*s.*	″	
31	·011	**83·80**	**780**	·292	45	—·018	+ **0·00**	+ **0**	—·350
32	·011	**78·73**	**740**	·296	46	·019	**7·47**	**80**	·358
33	·012	**73·60**	**699**	·300	47	·019	**15·20**	**164**	·367
34	·012	**68·33**	**655**	·304	48	·020	**23·27**	**253**	·375
35	·013	**62·93**	**609**	·308	49	·021	**31·60**	**346**	·383
36	·013	**57·40**	**561**	·312	50	·021	**40·27**	**446**	·392
37	·014	**51·73**	**511**	·317	51	·022	**49·33**	**551**	·400
38	·014	**45·93**	**457**	·321	52	·023	**58·80**	**662**	·408
39	·015	**39·93**	**402**	·325	53	·024	**68·67**	**780**	·417
40	·015	**33·80**	**343**	·329	54	·024	**79·07**	**905**	·425
41	·016	**27·40**	**281**	·333	55	·025	**89·94**	**1037**	·433
42	·016	**20·87**	**216**	·337	56	—·026	+ **101·34**	+ **1179**	—·442
43	·017	**14·13**	**147**	·342					
44	—·017	— **7·20**	— **76**	—·346					

Polaris Z. Dist. = 45° 56′.

1889.	η DRACONIS.					
Z.	S. T.			Az. E.		
16° 46′ N.	16h 19m			1° 15′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+·060	**21·54**	—·093	+·64	**56**	—1·02
" 20	·053	**22·12**	·080	·37	**61**	·87
February 9	·040	**22·76**	·067	·43	**70**	.73
March 1	·027	**23·40**	·047	·29	**79**	·51
" 21	·020	**24·06**	·020	·21	**88**	·22
April 10	·007	**24·56**	·007	·07	**95**	·07
" 30	·000	**24·96**	·000	·00	**99**	·00
May 20	·000	**25·27**	·000	·00	**100**	·00
June 9	·007	**25·28**	·000	·07	**98**	·00
" 29	·007	**25·21**	·020	·07	**92**	·29
July 19	·020	**25·00**	·033	·21	**84**	·44
August 8	·033	**24·65**	·053	·36	**75**	·65
" 28	·053	**24·19**	·073	·50	**65**	·87
September 17	·060	**23·76**	·093	·64	**54**	1·09
October 7	·073	**23·27**	·113	·79	**43**	1·31
" 27	·087	**22·98**	·127	·93	**37**	1·45
November 16	·093	**22·82**	·140	1·00	**32**	1·60
December 6	·093	**23·03**	·147	1·00	**30**	1·67
" 26	+·093	**23·33**	—·140	+1·00	**22**	—1·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	+·022	—**101·53**	— **916**	—·262					
29	·021	**96·60**	**881**	·267					
30	·021	**91·60**	**844**	·271	°		*s.*	*″*	
31	·020	**86·53**	**806**	·275	45	+·013	+ **0·00**	+ **0**	—·333
32	·020	**81·33**	**765**	·279	46	·013	**7·73**	**82**	·341
33	·019	**76·00**	**723**	·283	47	·012	**15·73**	**169**	·348
34	·019	**70·53**	**677**	·287	48	·011	**24·00**	**261**	·356
35	·018	**65·00**	**629**	·292	49	·011	**32·60**	**358**	·363
36	·018	**59·27**	**580**	·296	50	·010	**41·60**	**460**	·371
37	·017	**53·40**	**528**	·300	51	·009	**50·93**	**569**	·378
38	·017	**47·40**	**472**	·304	52	·009	**60·73**	**683**	·386
39	·016	**41·20**	**415**	·308	53	·008	**70·83**	**805**	·393
40	·016	**34·87**	**354**	·312	54	·007	**81·60**	**934**	·401
41	·015	**28·33**	**290**	·317	55	·007	**92·87**	**1071**	·408
42	·015	**21·60**	**223**	·321	56	+·006	+ **104·67**	+ **1217**	—·416
43	·014	**14·60**	**153**	·325					
44	+·014	— **7·40**	— **78**	—·329					

Polaris Z. Dist. = 45° 54′.

1889.	*a* SCORPII. *(Antares).*					
Z.	S. T.			Az. E.		
71° 11′ S.	$16^h\ 28^m$			1° 18′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+ ·067	**6·22**	—·087	+ ·60	**48**	—1·05
" 20	·060	**7·16**	·073	·54	**53**	·89
February 9	·049	**8·50**	·060	·42	**61**	.73
March 1	·033	**9·77**	·040	·30	**71**	·49
" 21	·020	**11·06**	·027	·18	**80**	·32
April 10	·007	**12·16**	·007	·06	**87**	·08
" 30	·000	**12·96**	·000	·00	**91**	·00
May 20	·000	**13·31**	·000	·00	**93**	·00
June 9	·007	**13·46**	·000	·06	**91**	·00
" 29	·013	**13·13**	·013	·12	**86**	·16
July 19	·020	**12·59**	·027	·18	**78**	·32
August 8	·033	**11·63**	·047	·30	**68**	·57
" 28	·047	**10·64**	·073	·42	**58**	·89
September 17	·067	**9·48**	·087	·60	**47**	1·05
October 7	·080	**8·49**	·107	·72	**38**	1·30
" 27	·093	**7·70**	·120	·84	**30**	1·46
November 16	·093	**7·37**	·140	·84	**24**	1·70
December 6	·100	**7·40**	·140	·90	**22**	1·70
" 26	+ ·100	**7·89**	—·140	+ ·90	**23**	—1·70

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*						
28	—·015	—**105·40**	— **951**	—·254					
29	·016	**100·33**	**915**	·258					
30	·015	**95·13**	**876**	·262	°		*s.*	*″*	
31	·017	**89·80**	**836**	·267	45	—·023	+ **0·00**	+ **0**	—·325
32	·017	**84·40**	**794**	·271	46	·023	**8·00**	**85**	·333
33	·017	**78·93**	**750**	·275	47	·024	**16·27**	**175**	·340
34	·018	**73·27**	**703**	·279	48	·025	**24·87**	**270**	·348
35	·018	**67·47**	**653**	·283	49	·025	**33·80**	**371**	·355
36	·019	**61·53**	**602**	·287	50	·026	**43·13**	**477**	·363
37	·019	**55·47**	**548**	·292	51	·027	**52·87**	**590**	·370
38	·020	**49·20**	**491**	·296	52	·027	**63·00**	**708**	·378
39	·020	**42·80**	**431**	·300	53	·028	**73·60**	**835**	·385
40	·021	**36·20**	**368**	·304	54	·029	**84·67**	**969**	·393
41	·021	**29·40**	**302**	·308	55	·029	**96·33**	**1111**	·400
42	·021	**22·40**	**232**	·312	56	—·030	+**108·53**	+**1262**	—·408
43	·022	**15·20**	**159**	·317					
44	—·022	— **7·73**	— **82**	—·321					

Polaris Z. Dist. = 45° 52′.

1889.		*a* AURIGÆ *(Capella)* S.P.				
Z.	S. T.			Az. E.		
89° 7′ N.	17h 17m			1° 32′		
	t.	*s.*	*t′*	*a.*	*″*	*a.*
January 0	....	**22·93**	—·087	....	**45**	—1·05
" 20	....	**23·17**	·087	....	**49**	1·05
February 9	....	**23·53**	·073	....	**56**	·89
March 1	....	**23·80**	·053	....	**64**	·65
" 21	....	**24·21**	·053	....	**73**	·41
April 10	....	**24·50**	·013	....	**81**	·16
" 30	....	**24·82**	·007	....	**88**	·08
May 20	....	**24·82**	·000	....	**90**	·00
June 9	....	**25·22**	·007	....	**91**	·08
" 29	....	**25·35**	·007	....	**86**	·08
July 19	....	**25·32**	·020	....	**80**	·24
August 8	....	**25·19**	·040	....	**71**	·49
" 28	....	**25·07**	·060	....	**61**	·73
September 17	....	**24·81**	·080	....	**51**	·97
October 7	....	**24·68**	·100	....	**40**	1·22
" 27	....	**24·48**	·113	....	**31**	1·38
November 16	....	**24·43**	·133	....	**24**	1·62
December 6	....	**24·48**	·140	....	**20**	1·70
" 26	....	**24·59**	—·140	....	**19**	—1·70

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°									
28									
29									
30					°		*s.*	*″*	
31					45	—·023	+ **0·00**	+ **0**	—·242
32					46	·024	**9·40**	**101**	·248
33					47	·024	**19·13**	**207**	·255
34					48	·025	**29·27**	**319**	·263
35					49	·026	**39·80**	**437**	·268
36		Invisible			50	·026	**50·73**	**562**	·275
37					51	·027	**62·13**	**694**	·282
38					52	·027	**74·07**	**834**	·288
39					53	·028	**86·53**	**983**	·295
40					54	·028	**99·53**	**1140**	·302
41					55	·029	**113·27**	**1307**	·308
42					56	—·029	+ **127·67**	+ **1485**	—·315
43									
44									

Polaris Z. Dist. = 45° 39′.

1889.	β DRACONIS.					
Z.	S. T.			Az. E.		
7° 23 N.	17h 26m			1° 34′		
	t.	*s.*	*t′*	*a.*	″	*a.*
January 0	+·060	**32·99**	−·093	+·48	**56**	−1·15
" 20	·060	**33·40**	·087	·48	**59**	1·06
February 9	·047	**34·00**	·073	·37	**65**	·90
March 1	·033	**34·73**	·060	·27	**74**	·74
" 21	·027	**35·35**	·033	·21	**82**	·41
April 10	·013	**36·05**	·060	·11	**91**	·25
" 30	·000	**36·17**	·013	·00	**98**	·16
May 20	·000	**36·97**	·007	·00	**101**	·08
June 9	·000	**37·22**	·000	·00	**101**	·00
" 29	·000	**37·31**	·013	·00	**98**	·16
July 19	·013	**37·09**	·020	·11	**92**	·25
August 8	·027	**36·39**	·040	·21	**83**	·49
" 28	·040	**36·26**	·053	·32	**73**	·65
September 17	·053	**35·77**	·080	·43	**62**	·98
October 7	·067	**35·21**	·100	·53	**52**	1·23
" 27	·080	**34·82**	·127	·64	**42**	1·55
November 16	·100	**34·48**	·133	·80	**35**	1·64
December 6	·100	**34·46**	·147	·80	**30**	1·80
" 26	+·100	**34·66**	−·147	+·80	**30**	−1·80

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″		°		*s.*	″	
28	+·008	+**126·73**	−**1144**	−·183					
29	·008	**120·67**	**1100**	·185					
30	·007	**114·40**	**1054**	·188	45	+·003	+ **0·00**	+ **0**	−·225
31	·007	**108·08**	**1006**	·190	46	·003	**9·60**	**103**	·231
32	·007	**101·53**	**955**	·193	47	·002	**19·60**	**211**	·237
33	·007	**94·87**	**901**	·195	48	·002	**29·93**	**326**	·242
34	·006	**88·13**	**844**	·198	49	·001	**40·73**	**447**	·248
35	·006	**81·13**	**785**	·200	50	·001	**51·93**	**575**	·254
36	·006	**74·00**	**723**	·203	51	·000	**63·60**	**710**	·260
37	·006	**66·73**	**658**	·205	52	+·000	**75·80**	**853**	·266
38	·005	**59·20**	**590**	·208	53	−·000	**88·53**	**1005**	·272
39	·005	**51·47**	**517**	·210	54	·001	**101·87**	**1166**	·277
40	·005	**43·53**	**441**	·213	55	·001	**115·93**	**1337**	·283
41	·004	**35·40**	**361**	·215	56	−·001	+**130·67**	+**1519**	−·289
42	·004	**26·97**	**278**	·218					
43	·004	**18·28**	**190**	·220					
44	+·004	+ **9·21**	− **98**	−·223					

Polaris Z. Dist. = 45° 36′.

1889.	*a* OPHIUCHI.					
Z.	S. T.			Az. E.		
32° 22′ S.	17h 33m			1° 35′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	+·073	**16·24**	—·093	+·69	**85**	—1·08
" 20	·067	**16·80**	·093	·63	**88**	1·08
February 9	·053	**17·58**	·073	·50	**95**	·85
March 1	·040	**18·50**	·060	·38	**103**	·70
" 21	·033	**18·41**	·033	·31	**112**	·39
April 10	·020	**20·24**	·020	·19	**120**	·23
" 30	·007	**20·99**	·007	·06	**127**	·08
May 20	·007	**21·47**	·000	·06	**130**	·00
June 9	·000	**21·83**	·000	·00	**131**	·00
" 29	·013	**21·83**	·007	·13	**128**	·08
July 19	·020	**21·56**	·020	·19	**122**	·23
August 8	·033	**21·13**	·033	·31	**113**	·39
" 28	·047	**20·45**	·053	·44	**104**	·62
September 17	·053	**19·77**	·080	·50	**94**	·93
October 7	·073	**19·00**	·100	·69	**82**	1·16
" 27	·087	**18·31**	·120	·81	**72**	1·39
November 16	·093	**17·76**	·133	·88	**65**	1·55
December 6	·107	**17·72**	·140	1·00	**60**	1·62
" 26	+·107	**17·55**	—·147	+1·00	**58**	—1·81

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*						
28	—·003	—**129·80**	—**1162**	—·174					
29	·003	**122·53**	**1118**	·177					
30	·003	**116·20**	**1070**	·179	°		*s*	*″*	
31	·004	**109·73**	**1021**	·182	45	—·008	+ **0·00**	+ **0**	—·217
32	·004	**103·13**	**969**	·184	46	·009	**9·73**	**104**	·223
33	·004	**96·40**	**915**	·187	47	·009	**19·87**	**215**	·228
34	·005	**89·53**	**858**	·189	48	·010	**30·40**	**331**	·234
35	·005	**82·47**	**798**	·192	49	·010	**41·33**	**454**	·240
36	·005	**74·20**	**735**	·194	50	·010	**52·73**	**584**	·246
37	·006	**67·80**	**689**	·197	51	·011	**64·53**	**721**	·252
38	·006	**60·13**	**599**	·199	52	·011	**76·93**	**866**	·257
39	·006	**52·33**	**526**	·202	53	·012	**89·93**	**1020**	·263
40	·007	**44·27**	**449**	·204	54	·012	**103·46**	**1184**	·269
41	·007	**35·93**	**368**	·207	55	·013	**117·73**	**1358**	·275
42	·007	**27·40**	**283**	·209	56	—·013	+**132·66**	+**1543**	—·281
43	·008	**18·60**	**193**	·212					
44	—·008	— **9·27**	— **99**	—·214					

Polaris Z. Dist. = 45° 34′.

1889.	γ DRACONIS.					
Z.	S. T.			Az. E.		
6° 30′ N.	17h 52m			1° 39′.		
	t.	*s.*	*t′.*	*c*	*″*	*a′*
January 0	+·073	**46·14**	—·087	+ ·69	**77**	—1·06
" 20	·067	**46 53**	·087	·63	**79**	1·06
February 9	·053	**47·06**	·073	·50	**85**	·90
March 1	·047	**47·74**	·053	·44	**93**	·65
" 21	·033	**48·41**	·040	·31	**101**	·49
April 10	·020	**49·13**	·020	·19	**111**	·25
" 30	·013	**49·67**	·007	·13	**118**	·08
May 20	·007	**50·20**	·007	·06	**122**	·08
June 9	·000	**50·47**	·000	·00	**123**	·00
" 29	·007	**50·56**	·007	·06	**120**	·08
July 19	·013	**50·42**	·013	·13	**115**	·16
August 8	·020	**50·18**	·033	·19	**107**	·41
" 28	·040	**49·70**	·053	·33	**98**	·65
September 17	·053	**49·17**	·067	·50	**87**	·82
October 7	·060	**48·68**	·093	·65	**76**	1·15
" 27	·080	**48·19**	·113	·75	**66**	1·39
November 16	·093	**47·80**	·133	·88	**58**	1·64
December 6	·100	**47·71**	·133	·94	**52**	1·64
" 26	+·107	**47·77**	—·147	+1·00	**50**	—1·80

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	+·006	—**133·86**	—**1208**	+·141					
29	·006	**127·40**	**1162**	·143					
30	·006	**120·86**	**1113**	·146	°		*s.*	*″*	
31	·006	**114·13**	**1062**	·148	45	+·002	+ **0·00**	+ **0**	+·183
32	·005	**107·26**	**1008**	·151	46	·001	**10·13**	**108**	·188
33	·005	**100·26**	**952**	·153	47	·001	**20·67**	**223**	·192
34	·005	**93·06**	**892**	·156	48	·001	**31·60**	**344**	·196
35	·004	**85·73**	**830**	·158	49	·000	**43·00**	**472**	·200
36	·004	**78·20**	**764**	·161	50	·000	**54·80**	**607**	·204
37	·004	**70·47**	**695**	·163	51	+·000	**67·13**	**749**	·208
38	·004	**62·53**	**623**	·166	52	—·000	**80·00**	**901**	·213
39	·003	**54·40**	**547**	·168	53	·000	**93·47**	**1061**	·217
40	·003	**46·00**	**467**	·171	54	·001	**107·60**	**1231**	·221
41	·003	**37·40**	**382**	·173	55	·001	**122·40**	**1412**	·225
42	·002	**28·47**	**294**	·176	56	—·001	+**137·93**	+**1604**	+·229
43	·002	**19·33**	**201**	·178					
44	+·002	— **9·80**	— **103**	+·181					

Polaris Z. Dist. = 45° 28′.

1889.	β AURIGÆ, S.P.					
Z.	S. T.			Az. E.		
90° 4′ N.	18h 0m			1° 41′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	....	**58·52**	—·087	....	**42**	—·99
" 20	....	**58·55**	·087	....	**43**	·99
February 9	....	**58·99**	·073	....	**49**	·84
March 1	....	**59·32**	·047	....	**57**	·61
" 21	....	**59·62**	·040	....	**66**	·38
April 10	....	**59·94**	·027	....	**74**	·23
" 30	....	**60·32**	·007	....	**82**	·08
May 20	....	**60·44**	·000	....	**86**	·00
June 9	....	**60·79**	·000	....	**88**	·00
" 29	....	**60·85**	·000	....	**85**	.00
July 19	....	**60·88**	·007	....	**80**	·15
August 8	....	**60·81**	·027	....	**73**	·31
" 28	....	**60·69**	·040	....	**63**	·53
September 17	....	**60·49**	·067	....	**53**	·76
October 7	....	**60·25**	·087	....	**42**	·99
" 27	....	**60·09**	·113	....	**32**	1·30
November 16	....	**60·00**	·120	....	**23**	1·37
December 6	....	**60·01**	·133	....	**17**	1·52
" 26	....	**60·09**	—·140	....	**15**	—1·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°									
28									
29									
30							*s.*	*a*	
31					45	—·013	+ **0·00**	+ **0**	—·175
32					46	·014	**10·27**	**110**	·178
33			Invisible		47	·014	**20·93**	**226**	·182
34					48	·014	**32·07**	**348**	·185
35					49	·014	**43·53**	**478**	·188
36					50	·015	**55·53**	**615**	·192
37					51	·015	**68·07**	**760**	·195
38					52	·015	**81·13**	**913**	·198
39					53	·016	**94·80**	**1075**	·202
40					54	·016	**109·07**	**1248**	·205
41					55	·016	**124·07**	**1431**	·208
42					56	—·016	+ **139·87**	+ **1626**	—·212
43									
44									

Polaris Z. Dist. = 45° 26′.

1889.	λ SAGITTARII.					
Z.	S. T.			Az. E.		
70° 29′ S.	18h 28m			1° 45′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	+.067	**25·26**	—·093	+ ·56	**31**	—1·08
" 20	.060	**25·60**	·093	·51	**31**	1·08
February 9	.053	**26·50**	·080	·45	**36**	·93
March 1	.047	**27·65**	·067	·39	**43**	·77
" 21	.023	**28·90**	·047	·28	**52**	·54
April 10	.027	**30·15**	·027	·23	**60**	·31
" 30	.013	**31·30**	·013	·11	**68**	·15
May 20	·007	**32·12**	·007	·06	**73**	·08
June 9	·000	**32·83**	·000	·00	**76**	·00
" 29	·007	**33·02**	·000	·06	**75**	.00
July 19	·007	**32·96**	·013	·06	**71**	.15
August 8	·013	**32·44**	·027	·11	**64**	.31
" 28	·033	**31·55**	·040	·28	**55**	·46
September 17	·047	**30·46**	·060	·39	**45**	·70
October 7	·060	**29.34**	·087	·51	**34**	1·00
" 27	·073	**28·29**	·107	·62	**23**	1·24
November 16	·087	**27·43**	·127	·73	**14**	1·47
December 6	·100	**26·97**	·140	·84	**7**	1·62
" 26	+·107	**26·95**	—·147	+ ·90	**3**	—1·70

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b·	S. T.	Az.	*c.*
°		*s.*	″						
28	—·006	—**140·80**	—**1270**	—·077					
29	·006	**134·00**	**1222**	·079					
30	·006	**127·07**	**1170**	·082	°	′	*s.*	″	
31	·006	**120·00**	**1117**	·084	45	—·008	+ **0·00**	+ **0**	—·117
32	·006	**112·73**	**1060**	·087	46	·008	**10·67**	**114**	·119
33	·007	**105·40**	**1001**	·089	47	·008	**21·80**	**235**	·122
34	·007	**97·87**	**938**	·092	48	·009	**33·27**	**362**	·124
35	·007	**90·13**	**872**	·094	49	·009	**45·20**	**496**	·127
36	·007	**82·20**	**803**	·097	50	·009	**57·80**	**638**	·129
37	·007	**74·07**	**731**	·099	51	·010	**70·80**	**788**	·132
38	·007	**65·73**	**655**	·102	52	·010	**84·33**	**947**	·134
39	·007	**57·20**	**575**	·104	53	·010	**98·47**	**1116**	·137
40	·007	**48·33**	**491**	·107	54	·011	**113·33**	**1295**	·139
41	·007	**39·27**	**402**	·109	55	·011	**128·87**	**1485**	·142
42	·008	**29·93**	**309**	·112	56	—·011	+**145·27**	+**1687**	—·144
43	·008	**20·27**	**211**	·114					
44	—·008	— **10·33**	— **108**	—·117					

Polaris Z. Dist. = 45° 17′.

1889.	*α* LYRÆ *(Vega)*.					
Z.	S. T.			Az. E.		
6° 19′ S.	18h 34m			1° 45′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	+·067	**8·36**	—·093	+ ·63	**67**	—1·02
" 20	·067	**8·65**	·093	·63	**68**	1·02
February 9	·060	**9·16**	·080	·56	**72**	·87
March 1	·053	**9·82**	·067	·50	**79**	·73
" 21	·040	**10·54**	·047	·38	**87**	·51
April 10	·027	**11·27**	·033	·25	**95**	·36
" 30	·013	**12·04**	·013	·13	**104**	·15
May 20	·007	**12·58**	·007	·06	**109**	·07
June 9	·000	**13·04**	·000	·00	**112**	·00
" 29	·000	**13·20**	·000	·00	**111**	·00
July 19	·013	**13·15**	·007	·13	**107**	·07
August 8	·020	**12·91**	·020	·19	**100**	·22
" 28	·023	**12·43**	·040	·31	**92**	·44
September 17	·047	**11·89**	·060	·44	**81**	·65
October 7	·067	**11·17**	·080	·63	**70**	·87
" 27	·073	**10·69**	·107	·69	**60**	1·16
November 16	·093	**10·26**	·120	·88	**51**	1·31
December 6	·100	**9·99**	·133	·94	**44**	1·45
" 26	+·107	**10·01**	—·147	+1·00	**29**	—1·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	+·002	—**141·60**	—**1277**	—·086					
29	·002	**134·80**	**1229**	·087					
30	·002	**127·80**	**1177**	·088	°		*s*	*″*	
31	·001	**120·67**	**1123**	·088	45	—·001	+**0·00**	+ **0**	—·100
32	·001	**113·47**	**1066**	·089	46	·001	**10·73**	**115**	·103
33	·001	**106·00**	**1006**	·090	47	·002	**21·87**	**236**	·105
34	·001	**98·40**	**943**	·091	48	·002	**33·40**	**364**	·108
35	·001	**90·67**	**877**	·092	49	·002	**45·47**	**499**	·110
36	·001	**82·73**	**808**	·093	50	·002	**57·93**	**642**	·113
37	·000	**74·53**	**735**	·093	51	·002	**71·00**	**793**	·115
38	+·000	**66·13**	**659**	·094	52	·003	**84·60**	**953**	·118
39	—·000	**57·53**	**578**	·095	53	·003	**98·87**	**1122**	·120
40	·000	**48·67**	**494**	·096	54	·003	**113·80**	**1302**	·123
41	·000	**39·53**	**404**	·097	55	·004	**129·47**	**1493**	·125
42	·001	**30·13**	**311**	·098	56	—·004	+**145·93**	+**1697**	—·128
43	·001	**20·40**	**213**	·098					
44	—·001	—**10·40**	—**109**	—·099					

Polaris Z. Dist. = 45° 15′.

1889.	σ SAGITTARII.					
Z.	S. T.			Az. E.		
71° 26′ S.	18h 55m			1° 47′		
	t.	*s.*	*t.*	*a.*	″	*a′*
January 0	+·060	**56·98**	—·033	+ ·60	**50**	—1.02
" 20	·067	**57·12**	·093	·67	**50**	1.02
February 9	·053	**58·00**	·087	·53	**53**	.95
March 1	·047	**58·97**	·067	·47	**59**	.73
" 21	·040	**60·20**	·053	·40	**68**	.58
April 10	·027	**61·46**	·033	·27	**76**	.36
" 30	·013	**62·70**	·013	·13	**85**	.15
May 20	·007	**63·57**	·007	·07	**90**	.07
June 9	·000	**64·48**	·000	·00	**94**	.00
" 29	·000	**64·85**	·000	·00	**94**	.00
July 19	·000	**64·85**	·007	·00	**91**	.07
August 8	·013	**64·38**	·013	·13	**85**	.15
" 28	·020	**63·68**	·040	·20	**78**	.44
September 17	·033	**62·64**	·060	·33	**67**	.65
October 7	·053	**61·53**	·080	·53	**56**	.87
" 27	·067	**60·38**	·100	·67	**45**	1.09
November 16	·080	**59·40**	·120	·80	**35**	1.31
December 6	·093	**58·85**	·133	·93	**27**	1.45
" 26	+·100	**58·57**	—·147	+1·00	**22**	—1.60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	″						
28	—·003	**—143·87**	**—1298**	—.044					
29	·003	**136·93**	**1249**	·045					
30	·004	**129·80**	**1196**	·046	°		*s.*	″	
31	·004	**122·60**	**1141**	·047	45	—·004	+ **0·00**	+ **0**	—·058
32	·004	**115·27**	**1083**	·048	46	·005	**10·87**	**117**	·060
33	·004	**107·67**	**1022**	·048	47	·005	**22·20**	**240**	·062
34	·004	**100·00**	**958**	·049	48	·005	**33·93**	**370**	·063
35	·004	**92·07**	**891**	·050	49	·005	**46·20**	**507**	·065
36	·004	**84·00**	**821**	·051	50	·005	**58·87**	**652**	·067
37	·004	**75·73**	**747**	·052	51	·005	**72·13**	**805**	·068
38	·004	**67·20**	**669**	·053	52	·005	**86·00**	**968**	·070
39	·004	**58·47**	**587**	·053	53	·005	**100·47**	**1140**	·072
40	·004	**49·47**	**501**	·054	54	·005	**115·60**	**1323**	·073
41	·004	**40·20**	**410**	·055	55	·005	**131·53**	**1517**	·075
42	·004	**30·60**	**316**	·056	56	—·006	**147·73**	+ **1724**	—·077
43	·004	**20·73**	**216**	·057					
45	—·004	**—10·53**	**—111**	—·058					

Polaris Z. Dist. = 45° 8′.

1889.	δ DRACONIS.					
Z.	S. T.			Az. E.		
22° 28′ N.	19h 5m			1° 47′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+·067	**16·09**	—·087	+·67	**76**	—·95
" 20	·067	**16·43**	·093	·67	**75**	1·02
February 9	·060	**16·67**	·087	·60	**79**	·95
March 1	·053	**17·18**	·073	·53	**84**	·80
" 21	·040	**17·75**	·060	·40	**93**	·65
April 10	·027	**18·41**	·040	·27	**101**	·43
" 30	·013	**18·92**	·020	·13	**110**	·21
May 20	·013	**19·56**	·013	·13	**116**	·15
June 9	·000	**19·87**	·000	·00	**120**	·00
" 29	·000	**20·17**	·000	·00	**120**	·00
July 19	·007	**20·18**	·007	·07	**117**	·07
August 8	·013	**20·10**	·020	·13	**112**	·22
" 28	·020	**19·86**	·033	·20	**104**	·36
September 17	·040	**19·48**	·053	·40	**94**	·58
October 7	·053	**18·92**	·073	·53	**83**	·80
" 27	·067	**18·52**	·000	·67	**72**	1·09
November 16	·087	**18·04**	·013	·87	**62**	1·24
December 6	·093	**17·88**	·133	·93	**54**	1·45
" 26	+·100	**17·81**	—·147	+1·00	**46**	—1·60

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	+·003	—**144·40**	—**1303**	—·027					
29	·003	**137·40**	**1254**	·028					
30	·003	**130·33**	**1201**	·029	°		*s.*	*″*	
31	·003	**123·07**	**1146**	·030	45	+·003	+ **0·00**	+ **0**	—·042
22	·003	**115·67**	**1087**	·031	46	·003	**10·93**	**117**	·045
33	·003	**108·13**	**1026**	·032	47	·003	**22·33**	**241**	·048
34	·003	**100·33**	**962**	·033	48	·002	**34·13**	**371**	·051
35	·003	**92·47**	**895**	·033	49	·002	**46·40**	**509**	·054
36	·003	**84·33**	**824**	·034	50	·002	**59·14**	**654**	·057
37	·003	**76·00**	**750**	·035	51	·002	**72·47**	**808**	·060
38	·003	**67·47**	**672**	·036	52	·002	**86·33**	**972**	·063
39	·003	**58·67**	**590**	·037	53	·002	**100·87**	**1144**	·066
40	·003	**49·60**	**504**	·038	54	·002	**116·07**	**1328**	·069
41	·003	**40·33**	**412**	·038	55	·002	**132·07**	**1523**	·072
42	·003	**30·73**	**317**	·039	56	+·002	+**148·87**	+**1730**	—·075
43	·003	**20·80**	**217**	·040					
44	+·003	—**10·60**	—**111**	—·041					

Polaris Z. Dist. = 45° 4′.

1889.	ε DRACONIS.					
Z.	S. T.			Az. E.		
24° 59′ N.	19h 39m			1° 47′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+·060	**33·87**	—·087	+·58	**81**	—1·05
" 20	·060	**34·11**	·093	·58	**79**	1·13
February 9	·060	**34·25**	·087	·58	**80**	1·05
March 1	·053	**34·69**	·073	·51	**85**	·89
" 21	·040	**35·26**	·067	·39	**94**	·81
April 10	·027	**35·88**	·047	·26	**101**	·57
" 30	·020	**36·40**	·027	·19	**110**	·32
May 20	·007	**37·19**	·020	·06	**117**	·24
June 9	·000	**37·44**	·000	·00	**121**	·00
" 29	·000	**37·79**	·000	·00	**121**	·00
July 19	·000	**37·91**	·000	·00	**122**	·00
August 8	·007	**37·86**	·014	·06	**117**	·16
" 28	·020	**37·67**	·027	·19	**110**	·32
September 17	·027	**37·29**	·047	·26	**101**	·57
October 7	·040	**36·90**	·067	·39	**91**	·81
" 27	·060	**36.41**	·087	·58	**80**	1·05
November 16	·073	**36·00**	·113	·71	**70**	1·38
December 6	·080	**35·74**	·127	·77	**61**	1·54
" 26	+·093	**35·62**	—·140	+·90	**55**	—1·70

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b·	S. T.	Az.	*c.*
°		*s.*	*″*						
28	—·003	—**144·47**	—**1303**	+·036					
29	·003	**137·47**	**1254**	·037					
30	·003	**130·40**	**1201**	·038	°		*s.*	*″*	
31	·003	**123·13**	**1146**	·038	45	—·002	+ **0·00**	+ **0**	+·050
32	·003	**115·73**	**1088**	·039	46	·002	**11·00**	**117**	·051
33	·003	**108·13**	**1027**	·040	47	·002	**22·33**	**241**	·052
34	·003	**100·46**	**963**	·041	48	·002	**34·13**	**372**	·052
35	·003	**92·47**	**895**	·042	49	·002	**46·40**	**500**	·053
36	·003	**84·33**	**824**	·043	50	·002	**59·20**	**655**	·054
37	·003	**76·00**	**750**	·043	51	·002	**72·53**	**809**	·055
38	·003	**67·47**	**672**	·044	52	·002	**86·40**	**972**	·056
39	·003	**58·67**	**590**	·045	53	·002	**100·93**	**1145**	·057
40	·002	**49·60**	**504**	·046	54	·002	**116·20**	**1329**	·057
41	·002	**40·33**	**412**	·047	55	·002	**132·13**	**1524**	·058
42	·002	**30·73**	**317**	·048	56	—·002	+**148·93**	+**1732**	+·059
43	·002	**20·80**	**217**	·048					
44	—·002	—**10·52**	—**111**	+·059					

Polaris Z. Dist. = 44° 53′.

1889.	γ AQUILÆ.					
Z.	S. T.			Az. E.		
34° 39′ S.	19h 45m			1° 47′		
	t.	*s.*	*t.*	*a.*	*″*	*a′.*
January 0	+·067	**6·81**	—·097	+·67	**68**	— .93
" 20	·073	**6·78**	·093	·70	**65**	1.00
February 9	·060	**7·29**	·087	·60	**67**	1.00
March 1	·053	**7·84**	·080	·53	**73**	.86
" 21	·047	**8·67**	·067	·47	**79**	.71
April 10	·033	**9·50**	·047	·33	**88**	.50
" 30	·027	**10·42**	·027	·27	**96**	.29
May 20	·013	**11·19**	·020	·13	**103**	.21
June 9	·007	**11·95**	·007	·07	**108**	.07
" 29	·000	**12·41**	·000	·00	**110**	.00
July 19	·007	**12·57**	·000	·07	**109**	.00
August 8	·013	**12·49**	·013	·13	**104**	.14
" 28	·013	**12·11**	·027	·13	**98**	.29
September 17	·033	**11·52**	·040	·33	**89**	.43
October 7	·047	**10·79**	·067	·47	**79**	.73
" 27	·067	**9·98**	·180	·67	**68**	.86
November 16	·073	**9·35**	·107	·73	**57**	1.14
December 6	·087	**8·84**	·127	·87	**49**	1.36
" 26	+·100	**8·68**	—·140	+1·00	**42**	—1.50

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*						
28	+·001	—**144·20**	—**1301**	+.035					
29	·001	**137·20**	**1252**	·035					
30	·001	**130·13**	**1199**	·036	°		*s.*	*″*	
31	·001	**122·87**	**1144**	·036	45	+·002	+ **0·00**	+ **0**	+·042
32	·001	**115·47**	**1086**	·036	46	·002	**10·93**	**117**	·043
33	·001	**107·93**	**1025**	·037	47	·002	**22·27**	**240**	·045
34	·001	**100·20**	**961**	·037	48	·002	**34·07**	**370**	·046
35	·001	**92·33**	**894**	·038	49	·002	**46·27**	**508**	·048
36	·001	**84·20**	**823**	·038	50	·002	**59·07**	**653**	·050
37	·001	**75·87**	**749**	·038	51	·002	**72·33**	**807**	·051
38	·001	**67·33**	**671**	·039	52	·002	**86·20**	**970**	·053
39	·001	**58·60**	**589**	·039	53	·002	**100·73**	**1143**	·055
40	·001	**49·53**	**503**	·040	54	·002	**115·93**	**1326**	·056
41	·001	**40·27**	**412**	·040	55	·002	**131·87**	**1520**	·058
42	·002	**30·67**	**317**	·040	56	+·002	**148·60**	+**1728**	+·059
43	·002	**20·80**	**217**	·041					
44	+·002	—**10·60**	—**111**	+·041					

Polaris Z. Dist. = 44° 51′.

1889.	α AQUILÆ (*Altair*).					
Z. 22° 28′ S.	S. T. 19h 49m			Az. E. 1° 47′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+·060	**39·11**	—·087	+·58	**54**	—·93
" 20	·067	**39·08**	·093	·64	**52**	1·00
February 9	·060	**39·52**	·093	·58	**53**	1.00
March 1	·053	**40·06**	·080	·51	**57**	·86
" 21	·047	**40·90**	·067	·45	**65**	·71
April 10	·033	**41·79**	·047	·32	**73**	·50
" 30	·027	**42·71**	·027	·26	**82**	·29
May 20	·013	**43·48**	·020	·13	**89**	·21
June 9	·007	**44·25**	·007	·06	**94**	·07
" 29	·007	**44·72**	·000	·06	**96**	·00
July 19	·000	**44·96**	·000	·00	**95**	·00
August 8	·007	**44·83**	·013	·06	**91**	·14
" 28	·020	**44·46**	·027	·19	**85**	·29
September 17	·023	**43·89**	·047	·32	**76**	·50
October 7	·047	**43·16**	·067	·45	**66**	·71
" 27	·060	**42·37**	·087	·58	**55**	·93
November 16	·073	**41·67**	·107	·71	**44**	1·14
December 6	·093	**41·10**	·120	·90	**35**	1·29
" 26	+·093	**40·87**	—·140	+·90	**28**	—1·50

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	+·001	—**143·87**	—**1298**	+·036					
29	·001	**136·93**	**1249**	·037					
30	·001	**129·87**	**1196**	·038	°		*s.*	*″*	
31	·001	**122·67**	**1141**	·038	45	+·002	+ **0·00**	+ **0**	+·050
22	·001	**115·27**	**1083**	·039	46	·002	**10·87**	**117**	·052
33	·001	**107·73**	**1022**	·040	47	·002	**22·20**	**240**	·053
34	·001	**100·00**	**958**	·041	48	·002	**33·93**	**370**	·055
35	·001	**92·13**	**891**	·042	49	·002	**46·20**	**507**	·057
36	·001	**84·07**	**821**	·043	50	·002	**58·87**	**652**	·053
37	·001	**75·73**	**747**	·043	51	·002	**72·13**	**806**	·060
38	·001	**67·20**	**669**	·044	52	·002	**86·00**	**968**	·062
39	·001	**58·47**	**587**	·045	53	·003	**100·47**	**1140**	·063
40	·001	**49·47**	**501**	·046	54	·003	**115·60**	**1323**	·065
41	·001	**40·20**	**410**	·047	55	·003	**131·53**	**1517**	·067
42	·001	**30·60**	**316**	·048	56	+·003	+**148·27**	+**1724**	+·068
43	·002	**20·73**	**216**	·048					
44	+·002	—**10·60**	—**111**	+·049					

Polaris Z. Dist. = 44° 49′.

1889.	a^2 CAPRICORNI.					
Z.	S. T.			Az. E.		
55° 53′ S.	$20^h\ 17^m$			1° 45′.		
	$t.$	$s.$	$t'.$	$a.$	$''$	$a'.$
January 0	+·067	**58·26**	—·080	+·60	**32**	—·88
" 20	·067	**58·13**	·093	·60	**29**	1·03
February 9	·067	**58·49**	·073	·60	**29**	·96
March 1	·067	**59·09**	·080	·60	**32**	·88
" 21	·053	**59·98**	·067	·48	**39**	·74
April 10	·040	**61·00**	·053	·36	**47**	·59
" 30	·027	**62·08**	·033	·24	**56**	·37
May 20	·020	**63·02**	·020	·18	**63**	·22
June 9	·013	**64·06**	·007	·12	**69**	·07
" 29	·007	**64·66**	·007	·06	**72**	·07
July 19	·000	**65·05**	·000	·00	**72**	·00
August 8	·007	**65·00**	·007	·06	**69**	·07
" 28	·013	**64·70**	·020	·12	**64**	·22
September 17	·027	**63·98**	·033	·24	**56**	·37
October 7	·040	**63.21**	·060	·36	**46**	·66
" 27	·060	**62·23**	·073	·54	**36**	·81
November 16	·073	**60·28**	·093	·66	**25**	1·03
December 6	·087	**60·63**	·113	·78	**16**	1·25
" 26	+·100	**60·13**	—·127	+·90	**8**	—1·40

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		$s.$	$''$						
28	+·004	—**140·73**	—**1269**	+·094					
29	·004	**133·93**	**1221**	·095					
30	·004	**127·00**	**1169**	·096	°		$s.$	$''$	
31	·004	**119·93**	**1116**	·097	45	+·006	+ **0·00**	+ **0**	+·108
32	·005	**112·73**	**1059**	·098	46	·006	**10·67**	**114**	·112
33	·005	**105·40**	**1000**	·098	47	·007	**21·73**	**235**	·115
34	·005	**97·80**	**937**	·099	48	·007	**33·20**	**362**	·118
35	·005	**90·13**	**872**	·100	49	·007	**45·13**	**496**	·122
36	·005	**82·20**	**803**	·101	50	·007	**57·60**	**638**	·125
37	·005	**74·07**	**730**	·102	51	·007	**70·53**	**788**	·128
38	·005	**65·73**	**654**	·103	52	·007	**84·07**	**945**	·132
39	·005	**57·20**	**573**	·103	53	·008	**98·27**	**1115**	·135
40	·006	**48·40**	**490**	·104	54	·008	**113·07**	**1294**	·138
41	·006	**39·33**	**401**	·105	55	·008	**128·67**	**1484**	·142
42	·006	**29·93**	**309**	·106	56	+·009	+**145·00**	+**1687**	+·145
43	·006	**20·33**	**211**	·107					
44	+·006	— **10·33**	— **108**	+·108					

Polaris Z. Dist. = 44° 40′.

1889.	*a* CYGNI.					
Z.	S. T.			Az. E.		
0° 7′ S.	20h 37m			1° 42′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	+·053	**37·88**	—·073	+ ·49	**56**	— ·87
" 20	·060	**37·89**	·087	·55	**52**	1·03
February 9	·067	**38·03**	·087	·62	**51**	1 03
March 1	·060	**38·38**	·080	·55	**54**	·95
" 21	·053	**38·89**	·067	·49	**60**	·79
April 10	·040	**39·54**	·053	·37	**67**	·63
" 30	·027	**40·27**	·033	·25	**77**	·39
May 20	·020	**41·06**	·027	·18	**84**	·32
June 9	·007	**41·65**	·007	·06	**91**	·08
" 29	·000	**42·16**	·000	·00	**94**	·00
July 19	·000	**42·48**	·000	·00	**95**	·00
August 8	·007	**42·51**	·000	·06	**93**	·00
" 28	·007	**42·38**	·013	·06	**89**	·16
September 17	·020	**42·05**	·027	·18	**81**	·32
October 7	·033	**41·59**	·040	·31	**72**	·47
" 27	·047	**41·06**	·067	·43	**62**	·79
November 16	·060	**40·53**	·287	·55	**51**	1·03
December 6	·073	**40·10**	·107	·68	**42**	1·26
" 26	+·087	**39·80**	—·127	+ ·80	**33**	—1·50

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*						
28	—·003	—**137·27**	—**1238**	+·121					
29	·003	**130·67**	**1191**	·123					
30	·003	**123·87**	**1141**	·125	°		*s*	*″*	
31	·003	**117·00**	**1089**	·127	45	+·001	+**0·00**	+**0**	+·150
32	·002	**109·93**	**1033**	·128	46	·001	**10·40**	**112**	·151
33	·002	**102·80**	**975**	·130	47	·001	**21·20**	**229**	·152
34	·002	**95·40**	**914**	·132	48	·001	**32·40**	**353**	·152
35	·002	**87·87**	**850**	·133	49	·001	**44·07**	**484**	·153
36	·002	**80·20**	**783**	·135	50	·001	**56·20**	**622**	·154
37	·002	**72·27**	**712**	·137	51	·001	**69·10**	**769**	·155
38	·002	**64·13**	**638**	·138	52	·001	**82·30**	**924**	·156
39	·001	**55·80**	**560**	·140	53	·001	**96·10**	**1088**	·157
40	·001	**47·20**	**478**	·141	54	·001	**110·57**	**1263**	·157
41	·001	**38·33**	**391**	·143	55	·001	**125·77**	**1448**	·158
42	·001	**29·20**	**301**	·145	56	+·001	+**141·70**	+**1645**	+·159
43	·001	**19·80**	**206**	·147					
44	—·001	—**10·07**	—**105**	+·148					

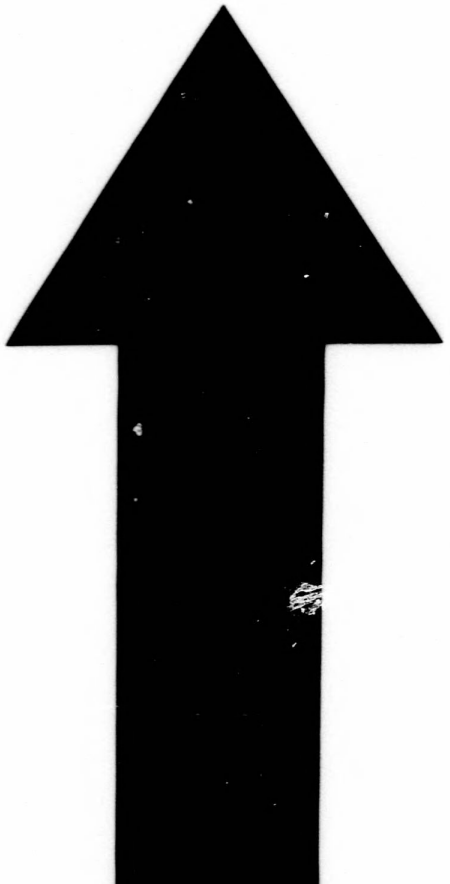
Polaris Z. Dist. = 44° 34′.

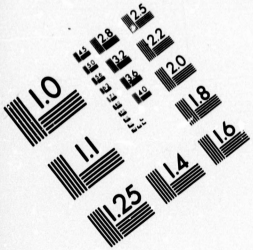
1889.	η CEPHEI.					
Z.	S. T.			Az. E.		
16° 24′ N.	20h 38m			1° 42′.		
	t.	*s.*	*t′.*	*c.*	″	*a′.*
January 0	+.053	**56·64**	—·080	·55	**44**	— ·88
" 20	·060	**56·52**	·093	·62	**40**	1·03
February 9	·060	**56·80**	·093	·62	**39**	1·03
March 1	·053	**57·13**	·087	·55	**42**	·96
" 21	·047	**57·55**	·073	·48	**48**	·81
April 10	·040	**58·16**	·060	·42	**55**	·66
" 30	·020	**58·42**	·040	·21	**64**	·44
May 20	·013	**59·53**	·027	·14	**72**	·29
June 9	·000	**60·07**	·013	·00	**78**	·15
" 29	·000	**60·45**	·000	·00	**82**	·00
July 19	·000	**60·81**	·000	·00	**83**	·00
August 8	·000	**60·87**	·007	·00	**81**	·07
" 28	·007	**60·73**	·013	·07	**77**	·15
September 17	·020	**60·47**	·027	·21	**69**	·29
October 7	·020	**60.05**	·053	·21	**60**	·59
" 27	·040	**59·60**	·073	·42	**50**	·81
November 16	·060	**59·13**	·093	·62	**39**	·96
December 6	·073	**58·75**	·107	·76	**30**	1·18
" 26	+·093	**58·51**	—·127	+·90	**21**	—1·40

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″						
28	—·010	**137·00**	**—1236**	+·130					
29	·009	**130·33**	**1188**	·132					
30	·009	**123·60**	**1138**	·133	°		*s.*	″	
31	·009	**116·73**	**1086**	·135	45	—·006	+ **0·00**	+ **0**	+·158
32	·009	**109·73**	**1031**	·137	46	·006	**10·40**	**111**	·161
33	·009	**102·53**	**973**	·138	47	·006	**21·20**	**229**	·164
34	·008	**95·20**	**912**	·140	48	·006	**32·33**	**352**	·167
35	·008	**87·67**	**849**	·142	49	·006	**44·00**	**483**	·170
36	·008	**80·00**	**781**	·143	50	·005	**56·07**	**621**	·173
37	·008	**72·07**	**710**	·145	51	·005	**68·73**	**767**	·176
38	·008	**64·00**	**637**	·147	52	·005	**81·87**	**922**	·179
39	·007	**55·67**	**559**	·148	53	·005	**95·67**	**1086**	·182
40	·007	**47·07**	**477**	·150	54	·004	**110·13**	**1260**	·185
41	·007	**38·27**	**391**	·152	55	·004	**125·27**	**1445**	·188
42	·007	**29·13**	**301**	·153	56	—·004	+**141·13**	+**1642**	+·191
43	·006	**19·73**	**206**	·155					
44	—·006	— **10·07**	**— 105**	+·157					

Polaris Z. Dist. = 44° 33′.





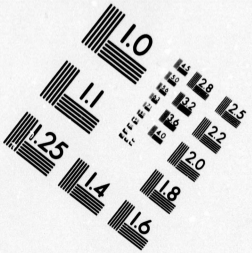
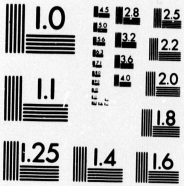
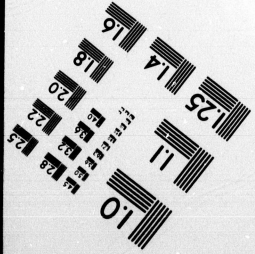
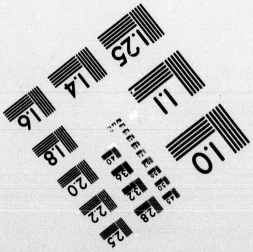


IMAGE EVALUATION
TEST TARGET (MT-3)







2.8
2.5
3.2
2.2
3.6
2.0
4.0
1.8
1.0

1889.	ι URSÆ MAJORIS, S.P.					
Z.	S. T.			Az. E.		
86° 31′ N.	21h 1m			1° 38′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	+.047	**31·36**	—·080	+ ·49	**44**	— ·88
" 20	·060	**31·23**	·093	·63	**39**	1·03
February 9	·060	**31·48**	·093	·63	**37**	1·03
March 1	·060	**31·63**	·093	·63	**39**	1·03
" 21	·047	**31·88**	·080	·49	**44**	·88
April 10	·047	**32·17**	·067	·49	**51**	·74
" 30	·033	**32·56**	·047	·35	**60**	·52
May 20	·020	**32·86**	·033	·21	**69**	·37
June 9	·007	**33·35**	·020	·07	**75**	·22
" 29	·000	**33·67**	·007	·00	**80**	·07
July 19	·000	**33·83**	·000	·00	**82**	·00
August 8	·000	**34·01**	·007	·00	**81**	·07
" 28	·007	**34·01**	·013	·07	**77**	·14
September 17	·013	**33·97**	·027	·14	**71**	·29
October 7	·027	**33·69**	·040	·28	**62**	·44
" 27	·047	**33·58**	·060	·49	**53**	·66
November 16	·050	**33·42**	·087	·56	**42**	·96
December 6	·063	**33·32**	·107	·70	**32**	1·18
" 26	+·080	**33·25**	—·127	+ ·84	**23**	—1·40

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°									
28									
29									
30					°		*s.*	″	
31					45	+·020	+ **0·00**	+ **0**	+·192
32					46	·020	**10·00**	**105**	·196
33		Invisible			47	·021	**20·33**	**219**	·200
34					48	·021	**31·13**	**338**	·204
35					49	·022	**42·47**	**464**	·208
36					50	·022	**53·93**	**597**	·213
37					51	·022	**66·07**	**737**	·217
38					52	·023	**78·73**	**886**	·221
39					53	·023	**92·00**	**1043**	·225
40		*s.*	″		54	·024	**105·87**	**1211**	·229
41	+·018	— **36·73**	— **376**	+·182	55	·024	**120·40**	**1389**	·233
42	·019	**28·00**	**289**	·184	56	+·024	+**135·67**	+**1598**	+·248
43	·019	**18·93**	**198**	·187					
44	+·020	— **9·60**	— **101**	+·189					

Polaris Z. Dist. = 44° 30′.

1889.	*a* CEPHEI.					
Z.	S. T.			Az. E.		
17° 7′ N.	21h 11m			1° 36′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	+·053	**50·22**	—·073	+·53	**35**	—·79
" 20	·067	**50·19**	·087	·67	**29**	·94
February 9	·067	**50·26**	·093	·67	**27**	1·01
March 1	·067	**50·40**	·087	·67	**28**	·94
" 21	·060	**50·85**	·080	·60	**33**	·87
April 10	·047	**51·42**	·067	·47	**40**	·72
" 30	·033	**52·07**	·053	·33	**49**	·51
May 20	·027	**52·76**	·033	·27	**57**	·36
June 9	·013	**53·38**	·013	·13	**64**	·14
" 29	·007	**53·87**	·000	·07	**69**	·00
July 19	·007	**54·24**	·000	·07	**71**	·00
August 8	·000	**54·43**	·000	·00	**71**	·00
" 28	·013	**54·35**	·007	·13	**67**	·07
September 17	·020	**54·06**	·020	·20	**62**	·22
October 7	·033	**53·80**	·033	·33	**52**	·36
" 27	·040	**53·39**	·060	·40	**44**	·65
November 16	·060	**52·92**	·073	·60	**33**	·79
December 6	·073	**52·56**	·100	·73	**23**	1·08
" 26	+·080	**52·28**	—·120	+·80	**14**	—1·30

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*		°		*s*	*″*	
28	—·014	**128·80**	**1162**	+·096					
29	·014	**122·54**	**1117**	·098					
30	·014	**116·20**	**1070**	·101					
31	·013	**109·74**	**1021**	·103	45	—·010	**0·00**	**0**	+·133
32	·013	**103·14**	**969**	·106	46	·009	**9·73**	**104**	·138
33	·013	**96·40**	**915**	·108	47	·009	**19·87**	**215**	·143
34	·013	**89·53**	**858**	·111	48	·008	**30·40**	**331**	·148
35	·012	**82·47**	**798**	·113	49	·008	**41·33**	**454**	·153
36	·012	**75·20**	**735**	·116	50	·007	**52·67**	**583**	·158
37	·012	**67·80**	**668**	·118	51	·007	**64·53**	**721**	·163
38	·011	**60·13**	**599**	·121	52	·006	**76·93**	**866**	·168
39	·011	**52·33**	**525**	·123	53	·006	**89·86**	**1020**	·173
40	·011	**44·27**	**449**	·126	54	·005	**103·47**	**1184**	·178
41	·011	**36·00**	**367**	·128	55	·005	**117·67**	**1358**	·183
42	·010	**27·40**	**283**	·131	56	—·004	+**132·67**	+**1543**	+·188
43	·010	**18·60**	**194**	·133					
44	—·010	**9·47**	**99**	+·136					

Polaris Z. Dist. = 44° 23′.

1889.	β AQUARII.						
Z.	S. T.			Az. E.		
51° 4′ S.	21h 30m			1° 31′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	+·053	**29·36**	—·073	+ ·47	**70**	— ·78
" 20	·073	**28·89**	·087	·64	**64**	·92
February 9	·073	**28·94**	·093	·64	**61**	·99
March 1	·067	**29·26**	·093	·58	**52**	·99
" 21	·060	**29·82**	·087	·52	**66**	·92
April 10	·053	**30·56**	·067	·47	**74**	·71
" 30	·047	**31·50**	·053	·41	**81**	·55
May 20	·033	**32·53**	·040	·29	**89**	·42
June 9	·020	**33·60**	·020	·17	**96**	·21
" 29	·013	**34·42**	·013	·12	**102**	·14
July 19	·007	**35·05**	·007	·06	**105**	·07
August 8	·000	**35·32**	·000	·00	**105**	·00
" 28	·007	**35 29**	·013	·06	**102**	·14
September 17	·020	**34·95**	·020	·17	**97**	·21
October 7	·027	**34·34**	·040	·23	**90**	·42
" 27	·047	**33·61**	·053	·41	**81**	·56
November 16	·053	**32·80**	·073	·47	**71**	·76
December 6	·073	**32·03**	·093	·64	**61**	1·08
" 26	+·080	**31·49**	—·113	+ ·70	**51**	—1·27

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	+·006	—**122·87**	—**1109**	+·170					
29	·007	**116·94**	**1066**	·183					
30	·007	**110·87**	**1022**	·187	°		*s*	*″*	
31	·007	**104·67**	**974**	·192	45	+·013	+**0·00**	+ **0**	+·250
32	·008	**98·40**	**925**	·196	46	·014	**9·33**	**100**	·256
33	·008	**91·93**	**873**	·200	47	·014	**19·00**	**205**	·262
34	·009	**85·40**	**819**	·204	48	·015	**29·07**	**316**	·267
35	·009	**78·60**	**761**	·208	49	·015	**39·47**	**433**	·273
36	·010	**71·73**	**701**	·212	50	·015	**50·33**	**577**	·279
37	·010	**64·67**	**638**	·217	51	·016	**61·67**	**688**	·285
38	·010	**57·33**	**572**	·221	52	·016	**73·47**	**827**	·291
39	·011	**49·87**	**501**	·225	53	·017	**85·87**	**974**	·297
40	·011	**42·20**	**428**	·229	54	·017	**98·80**	**1130**	·302
41	·012	**34·27**	**350**	·233	55	·018	**112·40**	**1296**	·308
42	·012	**26·13**	**270**	·237	56	+·018	+**127·67**	+**1472**	+·314
43	·012	**17·67**	**185**	·242					
44	+·013	— **9·00**	— **95**	+·246					

Polaris Z. Dist. = 44° 18′.

1889.	*a* AQUARII.					
Z.	S. T.			Az. E.		
45° 52′ S.	22h 3m			1° 22′.		
	t.	*s.*	*t′.*	*a.*	″	*a′.*
January 0	+ ·047	**60·51**	—·067	+ ·42	**44**	— ·60
" 20	·060	**60·05**	·087	·54	**33**	·78
February 9	·067	**59·95**	·087	·60	**29**	·78
March 1	·067	**60·06**	·087	·60	**28**	·78
" 21	·067	**60·48**	·080	·60	**31**	·72
April 10	·053	**61·17**	·073	·48	**37**	·66
" 30	·040	**62·09**	·053	·36	**45**	·48
May 20	·033	**63·02**	·040	·30	**53**	·36
June 9	·020	**64·04**	·020	·18	**61**	·18
" 29	·007	**64·95**	·013	·06	**67**	·12
July 19	·000	**65·62**	·007	·00	**71**	·06
August 8	·000	**66·01**	·000	·00	**73**	·00
" 28	·007	**66·11**	·000	·06	**72**	·00
September 17	·007	**65·96**	·013	·06	**68**	·12
October 7	·020	**65·48**	·020	·18	**62**	·18
" 27	·027	**64·85**	·040	·24	**54**	·36
November 16	·040	**64·11**	·060	·36	**44**	·54
December 6	·053	**63·41**	·080	·48	**34**	·72
" 26	+ ·067	**62·76**	—·100	+ ·60	**25**	— ·90

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	″						
28	+ ·008	—**119·27**	— **995**	+ ·237					
29	·008	**114·93**	**956**	·241					
30	·009	**99·47**	**916**	·246	°		*s.*	″	
31	·009	**93·93**	**873**	·250	45	+ ·015	+ **0·00**	+ **0**	+ ·308
22	·009	**88·33**	**830**	·254	46	·015	**8·53**	**90**	·314
33	·010	**82·53**	**782**	·258	47	·015	**17·20**	**184**	·320
34	·010	**76·60**	**734**	·262	48	·016	**26·27**	**283**	·326
35	·011	**70·60**	**683**	·267	49	·016	**35·60**	**389**	·332
36	·011	**64·40**	**629**	·271	50	·017	**45·33**	**500**	·338
37	·011	**58·00**	**571**	·275	51	·017	**55·47**	**617**	·344
38	·012	**51·47**	**513**	·279	52	·018	**66·13**	**742**	·350
39	·012	**44·80**	**449**	·283	53	·018	**77·20**	**874**	·356
40	·013	**37·87**	**384**	·287	54	·018	**88·80**	**1014**	·362
41	·013	**30·80**	**313**	·292	55	·019	**101·00**	**1163**	·368
42	·013	**23·47**	**242**	·296	56	+ ·019	+**113·80**	+**1321**	+ ·374
43	·014	**15·87**	**166**	·300					
44	+ ·014	— **8·07**	— **85**	+ ·304					

Polaris Z. Dist. = 44° 9′.

1889.	*a* GRUIS.							
Z.	S. T.			Az. E.				
92° 30′ S.	22h 9m			1° 20′				
	t.	*s.*	*t′*	*a.*	″	*a′.*		
January 0	+ ·047	**10·78**	....	+ ·49	**62**	....		
" 20	·053	**9·79**	....	·58	**55**	....		
February 9	·060	**9·58**	....	·63	**51**	....		
March 1	·053	**9·74**	....	·56	**53**	....		
" 21	·053	**10·42**	....	·56	**53**	....		
April 10	·047	**11·47**	....	·49	**58**	....		
" 30	·033	**12·93**	....	·35	**66**	....		
May 20	·027	**14·49**	....	·28	**73**	....		
June 9	·013	**16·15**	....	·14	**81**	....		
" 29	·007	**17·56**	....	·07	**88**	....		
July 19	·000	**18·65**	....	·00	**93**	....		
August 8	·000	**19·40**	....	·00	**93**	....		
" 28	·000	**19·50**	....	·00	**93**	....		
September 17	·000	**19·23**	....	·00	**89**	....		
October 7	·013	**18·33**	....	·14	**82**	....		
" 27	·020	**17·28**	....	·21	**76**	....		
November 16	·040	**15·83**	....	·42	**66**	....		
December 6	·053	**14·49**	....	·56	**57**	....		
" 26	+ ·060	**13·23**	....	+ ·63	**47**	....		

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″						
28	+ ·024	— **108·07**	— **975**	+ ·255					
29	·024	**102·80**	**938**	·258					
30	·025	**97·47**	**898**	·262	°				
31	·025	**92·07**	**857**	·265	45				
32	·025	**86·47**	**813**	·268	46				
33	·026	**80·87**	**768**	·272	47				
34	·027	**75·07**	**720**	·275	48				
35	·027	**69·13**	**670**	·278	49				
36	·028	**63·07**	**617**	·282	50		Invisible		
37	·028	**56·80**	**562**	·285	51				
38	·029	**50·40**	**503**	·288	52				
39	·029	**43·87**	**442**	·292	53				
40	·029	**37·07**	**377**	·295	54				
41	·030	**30·13**	**309**	·298	55				
42	+ ·030	— **22·93**	— **238**	+ ·302	56				
43	....	.....	.....	....					
44	....	.....	.....	....					

Polaris Z. Dist. = 44° 8′.

1889.	*a* PISCIS AUST. *(Fomalhaut).*					
Z.	S. T.			Az. E.		
75° 13′ S.	22h 56m			1° 3′.		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+·040	**16·74**	—·060	+·36	**76**	—·58
" 20	·060	**15·84**	·080	·54	**68**	·77
February 9	·067	**15·46**	·087	·60	**62**	·84
March 1	·067	**15·33**	·093	·60	**59**	·90
" 21	·067	**15·63**	·093	·60	**61**	·90
April 10	·060	**16·27**	·087	·54	**64**	·84
" 30	·053	**17·33**	·073	·48	**71**	·71
May 20	·040	**18·42**	·060	·36	**79**	·58
June 9	·027	**19·86**	·047	·24	**87**	·45
" 29	·013	**21·08**	·033	·12	**94**	·32
July 19	·007	**22·17**	·013	·06	**100**	·13
August 8	·000	**22·91**	·000	·00	**104**	·00
" 28	·007	**23·22**	·000	·06	**105**	·00
September 17	·007	**23·26**	·000	·06	**104**	·00
October 7	·007	**22·93**	·020	·18	**100**	·19
" 27	·020	**22·25**	·027	·48	**94**	·26
November 16	·033	**21·31**	·040	·30	**85**	·39
December 6	·040	**20·42**	·060	·36	**76**	·58
" 26	+·060	**19·42**	—·080	+·54	**67**	—·77

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	*″*						
28	+·020	— **85·89**	— **774**	+·290					
29	·020	**81·67**	**744**	·295					
30	·021	**77·40**	**713**	·300	°		*s.*	*″*	
31	·021	**73·13**	**681**	·305	45	+·028	+ **0·00**	+ **0**	+·375
32	·022	**68·73**	**646**	·314	46	·029	**6·47**	**70**	·384
33	·022	**64·20**	**610**	·318	47	·030	**13·20**	**143**	·393
34	·023	**59·60**	**571**	·322	48	·031	**20·20**	**220**	·403
35	·023	**54·93**	**531**	·327	49	·031	**27·53**	**302**	·412
36	·024	**50·13**	**489**	·331	50	·032	**35·07**	**389**	·421
37	·024	**45·13**	**446**	·335	51	·033	**43·00**	**480**	·430
38	·025	**40·07**	**399**	·340	52	·033	**51·20**	**577**	·439
39	·025	**34·87**	**351**	·343	53	·034	**59·87**	**680**	·448
40	·026	**29·47**	**299**	·350	54	·035	**68·87**	**789**	·458
41	·026	**24·00**	**245**	·352	55	·036	**78·40**	**904**	·467
42	·027	**18·27**	**188**	·360	56	+·036	+ **88·33**	+ **1027**	+·476
43	·027	**12·40**	**129**	·365					
44	+·028	— **6·33**	— **66**	+·370					

Polaris Z. Dist. = 43° 57′.

1889.	*a* PECASI.					
Z.	S. T.			Az. E.		
30° 23′ S.	$23^h\ 1^m$			1° 1′		
	t.	*s.*	*t′*	*a.*	″	*a′.*
January 0	+ ·047	**22·63**	—·060	+ ·38	**76**	— .71
" 20	·053	**22·19**	·080	·44	**69**	.94
February 9	·067	**21·90**	·087	·55	**62**	1.02
March 1	·067	**21·87**	·093	·55	**59**	1.10
" 21	·073	**21·97**	·093	·60	**60**	1.10
April 10	·067	**22·49**	·087	·55	**63**	1.02
" 30	·053	**23·23**	·073	·44	**70**	.86
May 20	·040	**24·00**	·060	·33	**78**	.71
June 9	·033	**24·96**	·040	·27	**86**	.47
" 29	·020	**25·84**	·027	·16	**94**	.31
July 19	·013	**26·58**	·013	·11	**100**	.16
August 8	·007	**27·13**	·007	·05	**104**	.08
" 28	·000	**27·46**	·000	·00	**105**	.00
September 17	·007	**27·35**	·000	·05	**105**	.00
October 7	·013	**27·31**	·007	·11	**100**	.08
" 27	·020	**26·94**	·020	·16	**95**	.24
November 16	·033	**26·37**	·040	·27	**86**	0.47
December 6	·040	**25·86**	·060	·33	**77**	0.71
" 26	+ ·053	**25·29**	—·080	+ ·44	**67**	—0.95

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	*c.*	L.	b.	S. T.	Az.	*c.*
°		*s.*	″						
28	+ ·004	— **83·13**	— **750**	+ .307					
29	·004	**79·13**	**720**	·312					
30	·005	**75·07**	**691**	·317	°		*s.*	″	
31	·006	**70·87**	**658**	·322	45	+ ·018	+ **0·00**	+ **0**	+ ·392
32	·006	**66·60**	**625**	·327	46	·0[illegible]	**6·27**	**68**	·401
33	·007	**62·27**	**589**	·332	47	·015	**12·80**	**139**	·410
34	·007	**57·80**	**553**	·337	48	·016	**19·60**	**214**	·419
35	·008	**53·27**	**515**	·342	49	·016	**26·67**	**293**	·428
36	·008	**48·53**	**474**	·347	50	·017	**34·00**	**377**	·438
37	·009	**43·80**	**430**	·357	51	·018	**41·67**	**466**	·447
38	·009	**38·87**	**386**	·352	52	·019	**49·67**	**560**	·456
39	·010	**33·80**	**338**	·362	53	·020	**58·07**	**659**	·465
40	·011	**28·60**	**289**	·367	54	·020	**66·80**	**765**	·474
41	·011	**23·20**	**236**	·372	55	·021	**76·00**	**877**	·483
42	·012	**17·73**	**182**	·377	56	+ ·02[illegible]	+ **85·67**	+ **996**	+ ·493
43	·012	**12·00**	**124**	·382					
44	+ ·013	— **6·13**	— **63**	+ ·387					

Polaris Z. Dist. = 43° 56′.

1889.	β URSÆ MAJORIS, S. P.					
Z.	S. T.			Az. E.		
78° 1′ N.	23h 2m			1° 1′.		
	t.	*s.*	*t′.*	*a*	*″*	*a′*
January 0	+·040	31·88	—·060	+·36	49	—·71
" 20	·060	31·61	·080	·54	40	·94
February 9	·067	31·67	·087	·60	34	1·02
March 1	·073	31·70	·093	·66	31	1·10
" 21	·073	31·80	·093	·66	32	1·10
April 10	·067	32·03	·086	·60	35	1·02
" 30	·053	32·45	·073	·48	42	·86
May 20	·047	32·79	·060	·42	50	·71
June 9	·027	33·38	·040	·24	59	·47
" 29	·020	33·78	·020	·18	67	·24
July 19	·007	34·24	·013	·06	73	·16
August 8	·000	34·52	·000	·00	77	·00
" 28	·000	34·72	·000	·00	79	·00
September 17	·007	34·74	·000	·06	78	·00
October 7	·013	34·73	·007	·12	74	·08
" 27	·020	34·69	·020	·18	68	·24
November 16	·033	34·51	·040	·30	59	·47
December 6	·047	34·42	·060	·42	50	·71
" 26	+·060	34·29	—·073	+·54	40	—·86

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
		s.	*″*						
28	+·037	— 82·47	— 744	+·284					
29	·038	78·47	716	·290					
30	·038	74·40	686	·296	°		*s.*	*″*	
31	·039	70·33	654	·302	45	+·046	+ 0·00	+ 0	+·383
32	·039	66·13	621	·308	46	·046	6·27	67	·392
33	·040	61·80	586	·313	47	·047	12·73	138	·400
34	·040	57·33	550	·319	48	·048	19·47	212	·408
35	·041	52·87	511	·325	49	·049	26·47	291	·417
36	·041	48·20	471	·331	50	·049	33·80	374	·425
37	·042	43·47	428	·337	51	·050	41·40	462	·433
38	·042	38·53	384	·343	52	·051	49·33	555	·442
39	·043	33·53	337	·348	53	·052	57·60	654	·450
40	·043	28·40	287	·354	54	·053	66·27	759	·458
41	·044	23·07	236	·366	55	·053	75·40	810	·467
42	·044	17·53	181	·366	56	+·054	+ 85·00	+1000	+·475
43	·045	11·93	124	·372					
44	+·045	— 6·07	— 63	+·378					

Polaris Z. Dist. = 43° 56′.

1889.	*a* URSÆ MAJORIS, S. P.					
Z.	S. T.			Az. E.		
72° 39′ N.	23h 5m			1° 0′.		
	l.	*s*.	*l′*.	*a*.	*″*	*a′*.
January 0	+·040	11·94	—·067	+·36	45	—·87
" 20	·053	11·59	·080	·48	36	1·04
February 9	·080	11·63	·093	·54	30	1·21
March 1	·067	11·71	·100	·60	27	1·30
" 21	·067	11·81	·100	·60	28	1·30
April 10	·060	12·04	·093	·54	31	1·21
" 30	·047	12·50	·080	·42	38	1·04
May 20	·040	12·85	·060	·36	46	·78
June 9	·027	13·45	·047	·24	55	·61
" 29	·013	13·93	·027	·12	62	·35
July 19	·013	14·28	·013	·12	69	·17
August 8	·007	14·63	·000	·06	73	·00
" 28	·000	14·80	·000	·00	75	·00
September 17	·000	14·90	·007	·00	74	·09
October 7	·007	14·81	·007	·06	70	·09
" 27	·013	14·79	·013	·12	64	·17
November 16	·027	14·60	·040	·24	56	·52
December 6	·040	14·51	·060	·36	46	·78
" 26	+·053	14·33	—·080	+·48	36	—1·04

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
		s.	*″*						
28	+·043	— 81·06	— 732	+·290					
29	·044	77·19	704	·295					
30	·044	73·19	675	·300	°		*s*.	*″*	
31	·045	69·12	644	·305	45	+·053	+ 0·00	+ 0	+·375
32	·045	64·92	611	·310	46	·054	6·20	65	·383
33	·046	60·72	577	·315	47	·054	12·60	135	·390
34	·047	56·32	541	·320	48	·055	19·20	208	·398
35	·047	51·92	503	·325	49	·056	26·07	286	·405
36	·048	47·32	463	·330	50	·056	33·27	367	·413
37	·048	42·66	421	·335	51	·057	40·73	454	·420
38	·049	37·86	378	·340	52	·058	48·53	545	·428
39	·049	32·92	331	·345	53	·059	56·67	643	·435
40	·050	27·86	283	·350	54	·059	65·27	746	·443
41	·051	22·60	232	·355	55	·060	74·20	857	·450
42	·051	17·20	179	·360	56	+·061	+ 83·67	+ 972	+·458
43	·052	11·67	122	·365					
44	+·052	— 5·93	— 63	+·370					

Polaris Z. Dist. = 43° 56′.

1889.	γ CEPHEI.					
Z.	S. T.			Az. E.		
31° 1′ N.	23h 26m			0° 51′		
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+·040	36·25	—·060	+·38	55	—·78
" 20	·053	36·08	·080	·51	46	1·04
February 9	·067	35·75	·093	·64	39	1·21
March 1	·073	35·46	·100	·70	35	1·30
" 21	·073	35·82	·093	·70	35	1·21
April 10	·067	36·17	·093	·64	38	1·21
" 30	·060	36·55	·080	·57	44	1·04
May 20	·053	37·19	·067	·45	52	·87
June 9	·040	37·69	·053	·38	60	·61
" 29	·027	38·32	·033	·25	68	·43
July 19	·013	38·91	·020	·13	75	·26
August 8	·013	39·36	·007	·13	80	·09
" 28	·000	39·64	·000	·00	83	·00
September 17	·000	39·75	·107	·00	83	·09
October 7	·007	39·75	·113	·06	80	·17
" 27	·013	39·54	·020	·13	75	·26
November 16	·027	39·22	·033	·25	68	·43
December 6	·040	38·90	·047	·38	59	·61
" 26	+·053	38·68	—·067	+·51	49	—·87

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°		*s.*	*″*						
28	—·083	— 69·40	— 626	+·351					
29	·082	66·00	602	·357					
30	·081	62·60	577	·363	°		*s.*	*″*	
31	·081	59·13	550	·368	45	—·072	+ 0·00	+ 0	+·450
32	·080	55·53	523	·374	46	·070	5·27	56	·467
33	·079	51·93	493	·380	47	·070	10·73	115	·483
34	·079	48·20	463	·386	48	·069	16·40	178	·500
35	·078	44·40	430	·392	49	·068	22·33	244	·517
36	·077	40·47	396	·398	50	·068	28·40	314	·533
37	·077	36·47	360	·403	51	·067	34·80	388	·550
38	·076	32·40	323	·409	52	·066	41·47	467	·567
39	·075	28·13	283	·415	53	·065	48·47	550	·583
40	·075	23·80	242	·421	54	·065	55·80	638	·600
41	·074	19·33	198	·427	55	·064	63·47	731	·617
42	·073	14·73	153	·433	56	—·063	+ 71·54	+ 831	+·633
43	·073	10·00	104	·438					
44	—·072	— 5·07	— 54	+·444					

Polaris Z. Dist. = 48° 53′.

1889.	λ DRACONIS, S. P.						
Z.	S. T.			Az. E.			
65° 3′ N.	23h 33m.			0° 48′.			
	t.	*s.*	*t′.*	*a.*	*″*	*a′.*
January 0	+·032	26·17	—·060	+ ·30	60	— ·62
" 20	·053	25·87	·080	·48	50	·83
February 9	·060	25·77	·093	·54	43	·96
March 1	·067	25·76	·100	·60	39	1·03
" 21	·067	25·92	·107	·60	39	1·10
April 10	·060	26·15	·100	·54	39	1·03
" 30	·053	26·61	·087	·48	47	·89
May 20	·047	26·92	·073	·42	55	·76
June 9	·027	27·56	·060	·24	63	·62
" 29	·020	28·03	·033	·18	72	·34
July 19	·013	28·47	·020	·12	79	·21
August 8	·007	28·86	·013	·06	84	·14
" 28	·000	29·08	·007	·00	87	·07
September 17	·000	29·25	·000	·00	88	·00
October 7	·000	29·26	·013	·00	84	·14
" 27	·013	29·18	·013	·12	80	·14
November 16	·020	29·04	·033	·18	73	·34
December 6	·033	29·04	·053	·30	64	·55
" 26	+·047	28·80	—·060	+ ·42	54	— ·62

LATITUDE CORRECTIONS.

L.	b.	S. T.	Az.	c.	L.	b.	S. T.	Az.	c.
°	′	*s.*	*″*						
28	+·061	— 65·47	— 592	+·301					
29	·062	62·33	569	·307					
30	·062	59·13	545	·313	°	′	*s.*	*″*	
31	·063	55·80	520	·318	45	+·071	+ 0·00	+ 0	+·400
32	·063	52·47	494	·324	46	·071	5·00	53	·410
33	·064	49·00	466	·350	47	·072	10·13	109	·420
34	·064	45·53	437	·336	48	·073	15·47	168	·430
35	·065	41·93	406	·342	49	·074	21·07	230	·440
36	·065	38·20	374	·348	50	·074	26·87	296	·450
37	·066	34·47	340	·353	51	·075	32·87	366	·460
38	·067	30·60	305	·359	52	·076	39·20	440	·470
39	·067	26·60	268	·365	53	·077	45·80	519	·480
40	·068	22·47	229	·371	54	·078	52·67	602	·490
41	·068	18·27	187	·377	55	·078	59·93	690	·500
42	·069	13·93	144	·383	56	+·079	+ 67·53	+ 784	+·510
43	·069	9·40	99	·388					
44	+·070	— 4·80	— 51	+·394					

Polaris Z. Dist. = 43° 51′.

E.

48′.

″	a′.
40	— ·62
50	·83
13	·96
39	1·03
39	1·10
39	1·03
17	·89
55	·76
63	·62
72	·34
79	·21
84	·14
87	·07
88	·00
84	·14
80	·14
73	·34
64	·55
54	— ·62

Az.	c.
″	
0	+ ·400
53	·410
109	·420
168	·430
230	·440
296	·450
366	·460
440	·470
519	·480
602	·490
690	·500
784	+ ·510