The Nautical Almanac 2022
For the Sun

TheNauticalAlmanac.com

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Acknowledgment and Credits

Dr. Enno Rodegerdts

The Nautical Almanac *Daily Pages* and Sun Almanacs found on our site were originally created from PyAlmanac written by the great Norwegian sailor Enno Rodegerdts. PyAlmanac used PyEphem to generate the almanacs and LaTex provided the final formatting. Visit Dr. Rodegerdts site and learn of his voyages at https://sv-inua.net/

Without his work TheNauticalAlmanac.com wouldn't exist.

Andrew Bauer

Mr. Bauer has taken the initial work of Dr. Rodegerdts and improved it to the excellence found in the following Daily Pages. Attending foremost to the accuracy of data and then formatting Mr. Bauer created SkyAlmanac which draws from Brandon Rhodes work *Ephem* and *Skyfield* and provides a clear arrangement of figures required for celestial navigation. To that end his work was determined, tireless and efficient. In our mutual writing across many lines of longitude he has always been pleasant, friendly and most affable.

As he has said, *"The art of celestial navigation should be promoted, not discouraged, even in the modern day".*

To both of these men we all owe a large debt of gratitude and thanks

Disclaimer and Warning

Prior to use verify the accuracy of The Nautical Almanac or data you download from our site. They SHOULD NOT and MUST NOT be relied upon for celestial navigation work of any sorts or any purpose whatsoever. You use them at your own risk or peril.

Errors & Corrections

Contact us if you find any significant errors and describe the correction that should be made.

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freely ye received, freely give

Useful Information

Time Signals- by telephone

WWV 303-499-7111 **WWVH** 808-335-4363

CHU **English:** 613-745-1576 (CHU provides only Eastern time announcements)
French: 613-745-9426

Time signals- by Radio

WWV (Fort Collins, Colorado)	2.5, 5, 10, 15, 20 MHz (male voice)
WWVH (Kauai, Hawaii)	2.5, 5, 10, 15 MHz (female voice)
CHU (Ottawa, Canada)	3330, 7850, and 14,670 kHz (USB)

Bowditch *2019- The American Practical Navigator*

https://TheNauticalAlmanac.com/2019_Bowditch-_American_Practical_Navigator.html

Organized in a convenient and useful manner. Download the Chapters, Parts or Tables you want or the entire work.

The Terrestrial Almanac Annual calendar and day planner for the entire year.

https://TheNauticalAlmanac.com/TerrestrialAlmanac.html

Pub. No. 249 Download individual Latitudes or Volumes

Epoch 2020 https://www.thenauticalalmanac.com/Pub_No_249_Epoch_2020.html

Epoch 2025 https://www.thenauticalalmanac.com/Pub_No_249_Epoch_2025.html

Pub. No. 229 Download individual Volumes covering a range of Latitudes

https://TheNauticalAlmanac.com/Pub. No. 229.html

Sight Reduction Forms & Methods

https://www.TheNauticalAlmanac.com/Methods.html

Celestial Navigation

useful Formulas

About Calculators

The Casio *fx-300ES Plus* is an inexpensive calculator at about 11 USD. It features *natural input* so you enter a formula just as it would be written on paper. Entering degrees, minutes and seconds is very simple. The Casio *fx-300ES Plus* has 9 memory locations and you can review many of the previous entries you make using a special key on the calculator.

Determine Hc using a calculator

The formula

Hc = asin[sin(**Declination**)*sin(**Latitude**) + cos(**Latitude**)*cos(**Declination**)*cos(**LHA**)]

As it would be entered into the Casio calculator Note- Sin^{-1} is the arc-sin key

Sin^{-1}(Sin(**Ap Latitude**) x Sin(**Declination**) + Cos(**Ap Latitude)** x Cos(**Declination**) x Cos(**LHA**)

Declination is the declination of the Celestial body you're observing. When the heavenly body's declination is *Contrary name* to your Ap Latitude enter a negative sign before it.

Latitude "The AP latitude is chosen to be the nearest whole degree in latitude to the DR latitude." *from Bowditch 2019 Vol. 1 Chapter 19 section 1902 p. 310* Consider this to be where you are, think you are or where you would like to determine Hc for. Typically, you'll be using an *Assumed position Latitude* or *Ap Latitude* as it's called. *See Bowditch 2019 Vol. 1 Chapter 19 section 1902 p. 310*

About LHA determination

Assumed Position longitude (***a* λ**) "The AP longitude is that nearest the DR longitude resulting in a whole degree of LHA for the observed body." *From Bowditch 2019 Vol. 1 Chapter 19 section 1902 p. 310*

In Western Longitudes *see Bowditch 2019 Vol. 1 Chapter 19 section 1905 p. 313*

LHA is the Local Hour Angle derived by subtracting your Assumed Longitude (***a* λ**) whole degree value from the whole degree ***GHA*** (Greenwich Hour Angle) value. If GHA is less than the ***a* λ** than the add 360° to it then subtract the ***a* λ.** *Ignore the arc minutes* of GHA and ***a* λ.**

Example when GHA is less than ***a* λ** **GHA**= 43° 25.2' ***a* λ**= W 55° 15.1'

360° + 43° = 403° Then....403° – 55° = 348° (LHA)

In Eastern Longitudes *see Bowditch 2019 Vol. 1 Chapter 19 section 1905 p. 313*

LHA**, in **Eastern Longitudes, is determined by adding the entire GHA figure (degrees and minutes) to the whole degree figure of the Assumed longitude (***a* λ**) *plus* the amount of arc minutes required to get to the next degree of the GHA. If the resulting LHA figure is greater than 360° then subtract 360° from the figure to obtain the LHA.

Example- **GHA**= 58° 01.2' ***a* λ**= E 9° 10.1' (ignore the 10.1')

Step 1- *get GHA degree difference;* 59° - 58° 01.2' = 0° 58.8'

Step 2- add *a* λ degrees to *difference* found in step 1; 9° + 0°58.8' = 9° 58.8' *a* λ

Step 3- *get LHA;* 58° 01.2 + 9° 58.8' = 68° (LHA)

Why would you want to determine Hc using a calculator?

It's faster than looking up in Pub. No. 249 and Pub. No. 229, highly accurate and you don't need a lot of printed out pages of Latitudes from Pub. No. 249 and Pub. No. 229. Pub. No. 249 Vol. 2 & 3 don't cover any declination greater than 29 degrees so you'd have to use Pub. No. 229 which is extremely large.

Celestial Navigation

Determine Z

Z = acos[(sin(**Declination**) – sin(**Ap Latitude)** x sin(**Hc**)) ÷ (cos(**Ap Latitude**) x cos(**Hc**))]

As it would be entered into the Casio calculator... Note- Cos^{-1} is the arc-cosine key

Cos^{-1}((Sin(**Declination**) – Sin(**AP Latitude**) x Sin(**Hc**)) ÷ (Cos(**AP Latitude**) x Cos(**Hc**)

If the heavenly body's declination is *Contrary name* to the Ap Latitude enter a negative sign before it.

To obtain Zn see the rules below for Northern and Southern latitudes.

Determine Z independent of Hc

$$Z = \tan^{-1}\left(\frac{\sin \mathrm{LHA}}{(\cos \mathrm{L} \tan \mathrm{d}) - (\sin \mathrm{L} \cos \mathrm{LHA})}\right)$$

"L" is latitude and "*d"* is declination. When the heavenly body's declination is *Contrary name* to your Ap Latitude enter a negative sign before it.

As it would be entered into the Casio calculator... Note- $\tan^{-1}$ is the arc-tangent key

Z = $\tan^{-1}$ ((sin (**LHA**) ÷ (cos(**AP latitude**) x tan(**declination**) – (sin(**AP latitude**) x cos(**LHA**))

The sign convention used in the calculation of this azimuth formula is as follows:
from *Bowditch Chapter 22 CALCULATIONS AND CONVERSIONS, page 331*

1) If latitude and declination are of contrary name, declination is treated as a negative quantity;
2) If the local hour angle is greater than 180°, it is treated as a negative quantity. If the azimuth angle as calculated is negative, add 180° to obtain the desired value.

To obtain Zn apply the following rules

In Northern Latitudes	**In Southern Latitudes**
LHA greater than 180°....Zn=Z	LHA greater than 180°....Zn= 180° – Z
LHA less than 180°.....Zn=360° – Z	LHA less than 180°.....Zn= 180° + Z

Determine Refraction 0.96 ÷ Tan of (Ha)
Gives good results down to about 8° from the horizon but not less.

Refraction (good overall formula from 90° to below 8° from the horizon)

$$R_0 = \cot\left(H_a + \frac{7.31}{H_a + 4.4}\right)$$

As it would be entered into the Casio calculator...

1 ÷ Tan((Ha + (7.31 ÷ (Ha + 4.4))

Both refraction formulas use the standard pressure and temperature of;

1010 mb	10° C
29.83 in	53° F

Determine Dip using feet 0.97 x (Square Root of *He* (Height of Eye) in feet)

Determine Dip using meters 1.76 x (Square Root of *He* (Height of eye) in meters)

Rules to Calculate Latitude using the Sun- *Noon-Sight*

1- Latitude and declination *Same name* but latitude is greater than declination:

Latitude= (90° – Ho) + declination

2- Latitude and declination *Same name* but declination greater than latitude:

Latitude= Declination – (90° – Ho)

3- Latitude and declination *Contrary name*:

Latitude= (90° – Ho) – Declination

To get AP longitude (needed for plotting the LOP)

In Western longitudes

Combine the DR Longitude figure with only the minutes (of arc) of the total GHA figure. The Ap λ figure will be used when plotting the LOP on the UPS.

In Eastern longitudes

In Eastern longitudes the Ap λ is determined as follows;

DR longitude + (0°60' *minus* GHA minutes of arc)

Example- E 075° + (0°60' – 0° 02')= 75° 58' Ap longitude

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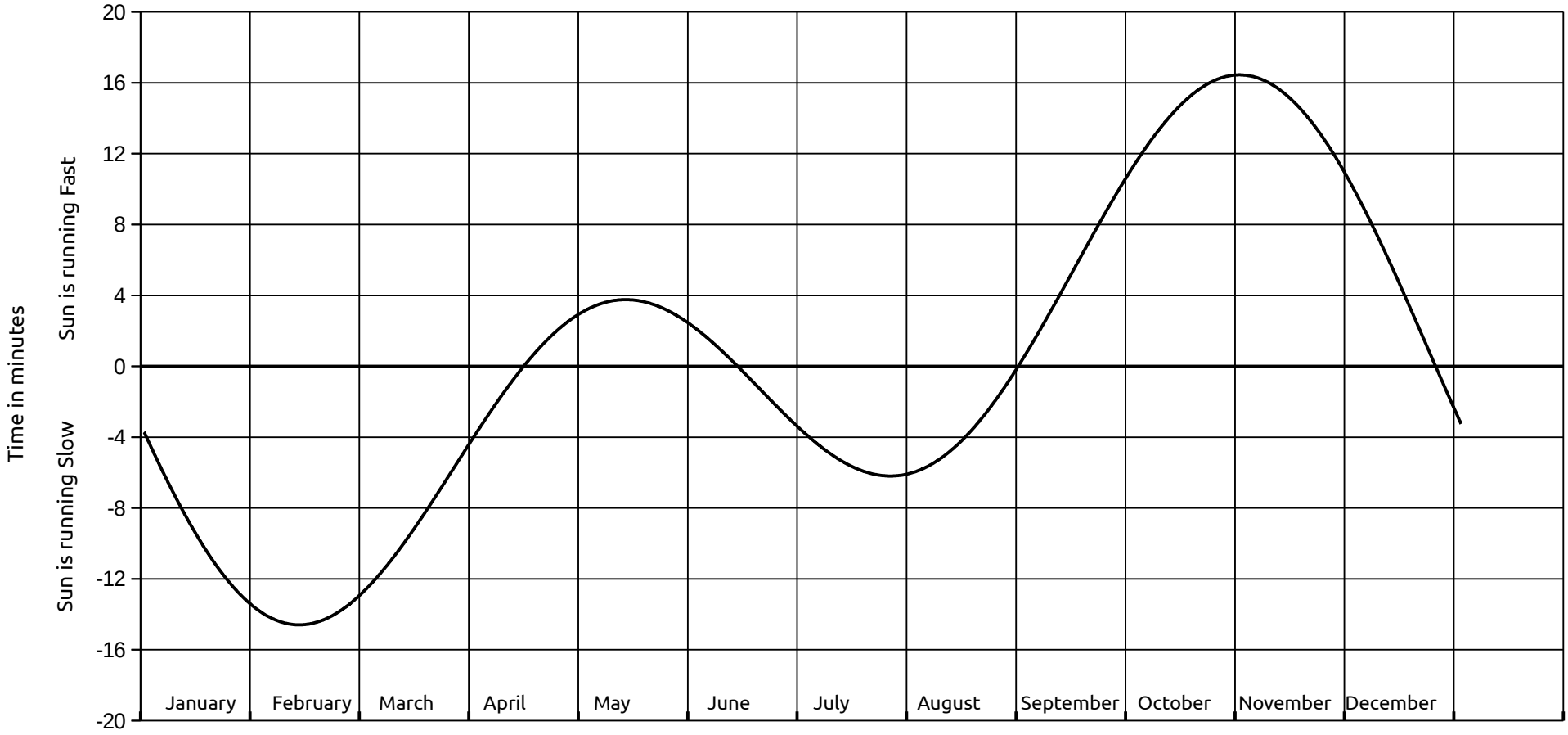
Formula Sheet added to NA.odt

Equation of Time
for the Sun



Equation_of_Time_Curve.odt

DUT1 = UT1-UTC = -0.1105 sec ΔT = TT-UT1 = +69.2945 sec

2022 January 01 to Jan. 15 UT

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	179°10.5	S23°01.2	0	178°49.5	S22°44.7	0	178°29.4	S22°24.1	0	178°10.5	S21°59.5	0	177°52.8	S21°31.0
1	194°10.2	01.0	1	193°49.2	44.4	1	193°29.1	23.7	1	193°10.2	59.1	1	192°52.6	30.6
2	209°09.9	00.8	2	208°48.9	44.1	2	208°28.9	23.4	2	208°10.0	58.7	2	207°52.3	30.2
3	224°09.6	·· 00.6	3	223°48.6	·· 43.9	3	223°28.6	·· 23.1	3	223°09.7	·· 58.4	3	222°52.1	·· 29.8
4	239°09.3	00.4	4	238°48.3	43.6	4	238°28.3	22.8	4	238°09.4	58.0	4	237°51.9	29.3
5	254°09.0	00.2	5	253°48.1	43.4	5	253°28.1	22.5	5	253°09.2	57.6	5	252°51.6	28.9
6	269°08.7	S23°00.0	6	268°47.8	S22°43.1	6	268°27.8	S22°22.2	6	268°08.9	S21°57.2	6	267°51.4	S21°28.5
7	284°08.4	22°59.8	7	283°47.5	42.8	7	283°27.5	21.8	7	283°08.7	56.9	7	282°51.2	28.1
8	299°08.1	59.6	8	298°47.2	42.6	8	298°27.2	21.5	8	298°08.4	56.5	8	297°50.9	27.6
9	314°07.8	·· 59.4	9	313°46.9	·· 42.3	9	313°27.0	·· 21.2	9	313°08.2	·· 56.1	9	312°50.7	·· 27.2
10	329°07.5	59.2	10	328°46.6	42.0	10	328°26.7	20.9	10	328°07.9	55.7	10	327°50.5	26.8
11	344°07.2	58.9	11	343°46.4	41.8	11	343°26.4	20.6	11	343°07.7	55.4	11	342°50.2	26.3
12	359°06.9	S22°58.7	12	358°46.1	S22°41.5	12	358°26.2	S22°20.2	12	358°07.4	S21°55.0	12	357°50.0	S21°25.9
13	14°06.6	58.5	13	13°45.8	41.2	13	13°25.9	19.9	13	13°07.2	54.6	13	12°49.8	25.5
14	29°06.3	58.3	14	28°45.5	41.0	14	28°25.6	19.6	14	28°06.9	54.2	14	27°49.5	25.1
15	44°06.0	·· 58.1	15	43°45.2	·· 40.7	15	43°25.4	·· 19.3	15	43°06.7	·· 53.9	15	42°49.3	·· 24.6
16	59°05.7	57.9	16	58°44.9	40.4	16	58°25.1	18.9	16	58°06.4	53.5	16	57°49.1	24.2
17	74°05.5	57.7	17	73°44.7	40.2	17	73°24.8	18.6	17	73°06.2	53.1	17	72°48.8	23.8
18	89°05.2	S22°57.5	18	88°44.4	S22°39.9	18	88°24.6	S22°18.3	18	88°05.9	S21°52.7	18	87°48.6	S21°23.3
19	104°04.9	57.2	19	103°44.1	39.6	19	103°24.3	17.9	19	103°05.7	52.3	19	102°48.4	22.9
20	119°04.6	57.0	20	118°43.8	39.3	20	118°24.0	17.6	20	118°05.4	51.9	20	117°48.2	22.5
21	134°04.3	·· 56.8	21	133°43.5	·· 39.1	21	133°23.8	·· 17.3	21	133°05.2	·· 51.6	21	132°47.9	·· 22.0
22	149°04.0	56.6	22	148°43.2	38.8	22	148°23.5	17.0	22	148°04.9	51.2	22	147°47.7	21.6
23	164°03.7	56.4	23	163°43.0	38.5	23	163°23.2	16.6	23	163°04.7	50.8	23	162°47.5	21.1
	SD=16.3′	d = -0.2′		SD=16.3′	d = -0.3′		SD=16.3′	d = -0.3′		SD=16.3′	d = -0.4′		SD=16.3′	d = -0.4′

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	179°03.4	S22°56.1	0	178°42.7	S22°38.2	0	178°23.0	S22°16.3	0	178°04.4	S21°50.4	0	177°47.2	S21°20.7
1	194°03.1	55.9	1	193°42.4	38.0	1	193°22.7	16.0	1	193°04.2	50.0	1	192°47.0	20.3
2	209°02.8	55.7	2	208°42.1	37.7	2	208°22.4	15.6	2	208°03.9	49.6	2	207°46.8	19.8
3	224°02.5	·· 55.5	3	223°41.8	·· 37.4	3	223°22.2	·· 15.3	3	223°03.7	·· 49.2	3	222°46.6	·· 19.4
4	239°02.2	55.3	4	238°41.6	37.1	4	238°21.9	15.0	4	238°03.4	48.9	4	237°46.3	18.9
5	254°01.9	55.0	5	253°41.3	36.8	5	253°21.6	14.6	5	253°03.2	48.5	5	252°46.1	18.5
6	269°01.6	S22°54.8	6	268°41.0	S22°36.6	6	268°21.4	S22°14.3	6	268°02.9	S21°48.1	6	267°45.9	S21°18.1
7	284°01.3	54.6	7	283°40.7	36.3	7	283°21.1	13.9	7	283°02.7	47.7	7	282°45.6	17.6
8	299°01.1	54.4	8	298°40.4	36.0	8	298°20.8	13.6	8	298°02.4	47.3	8	297°45.4	17.2
9	314°00.8	·· 54.1	9	313°40.2	·· 35.7	9	313°20.6	·· 13.3	9	313°02.2	·· 46.9	9	312°45.2	·· 16.7
10	329°00.5	53.9	10	328°39.9	35.4	10	328°20.3	12.9	10	328°02.0	46.5	10	327°45.0	16.3
11	344°00.2	53.7	11	343°39.6	35.1	11	343°20.0	12.6	11	343°01.7	46.1	11	342°44.7	15.8
12	358°59.9	S22°53.4	12	358°39.3	S22°34.9	12	358°19.8	S22°12.3	12	358°01.5	S21°45.7	12	357°44.5	S21°15.4
13	13°59.6	53.2	13	13°39.0	34.6	13	13°19.5	11.9	13	13°01.2	45.3	13	12°44.3	14.9
14	28°59.3	53.0	14	28°38.8	34.3	14	28°19.3	11.6	14	28°01.0	44.9	14	27°44.1	14.5
15	43°59.0	·· 52.8	15	43°38.5	·· 34.0	15	43°19.0	·· 11.2	15	43°00.7	·· 44.5	15	42°43.8	·· 14.0
16	58°58.7	52.5	16	58°38.2	33.7	16	58°18.7	10.9	16	58°00.5	44.1	16	57°43.6	13.6
17	73°58.4	52.3	17	73°37.9	33.4	17	73°18.5	10.5	17	73°00.2	43.7	17	72°43.4	13.1
18	88°58.1	S22°52.1	18	88°37.7	S22°33.1	18	88°18.2	S22°10.2	18	88°00.0	S21°43.3	18	87°43.2	S21°12.7
19	103°57.8	51.8	19	103°37.4	32.8	19	103°17.9	09.8	19	102°59.8	42.9	19	102°42.9	12.2
20	118°57.6	51.6	20	118°37.1	32.5	20	118°17.7	09.5	20	117°59.5	42.5	20	117°42.7	11.8
21	133°57.3	·· 51.3	21	133°36.8	·· 32.3	21	133°17.4	·· 09.1	21	132°59.3	·· 42.1	21	132°42.5	·· 11.3
22	148°57.0	51.1	22	148°36.5	32.0	22	148°17.2	08.8	22	147°59.0	41.7	22	147°42.3	10.9
23	163°56.7	50.9	23	163°36.3	31.7	23	163°16.9	08.4	23	162°58.8	41.3	23	162°42.1	10.4
	SD=16.3′	d = -0.2′		SD=16.3′	d = -0.3′		SD=16.3′	d = -0.3′		SD=16.3′	d = -0.4′		SD=16.3′	d = -0.4′

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	178°56.4	S22°50.6	0	178°36.0	S22°31.4	0	178°16.6	S22°08.1	0	177°58.5	S21°40.9	0	177°41.8	S21°10.0
1	193°56.1	50.4	1	193°35.7	31.1	1	193°16.4	07.7	1	192°58.3	40.5	1	192°41.6	09.5
2	208°55.8	50.2	2	208°35.4	30.8	2	208°16.1	07.4	2	207°58.1	40.1	2	207°41.4	09.1
3	223°55.5	·· 49.9	3	223°35.2	·· 30.5	3	223°15.9	·· 07.0	3	222°57.8	·· 39.7	3	222°41.2	·· 08.6
4	238°55.2	49.7	4	238°34.9	30.2	4	238°15.6	06.7	4	237°57.6	39.3	4	237°41.0	08.1
5	253°54.9	49.4	5	253°34.6	29.9	5	253°15.3	06.3	5	252°57.3	38.9	5	252°40.7	07.7
6	268°54.7	S22°49.2	6	268°34.3	S22°29.6	6	268°15.1	S22°06.0	6	267°57.1	S21°38.5	6	267°40.5	S21°07.2
7	283°54.4	48.9	7	283°34.1	29.3	7	283°14.8	05.6	7	282°56.9	38.1	7	282°40.3	06.8
8	298°54.1	48.7	8	298°33.8	29.0	8	298°14.6	05.3	8	297°56.6	37.7	8	297°40.1	06.3
9	313°53.8	·· 48.4	9	313°33.5	·· 28.7	9	313°14.3	·· 04.9	9	312°56.4	·· 37.3	9	312°39.9	·· 05.8
10	328°53.5	48.2	10	328°33.2	28.4	10	328°14.0	04.6	10	327°56.1	36.8	10	327°39.6	05.4
11	343°53.2	48.0	11	343°33.0	28.1	11	343°13.8	04.2	11	342°55.9	36.4	11	342°39.4	04.9
12	358°52.9	S22°47.7	12	358°32.7	S22°27.8	12	358°13.5	S22°03.8	12	357°55.7	S21°36.0	12	357°39.2	S21°04.5
13	13°52.6	47.5	13	13°32.4	27.5	13	13°13.3	03.5	13	12°55.4	35.6	13	12°39.0	04.0
14	28°52.4	47.2	14	28°32.1	27.2	14	28°13.0	03.1	14	27°55.2	35.2	14	27°38.8	03.5
15	43°52.1	·· 47.0	15	43°31.9	·· 26.8	15	43°12.8	·· 02.8	15	42°54.9	·· 34.8	15	42°38.5	·· 03.1
16	58°51.8	46.7	16	58°31.6	26.5	16	58°12.5	02.4	16	57°54.7	34.4	16	57°38.3	02.6
17	73°51.5	46.4	17	73°31.3	26.2	17	73°12.2	02.0	17	72°54.5	34.0	17	72°38.1	02.1
18	88°51.2	S22°46.2	18	88°31.0	S22°25.9	18	88°12.0	S22°01.7	18	87°54.2	S21°33.5	18	87°37.9	S21°01.7
19	103°50.9	45.9	19	103°30.8	25.6	19	103°11.7	01.3	19	102°54.0	33.1	19	102°37.7	01.2
20	118°50.6	45.7	20	118°30.5	25.3	20	118°11.5	00.9	20	117°53.8	32.7	20	117°37.5	00.7
21	133°50.3	·· 45.4	21	133°30.2	·· 25.0	21	133°11.2	·· 00.6	21	132°53.5	·· 32.3	21	132°37.2	21°00.3
22	148°50.1	45.2	22	148°30.0	24.7	22	148°11.0	22°00.2	22	147°53.3	31.9	22	147°37.0	20°59.8
23	163°49.8	44.9	23	163°29.7	24.4	23	163°10.7	21°59.8	23	162°53.0	31.4	23	162°36.8	59.3
	SD=16.3′	d = -0.2′		SD=16.3′	d = -0.3′		SD=16.3′	d = -0.4′		SD=16.3′	d = -0.4′		SD=16.3′	d = -0.5′

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	177°36.6	S20°58.8	0	177°21.9	S20°23.1	0	177°08.9	S19°43.8	0	176°57.6	S19°01.3	0	176°48.0	S18°15.6
1	192°36.4	58.4	1	192°21.7	22.5	1	192°08.7	43.3	1	191°57.4	00.7	1	191°47.8	15.0
2	207°36.2	57.9	2	207°21.6	22.0	2	207°08.6	42.7	2	206°57.3	19°00.1	2	206°47.7	14.3
3	222°36.0	·· 57.4	3	222°21.4	·· 21.5	3	222°08.4	·· 42.1	3	221°57.1	18°59.5	3	221°47.6	·· 13.6
4	237°35.7	56.9	4	237°21.2	21.0	4	237°08.2	41.6	4	236°57.0	58.8	4	236°47.5	13.0
5	252°35.5	56.5	5	252°21.0	20.4	5	252°08.1	41.0	5	251°56.8	58.2	5	251°47.4	12.3
6	267°35.3	S20°56.0	6	267°20.8	S20°19.9	6	267°07.9	S19°40.4	6	266°56.7	S18°57.6	6	266°47.2	S18°11.7
7	282°35.1	55.5	7	282°20.6	19.4	7	282°07.7	39.8	7	281°56.6	57.0	7	281°47.1	11.0
8	297°34.9	55.0	8	297°20.4	18.9	8	297°07.6	39.3	8	296°56.4	56.4	8	296°47.0	10.4
9	312°34.7	·· 54.6	9	312°20.2	·· 18.3	9	312°07.4	·· 38.7	9	311°56.3	·· 55.8	9	311°46.9	·· 09.7
10	327°34.5	54.1	10	327°20.0	17.8	10	327°07.2	38.1	10	326°56.1	55.1	10	326°46.8	09.0
11	342°34.3	53.6	11	342°19.8	17.3	11	342°07.1	37.5	11	341°56.0	54.5	11	341°46.6	08.4
12	357°34.0	S20°53.1	12	357°19.6	S20°16.8	12	357°06.9	S19°37.0	12	356°55.8	S18°53.9	12	356°46.5	S18°07.7
13	12°33.8	52.6	13	12°19.5	16.2	13	12°06.7	36.4	13	11°55.7	53.3	13	11°46.4	07.0
14	27°33.6	52.2	14	27°19.3	15.7	14	27°06.6	35.8	14	26°55.6	52.7	14	26°46.3	06.4
15	42°33.4	·· 51.7	15	42°19.1	·· 15.2	15	42°06.4	·· 35.2	15	41°55.4	·· 52.0	15	41°46.2	·· 05.7
16	57°33.2	51.2	16	57°18.9	14.6	16	57°06.2	34.7	16	56°55.3	51.4	16	56°46.1	05.1
17	72°33.0	50.7	17	72°18.7	14.1	17	72°06.1	34.1	17	71°55.1	50.8	17	71°45.9	04.4
18	87°32.8	S20°50.2	18	87°18.5	S20°13.6	18	87°05.9	S19°33.5	18	86°55.0	S18°50.2	18	86°45.8	S18°03.7
19	102°32.6	49.7	19	102°18.3	13.0	19	102°05.7	32.9	19	101°54.9	49.5	19	101°45.7	03.1
20	117°32.4	49.3	20	117°18.2	12.5	20	117°05.6	32.3	20	116°54.7	48.9	20	116°45.6	02.4
21	132°32.2	·· 48.8	21	132°18.0	·· 12.0	21	132°05.4	·· 31.8	21	131°54.6	·· 48.3	21	131°45.5	·· 01.7
22	147°32.0	48.3	22	147°17.8	11.4	22	147°05.3	31.2	22	146°54.4	47.7	22	146°45.4	01.1
23	162°31.7	47.8	23	162°17.6	10.9	23	162°05.1	30.6	23	161°54.3	47.0	23	161°45.3	00.4
	SD=16.3′	d = -0.5′		SD=16.2′	d = -0.5′		SD=16.2′	d = -0.6′		SD=16.2′	d = -0.6′		SD=16.2′	d = -0.7′

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	177°31.5	S20°47.3	0	177°17.4	S20°10.4	0	177°04.9	S19°30.0	0	176°54.2	S18°46.4	0	176°45.1	S17°59.7
1	192°31.3	46.8	1	192°17.2	09.8	1	192°04.8	29.4	1	191°54.0	45.8	1	191°45.0	59.0
2	207°31.1	46.3	2	207°17.0	09.3	2	207°04.6	28.8	2	206°53.9	45.2	2	206°44.9	58.4
3	222°30.9	·· 45.8	3	222°16.9	·· 08.7	3	222°04.4	·· 28.3	3	221°53.8	·· 44.5	3	221°44.8	·· 57.7
4	237°30.7	45.3	4	237°16.7	08.2	4	237°04.3	27.7	4	236°53.6	43.9	4	236°44.7	57.0
5	252°30.5	44.9	5	252°16.5	07.7	5	252°04.1	27.1	5	251°53.5	43.3	5	251°44.6	56.4
6	267°30.3	S20°44.4	6	267°16.3	S20°07.1	6	267°04.0	S19°26.5	6	266°53.3	S18°42.6	6	266°44.5	S17°55.7
7	282°30.1	43.9	7	282°16.1	06.6	7	282°03.8	25.9	7	281°53.2	42.0	7	281°44.4	55.0
8	297°29.9	43.4	8	297°15.9	06.0	8	297°03.7	25.3	8	296°53.1	41.4	8	296°44.3	54.3
9	312°29.7	·· 42.9	9	312°15.8	·· 05.5	9	312°03.5	·· 24.7	9	311°52.9	·· 40.7	9	311°44.1	·· 53.7
10	327°29.5	42.4	10	327°15.6	05.0	10	327°03.3	24.1	10	326°52.8	40.1	10	326°44.0	53.0
11	342°29.3	41.9	11	342°15.4	04.4	11	342°03.2	23.6	11	341°52.7	39.5	11	341°43.9	52.3
12	357°29.1	S20°41.4	12	357°15.2	S20°03.9	12	357°03.0	S19°23.0	12	356°52.5	S18°38.8	12	356°43.8	S17°51.6
13	12°28.9	40.9	13	12°15.0	03.3	13	12°02.9	22.4	13	11°52.4	38.2	13	11°43.7	51.0
14	27°28.7	40.4	14	27°14.9	02.8	14	27°02.7	21.8	14	26°52.3	37.6	14	26°43.6	50.3
15	42°28.5	·· 39.9	15	42°14.7	·· 02.2	15	42°02.5	·· 21.2	15	41°52.1	·· 36.9	15	41°43.5	·· 49.6
16	57°28.3	39.4	16	57°14.5	01.7	16	57°02.4	20.6	16	56°52.0	36.3	16	56°43.4	48.9
17	72°28.1	38.9	17	72°14.3	01.1	17	72°02.2	20.0	17	71°51.9	35.7	17	71°43.3	48.3
18	87°27.9	S20°38.4	18	87°14.1	S20°00.6	18	87°02.1	S19°19.4	18	86°51.7	S18°35.0	18	86°43.2	S17°47.6
19	102°27.7	37.9	19	102°14.0	20°00.0	19	102°01.9	18.8	19	101°51.6	34.4	19	101°43.1	46.9
20	117°27.4	37.4	20	117°13.8	19°59.5	20	117°01.8	18.2	20	116°51.5	33.7	20	116°43.0	46.2
21	132°27.2	·· 36.9	21	132°13.6	·· 58.9	21	132°01.6	·· 17.6	21	131°51.4	·· 33.1	21	131°42.8	·· 45.5
22	147°27.0	36.4	22	147°13.4	58.4	22	147°01.5	17.0	22	146°51.2	32.5	22	146°42.7	44.9
23	162°26.8	35.9	23	162°13.2	57.8	23	162°01.3	16.4	23	161°51.1	31.8	23	161°42.6	44.2
	SD=16.3′	d = -0.5′		SD=16.2′	d = -0.5′		SD=16.2′	d = -0.6′		SD=16.2′	d = -0.6′		SD=16.2′	d = -0.7′

18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	177°26.6	S20°35.4	0	177°13.1	S19°57.3	0	177°01.2	S19°15.8	0	176°51.0	S18°31.2	0	176°42.5	S17°43.5
1	192°26.4	34.9	1	192°12.9	56.7	1	192°01.0	15.2	1	191°50.8	30.5	1	191°42.4	42.8
2	207°26.2	34.4	2	207°12.7	56.2	2	207°00.8	14.6	2	206°50.7	29.9	2	206°42.3	42.1
3	222°26.0	·· 33.9	3	222°12.5	·· 55.6	3	222°00.7	·· 14.0	3	221°50.6	·· 29.3	3	221°42.2	·· 41.4
4	237°25.8	33.4	4	237°12.4	55.1	4	237°00.5	13.4	4	236°50.4	28.6	4	236°42.1	40.8
5	252°25.7	32.8	5	252°12.2	54.5	5	252°00.4	12.8	5	251°50.3	28.0	5	251°42.0	40.1
6	267°25.5	S20°32.3	6	267°12.0	S19°54.0	6	267°00.2	S19°12.2	6	266°50.2	S18°27.3	6	266°41.9	S17°39.4
7	282°25.3	31.8	7	282°11.8	53.4	7	282°00.1	11.6	7	281°50.1	26.7	7	281°41.8	38.7
8	297°25.1	31.3	8	297°11.7	52.8	8	296°59.9	11.0	8	296°49.9	26.0	8	296°41.7	38.0
9	312°24.9	·· 30.8	9	312°11.5	·· 52.3	9	311°59.8	·· 10.4	9	311°49.8	·· 25.4	9	311°41.6	·· 37.3
10	327°24.7	30.3	10	327°11.3	51.7	10	326°59.6	09.8	10	326°49.7	24.7	10	326°41.5	36.6
11	342°24.5	29.8	11	342°11.1	51.2	11	341°59.5	09.2	11	341°49.6	24.1	11	341°41.4	36.0
12	357°24.3	S20°29.3	12	357°11.0	S19°50.6	12	356°59.3	S19°08.6	12	356°49.4	S18°23.4	12	356°41.3	S17°35.3
13	12°24.1	28.8	13	12°10.8	50.0	13	11°59.2	08.0	13	11°49.3	22.8	13	11°41.2	34.6
14	27°23.9	28.2	14	27°10.6	49.5	14	26°59.0	07.4	14	26°49.2	22.1	14	26°41.1	33.9
15	42°23.7	·· 27.7	15	42°10.4	·· 48.9	15	41°58.9	·· 06.8	15	41°49.1	·· 21.5	15	41°41.0	·· 33.2
16	57°23.5	27.2	16	57°10.3	48.4	16	56°58.7	06.2	16	56°48.9	20.8	16	56°40.9	32.5
17	72°23.3	26.7	17	72°10.1	47.8	17	71°58.6	05.6	17	71°48.8	20.2	17	71°40.8	31.8
18	87°23.1	S20°26.2	18	87°09.9	S19°47.2	18	86°58.4	S19°05.0	18	86°48.7	S18°19.5	18	86°40.7	S17°31.1
19	102°22.9	25.7	19	102°09.8	46.7	19	101°58.3	04.4	19	101°48.6	18.9	19	101°40.6	30.4
20	117°22.7	25.1	20	117°09.6	46.1	20	116°58.1	03.7	20	116°48.4	18.2	20	116°40.5	29.7
21	132°22.5	·· 24.6	21	132°09.4	·· 45.5	21	131°58.0	·· 03.1	21	131°48.3	·· 17.6	21	131°40.4	·· 29.0
22	147°22.3	24.1	22	147°09.2	45.0	22	146°57.9	02.5	22	146°48.2	16.9	22	146°40.3	28.3
23	162°22.1	23.6	23	162°09.1	44.4	23	161°57.7	01.9	23	161°48.1	16.3	23	161°40.2	27.7
	SD=16.3′	d = -0.5′		SD=16.2′	d = -0.6′		SD=16.2′	d = -0.6′		SD=16.2′	d = -0.6′		SD=16.2′	d = -0.7′

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	176°40.1	S17°27.0	0	176°34.1	S16°35.5	0	176°30.0	S15°41.5	0	176°27.6	S14°45.0	0	176°27.1	S13°46.3
1	191°40.0	26.3	1	191°34.0	34.8	1	191°29.9	40.7	1	191°27.6	44.2	1	191°27.1	45.5
2	206°39.9	25.6	2	206°34.0	34.0	2	206°29.9	39.9	2	206°27.6	43.4	2	206°27.1	44.6
3	221°39.8	·· 24.9	3	221°33.9	·· 33.3	3	221°29.8	·· 39.1	3	221°27.6	·· 42.6	3	221°27.2	·· 43.8
4	236°39.7	24.2	4	236°33.8	32.6	4	236°29.8	38.4	4	236°27.6	41.8	4	236°27.2	43.0
5	251°39.6	23.5	5	251°33.8	31.8	5	251°29.7	37.6	5	251°27.6	41.0	5	251°27.2	42.2
6	266°39.6	S17°22.8	6	266°33.7	S16°31.1	6	266°29.7	S15°36.8	6	266°27.5	S14°40.2	6	266°27.2	S13°41.3
7	281°39.5	22.1	7	281°33.6	30.4	7	281°29.7	36.1	7	281°27.5	39.4	7	281°27.2	40.5
8	296°39.4	21.4	8	296°33.6	29.6	8	296°29.6	35.3	8	296°27.5	38.6	8	296°27.2	39.7
9	311°39.3	·· 20.7	9	311°33.5	·· 28.9	9	311°29.6	·· 34.5	9	311°27.5	·· 37.8	9	311°27.2	·· 38.8
10	326°39.2	20.0	10	326°33.4	28.2	10	326°29.5	33.8	10	326°27.5	37.0	10	326°27.2	38.0
11	341°39.1	19.3	11	341°33.4	27.4	11	341°29.5	33.0	11	341°27.5	36.2	11	341°27.2	37.2
12	356°39.0	S17°18.6	12	356°33.3	S16°26.7	12	356°29.4	S15°32.2	12	356°27.4	S14°35.4	12	356°27.2	S13°36.3
13	11°38.9	17.9	13	11°33.2	25.9	13	11°29.4	31.4	13	11°27.4	34.6	13	11°27.2	35.5
14	26°38.8	17.2	14	26°33.2	25.2	14	26°29.4	30.7	14	26°27.4	33.7	14	26°27.2	34.7
15	41°38.7	·· 16.5	15	41°33.1	·· 24.5	15	41°29.3	·· 29.9	15	41°27.4	·· 32.9	15	41°27.2	·· 33.8
16	56°38.6	15.8	16	56°33.0	23.7	16	56°29.3	29.1	16	56°27.4	32.1	16	56°27.3	33.0
17	71°38.5	15.1	17	71°33.0	23.0	17	71°29.2	28.3	17	71°27.4	31.3	17	71°27.3	32.2
18	86°38.4	S17°14.3	18	86°32.9	S16°22.2	18	86°29.2	S15°27.6	18	86°27.4	S14°30.5	18	86°27.3	S13°31.3
19	101°38.4	13.6	19	101°32.8	21.5	19	101°29.2	26.8	19	101°27.3	29.7	19	101°27.3	30.5
20	116°38.3	12.9	20	116°32.8	20.7	20	116°29.1	26.0	20	116°27.3	28.9	20	116°27.3	29.6
21	131°38.2	·· 12.2	21	131°32.7	·· 20.0	21	131°29.1	·· 25.2	21	131°27.3	·· 28.1	21	131°27.3	·· 28.8
22	146°38.1	11.5	22	146°32.6	19.3	22	146°29.1	24.4	22	146°27.3	27.3	22	146°27.3	28.0
23	161°38.0	10.8	23	161°32.6	18.5	23	161°29.0	23.7	23	161°27.3	26.5	23	161°27.3	27.1
	SD=16.2′	d = -0.7′		SD=16.2′	d = -0.7′		SD=16.2′	d = -0.8′		SD=16.2′	d = -0.8′		SD=16.2′	d = -0.8′

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	176°37.9	S17°10.1	0	176°32.5	S16°17.8	0	176°29.0	S15°22.9	0	176°27.3	S14°25.7	0	176°27.4	S13°26.3
1	191°37.8	09.4	1	191°32.5	17.0	1	191°28.9	22.1	1	191°27.3	24.9	1	191°27.4	25.4
2	206°37.7	08.7	2	206°32.4	16.3	2	206°28.9	21.3	2	206°27.3	24.0	2	206°27.4	24.6
3	221°37.7	·· 08.0	3	221°32.3	·· 15.5	3	221°28.9	·· 20.6	3	221°27.2	·· 23.2	3	221°27.4	·· 23.8
4	236°37.6	07.3	4	236°32.3	14.8	4	236°28.8	19.8	4	236°27.2	22.4	4	236°27.4	22.9
5	251°37.5	06.6	5	251°32.2	14.0	5	251°28.8	19.0	5	251°27.2	21.6	5	251°27.4	22.1
6	266°37.4	S17°05.8	6	266°32.2	S16°13.3	6	266°28.8	S15°18.2	6	266°27.2	S14°20.8	6	266°27.4	S13°21.2
7	281°37.3	05.1	7	281°32.1	12.5	7	281°28.7	17.4	7	281°27.2	20.0	7	281°27.5	20.4
8	296°37.2	04.4	8	296°32.0	11.8	8	296°28.7	16.6	8	296°27.2	19.2	8	296°27.5	19.6
9	311°37.1	·· 03.7	9	311°32.0	·· 11.0	9	311°28.7	·· 15.9	9	311°27.2	·· 18.4	9	311°27.5	·· 18.7
10	326°37.1	03.0	10	326°31.9	10.3	10	326°28.6	15.1	10	326°27.2	17.5	10	326°27.5	17.9
11	341°37.0	02.3	11	341°31.9	09.5	11	341°28.6	14.3	11	341°27.2	16.7	11	341°27.5	17.0
12	356°36.9	S17°01.6	12	356°31.8	S16°08.8	12	356°28.6	S15°13.5	12	356°27.2	S14°15.9	12	356°27.5	S13°16.2
13	11°36.8	00.9	13	11°31.7	08.0	13	11°28.5	12.7	13	11°27.2	15.1	13	11°27.6	15.4
14	26°36.7	17°00.1	14	26°31.7	07.3	14	26°28.5	11.9	14	26°27.2	14.3	14	26°27.6	14.5
15	41°36.6	16°59.4	15	41°31.6	·· 06.5	15	41°28.5	·· 11.2	15	41°27.1	·· 13.5	15	41°27.6	·· 13.7
16	56°36.6	58.7	16	56°31.6	05.8	16	56°28.4	10.4	16	56°27.1	12.7	16	56°27.6	12.8
17	71°36.5	58.0	17	71°31.5	05.0	17	71°28.4	09.6	17	71°27.1	11.8	17	71°27.6	12.0
18	86°36.4	S16°57.3	18	86°31.5	S16°04.3	18	86°28.4	S15°08.8	18	86°27.1	S14°11.0	18	86°27.6	S13°11.1
19	101°36.3	56.6	19	101°31.4	03.5	19	101°28.4	08.0	19	101°27.1	10.2	19	101°27.7	10.3
20	116°36.2	55.8	20	116°31.4	02.8	20	116°28.3	07.2	20	116°27.1	09.4	20	116°27.7	09.4
21	131°36.2	·· 55.1	21	131°31.3	·· 02.0	21	131°28.3	·· 06.4	21	131°27.1	·· 08.6	21	131°27.7	·· 08.6
22	146°36.1	54.4	22	146°31.2	01.3	22	146°28.3	05.6	22	146°27.1	07.7	22	146°27.7	07.7
23	161°36.0	53.7	23	161°31.2	00.5	23	161°28.2	04.9	23	161°27.1	06.9	23	161°27.7	06.9
	SD=16.2′	d = -0.7′		SD=16.2′	d = -0.7′		SD=16.2′	d = -0.8′		SD=16.2′	d = -0.8′		SD=16.2′	d = -0.8′

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	176°35.9	S16°53.0	0	176°31.1	S15°59.8	0	176°28.2	S15°04.1	0	176°27.1	S14°06.1	0	176°27.8	S13°06.0
1	191°35.8	52.2	1	191°31.1	59.0	1	191°28.2	03.3	1	191°27.1	05.3	1	191°27.8	05.2
2	206°35.8	51.5	2	206°31.0	58.2	2	206°28.2	02.5	2	206°27.1	04.5	2	206°27.8	04.4
3	221°35.7	·· 50.8	3	221°31.0	·· 57.5	3	221°28.1	·· 01.7	3	221°27.1	·· 03.6	3	221°27.8	·· 03.5
4	236°35.6	50.1	4	236°30.9	56.7	4	236°28.1	00.9	4	236°27.1	02.8	4	236°27.8	02.7
5	251°35.5	49.3	5	251°30.9	56.0	5	251°28.1	15°00.1	5	251°27.1	02.0	5	251°27.9	01.8
6	266°35.4	S16°48.6	6	266°30.8	S15°55.2	6	266°28.1	S14°59.3	6	266°27.1	S14°01.2	6	266°27.9	S13°01.0
7	281°35.4	47.9	7	281°30.8	54.4	7	281°28.0	58.5	7	281°27.1	14°00.4	7	281°27.9	13°00.1
8	296°35.3	47.2	8	296°30.7	53.7	8	296°28.0	57.7	8	296°27.1	13°59.5	8	296°27.9	12°59.3
9	311°35.2	·· 46.4	9	311°30.7	·· 52.9	9	311°28.0	·· 56.9	9	311°27.1	·· 58.7	9	311°28.0	·· 58.4
10	326°35.1	45.7	10	326°30.6	52.2	10	326°28.0	56.2	10	326°27.1	57.9	10	326°28.0	57.6
11	341°35.1	45.0	11	341°30.6	51.4	11	341°27.9	55.4	11	341°27.1	57.1	11	341°28.0	56.7
12	356°35.0	S16°44.3	12	356°30.5	S15°50.6	12	356°27.9	S14°54.6	12	356°27.1	S13°56.2	12	356°28.0	S12°55.9
13	11°34.9	43.5	13	11°30.5	49.9	13	11°27.9	53.8	13	11°27.1	55.4	13	11°28.1	55.0
14	26°34.8	42.8	14	26°30.4	49.1	14	26°27.9	53.0	14	26°27.1	54.6	14	26°28.1	54.1
15	41°34.8	·· 42.1	15	41°30.4	·· 48.3	15	41°27.8	·· 52.2	15	41°27.1	·· 53.8	15	41°28.1	·· 53.3
16	56°34.7	41.4	16	56°30.3	47.6	16	56°27.8	51.4	16	56°27.1	52.9	16	56°28.1	52.4
17	71°34.6	40.6	17	71°30.3	46.8	17	71°27.8	50.6	17	71°27.1	52.1	17	71°28.2	51.6
18	86°34.5	S16°39.9	18	86°30.2	S15°46.1	18	86°27.8	S14°49.8	18	86°27.1	S13°51.3	18	86°28.2	S12°50.7
19	101°34.5	39.2	19	101°30.2	45.3	19	101°27.7	49.0	19	101°27.1	50.5	19	101°28.2	49.9
20	116°34.4	38.4	20	116°30.1	44.5	20	116°27.7	48.2	20	116°27.1	49.6	20	116°28.2	49.0
21	131°34.3	·· 37.7	21	131°30.1	·· 43.8	21	131°27.7	·· 47.4	21	131°27.1	·· 48.8	21	131°28.3	·· 48.2
22	146°34.3	37.0	22	146°30.1	43.0	22	146°27.7	46.6	22	146°27.1	48.0	22	146°28.3	47.3
23	161°34.2	36.2	23	161°30.0	42.2	23	161°27.7	45.8	23	161°27.1	47.1	23	161°28.3	46.5
	SD=16.2′	d = -0.7′		SD=16.2′	d = -0.8′		SD=16.2′	d = -0.8′		SD=16.2′	d = -0.8′		SD=16.2′	d = -0.8′

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	176°28.4	S12°45.6	0	176°31.2	S11°43.0	0	176°35.6	S10°38.8	0	176°41.4	S09°33.1	0	176°48.6	S08°26.1
1	191°28.4	44.7	1	191°31.3	42.2	1	191°35.7	37.9	1	191°41.5	32.2	1	191°48.7	25.1
2	206°28.4	43.9	2	206°31.3	41.3	2	206°35.8	37.0	2	206°41.6	31.3	2	206°48.8	24.2
3	221°28.4	·· 43.0	3	221°31.4	·· 40.4	3	221°35.8	·· 36.1	3	221°41.7	·· 30.3	3	221°48.9	·· 23.2
4	236°28.5	42.2	4	236°31.4	39.5	4	236°35.9	35.2	4	236°41.8	29.4	4	236°49.0	22.3
5	251°28.5	41.3	5	251°31.5	38.6	5	251°36.0	34.3	5	251°41.9	28.5	5	251°49.1	21.4
6	266°28.5	S12°40.5	6	266°31.5	S11°37.8	6	266°36.1	S10°33.4	6	266°42.0	S09°27.6	6	266°49.2	S08°20.4
7	281°28.6	39.6	7	281°31.6	36.9	7	281°36.1	32.5	7	281°42.1	26.6	7	281°49.3	19.5
8	296°28.6	38.7	8	296°31.6	36.0	8	296°36.2	31.6	8	296°42.2	25.7	8	296°49.4	18.5
9	311°28.6	·· 37.9	9	311°31.7	·· 35.1	9	311°36.3	·· 30.7	9	311°42.3	·· 24.8	9	311°49.5	·· 17.6
10	326°28.7	37.0	10	326°31.7	34.2	10	326°36.3	29.8	10	326°42.3	23.9	10	326°49.6	16.7
11	341°28.7	36.2	11	341°31.8	33.3	11	341°36.4	28.9	11	341°42.4	22.9	11	341°49.7	15.7
12	356°28.7	S12°35.3	12	356°31.9	S11°32.5	12	356°36.5	S10°28.0	12	356°42.5	S09°22.0	12	356°49.9	S08°14.8
13	11°28.8	34.4	13	11°31.9	31.6	13	11°36.6	27.1	13	11°42.6	21.1	13	11°50.0	13.8
14	26°28.8	33.6	14	26°32.0	30.7	14	26°36.6	26.2	14	26°42.7	20.2	14	26°50.1	12.9
15	41°28.8	·· 32.7	15	41°32.0	·· 29.8	15	41°36.7	·· 25.2	15	41°42.8	·· 19.2	15	41°50.2	·· 12.0
16	56°28.9	31.9	16	56°32.1	28.9	16	56°36.8	24.3	16	56°42.9	18.3	16	56°50.3	11.0
17	71°28.9	31.0	17	71°32.1	28.0	17	71°36.9	23.4	17	71°43.0	17.4	17	71°50.4	10.1
18	86°28.9	S12°30.1	18	86°32.2	S11°27.1	18	86°36.9	S10°22.5	18	86°43.1	S09°16.5	18	86°50.5	S08°09.1
19	101°29.0	29.3	19	101°32.2	26.3	19	101°37.0	21.6	19	101°43.2	15.5	19	101°50.6	08.2
20	116°29.0	28.4	20	116°32.3	25.4	20	116°37.1	20.7	20	116°43.3	14.6	20	116°50.7	07.2
21	131°29.0	·· 27.5	21	131°32.4	·· 24.5	21	131°37.2	·· 19.8	21	131°43.4	·· 13.7	21	131°50.9	·· 06.3
22	146°29.1	26.7	22	146°32.4	23.6	22	146°37.3	18.9	22	146°43.5	12.8	22	146°51.0	05.3
23	161°29.1	25.8	23	161°32.5	22.7	23	161°37.3	18.0	23	161°43.6	11.8	23	161°51.1	04.4
	SD=16.2′	d = -0.9′		SD=16.2′	d = -0.9′		SD=16.2′	d = -0.9′		SD=16.2′	d = -0.9′		SD=16.1′	d = -0.9′

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	176°29.1	S12°24.9	0	176°32.5	S11°21.8	0	176°37.4	S10°17.1	0	176°43.7	S09°10.9	0	176°51.2	S08°03.5
1	191°29.2	24.1	1	191°32.6	20.9	1	191°37.5	16.2	1	191°43.8	10.0	1	191°51.3	02.5
2	206°29.2	23.2	2	206°32.6	20.0	2	206°37.6	15.3	2	206°43.9	09.0	2	206°51.4	01.6
3	221°29.2	·· 22.3	3	221°32.7	·· 19.1	3	221°37.6	·· 14.3	3	221°44.0	·· 08.1	3	221°51.5	08°00.6
4	236°29.3	21.5	4	236°32.8	18.3	4	236°37.7	13.4	4	236°44.1	07.2	4	236°51.6	07°59.7
5	251°29.3	20.6	5	251°32.8	17.4	5	251°37.8	12.5	5	251°44.2	06.3	5	251°51.8	58.7
6	266°29.4	S12°19.7	6	266°32.9	S11°16.5	6	266°37.9	S10°11.6	6	266°44.2	S09°05.3	6	266°51.9	S07°57.8
7	281°29.4	18.9	7	281°32.9	15.6	7	281°38.0	10.7	7	281°44.3	04.4	7	281°52.0	56.8
8	296°29.4	18.0	8	296°33.0	14.7	8	296°38.0	09.8	8	296°44.4	03.5	8	296°52.1	55.9
9	311°29.5	·· 17.1	9	311°33.1	·· 13.8	9	311°38.1	·· 08.9	9	311°44.5	·· 02.5	9	311°52.2	·· 55.0
10	326°29.5	16.3	10	326°33.1	12.9	10	326°38.2	08.0	10	326°44.6	01.6	10	326°52.3	54.0
11	341°29.6	15.4	11	341°33.2	12.0	11	341°38.3	07.1	11	341°44.7	09°00.7	11	341°52.4	53.1
12	356°29.6	S12°14.5	12	356°33.2	S11°11.1	12	356°38.4	S10°06.1	12	356°44.8	S08°59.7	12	356°52.6	S07°52.1
13	11°29.6	13.7	13	11°33.3	10.2	13	11°38.4	05.2	13	11°44.9	58.8	13	11°52.7	51.2
14	26°29.7	12.8	14	26°33.4	09.3	14	26°38.5	04.3	14	26°45.0	57.9	14	26°52.8	50.2
15	41°29.7	·· 11.9	15	41°33.4	·· 08.5	15	41°38.6	·· 03.4	15	41°45.1	·· 56.9	15	41°52.9	·· 49.3
16	56°29.8	11.1	16	56°33.5	07.6	16	56°38.7	02.5	16	56°45.2	56.0	16	56°53.0	48.3
17	71°29.8	10.2	17	71°33.5	06.7	17	71°38.8	01.6	17	71°45.3	55.1	17	71°53.1	47.4
18	86°29.8	S12°09.3	18	86°33.6	S11°05.8	18	86°38.8	S10°00.7	18	86°45.4	S08°54.1	18	86°53.3	S07°46.4
19	101°29.9	08.5	19	101°33.7	04.9	19	101°38.9	09°59.7	19	101°45.5	53.2	19	101°53.4	45.5
20	116°29.9	07.6	20	116°33.7	04.0	20	116°39.0	58.8	20	116°45.6	52.3	20	116°53.5	44.5
21	131°30.0	·· 06.7	21	131°33.8	·· 03.1	21	131°39.1	·· 57.9	21	131°45.7	·· 51.3	21	131°53.6	·· 43.6
22	146°30.0	05.8	22	146°33.9	02.2	22	146°39.2	57.0	22	146°45.8	50.4	22	146°53.7	42.6
23	161°30.0	05.0	23	161°33.9	01.3	23	161°39.3	56.1	23	161°45.9	49.5	23	161°53.8	41.7
	SD=16.2′	d = -0.9′		SD=16.2′	d = -0.9′		SD=16.2′	d = -0.9′		SD=16.2′	d = -0.9′		SD=16.1′	d = -0.9′

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	01	GHA	Dec
0	176°30.1	S12°04.1	0	176°34.0	S11°00.4	0	176°39.3	S09°55.2	0	176°46.0	S08°48.5	0	176°54.0	S07°40.7
1	191°30.1	03.2	1	191°34.1	10°59.5	1	191°39.4	54.3	1	191°46.1	47.6	1	191°54.1	39.8
2	206°30.2	02.3	2	206°34.1	58.6	2	206°39.5	53.3	2	206°46.2	46.7	2	206°54.2	38.8
3	221°30.2	·· 01.5	3	221°34.2	·· 57.7	3	221°39.6	·· 52.4	3	221°46.3	·· 45.7	3	221°54.3	·· 37.9
4	236°30.3	12°00.6	4	236°34.3	56.8	4	236°39.7	51.5	4	236°46.5	44.8	4	236°54.4	36.9
5	251°30.3	11°59.7	5	251°34.3	55.9	5	251°39.8	50.6	5	251°46.6	43.9	5	251°54.6	36.0
6	266°30.4	S11°58.8	6	266°34.4	S10°55.0	6	266°39.9	S09°49.7	6	266°46.7	S08°42.9	6	266°54.7	S07°35.0
7	281°30.4	58.0	7	281°34.4	54.1	7	281°39.9	48.7	7	281°46.8	42.0	7	281°54.8	34.1
8	296°30.4	57.1	8	296°34.5	53.2	8	296°40.0	47.8	8	296°46.9	41.1	8	296°54.9	33.1
9	311°30.5	·· 56.2	9	311°34.6	·· 52.3	9	311°40.1	·· 46.9	9	311°47.0	·· 40.1	9	311°55.0	·· 32.2
10	326°30.5	55.3	10	326°34.7	51.4	10	326°40.2	46.0	10	326°47.1	39.2	10	326°55.2	31.2
11	341°30.6	54.5	11	341°34.7	50.5	11	341°40.3	45.1	11	341°47.2	38.3	11	341°55.3	30.3
12	356°30.6	S11°53.6	12	356°34.8	S10°49.6	12	356°40.4	S09°44.2	12	356°47.3	S08°37.3	12	356°55.4	S07°29.3
13	11°30.7	52.7	13	11°34.9	48.7	13	11°40.5	43.2	13	11°47.4	36.4	13	11°55.5	28.4
14	26°30.7	51.8	14	26°34.9	47.8	14	26°40.5	42.3	14	26°47.5	35.5	14	26°55.6	27.4
15	41°30.8	·· 51.0	15	41°35.0	·· 46.9	15	41°40.6	·· 41.4	15	41°47.6	·· 34.5	15	41°55.8	·· 26.5
16	56°30.8	50.1	16	56°35.1	46.0	16	56°40.7	40.5	16	56°47.7	33.6	16	56°55.9	25.5
17	71°30.9	49.2	17	71°35.1	45.1	17	71°40.8	39.6	17	71°47.8	32.6	17	71°56.0	24.6
18	86°30.9	S11°48.3	18	86°35.2	S10°44.2	18	86°40.9	S09°38.6	18	86°47.9	S08°31.7	18	86°56.1	S07°23.6
19	101°31.0	47.4	19	101°35.3	43.3	19	101°41.0	37.7	19	101°48.0	30.8	19	101°56.3	22.7
20	116°31.0	46.6	20	116°35.3	42.4	20	116°41.1	36.8	20	116°48.1	29.8	20	116°56.4	21.7
21	131°31.1	·· 45.7	21	131°35.4	·· 41.5	21	131°41.2	·· 35.9	21	131°48.2	·· 28.9	21	131°56.5	·· 20.8
22	146°31.1	44.8	22	146°35.5	40.6	22	146°41.3	34.9	22	146°48.3	27.9	22	146°56.6	19.8
23	161°31.2	43.9	23	161°35.5	39.7	23	161°41.3	34.0	23	161°48.4	27.0	23	161°56.7	18.9
	SD=16.2′	d = -0.9′		SD=16.2′	d = -0.9′		SD=16.2′	d = -0.9′		SD=16.1′	d = -0.9′		SD=16.1′	d = -0.9′

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	176°56.9	S07°17.9	0	177°06.3	S06°08.8	0	177°16.7	S04°58.9	0	177°28.0	S03°48.5	0	177°40.1	S02°37.6
1	191°57.0	16.9	1	192°06.4	07.8	1	192°16.9	57.9	1	192°28.2	47.5	1	192°40.3	36.6
2	206°57.1	16.0	2	207°06.6	06.8	2	207°17.0	57.0	2	207°28.3	46.5	2	207°40.4	35.6
3	221°57.2	·· 15.0	3	222°06.7	·· 05.9	3	222°17.2	·· 56.0	3	222°28.5	·· 45.5	3	222°40.6	·· 34.6
4	236°57.4	14.1	4	237°06.8	04.9	4	237°17.3	55.0	4	237°28.7	44.5	4	237°40.8	33.7
5	251°57.5	13.1	5	252°07.0	04.0	5	252°17.5	54.0	5	252°28.8	43.5	5	252°40.9	32.7
6	266°57.6	S07°12.2	6	267°07.1	S06°03.0	6	267°17.6	S04°53.1	6	267°29.0	S03°42.6	6	267°41.1	S02°31.7
7	281°57.7	11.2	7	282°07.3	02.0	7	282°17.8	52.1	7	282°29.2	41.6	7	282°41.3	30.7
8	296°57.9	10.3	8	297°07.4	01.1	8	297°17.9	51.1	8	297°29.3	40.6	8	297°41.5	29.7
9	311°58.0	·· 09.3	9	312°07.5	06°00.1	9	312°18.1	·· 50.1	9	312°29.5	·· 39.6	9	312°41.6	·· 28.7
10	326°58.1	08.3	10	327°07.7	05°59.1	10	327°18.2	49.2	10	327°29.7	38.6	10	327°41.8	27.7
11	341°58.2	07.4	11	342°07.8	58.2	11	342°18.4	48.2	11	342°29.8	37.7	11	342°42.0	26.8
12	356°58.4	S07°06.4	12	357°08.0	S05°57.2	12	357°18.5	S04°47.2	12	357°30.0	S03°36.7	12	357°42.2	S02°25.8
13	11°58.5	05.5	13	12°08.1	56.2	13	12°18.7	46.2	13	12°30.1	35.7	13	12°42.3	24.8
14	26°58.6	04.5	14	27°08.2	55.2	14	27°18.8	45.2	14	27°30.3	34.7	14	27°42.5	23.8
15	41°58.7	·· 03.6	15	42°08.4	·· 54.3	15	42°19.0	·· 44.3	15	42°30.5	·· 33.7	15	42°42.7	·· 22.8
16	56°58.9	02.6	16	57°08.5	53.3	16	57°19.2	43.3	16	57°30.6	32.7	16	57°42.8	21.8
17	71°59.0	01.7	17	72°08.7	52.3	17	72°19.3	42.3	17	72°30.8	31.8	17	72°43.0	20.8
18	86°59.1	S07°00.7	18	87°08.8	S05°51.4	18	87°19.5	S04°41.3	18	87°31.0	S03°30.8	18	87°43.2	S02°19.8
19	101°59.2	06°59.7	19	102°08.9	50.4	19	102°19.6	40.4	19	102°31.1	29.8	19	102°43.4	18.9
20	116°59.4	58.8	20	117°09.1	49.4	20	117°19.8	39.4	20	117°31.3	28.8	20	117°43.5	17.9
21	131°59.5	·· 57.8	21	132°09.2	·· 48.5	21	132°19.9	·· 38.4	21	132°31.5	·· 27.8	21	132°43.7	·· 16.9
22	146°59.6	56.9	22	147°09.4	47.5	22	147°20.1	37.4	22	147°31.6	26.8	22	147°43.9	15.9
23	161°59.8	55.9	23	162°09.5	46.5	23	162°20.2	36.5	23	162°31.8	25.9	23	162°44.1	14.9
	SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	176°59.9	S06°55.0	0	177°09.7	S05°45.6	0	177°20.4	S04°35.5	0	177°32.0	S03°24.9	0	177°44.2	S02°13.9
1	192°00.0	54.0	1	192°09.8	44.6	1	192°20.5	34.5	1	192°32.1	23.9	1	192°44.4	12.9
2	207°00.1	53.0	2	207°09.9	43.6	2	207°20.7	33.5	2	207°32.3	22.9	2	207°44.6	12.0
3	222°00.3	·· 52.1	3	222°10.1	·· 42.7	3	222°20.9	·· 32.5	3	222°32.5	·· 21.9	3	222°44.8	·· 11.0
4	237°00.4	51.1	4	237°10.2	41.7	4	237°21.0	31.6	4	237°32.6	20.9	4	237°44.9	10.0
5	252°00.5	50.2	5	252°10.4	40.7	5	252°21.2	30.6	5	252°32.8	20.0	5	252°45.1	09.0
6	267°00.7	S06°49.2	6	267°10.5	S05°39.7	6	267°21.3	S04°29.6	6	267°33.0	S03°19.0	6	267°45.3	S02°08.0
7	282°00.8	48.2	7	282°10.7	38.8	7	282°21.5	28.6	7	282°33.1	18.0	7	282°45.5	07.0
8	297°00.9	47.3	8	297°10.8	37.8	8	297°21.6	27.7	8	297°33.3	17.0	8	297°45.6	06.0
9	312°01.1	·· 46.3	9	312°10.9	·· 36.8	9	312°21.8	·· 26.7	9	312°33.5	·· 16.0	9	312°45.8	·· 05.0
10	327°01.2	45.4	10	327°11.1	35.9	10	327°21.9	25.7	10	327°33.6	15.0	10	327°46.0	04.1
11	342°01.3	44.4	11	342°11.2	34.9	11	342°22.1	24.7	11	342°33.8	14.1	11	342°46.2	03.1
12	357°01.4	S06°43.4	12	357°11.4	S05°33.9	12	357°22.3	S04°23.7	12	357°34.0	S03°13.1	12	357°46.3	S02°02.1
13	12°01.6	42.5	13	12°11.5	33.0	13	12°22.4	22.8	13	12°34.1	12.1	13	12°46.5	01.1
14	27°01.7	41.5	14	27°11.7	32.0	14	27°22.6	21.8	14	27°34.3	11.1	14	27°46.7	02°00.1
15	42°01.8	·· 40.6	15	42°11.8	·· 31.0	15	42°22.7	·· 20.8	15	42°34.5	·· 10.1	15	42°46.9	01°59.1
16	57°02.0	39.6	16	57°12.0	30.0	16	57°22.9	19.8	16	57°34.6	09.1	16	57°47.1	58.1
17	72°02.1	38.6	17	72°12.1	29.1	17	72°23.0	18.8	17	72°34.8	08.1	17	72°47.2	57.1
18	87°02.2	S06°37.7	18	87°12.3	S05°28.1	18	87°23.2	S04°17.9	18	87°35.0	S03°07.2	18	87°47.4	S01°56.2
19	102°02.4	36.7	19	102°12.4	27.1	19	102°23.4	16.9	19	102°35.1	06.2	19	102°47.6	55.2
20	117°02.5	35.8	20	117°12.5	26.2	20	117°23.5	15.9	20	117°35.3	05.2	20	117°47.8	54.2
21	132°02.6	·· 34.8	21	132°12.7	·· 25.2	21	132°23.7	·· 14.9	21	132°35.5	·· 04.2	21	132°47.9	·· 53.2
22	147°02.8	33.8	22	147°12.8	24.2	22	147°23.8	13.9	22	147°35.6	03.2	22	147°48.1	52.2
23	162°02.9	32.9	23	162°13.0	23.2	23	162°24.0	13.0	23	162°35.8	02.2	23	162°48.3	51.2
	SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′

04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec
0	177°03.0	S06°31.9	0	177°13.1	S05°22.3	0	177°24.2	S04°12.0	0	177°36.0	S03°01.3	0	177°48.5	S01°50.2
1	192°03.2	31.0	1	192°13.3	21.3	1	192°24.3	11.0	1	192°36.2	03°00.3	1	192°48.6	49.2
2	207°03.3	30.0	2	207°13.4	20.3	2	207°24.5	10.0	2	207°36.3	02°59.3	2	207°48.8	48.3
3	222°03.4	·· 29.0	3	222°13.6	·· 19.4	3	222°24.6	·· 09.1	3	222°36.5	·· 58.3	3	222°49.0	·· 47.3
4	237°03.6	28.1	4	237°13.7	18.4	4	237°24.8	08.1	4	237°36.7	57.3	4	237°49.2	46.3
5	252°03.7	27.1	5	252°13.9	17.4	5	252°25.0	07.1	5	252°36.8	56.3	5	252°49.4	45.3
6	267°03.8	S06°26.1	6	267°14.0	S05°16.4	6	267°25.1	S04°06.1	6	267°37.0	S02°55.3	6	267°49.5	S01°44.3
7	282°04.0	25.2	7	282°14.2	15.5	7	282°25.3	05.1	7	282°37.2	54.4	7	282°49.7	43.3
8	297°04.1	24.2	8	297°14.3	14.5	8	297°25.4	04.2	8	297°37.3	53.4	8	297°49.9	42.3
9	312°04.2	·· 23.2	9	312°14.5	·· 13.5	9	312°25.6	·· 03.2	9	312°37.5	·· 52.4	9	312°50.1	·· 41.3
10	327°04.4	22.3	10	327°14.6	12.5	10	327°25.8	02.2	10	327°37.7	51.4	10	327°50.2	40.4
11	342°04.5	21.3	11	342°14.8	11.6	11	342°25.9	01.2	11	342°37.9	50.4	11	342°50.4	39.4
12	357°04.6	S06°20.4	12	357°14.9	S05°10.6	12	357°26.1	S04°00.2	12	357°38.0	S02°49.4	12	357°50.6	S01°38.4
13	12°04.8	19.4	13	12°15.1	09.6	13	12°26.2	03°59.2	13	12°38.2	48.4	13	12°50.8	37.4
14	27°04.9	18.4	14	27°15.2	08.6	14	27°26.4	58.3	14	27°38.4	47.5	14	27°51.0	36.4
15	42°05.1	·· 17.5	15	42°15.4	·· 07.7	15	42°26.6	·· 57.3	15	42°38.5	·· 46.5	15	42°51.1	·· 35.4
16	57°05.2	16.5	16	57°15.5	06.7	16	57°26.7	56.3	16	57°38.7	45.5	16	57°51.3	34.4
17	72°05.3	15.5	17	72°15.7	05.7	17	72°26.9	55.3	17	72°38.9	44.5	17	72°51.5	33.4
18	87°05.5	S06°14.6	18	87°15.8	S05°04.8	18	87°27.0	S03°54.3	18	87°39.0	S02°43.5	18	87°51.7	S01°32.4
19	102°05.6	13.6	19	102°16.0	03.8	19	102°27.2	53.4	19	102°39.2	42.5	19	102°51.9	31.5
20	117°05.7	12.6	20	117°16.1	02.8	20	117°27.4	52.4	20	117°39.4	41.5	20	117°52.0	30.5
21	132°05.9	·· 11.7	21	132°16.3	·· 01.8	21	132°27.5	·· 51.4	21	132°39.6	·· 40.6	21	132°52.2	·· 29.5
22	147°06.0	10.7	22	147°16.4	05°00.9	22	147°27.7	50.4	22	147°39.7	39.6	22	147°52.4	28.5
23	162°06.1	09.7	23	162°16.6	04°59.9	23	162°27.9	49.4	23	162°39.9	38.6	23	162°52.6	27.5
	SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′		SD=16.1′	d=-1.0′

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	177°52.7	S01°26.5	0	178°05.9	S00°15.4	0	178°19.3	N00°55.7	0	178°32.8	N02°06.6	0	178°46.4	N03°17.0
1	192°52.9	25.5	1	193°06.1	14.4	1	193°19.5	56.7	1	193°33.0	07.5	1	193°46.6	18.0
2	207°53.1	24.5	2	208°06.2	13.4	2	208°19.7	57.7	2	208°33.2	08.5	2	208°46.7	19.0
3	222°53.3	·· 23.6	3	223°06.4	·· 12.4	3	223°19.8	·· 58.7	3	223°33.4	·· 09.5	3	223°46.9	·· 19.9
4	237°53.5	22.6	4	238°06.6	11.4	4	238°20.0	00°59.6	4	238°33.6	10.5	4	238°47.1	20.9
5	252°53.6	21.6	5	253°06.8	10.4	5	253°20.2	01°00.6	5	253°33.8	11.5	5	253°47.3	21.9
6	267°53.8	S01°20.6	6	268°07.0	S00°09.4	6	268°20.4	N01°01.6	6	268°34.0	N02°12.4	6	268°47.5	N03°22.9
7	282°54.0	19.6	7	283°07.2	08.5	7	283°20.6	02.6	7	283°34.1	13.4	7	283°47.7	23.8
8	297°54.2	18.6	8	298°07.4	07.5	8	298°20.8	03.6	8	298°34.3	14.4	8	298°47.9	24.8
9	312°54.4	·· 17.6	9	313°07.5	·· 06.5	9	313°21.0	·· 04.6	9	313°34.5	·· 15.4	9	313°48.1	·· 25.8
10	327°54.5	16.6	10	328°07.7	05.5	10	328°21.2	05.6	10	328°34.7	16.4	10	328°48.2	26.8
11	342°54.7	15.7	11	343°07.9	04.5	11	343°21.3	06.5	11	343°34.9	17.3	11	343°48.4	27.7
12	357°54.9	S01°14.7	12	358°08.1	S00°03.5	12	358°21.5	N01°07.5	12	358°35.1	N02°18.3	12	358°48.6	N03°28.7
13	12°55.1	13.7	13	13°08.3	02.5	13	13°21.7	08.5	13	13°35.3	19.3	13	13°48.8	29.7
14	27°55.3	12.7	14	28°08.5	01.5	14	28°21.9	09.5	14	28°35.5	20.3	14	28°49.0	30.7
15	42°55.5	·· 11.7	15	43°08.6	S00°00.5	15	43°22.1	·· 10.5	15	43°35.7	·· 21.3	15	43°49.2	·· 31.6
16	57°55.6	10.7	16	58°08.8	N00°00.4	16	58°22.3	11.5	16	58°35.8	22.2	16	58°49.4	32.6
17	72°55.8	09.7	17	73°09.0	01.4	17	73°22.5	12.5	17	73°36.0	23.2	17	73°49.5	33.6
18	87°56.0	S01°08.7	18	88°09.2	N00°02.4	18	88°22.7	N01°13.4	18	88°36.2	N02°24.2	18	88°49.7	N03°34.5
19	102°56.2	07.7	19	103°09.4	03.4	19	103°22.9	14.4	19	103°36.4	25.2	19	103°49.9	35.5
20	117°56.4	06.8	20	118°09.6	04.4	20	118°23.0	15.4	20	118°36.6	26.2	20	118°50.1	36.5
21	132°56.5	·· 05.8	21	133°09.8	·· 05.4	21	133°23.2	·· 16.4	21	133°36.8	·· 27.1	21	133°50.3	·· 37.5
22	147°56.7	04.8	22	148°09.9	06.4	22	148°23.4	17.4	22	148°37.0	28.1	22	148°50.5	38.4
23	162°56.9	03.8	23	163°10.1	07.4	23	163°23.6	18.4	23	163°37.2	29.1	23	163°50.7	39.4
	SD=16.1′	d = -1.0′		SD=16.1′	d = -1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′

18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	177°57.1	S01°02.8	0	178°10.3	N00°08.3	0	178°23.8	N01°19.4	0	178°37.3	N02°30.1	0	178°50.9	N03°40.4
1	192°57.3	01.8	1	193°10.5	09.3	1	193°24.0	20.3	1	193°37.5	31.1	1	193°51.0	41.4
2	207°57.4	01°00.8	2	208°10.7	10.3	2	208°24.2	21.3	2	208°37.7	32.0	2	208°51.2	42.3
3	222°57.6	00°59.8	3	223°10.9	·· 11.3	3	223°24.4	·· 22.3	3	223°37.9	·· 33.0	3	223°51.4	·· 43.3
4	237°57.8	58.8	4	238°11.1	12.3	4	238°24.5	23.3	4	238°38.1	34.0	4	238°51.6	44.3
5	252°58.0	57.9	5	253°11.2	13.3	5	253°24.7	24.3	5	253°38.3	35.0	5	253°51.8	45.2
6	267°58.2	S00°56.9	6	268°11.4	N00°14.3	6	268°24.9	N01°25.3	6	268°38.5	N02°36.0	6	268°52.0	N03°46.2
7	282°58.4	55.9	7	283°11.6	15.3	7	283°25.1	26.2	7	283°38.7	36.9	7	283°52.2	47.2
8	297°58.5	54.9	8	298°11.8	16.2	8	298°25.3	27.2	8	298°38.9	37.9	8	298°52.3	48.2
9	312°58.7	·· 53.9	9	313°12.0	·· 17.2	9	313°25.5	·· 28.2	9	313°39.0	·· 38.9	9	313°52.5	·· 49.1
10	327°58.9	52.9	10	328°12.2	18.2	10	328°25.7	29.2	10	328°39.2	39.9	10	328°52.7	50.1
11	342°59.1	51.9	11	343°12.4	19.2	11	343°25.9	30.2	11	343°39.4	40.9	11	343°52.9	51.1
12	357°59.3	S00°50.9	12	358°12.6	N00°20.2	12	358°26.0	N01°31.2	12	358°39.6	N02°41.8	12	358°53.1	N03°52.0
13	12°59.4	50.0	13	13°12.7	21.2	13	13°26.2	32.2	13	13°39.8	42.8	13	13°53.3	53.0
14	27°59.6	49.0	14	28°12.9	22.2	14	28°26.4	33.1	14	28°40.0	43.8	14	28°53.5	54.0
15	42°59.8	·· 48.0	15	43°13.1	·· 23.1	15	43°26.6	·· 34.1	15	43°40.2	·· 44.8	15	43°53.7	·· 55.0
16	58°00.0	47.0	16	58°13.3	24.1	16	58°26.8	35.1	16	58°40.4	45.8	16	58°53.8	55.9
17	73°00.2	46.0	17	73°13.5	25.1	17	73°27.0	36.1	17	73°40.5	46.7	17	73°54.0	56.9
18	88°00.4	S00°45.0	18	88°13.7	N00°26.1	18	88°27.2	N01°37.1	18	88°40.7	N02°47.7	18	88°54.2	N03°57.9
19	103°00.5	44.0	19	103°13.9	27.1	19	103°27.4	38.1	19	103°40.9	48.7	19	103°54.4	58.8
20	118°00.7	43.0	20	118°14.0	28.1	20	118°27.6	39.0	20	118°41.1	49.7	20	118°54.6	03°59.8
21	133°00.9	·· 42.0	21	133°14.2	·· 29.1	21	133°27.7	·· 40.0	21	133°41.3	·· 50.6	21	133°54.8	04°00.8
22	148°01.1	41.1	22	148°14.4	30.1	22	148°27.9	41.0	22	148°41.5	51.6	22	148°55.0	01.7
23	163°01.3	40.1	23	163°14.6	31.0	23	163°28.1	42.0	23	163°41.7	52.6	23	163°55.1	02.7
	SD=16.1′	d = -1.0′		SD=16.1′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′

19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec	31	GHA	Dec
0	178°01.5	S00°39.1	0	178°14.8	N00°32.0	0	178°28.3	N01°43.0	0	178°41.9	N02°53.6	0	178°55.3	N04°03.7
1	193°01.6	38.1	1	193°15.0	33.0	1	193°28.5	44.0	1	193°42.0	54.6	1	193°55.5	04.7
2	208°01.8	37.1	2	208°15.2	34.0	2	208°28.7	44.9	2	208°42.2	55.5	2	208°55.7	05.6
3	223°02.0	·· 36.1	3	223°15.4	·· 35.0	3	223°28.9	·· 45.9	3	223°42.4	·· 56.5	3	223°55.9	·· 06.6
4	238°02.2	35.1	4	238°15.5	36.0	4	238°29.1	46.9	4	238°42.6	57.5	4	238°56.1	07.6
5	253°02.4	34.1	5	253°15.7	37.0	5	253°29.2	47.9	5	253°42.8	58.5	5	253°56.3	08.5
6	268°02.6	S00°33.2	6	268°15.9	N00°38.0	6	268°29.4	N01°48.9	6	268°43.0	N02°59.4	6	268°56.4	N04°09.5
7	283°02.7	32.2	7	283°16.1	38.9	7	283°29.6	49.9	7	283°43.2	03°00.4	7	283°56.6	10.5
8	298°02.9	31.2	8	298°16.3	39.9	8	298°29.8	50.8	8	298°43.4	01.4	8	298°56.8	11.4
9	313°03.1	·· 30.2	9	313°16.5	·· 40.9	9	313°30.0	·· 51.8	9	313°43.6	·· 02.4	9	313°57.0	·· 12.4
10	328°03.3	29.2	10	328°16.7	41.9	10	328°30.2	52.8	10	328°43.7	03.3	10	328°57.2	13.4
11	343°03.5	28.2	11	343°16.8	42.9	11	343°30.4	53.8	11	343°43.9	04.3	11	343°57.4	14.3
12	358°03.7	S00°27.2	12	358°17.0	N00°43.9	12	358°30.6	N01°54.8	12	358°44.1	N03°05.3	12	358°57.6	N04°15.3
13	13°03.8	26.2	13	13°17.2	44.9	13	13°30.8	55.7	13	13°44.3	06.3	13	13°57.7	16.3
14	28°04.0	25.2	14	28°17.4	45.8	14	28°30.9	56.7	14	28°44.5	07.3	14	28°57.9	17.2
15	43°04.2	·· 24.3	15	43°17.6	·· 46.8	15	43°31.1	·· 57.7	15	43°44.7	·· 08.2	15	43°58.1	·· 18.2
16	58°04.4	23.3	16	58°17.8	47.8	16	58°31.3	58.7	16	58°44.9	09.2	16	58°58.3	19.2
17	73°04.6	22.3	17	73°18.0	48.8	17	73°31.5	01°59.7	17	73°45.1	10.2	17	73°58.5	20.1
18	88°04.8	S00°21.3	18	88°18.2	N00°49.8	18	88°31.7	N02°00.7	18	88°45.2	N03°11.2	18	88°58.7	N04°21.1
19	103°04.9	20.3	19	103°18.3	50.8	19	103°31.9	01.6	19	103°45.4	12.1	19	103°58.9	22.1
20	118°05.1	19.3	20	118°18.5	51.8	20	118°32.1	02.6	20	118°45.6	13.1	20	118°59.0	23.0
21	133°05.3	·· 18.3	21	133°18.7	·· 52.7	21	133°32.3	·· 03.6	21	133°45.8	·· 14.1	21	133°59.2	·· 24.0
22	148°05.5	17.3	22	148°18.9	53.7	22	148°32.5	04.6	22	148°46.0	15.1	22	148°59.4	25.0
23	163°05.7	16.4	23	163°19.1	54.7	23	163°32.6	05.6	23	163°46.2	16.0	23	163°59.6	25.9
	SD=16.1′	d = -1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	178°59.8	N04°26.9	0	179°13.0	N05°36.1	0	179°25.8	N06°44.4	0	179°38.2	N07°51.6	0	179°50.0	N08°57.7
1	194°00.0	27.9	1	194°13.1	37.1	1	194°26.0	45.3	1	194°38.3	52.6	1	194°50.1	58.6
2	209°00.1	28.8	2	209°13.3	38.0	2	209°26.1	46.3	2	209°38.5	53.5	2	209°50.3	08°59.5
3	224°00.3	·· 29.8	3	224°13.5	·· 39.0	3	224°26.3	·· 47.2	3	224°38.7	·· 54.4	3	224°50.5	09°00.4
4	239°00.5	30.8	4	239°13.7	39.9	4	239°26.5	48.2	4	239°38.8	55.3	4	239°50.6	01.3
5	254°00.7	31.7	5	254°13.9	40.9	5	254°26.7	49.1	5	254°39.0	56.3	5	254°50.8	02.2
6	269°00.9	N04°32.7	6	269°14.0	N05°41.8	6	269°26.8	N06°50.0	6	269°39.2	N07°57.2	6	269°50.9	N09°03.1
7	284°01.1	33.7	7	284°14.2	42.8	7	284°27.0	51.0	7	284°39.3	58.1	7	284°51.1	04.0
8	299°01.3	34.6	8	299°14.4	43.7	8	299°27.2	51.9	8	299°39.5	07°59.0	8	299°51.3	04.9
9	314°01.4	·· 35.6	9	314°14.6	·· 44.7	9	314°27.4	·· 52.9	9	314°39.7	08°00.0	9	314°51.4	·· 05.8
10	329°01.6	36.6	10	329°14.8	45.6	10	329°27.5	53.8	10	329°39.8	00.9	10	329°51.6	06.7
11	344°01.8	37.5	11	344°14.9	46.6	11	344°27.7	54.7	11	344°40.0	01.8	11	344°51.7	07.6
12	359°02.0	N04°38.5	12	359°15.1	N05°47.5	12	359°27.9	N06°55.7	12	359°40.2	N08°02.7	12	359°51.9	N09°08.5
13	14°02.2	39.5	13	14°15.3	48.5	13	14°28.1	56.6	13	14°40.3	03.6	13	14°52.0	09.4
14	29°02.4	40.4	14	29°15.5	49.4	14	29°28.2	57.6	14	29°40.5	04.6	14	29°52.2	10.4
15	44°02.5	·· 41.4	15	44°15.7	·· 50.4	15	44°28.4	·· 58.5	15	44°40.7	·· 05.5	15	44°52.4	·· 11.3
16	59°02.7	42.4	16	59°15.8	51.4	16	59°28.6	06°59.4	16	59°40.8	06.4	16	59°52.5	12.2
17	74°02.9	43.3	17	74°16.0	52.3	17	74°28.8	07°00.4	17	74°41.0	07.3	17	74°52.7	13.1
18	89°03.1	N04°44.3	18	89°16.2	N05°53.3	18	89°28.9	N07°01.3	18	89°41.2	N08°08.3	18	89°52.8	N09°14.0
19	104°03.3	45.2	19	104°16.4	54.2	19	104°29.1	02.2	19	104°41.3	09.2	19	104°53.0	14.9
20	119°03.5	46.2	20	119°16.6	55.2	20	119°29.3	03.2	20	119°41.5	10.1	20	119°53.1	15.8
21	134°03.6	·· 47.2	21	134°16.7	·· 56.1	21	134°29.4	·· 04.1	21	134°41.7	·· 11.0	21	134°53.3	·· 16.7
22	149°03.8	48.1	22	149°16.9	57.1	22	149°29.6	05.1	22	149°41.8	11.9	22	149°53.5	17.6
23	164°04.0	49.1	23	164°17.1	58.0	23	164°29.8	06.0	23	164°42.0	12.9	23	164°53.6	18.5
	SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 0.9′		SD=16.0′	d = 0.9′		SD=15.9′	d = 0.9′

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	179°04.2	N04°50.1	0	179°17.3	N05°59.0	0	179°30.0	N07°06.9	0	179°42.2	N08°13.8	0	179°53.8	N09°19.4
1	194°04.4	51.0	1	194°17.5	05°59.9	1	194°30.1	07.9	1	194°42.3	14.7	1	194°53.9	20.3
2	209°04.6	52.0	2	209°17.6	06°00.9	2	209°30.3	08.8	2	209°42.5	15.6	2	209°54.1	21.2
3	224°04.7	·· 53.0	3	224°17.8	·· 01.8	3	224°30.5	·· 09.7	3	224°42.7	·· 16.5	3	224°54.2	·· 22.1
4	239°04.9	53.9	4	239°18.0	02.8	4	239°30.7	10.7	4	239°42.8	17.5	4	239°54.4	23.0
5	254°05.1	54.9	5	254°18.2	03.7	5	254°30.8	11.6	5	254°43.0	18.4	5	254°54.6	23.9
6	269°05.3	N04°55.8	6	269°18.3	N06°04.7	6	269°31.0	N07°12.5	6	269°43.2	N08°19.3	6	269°54.7	N09°24.8
7	284°05.5	56.8	7	284°18.5	05.6	7	284°31.2	13.5	7	284°43.3	20.2	7	284°54.9	25.7
8	299°05.7	57.8	8	299°18.7	06.6	8	299°31.4	14.4	8	299°43.5	21.1	8	299°55.0	26.6
9	314°05.9	·· 58.7	9	314°18.9	·· 07.5	9	314°31.5	·· 15.3	9	314°43.7	·· 22.1	9	314°55.2	·· 27.5
10	329°06.0	04°59.7	10	329°19.1	08.5	10	329°31.7	16.3	10	329°43.8	23.0	10	329°55.3	28.4
11	344°06.2	05°00.6	11	344°19.2	09.4	11	344°31.9	17.2	11	344°44.0	23.9	11	344°55.5	29.3
12	359°06.4	N05°01.6	12	359°19.4	N06°10.4	12	359°32.0	N07°18.2	12	359°44.2	N08°24.8	12	359°55.6	N09°30.2
13	14°06.6	02.6	13	14°19.6	11.3	13	14°32.2	19.1	13	14°44.3	25.7	13	14°55.8	31.1
14	29°06.8	03.5	14	29°19.8	12.3	14	29°32.4	20.0	14	29°44.5	26.6	14	29°55.9	32.0
15	44°06.9	·· 04.5	15	44°20.0	·· 13.2	15	44°32.6	·· 21.0	15	44°44.6	·· 27.6	15	44°56.1	·· 32.9
16	59°07.1	05.4	16	59°20.1	14.2	16	59°32.7	21.9	16	59°44.8	28.5	16	59°56.3	33.8
17	74°07.3	06.4	17	74°20.3	15.1	17	74°32.9	22.8	17	74°45.0	29.4	17	74°56.4	34.7
18	89°07.5	N05°07.4	18	89°20.5	N06°16.1	18	89°33.1	N07°23.8	18	89°45.1	N08°30.3	18	89°56.6	N09°35.6
19	104°07.7	08.3	19	104°20.7	17.0	19	104°33.2	24.7	19	104°45.3	31.2	19	104°56.7	36.5
20	119°07.9	09.3	20	119°20.8	17.9	20	119°33.4	25.6	20	119°45.5	32.1	20	119°56.9	37.4
21	134°08.0	·· 10.2	21	134°21.0	·· 18.9	21	134°33.6	·· 26.5	21	134°45.6	·· 33.1	21	134°57.0	·· 38.3
22	149°08.2	11.2	22	149°21.2	19.8	22	149°33.8	27.5	22	149°45.8	34.0	22	149°57.2	39.1
23	164°08.4	12.2	23	164°21.4	20.8	23	164°33.9	28.4	23	164°46.0	34.9	23	164°57.3	40.0
	SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 0.9′		SD=16.0′	d = 0.9′		SD=15.9′	d = 0.9′

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	179°08.6	N05°13.1	0	179°21.6	N06°21.7	0	179°34.1	N07°29.3	0	179°46.1	N08°35.8	0	179°57.5	N09°40.9
1	194°08.8	14.1	1	194°21.7	22.7	1	194°34.3	30.3	1	194°46.3	36.7	1	194°57.6	41.8
2	209°09.0	15.0	2	209°21.9	23.6	2	209°34.4	31.2	2	209°46.4	37.6	2	209°57.8	42.7
3	224°09.1	·· 16.0	3	224°22.1	·· 24.6	3	224°34.6	·· 32.1	3	224°46.6	·· 38.5	3	224°57.9	·· 43.6
4	239°09.3	17.0	4	239°22.3	25.5	4	239°34.8	33.1	4	239°46.8	39.5	4	239°58.1	44.5
5	254°09.5	17.9	5	254°22.4	26.5	5	254°35.0	34.0	5	254°46.9	40.4	5	254°58.2	45.4
6	269°09.7	N05°18.9	6	269°22.6	N06°27.4	6	269°35.1	N07°34.9	6	269°47.1	N08°41.3	6	269°58.4	N09°46.3
7	284°09.9	19.8	7	284°22.8	28.4	7	284°35.3	35.9	7	284°47.3	42.2	7	284°58.6	47.2
8	299°10.0	20.8	8	299°23.0	29.3	8	299°35.5	36.8	8	299°47.4	43.1	8	299°58.7	48.1
9	314°10.2	·· 21.8	9	314°23.1	·· 30.2	9	314°35.6	·· 37.7	9	314°47.6	·· 44.0	9	314°58.9	·· 49.0
10	329°10.4	22.7	10	329°23.3	31.2	10	329°35.8	38.6	10	329°47.7	44.9	10	329°59.0	49.9
11	344°10.6	23.7	11	344°23.5	32.1	11	344°36.0	39.6	11	344°47.9	45.8	11	344°59.2	50.8
12	359°10.8	N05°24.6	12	359°23.7	N06°33.1	12	359°36.1	N07°40.5	12	359°48.1	N08°46.8	12	359°59.3	N09°51.7
13	14°11.0	25.6	13	14°23.9	34.0	13	14°36.3	41.4	13	14°48.2	47.7	13	14°59.5	52.6
14	29°11.1	26.5	14	29°24.0	35.0	14	29°36.5	42.4	14	29°48.4	48.6	14	29°59.6	53.4
15	44°11.3	·· 27.5	15	44°24.2	·· 35.9	15	44°36.6	·· 43.3	15	44°48.5	·· 49.5	15	44°59.8	·· 54.3
16	59°11.5	28.4	16	59°24.4	36.9	16	59°36.8	44.2	16	59°48.7	50.4	16	59°59.9	55.2
17	74°11.7	29.4	17	74°24.6	37.8	17	74°37.0	45.1	17	74°48.9	51.3	17	75°00.1	56.1
18	89°11.9	N05°30.4	18	89°24.7	N06°38.7	18	89°37.2	N07°46.1	18	89°49.0	N08°52.2	18	90°00.2	N09°57.0
19	104°12.0	31.3	19	104°24.9	39.7	19	104°37.3	47.0	19	104°49.2	53.1	19	105°00.4	57.9
20	119°12.2	32.3	20	119°25.1	40.6	20	119°37.5	47.9	20	119°49.3	54.0	20	120°00.5	58.8
21	134°12.4	·· 33.2	21	134°25.3	·· 41.6	21	134°37.7	·· 48.9	21	134°49.5	·· 54.9	21	135°00.7	09°59.7
22	149°12.6	34.2	22	149°25.4	42.5	22	149°37.8	49.8	22	149°49.7	55.8	22	150°00.8	10°00.6
23	164°12.8	35.1	23	164°25.6	43.4	23	164°38.0	50.7	23	164°49.8	56.8	23	165°01.0	01.4
	SD=16.0′	d = 1.0′		SD=16.0′	d = 0.9′		SD=16.0′	d = 0.9′		SD=16.0′	d = 0.9′		SD=15.9′	d = 0.9′

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	180°01.1	N10°02.3	0	180°11.4	N11°05.5	0	180°20.8	N12°07.1	0	180°29.2	N13°06.8	0	180°36.4	N14°04.7
1	195°01.3	03.2	1	195°11.6	06.4	1	195°20.9	07.9	1	195°29.3	07.6	1	195°36.5	05.4
2	210°01.4	04.1	2	210°11.7	07.2	2	210°21.1	08.7	2	210°29.4	08.4	2	210°36.6	06.2
3	225°01.6	·· 05.0	3	225°11.8	·· 08.1	3	225°21.2	·· 09.6	3	225°29.5	·· 09.3	3	225°36.6	·· 07.0
4	240°01.7	05.9	4	240°12.0	09.0	4	240°21.3	10.4	4	240°29.6	10.1	4	240°36.7	07.8
5	255°01.9	06.8	5	255°12.1	09.8	5	255°21.4	11.3	5	255°29.7	10.9	5	255°36.8	08.6
6	270°02.0	N10°07.7	6	270°12.2	N11°10.7	6	270°21.5	N12°12.1	6	270°29.8	N13°11.7	6	270°36.9	N14°09.4
7	285°02.2	08.5	7	285°12.4	11.6	7	285°21.7	12.9	7	285°29.9	12.5	7	285°37.0	10.2
8	300°02.3	09.4	8	300°12.5	12.4	8	300°21.8	13.8	8	300°30.0	13.3	8	300°37.1	11.0
9	315°02.4	·· 10.3	9	315°12.7	·· 13.3	9	315°21.9	·· 14.6	9	315°30.1	·· 14.2	9	315°37.2	·· 11.7
10	330°02.6	11.2	10	330°12.8	14.2	10	330°22.0	15.5	10	330°30.2	15.0	10	330°37.3	12.5
11	345°02.7	12.1	11	345°12.9	15.0	11	345°22.2	16.3	11	345°30.3	15.8	11	345°37.4	13.3
12	0°02.9	N10°13.0	12	0°13.1	N11°15.9	12	0°22.3	N12°17.1	12	0°30.4	N13°16.6	12	0°37.5	N14°14.1
13	15°03.0	13.9	13	15°13.2	16.7	13	15°22.4	18.0	13	15°30.5	17.4	13	15°37.6	14.9
14	30°03.2	14.7	14	30°13.3	17.6	14	30°22.5	18.8	14	30°30.6	18.2	14	30°37.6	15.7
15	45°03.3	·· 15.6	15	45°13.5	·· 18.5	15	45°22.6	·· 19.7	15	45°30.8	·· 19.0	15	45°37.7	·· 16.4
16	60°03.5	16.5	16	60°13.6	19.3	16	60°22.8	20.5	16	60°30.9	19.8	16	60°37.8	17.2
17	75°03.6	17.4	17	75°13.7	20.2	17	75°22.9	21.3	17	75°31.0	20.6	17	75°37.9	18.0
18	90°03.8	N10°18.3	18	90°13.9	N11°21.1	18	90°23.0	N12°22.2	18	90°31.1	N13°21.5	18	90°38.0	N14°18.8
19	105°03.9	19.2	19	105°14.0	21.9	19	105°23.1	23.0	19	105°31.2	22.3	19	105°38.1	19.6
20	120°04.1	20.0	20	120°14.1	22.8	20	120°23.2	23.8	20	120°31.3	23.1	20	120°38.2	20.4
21	135°04.2	·· 20.9	21	135°14.3	·· 23.6	21	135°23.4	·· 24.7	21	135°31.4	·· 23.9	21	135°38.3	·· 21.1
22	150°04.4	21.8	22	150°14.4	24.5	22	150°23.5	25.5	22	150°31.5	24.7	22	150°38.3	21.9
23	165°04.5	22.7	23	165°14.5	25.4	23	165°23.6	26.3	23	165°31.6	25.5	23	165°38.4	22.7
	SD=15.9′	d = 0.9′		SD=15.9′	d = 0.9′		SD=15.9′	d = 0.8′		SD=15.9′	d = 0.8′		SD=15.9′	d = 0.8′

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	180°04.6	N10°23.6	0	180°14.7	N11°26.2	0	180°23.7	N12°27.2	0	180°31.7	N13°26.3	0	180°38.5	N14°23.5
1	195°04.8	24.4	1	195°14.8	27.1	1	195°23.8	28.0	1	195°31.8	27.1	1	195°38.6	24.3
2	210°04.9	25.3	2	210°14.9	27.9	2	210°23.9	28.8	2	210°31.9	27.9	2	210°38.7	25.0
3	225°05.1	·· 26.2	3	225°15.1	·· 28.8	3	225°24.1	·· 29.7	3	225°32.0	·· 28.7	3	225°38.8	·· 25.8
4	240°05.2	27.1	4	240°15.2	29.6	4	240°24.2	30.5	4	240°32.1	29.5	4	240°38.9	26.6
5	255°05.4	28.0	5	255°15.3	30.5	5	255°24.3	31.3	5	255°32.2	30.4	5	255°39.0	27.4
6	270°05.5	N10°28.8	6	270°15.5	N11°31.4	6	270°24.4	N12°32.2	6	270°32.3	N13°31.2	6	270°39.0	N14°28.1
7	285°05.7	29.7	7	285°15.6	32.2	7	285°24.5	33.0	7	285°32.4	32.0	7	285°39.1	28.9
8	300°05.8	30.6	8	300°15.7	33.1	8	300°24.7	33.8	8	300°32.5	32.8	8	300°39.2	29.7
9	315°05.9	·· 31.5	9	315°15.9	·· 33.9	9	315°24.8	·· 34.7	9	315°32.6	·· 33.6	9	315°39.3	·· 30.5
10	330°06.1	32.4	10	330°16.0	34.8	10	330°24.9	35.5	10	330°32.7	34.4	10	330°39.4	31.2
11	345°06.2	33.2	11	345°16.1	35.6	11	345°25.0	36.3	11	345°32.8	35.2	11	345°39.5	32.0
12	0°06.4	N10°34.1	12	0°16.2	N11°36.5	12	0°25.1	N12°37.2	12	0°32.9	N13°36.0	12	0°39.5	N14°32.8
13	15°06.5	35.0	13	15°16.4	37.3	13	15°25.2	38.0	13	15°33.0	36.8	13	15°39.6	33.6
14	30°06.7	35.9	14	30°16.5	38.2	14	30°25.3	38.8	14	30°33.1	37.6	14	30°39.7	34.3
15	45°06.8	·· 36.8	15	45°16.6	·· 39.1	15	45°25.5	·· 39.7	15	45°33.2	·· 38.4	15	45°39.8	·· 35.1
16	60°07.0	37.6	16	60°16.8	39.9	16	60°25.6	40.5	16	60°33.3	39.2	16	60°39.9	35.9
17	75°07.1	38.5	17	75°16.9	40.8	17	75°25.7	41.3	17	75°33.4	40.0	17	75°40.0	36.7
18	90°07.2	N10°39.4	18	90°17.0	N11°41.6	18	90°25.8	N12°42.1	18	90°33.5	N13°40.8	18	90°40.0	N14°37.4
19	105°07.4	40.3	19	105°17.2	42.5	19	105°25.9	43.0	19	105°33.6	41.6	19	105°40.1	38.2
20	120°07.5	41.1	20	120°17.3	43.3	20	120°26.0	43.8	20	120°33.7	42.4	20	120°40.2	39.0
21	135°07.7	·· 42.0	21	135°17.4	·· 44.2	21	135°26.2	·· 44.6	21	135°33.8	·· 43.2	21	135°40.3	·· 39.8
22	150°07.8	42.9	22	150°17.5	45.0	22	150°26.3	45.4	22	150°33.9	44.0	22	150°40.4	40.5
23	165°07.9	43.8	23	165°17.7	45.9	23	165°26.4	46.3	23	165°34.0	44.8	23	165°40.5	41.3
	SD=15.9′	d = 0.9′		SD=15.9′	d = 0.9′		SD=15.9′	d = 0.8′		SD=15.9′	d = 0.8′		SD=15.9′	d = 0.8′

18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	180°08.1	N10°44.6	0	180°17.8	N11°46.7	0	180°26.5	N12°47.1	0	180°34.1	N13°45.6	0	180°40.5	N14°42.1
1	195°08.2	45.5	1	195°17.9	47.6	1	195°26.6	47.9	1	195°34.2	46.4	1	195°40.6	42.8
2	210°08.4	46.4	2	210°18.1	48.4	2	210°26.7	48.8	2	210°34.3	47.2	2	210°40.7	43.6
3	225°08.5	·· 47.2	3	225°18.2	·· 49.3	3	225°26.8	·· 49.6	3	225°34.4	·· 48.0	3	225°40.8	·· 44.4
4	240°08.7	48.1	4	240°18.3	50.1	4	240°26.9	50.4	4	240°34.5	48.8	4	240°40.9	45.1
5	255°08.8	49.0	5	255°18.4	51.0	5	255°27.1	51.2	5	255°34.6	49.6	5	255°40.9	45.9
6	270°08.9	N10°49.9	6	270°18.6	N11°51.8	6	270°27.2	N12°52.0	6	270°34.7	N13°50.4	6	270°41.0	N14°46.7
7	285°09.1	50.7	7	285°18.7	52.7	7	285°27.3	52.9	7	285°34.8	51.2	7	285°41.1	47.4
8	300°09.2	51.6	8	300°18.8	53.5	8	300°27.4	53.7	8	300°34.9	52.0	8	300°41.2	48.2
9	315°09.4	·· 52.5	9	315°18.9	·· 54.4	9	315°27.5	·· 54.5	9	315°35.0	·· 52.8	9	315°41.3	·· 49.0
10	330°09.5	53.4	10	330°19.1	55.2	10	330°27.6	55.3	10	330°35.1	53.6	10	330°41.3	49.7
11	345°09.6	54.2	11	345°19.2	56.1	11	345°27.7	56.2	11	345°35.2	54.4	11	345°41.4	50.5
12	0°09.8	N10°55.1	12	0°19.3	N11°56.9	12	0°27.8	N12°57.0	12	0°35.2	N13°55.2	12	0°41.5	N14°51.3
13	15°09.9	56.0	13	15°19.4	57.8	13	15°27.9	57.8	13	15°35.3	55.9	13	15°41.6	52.0
14	30°10.0	56.8	14	30°19.6	58.6	14	30°28.1	58.6	14	30°35.4	56.7	14	30°41.7	52.8
15	45°10.2	·· 57.7	15	45°19.7	11°59.5	15	45°28.2	12°59.4	15	45°35.5	·· 57.5	15	45°41.7	·· 53.6
16	60°10.3	58.6	16	60°19.8	12°00.3	16	60°28.3	13°00.3	16	60°35.6	58.3	16	60°41.8	54.3
17	75°10.5	10°59.4	17	75°19.9	01.1	17	75°28.4	01.1	17	75°35.7	59.1	17	75°41.9	55.1
18	90°10.6	N11°00.3	18	90°20.1	N12°02.0	18	90°28.5	N13°01.9	18	90°35.8	N13°59.9	18	90°42.0	N14°55.8
19	105°10.7	01.2	19	105°20.2	02.8	19	105°28.6	02.7	19	105°35.9	14°00.7	19	105°42.0	56.6
20	120°10.9	02.0	20	120°20.3	03.7	20	120°28.7	03.5	20	120°36.0	01.5	20	120°42.1	57.4
21	135°11.0	·· 02.9	21	135°20.4	·· 04.5	21	135°28.8	·· 04.4	21	135°36.1	·· 02.3	21	135°42.2	·· 58.1
22	150°11.2	03.8	22	150°20.6	05.4	22	150°28.9	05.2	22	150°36.2	03.1	22	150°42.3	58.9
23	165°11.3	04.6	23	165°20.7	06.2	23	165°29.0	06.0	23	165°36.3	03.9	23	165°42.3	59.6
	SD=15.9′	d = 0.9′		SD=15.9′	d = 0.9′		SD=15.9′	d = 0.8′		SD=15.9′	d = 0.8′		SD=15.9′	d = 0.8′

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	180°42.4	N15°00.4	0	180°47.3	N15°53.9	0	180°50.9	N16°45.1	0	180°53.3	N17°33.7	0	180°54.4	N18°19.6
1	195°42.5	01.2	1	195°47.3	54.7	1	195°50.9	45.8	1	195°53.3	34.3	1	195°54.4	20.3
2	210°42.6	01.9	2	210°47.4	55.4	2	210°51.0	46.5	2	210°53.3	35.0	2	210°54.4	20.9
3	225°42.7	·· 02.7	3	225°47.5	·· 56.1	3	225°51.0	·· 47.1	3	225°53.4	·· 35.7	3	225°54.5	·· 21.5
4	240°42.7	03.4	4	240°47.5	56.8	4	240°51.1	47.8	4	240°53.4	36.3	4	240°54.5	22.1
5	255°42.8	04.2	5	255°47.6	57.6	5	255°51.1	48.5	5	255°53.4	37.0	5	255°54.5	22.7
6	270°42.9	N15°05.0	6	270°47.6	N15°58.3	6	270°51.1	N16°49.2	6	270°53.4	N17°37.6	6	270°54.5	N18°23.3
7	285°42.9	05.7	7	285°47.7	59.0	7	285°51.2	49.9	7	285°53.5	38.3	7	285°54.5	24.0
8	300°43.0	06.5	8	300°47.7	15°59.7	8	300°51.2	50.6	8	300°53.5	38.9	8	300°54.5	24.6
9	315°43.1	·· 07.2	9	315°47.8	16°00.5	9	315°51.3	·· 51.3	9	315°53.5	·· 39.6	9	315°54.5	·· 25.2
10	330°43.2	08.0	10	330°47.9	01.2	10	330°51.3	52.0	10	330°53.5	40.2	10	330°54.5	25.8
11	345°43.2	08.7	11	345°47.9	01.9	11	345°51.3	52.7	11	345°53.5	40.9	11	345°54.5	26.4
12	0°43.3	N15°09.5	12	0°48.0	N16°02.6	12	0°51.4	N16°53.4	12	0°53.6	N17°41.5	12	0°54.5	N18°27.0
13	15°43.4	10.2	13	15°48.0	03.3	13	15°51.4	54.0	13	15°53.6	42.2	13	15°54.5	27.6
14	30°43.5	11.0	14	30°48.1	04.1	14	30°51.5	54.7	14	30°53.6	42.8	14	30°54.5	28.3
15	45°43.5	·· 11.7	15	45°48.1	·· 04.8	15	45°51.5	·· 55.4	15	45°53.6	·· 43.5	15	45°54.5	·· 28.9
16	60°43.6	12.5	16	60°48.2	05.5	16	60°51.5	56.1	16	60°53.7	44.1	16	60°54.5	29.5
17	75°43.7	13.3	17	75°48.2	06.2	17	75°51.6	56.8	17	75°53.7	44.8	17	75°54.5	30.1
18	90°43.8	N15°14.0	18	90°48.3	N16°06.9	18	90°51.6	N16°57.5	18	90°53.7	N17°45.4	18	90°54.5	N18°30.7
19	105°43.8	14.8	19	105°48.4	07.7	19	105°51.7	58.2	19	105°53.7	46.1	19	105°54.5	31.3
20	120°43.9	15.5	20	120°48.4	08.4	20	120°51.7	58.8	20	120°53.7	46.7	20	120°54.5	31.9
21	135°44.0	·· 16.3	21	135°48.5	·· 09.1	21	135°51.7	16°59.5	21	135°53.8	·· 47.4	21	135°54.5	·· 32.5
22	150°44.0	17.0	22	150°48.5	09.8	22	150°51.8	17°00.2	22	150°53.8	48.0	22	150°54.5	33.1
23	165°44.1	17.8	23	165°48.6	10.5	23	165°51.8	00.9	23	165°53.8	48.7	23	165°54.5	33.7
	SD=15.9′	$d=0.8'$		SD=15.9′	$d=0.7'$		SD=15.8′	$d=0.7'$		SD=15.8′	$d=0.7'$		SD=15.8′	$d=0.6'$

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	180°44.2	N15°18.5	0	180°48.6	N16°11.2	0	180°51.8	N17°01.6	0	180°53.8	N17°49.3	0	180°54.5	N18°34.3
1	195°44.2	19.3	1	195°48.7	12.0	1	195°51.9	02.2	1	195°53.8	49.9	1	195°54.5	34.9
2	210°44.3	20.0	2	210°48.7	12.7	2	210°51.9	02.9	2	210°53.8	50.6	2	210°54.5	35.5
3	225°44.4	·· 20.7	3	225°48.8	·· 13.4	3	225°51.9	·· 03.6	3	225°53.9	·· 51.2	3	225°54.5	·· 36.2
4	240°44.5	21.5	4	240°48.8	14.1	4	240°52.0	04.3	4	240°53.9	51.9	4	240°54.5	36.8
5	255°44.5	22.2	5	255°48.9	14.8	5	255°52.0	05.0	5	255°53.9	52.5	5	255°54.5	37.4
6	270°44.6	N15°23.0	6	270°48.9	N16°15.5	6	270°52.0	N17°05.6	6	270°53.9	N17°53.2	6	270°54.5	N18°38.0
7	285°44.7	23.7	7	285°49.0	16.2	7	285°52.1	06.3	7	285°53.9	53.8	7	285°54.5	38.6
8	300°44.7	24.5	8	300°49.0	17.0	8	300°52.1	07.0	8	300°54.0	54.4	8	300°54.5	39.2
9	315°44.8	·· 25.2	9	315°49.1	·· 17.7	9	315°52.2	·· 07.7	9	315°54.0	·· 55.1	9	315°54.5	·· 39.8
10	330°44.9	26.0	10	330°49.1	18.4	10	330°52.2	08.4	10	330°54.0	55.7	10	330°54.5	40.4
11	345°44.9	26.7	11	345°49.2	19.1	11	345°52.2	09.0	11	345°54.0	56.4	11	345°54.5	41.0
12	0°45.0	N15°27.5	12	0°49.2	N16°19.8	12	0°52.3	N17°09.7	12	0°54.0	N17°57.0	12	0°54.5	N18°41.6
13	15°45.1	28.2	13	15°49.3	20.5	13	15°52.3	10.4	13	15°54.0	57.6	13	15°54.5	42.2
14	30°45.1	28.9	14	30°49.3	21.2	14	30°52.3	11.1	14	30°54.0	58.3	14	30°54.5	42.8
15	45°45.2	·· 29.7	15	45°49.4	·· 21.9	15	45°52.3	·· 11.7	15	45°54.1	·· 58.9	15	45°54.5	·· 43.4
16	60°45.3	30.4	16	60°49.4	22.6	16	60°52.4	12.4	16	60°54.1	17°59.6	16	60°54.5	44.0
17	75°45.3	31.2	17	75°49.5	23.4	17	75°52.4	13.1	17	75°54.1	18°00.2	17	75°54.5	44.6
18	90°45.4	N15°31.9	18	90°49.5	N16°24.1	18	90°52.4	N17°13.7	18	90°54.1	N18°00.8	18	90°54.5	N18°45.2
19	105°45.5	32.6	19	105°49.6	24.8	19	105°52.5	14.4	19	105°54.1	01.5	19	105°54.5	45.8
20	120°45.5	33.4	20	120°49.6	25.5	20	120°52.5	15.1	20	120°54.1	02.1	20	120°54.5	46.4
21	135°45.6	·· 34.1	21	135°49.7	·· 26.2	21	135°52.5	·· 15.8	21	135°54.2	·· 02.7	21	135°54.5	·· 46.9
22	150°45.7	34.9	22	150°49.7	26.9	22	150°52.6	16.4	22	150°54.2	03.4	22	150°54.5	47.5
23	165°45.7	35.6	23	165°49.8	27.6	23	165°52.6	17.1	23	165°54.2	04.0	23	165°54.5	48.1
	SD=15.9′	$d=0.7'$		SD=15.9′	$d=0.7'$		SD=15.8′	$d=0.7'$		SD=15.8′	$d=0.6'$		SD=15.8′	$d=0.6'$

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	180°45.8	N15°36.3	0	180°49.8	N16°28.3	0	180°52.6	N17°17.8	0	180°54.2	N18°04.6	0	180°54.5	N18°48.7
1	195°45.9	37.1	1	195°49.9	29.0	1	195°52.7	18.4	1	195°54.2	05.3	1	195°54.5	49.3
2	210°45.9	37.8	2	210°49.9	29.7	2	210°52.7	19.1	2	210°54.2	05.9	2	210°54.5	49.9
3	225°46.0	·· 38.6	3	225°50.0	·· 30.4	3	225°52.7	·· 19.8	3	225°54.2	·· 06.5	3	225°54.5	·· 50.5
4	240°46.0	39.3	4	240°50.0	31.1	4	240°52.8	20.4	4	240°54.2	07.1	4	240°54.5	51.1
5	255°46.1	40.0	5	255°50.1	31.8	5	255°52.8	21.1	5	255°54.3	07.8	5	255°54.5	51.7
6	270°46.2	N15°40.8	6	270°50.1	N16°32.5	6	270°52.8	N17°21.8	6	270°54.3	N18°08.4	6	270°54.5	N18°52.3
7	285°46.2	41.5	7	285°50.2	33.2	7	285°52.8	22.4	7	285°54.3	09.0	7	285°54.5	52.9
8	300°46.3	42.2	8	300°50.2	33.9	8	300°52.9	23.1	8	300°54.3	09.7	8	300°54.5	53.5
9	315°46.4	·· 43.0	9	315°50.2	·· 34.6	9	315°52.9	·· 23.8	9	315°54.3	·· 10.3	9	315°54.4	·· 54.0
10	330°46.4	43.7	10	330°50.3	35.3	10	330°52.9	24.4	10	330°54.3	10.9	10	330°54.4	54.6
11	345°46.5	44.4	11	345°50.3	36.0	11	345°53.0	25.1	11	345°54.3	11.5	11	345°54.4	55.2
12	0°46.6	N15°45.2	12	0°50.4	N16°36.7	12	0°53.0	N17°25.8	12	0°54.3	N18°12.2	12	0°54.4	N18°55.8
13	15°46.6	45.9	13	15°50.4	37.4	13	15°53.0	26.4	13	15°54.3	12.8	13	15°54.4	56.4
14	30°46.7	46.6	14	30°50.5	38.1	14	30°53.0	27.1	14	30°54.3	13.4	14	30°54.4	57.0
15	45°46.7	·· 47.4	15	45°50.5	·· 38.8	15	45°53.1	·· 27.8	15	45°54.4	·· 14.0	15	45°54.4	·· 57.6
16	60°46.8	48.1	16	60°50.6	39.5	16	60°53.1	28.4	16	60°54.4	14.7	16	60°54.4	58.1
17	75°46.9	48.8	17	75°50.6	40.2	17	75°53.1	29.1	17	75°54.4	15.3	17	75°54.4	58.7
18	90°46.9	N15°49.6	18	90°50.6	N16°40.9	18	90°53.1	N17°29.7	18	90°54.4	N18°15.9	18	90°54.4	N18°59.3
19	105°47.0	50.3	19	105°50.7	41.6	19	105°53.2	30.4	19	105°54.4	16.5	19	105°54.4	18°59.9
20	120°47.0	51.0	20	120°50.7	42.3	20	120°53.2	31.1	20	120°54.4	17.2	20	120°54.4	19°00.5
21	135°47.1	·· 51.7	21	135°50.8	·· 43.0	21	135°53.2	·· 31.7	21	135°54.4	·· 17.8	21	135°54.4	·· 01.1
22	150°47.2	52.5	22	150°50.8	43.7	22	150°53.2	32.4	22	150°54.4	18.4	22	150°54.3	01.6
23	165°47.2	53.2	23	165°50.9	44.4	23	165°53.3	33.0	23	165°54.4	19.0	23	165°54.3	02.2
	SD=15.9′	$d=0.7'$		SD=15.8′	$d=0.7'$		SD=15.8′	$d=0.7'$		SD=15.8′	$d=0.6'$		SD=15.8′	$d=0.6'$

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	180°54.3	N19°02.8	0	180°52.9	N19°43.1	0	180°50.3	N20°20.3	0	180°46.4	N20°54.4	0	180°41.4	N21°25.3
1	195°54.3	03.4	1	195°52.9	43.6	1	195°50.3	20.8	1	195°46.4	54.9	1	195°41.4	25.8
2	210°54.3	04.0	2	210°52.9	44.1	2	210°50.2	21.3	2	210°46.3	55.4	2	210°41.3	26.2
3	225°54.3	·· 04.5	3	225°52.9	·· 44.7	3	225°50.2	·· 21.8	3	225°46.3	·· 55.8	3	225°41.2	·· 26.6
4	240°54.3	05.1	4	240°52.8	45.2	4	240°50.1	22.3	4	240°46.2	56.3	4	240°41.1	27.0
5	255°54.3	05.7	5	255°52.8	45.7	5	255°50.1	22.8	5	255°46.1	56.7	5	255°41.0	27.4
6	270°54.3	N19°06.3	6	270°52.8	N19°46.3	6	270°50.0	N20°23.3	6	270°46.1	N20°57.1	6	270°41.0	N21°27.8
7	285°54.2	06.8	7	285°52.7	46.8	7	285°50.0	23.8	7	285°46.0	57.6	7	285°40.9	28.2
8	300°54.2	07.4	8	300°52.7	47.4	8	300°49.9	24.3	8	300°45.9	58.0	8	300°40.8	28.6
9	315°54.2	·· 08.0	9	315°52.7	·· 47.9	9	315°49.9	·· 24.8	9	315°45.9	·· 58.5	9	315°40.7	·· 29.0
10	330°54.2	08.6	10	330°52.7	48.4	10	330°49.8	25.2	10	330°45.8	58.9	10	330°40.6	29.4
11	345°54.2	09.1	11	345°52.6	49.0	11	345°49.8	25.7	11	345°45.8	59.4	11	345°40.6	29.8
12	0°54.2	N19°09.7	12	0°52.6	N19°49.5	12	0°49.8	N20°26.2	12	0°45.7	N20°59.8	12	0°40.5	N21°30.2
13	15°54.2	10.3	13	15°52.6	50.0	13	15°49.7	26.7	13	15°45.6	21°00.3	13	15°40.4	30.6
14	30°54.2	10.9	14	30°52.5	50.5	14	30°49.7	27.2	14	30°45.6	00.7	14	30°40.3	31.0
15	45°54.1	·· 11.4	15	45°52.5	·· 51.1	15	45°49.6	·· 27.7	15	45°45.5	·· 01.2	15	45°40.3	·· 31.4
16	60°54.1	12.0	16	60°52.5	51.6	16	60°49.6	28.2	16	60°45.4	01.6	16	60°40.2	31.8
17	75°54.1	12.6	17	75°52.4	52.1	17	75°49.5	28.7	17	75°45.4	02.0	17	75°40.1	32.2
18	90°54.1	N19°13.1	18	90°52.4	N19°52.7	18	90°49.5	N20°29.1	18	90°45.3	N21°02.5	18	90°40.0	N21°32.6
19	105°54.1	13.7	19	105°52.4	53.2	19	105°49.4	29.6	19	105°45.2	02.9	19	105°39.9	32.9
20	120°54.1	14.3	20	120°52.3	53.7	20	120°49.4	30.1	20	120°45.2	03.4	20	120°39.8	33.3
21	135°54.1	·· 14.8	21	135°52.3	·· 54.2	21	135°49.3	·· 30.6	21	135°45.1	·· 03.8	21	135°39.8	·· 33.7
22	150°54.0	15.4	22	150°52.3	54.8	22	150°49.3	31.1	22	150°45.0	04.2	22	150°39.7	34.1
23	165°54.0	16.0	23	165°52.2	55.3	23	165°49.2	31.6	23	165°45.0	04.7	23	165°39.6	34.5
	SD=15.8′	$d=0.6'$		SD=15.8′	$d=0.5'$		SD=15.8′	$d=0.5'$		SD=15.8′	$d=0.5'$		SD=15.8′	$d=0.4'$

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	180°54.0	N19°16.5	0	180°52.2	N19°55.8	0	180°49.2	N20°32.0	0	180°44.9	N21°05.1	0	180°39.5	N21°34.9
1	195°54.0	17.1	1	195°52.2	56.3	1	195°49.1	32.5	1	195°44.8	05.5	1	195°39.4	35.3
2	210°54.0	17.7	2	210°52.1	56.9	2	210°49.1	33.0	2	210°44.8	06.0	2	210°39.4	35.7
3	225°54.0	·· 18.2	3	225°52.1	·· 57.4	3	225°49.0	·· 33.5	3	225°44.7	·· 06.4	3	225°39.3	·· 36.1
4	240°53.9	18.8	4	240°52.1	57.9	4	240°49.0	34.0	4	240°44.6	06.9	4	240°39.2	36.5
5	255°53.9	19.4	5	255°52.0	58.4	5	255°48.9	34.4	5	255°44.6	07.3	5	255°39.1	36.9
6	270°53.9	N19°19.9	6	270°52.0	N19°59.0	6	270°48.8	N20°34.9	6	270°44.5	N21°07.7	6	270°39.0	N21°37.2
7	285°53.9	20.5	7	285°52.0	19°59.5	7	285°48.8	35.4	7	285°44.4	08.2	7	285°38.9	37.6
8	300°53.9	21.1	8	300°51.9	20°00.0	8	300°48.7	35.9	8	300°44.4	08.6	8	300°38.9	38.0
9	315°53.8	·· 21.6	9	315°51.9	·· 00.5	9	315°48.7	·· 36.4	9	315°44.3	·· 09.0	9	315°38.8	·· 38.4
10	330°53.8	22.2	10	330°51.9	01.0	10	330°48.6	36.8	10	330°44.2	09.4	10	330°38.7	38.8
11	345°53.8	22.7	11	345°51.8	01.6	11	345°48.6	37.3	11	345°44.1	09.9	11	345°38.6	39.2
12	0°53.8	N19°23.3	12	0°51.8	N20°02.1	12	0°48.5	N20°37.8	12	0°44.1	N21°10.3	12	0°38.5	N21°39.5
13	15°53.8	23.9	13	15°51.7	02.6	13	15°48.5	38.3	13	15°44.0	10.7	13	15°38.4	39.9
14	30°53.8	24.4	14	30°51.7	03.1	14	30°48.4	38.7	14	30°43.9	11.2	14	30°38.4	40.3
15	45°53.7	·· 25.0	15	45°51.7	·· 03.6	15	45°48.4	·· 39.2	15	45°43.9	·· 11.6	15	45°38.3	·· 40.7
16	60°53.7	25.5	16	60°51.6	04.1	16	60°48.3	39.7	16	60°43.8	12.0	16	60°38.2	41.1
17	75°53.7	26.1	17	75°51.6	04.7	17	75°48.3	40.1	17	75°43.7	12.4	17	75°38.1	41.5
18	90°53.7	N19°26.6	18	90°51.6	N20°05.2	18	90°48.2	N20°40.6	18	90°43.7	N21°12.9	18	90°38.0	N21°41.8
19	105°53.7	27.2	19	105°51.5	05.7	19	105°48.1	41.1	19	105°43.6	13.3	19	105°37.9	42.2
20	120°53.6	27.8	20	120°51.5	06.2	20	120°48.1	41.6	20	120°43.5	13.7	20	120°37.8	42.6
21	135°53.6	·· 28.3	21	135°51.4	·· 06.7	21	135°48.0	·· 42.0	21	135°43.4	·· 14.1	21	135°37.8	·· 43.0
22	150°53.6	28.9	22	150°51.4	07.2	22	150°48.0	42.5	22	150°43.4	14.6	22	150°37.7	43.3
23	165°53.6	29.4	23	165°51.4	07.7	23	165°47.9	43.0	23	165°43.3	15.0	23	165°37.6	43.7
	SD=15.8′	$d=0.6'$		SD=15.8′	$d=0.5'$		SD=15.8′	$d=0.5'$		SD=15.8′	$d=0.4'$		SD=15.8′	$d=0.4'$

18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	180°53.5	N19°30.0	0	180°51.3	N20°08.2	0	180°47.9	N20°43.4	0	180°43.2	N21°15.4	0	180°37.5	N21°44.1
1	195°53.5	30.5	1	195°51.3	08.7	1	195°47.8	43.9	1	195°43.2	15.8	1	195°37.4	44.5
2	210°53.5	31.1	2	210°51.2	09.3	2	210°47.8	44.4	2	210°43.1	16.3	2	210°37.3	44.8
3	225°53.5	·· 31.6	3	225°51.2	·· 09.8	3	225°47.7	·· 44.8	3	225°43.0	·· 16.7	3	225°37.2	·· 45.2
4	240°53.5	32.2	4	240°51.2	10.3	4	240°47.6	45.3	4	240°42.9	17.1	4	240°37.1	45.6
5	255°53.4	32.7	5	255°51.1	10.8	5	255°47.6	45.8	5	255°42.9	17.5	5	255°37.1	46.0
6	270°53.4	N19°33.3	6	270°51.1	N20°11.3	6	270°47.5	N20°46.2	6	270°42.8	N21°17.9	6	270°37.0	N21°46.3
7	285°53.4	33.8	7	285°51.0	11.8	7	285°47.5	46.7	7	285°42.7	18.3	7	285°36.9	46.7
8	300°53.4	34.4	8	300°51.0	12.3	8	300°47.4	47.1	8	300°42.6	18.8	8	300°36.8	47.1
9	315°53.3	·· 34.9	9	315°51.0	·· 12.8	9	315°47.4	·· 47.6	9	315°42.6	·· 19.2	9	315°36.7	·· 47.4
10	330°53.3	35.5	10	330°50.9	13.3	10	330°47.3	48.1	10	330°42.5	19.6	10	330°36.6	47.8
11	345°53.3	36.0	11	345°50.9	13.8	11	345°47.2	48.5	11	345°42.4	20.0	11	345°36.5	48.2
12	0°53.3	N19°36.6	12	0°50.8	N20°14.3	12	0°47.2	N20°49.0	12	0°42.3	N21°20.4	12	0°36.4	N21°48.5
13	15°53.2	37.1	13	15°50.8	14.8	13	15°47.1	49.4	13	15°42.3	20.8	13	15°36.4	48.9
14	30°53.2	37.6	14	30°50.8	15.3	14	30°47.1	49.9	14	30°42.2	21.3	14	30°36.3	49.3
15	45°53.2	·· 38.2	15	45°50.7	·· 15.8	15	45°47.0	·· 50.4	15	45°42.1	·· 21.7	15	45°36.2	·· 49.6
16	60°53.2	38.7	16	60°50.7	16.3	16	60°46.9	50.8	16	60°42.0	22.1	16	60°36.1	50.0
17	75°53.1	39.3	17	75°50.6	16.8	17	75°46.9	51.3	17	75°42.0	22.5	17	75°36.0	50.4
18	90°53.1	N19°39.8	18	90°50.6	N20°17.3	18	90°46.8	N20°51.7	18	90°41.9	N21°22.9	18	90°35.9	N21°50.7
19	105°53.1	40.4	19	105°50.5	17.8	19	105°46.8	52.2	19	105°41.8	23.3	19	105°35.8	51.1
20	120°53.1	40.9	20	120°50.5	18.3	20	120°46.7	52.6	20	120°41.7	23.7	20	120°35.7	51.5
21	135°53.0	·· 41.4	21	135°50.4	·· 18.8	21	135°46.6	·· 53.1	21	135°41.7	·· 24.1	21	135°35.6	·· 51.8
22	150°53.0	42.0	22	150°50.4	19.3	22	150°46.6	53.5	22	150°41.6	24.5	22	150°35.5	52.2
23	165°53.0	42.5	23	165°50.4	19.8	23	165°46.5	54.0	23	165°41.5	24.9	23	165°35.5	52.5
	SD=15.8′	$d=0.6'$		SD=15.8′	$d=0.5'$		SD=15.8′	$d=0.5'$		SD=15.8′	$d=0.4'$		SD=15.8′	$d=0.4'$

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	180°35.4	N21°52.9	0	180°28.4	N22°17.0	0	180°20.6	N22°37.7	0	180°12.1	N22°54.7	0	180°03.1	N23°08.1
1	195°35.3	53.3	1	195°28.3	17.3	1	195°20.4	37.9	1	195°12.0	54.9	1	195°03.0	08.3
2	210°35.2	53.6	2	210°28.2	17.7	2	210°20.3	38.2	2	210°11.9	55.1	2	210°02.9	08.4
3	225°35.1	·· 54.0	3	225°28.0	·· 18.0	3	225°20.2	·· 38.4	3	225°11.7	·· 55.3	3	225°02.7	·· 08.6
4	240°35.0	54.3	4	240°27.9	18.3	4	240°20.1	38.7	4	240°11.6	55.5	4	240°02.6	08.7
5	255°34.9	54.7	5	255°27.8	18.6	5	255°20.0	39.0	5	255°11.5	55.8	5	255°02.5	08.9
6	270°34.8	N21°55.0	6	270°27.7	N22°18.9	6	270°19.9	N22°39.2	6	270°11.4	N22°56.0	6	270°02.4	N23°09.1
7	285°34.7	55.4	7	285°27.6	19.2	7	285°19.8	39.5	7	285°11.2	56.2	7	285°02.2	09.2
8	300°34.6	55.8	8	300°27.5	19.5	8	300°19.6	39.7	8	300°11.1	56.4	8	300°02.1	09.4
9	315°34.5	·· 56.1	9	315°27.4	·· 19.8	9	315°19.5	·· 40.0	9	315°11.0	·· 56.6	9	315°02.0	·· 09.5
10	330°34.4	56.5	10	330°27.3	20.1	10	330°19.4	40.2	10	330°10.9	56.8	10	330°01.8	09.7
11	345°34.3	56.8	11	345°27.2	20.4	11	345°19.3	40.5	11	345°10.8	57.0	11	345°01.7	09.8
12	0°34.3	N21°57.2	12	0°27.1	N22°20.7	12	0°19.2	N22°40.8	12	0°10.6	N22°57.2	12	0°01.6	N23°10.0
13	15°34.2	57.5	13	15°27.0	21.0	13	15°19.1	41.0	13	15°10.5	57.4	13	15°01.5	10.1
14	30°34.1	57.9	14	30°26.9	21.3	14	30°19.0	41.3	14	30°10.4	57.6	14	30°01.3	10.3
15	45°34.0	·· 58.2	15	45°26.8	·· 21.6	15	45°18.8	·· 41.5	15	45°10.3	·· 57.8	15	45°01.2	·· 10.4
16	60°33.9	58.6	16	60°26.7	21.9	16	60°18.7	41.8	16	60°10.1	58.0	16	60°01.1	10.6
17	75°33.8	58.9	17	75°26.6	22.2	17	75°18.6	42.0	17	75°10.0	58.2	17	75°00.9	10.7
18	90°33.7	N21°59.3	18	90°26.5	N22°22.5	18	90°18.5	N22°42.3	18	90°09.9	N22°58.4	18	90°00.8	N23°10.9
19	105°33.6	21°59.6	19	105°26.4	22.8	19	105°18.4	42.5	19	105°09.8	58.6	19	105°00.7	11.0
20	120°33.5	22°00.0	20	120°26.3	23.1	20	120°18.3	42.8	20	120°09.7	58.8	20	120°00.6	11.2
21	135°33.4	·· 00.3	21	135°26.2	·· 23.4	21	135°18.2	·· 43.0	21	135°09.5	·· 59.0	21	135°00.4	·· 11.3
22	150°33.3	00.6	22	150°26.1	23.7	22	150°18.0	43.3	22	150°09.4	59.2	22	150°00.3	11.5
23	165°33.2	01.0	23	165°25.9	24.0	23	165°17.9	43.5	23	165°09.3	59.4	23	165°00.2	11.6
	SD=15.8′	d = 0.4′		SD=15.8′	d = 0.3′		SD=15.8′	d = 0.3′		SD=15.8′	d = 0.2′		SD=15.7′	d = 0.2′

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	180°33.1	N22°01.3	0	180°25.8	N22°24.3	0	180°17.8	N22°43.7	0	180°09.2	N22°59.6	0	180°00.0	N23°11.8
1	195°33.0	01.7	1	195°25.7	24.6	1	195°17.7	44.0	1	195°09.0	22°59.8	1	194°59.9	11.9
2	210°32.9	02.0	2	210°25.6	24.9	2	210°17.6	44.2	2	210°08.9	23°00.0	2	209°59.8	12.0
3	225°32.8	·· 02.4	3	225°25.5	·· 25.2	3	225°17.5	·· 44.5	3	225°08.8	·· 00.2	3	224°59.7	·· 12.2
4	240°32.7	02.7	4	240°25.4	25.5	4	240°17.3	44.7	4	240°08.7	00.3	4	239°59.5	12.3
5	255°32.6	03.0	5	255°25.3	25.8	5	255°17.2	45.0	5	255°08.5	00.5	5	254°59.4	12.5
6	270°32.6	N22°03.4	6	270°25.2	N22°26.1	6	270°17.1	N22°45.2	6	270°08.4	N23°00.7	6	269°59.3	N23°12.6
7	285°32.5	03.7	7	285°25.1	26.4	7	285°17.0	45.4	7	285°08.3	00.9	7	284°59.1	12.8
8	300°32.4	04.1	8	300°25.0	26.6	8	300°16.9	45.7	8	300°08.2	01.1	8	299°59.0	12.9
9	315°32.3	·· 04.4	9	315°24.9	·· 26.9	9	315°16.8	·· 45.9	9	315°08.0	·· 01.3	9	314°58.9	·· 13.0
10	330°32.2	04.7	10	330°24.8	27.2	10	330°16.6	46.2	10	330°07.9	01.5	10	329°58.7	13.2
11	345°32.1	05.1	11	345°24.7	27.5	11	345°16.5	46.4	11	345°07.8	01.7	11	344°58.6	13.3
12	0°32.0	N22°05.4	12	0°24.6	N22°27.8	12	0°16.4	N22°46.6	12	0°07.7	N23°01.9	12	359°58.5	N23°13.4
13	15°31.9	05.7	13	15°24.4	28.1	13	15°16.3	46.9	13	15°07.5	02.0	13	14°58.4	13.6
14	30°31.8	06.1	14	30°24.3	28.4	14	30°16.2	47.1	14	30°07.4	02.2	14	29°58.2	13.7
15	45°31.7	·· 06.4	15	45°24.2	·· 28.6	15	45°16.1	·· 47.3	15	45°07.3	·· 02.4	15	44°58.1	·· 13.8
16	60°31.6	06.7	16	60°24.1	28.9	16	60°15.9	47.6	16	60°07.2	02.6	16	59°58.0	14.0
17	75°31.5	07.1	17	75°24.0	29.2	17	75°15.8	47.8	17	75°07.0	02.8	17	74°57.8	14.1
18	90°31.4	N22°07.4	18	90°23.9	N22°29.5	18	90°15.7	N22°48.0	18	90°06.9	N23°03.0	18	89°57.7	N23°14.2
19	105°31.3	07.7	19	105°23.8	29.8	19	105°15.6	48.3	19	105°06.8	03.1	19	104°57.6	14.4
20	120°31.2	08.1	20	120°23.7	30.1	20	120°15.5	48.5	20	120°06.7	03.3	20	119°57.4	14.5
21	135°31.1	·· 08.4	21	135°23.6	·· 30.3	21	135°15.3	·· 48.7	21	135°06.5	·· 03.5	21	134°57.3	·· 14.6
22	150°31.0	08.7	22	150°23.5	30.6	22	150°15.2	49.0	22	150°06.4	03.7	22	149°57.2	14.8
23	165°30.9	09.1	23	165°23.3	30.9	23	165°15.1	49.2	23	165°06.3	03.9	23	164°57.0	14.9
	SD=15.8′	d = 0.3′		SD=15.8′	d = 0.3′		SD=15.8′	d = 0.2′		SD=15.7′	d = 0.2′		SD=15.7′	d = 0.1′

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	180°30.8	N22°09.4	0	180°23.2	N22°31.2	0	180°15.0	N22°49.4	0	180°06.2	N23°04.0	0	179°56.9	N23°15.0
1	195°30.7	09.7	1	195°23.1	31.5	1	195°14.9	49.7	1	195°06.0	04.2	1	194°56.8	15.1
2	210°30.6	10.0	2	210°23.0	31.7	2	210°14.7	49.9	2	210°05.9	04.4	2	209°56.7	15.3
3	225°30.5	·· 10.4	3	225°22.9	·· 32.0	3	225°14.6	·· 50.1	3	225°05.8	·· 04.6	3	224°56.5	·· 15.4
4	240°30.4	10.7	4	240°22.8	32.3	4	240°14.5	50.3	4	240°05.7	04.8	4	239°56.4	15.5
5	255°30.3	11.0	5	255°22.7	32.6	5	255°14.4	50.6	5	255°05.5	04.9	5	254°56.3	15.6
6	270°30.2	N22°11.3	6	270°22.6	N22°32.8	6	270°14.3	N22°50.8	6	270°05.4	N23°05.1	6	269°56.1	N23°15.8
7	285°30.1	11.7	7	285°22.5	33.1	7	285°14.2	51.0	7	285°05.3	05.3	7	284°56.0	15.9
8	300°30.0	12.0	8	300°22.4	33.4	8	300°14.0	51.2	8	300°05.2	05.4	8	299°55.9	16.0
9	315°29.9	·· 12.3	9	315°22.2	·· 33.7	9	315°13.9	·· 51.4	9	315°05.0	·· 05.6	9	314°55.7	·· 16.1
10	330°29.8	12.6	10	330°22.1	33.9	10	330°13.8	51.7	10	330°04.9	05.8	10	329°55.6	16.2
11	345°29.7	12.9	11	345°22.0	34.2	11	345°13.7	51.9	11	345°04.8	06.0	11	344°55.5	16.4
12	0°29.6	N22°13.3	12	0°21.9	N22°34.5	12	0°13.6	N22°52.1	12	0°04.7	N23°06.1	12	359°55.3	N23°16.5
13	15°29.5	13.6	13	15°21.8	34.7	13	15°13.4	52.3	13	15°04.5	06.3	13	14°55.2	16.6
14	30°29.4	13.9	14	30°21.7	35.0	14	30°13.3	52.6	14	30°04.4	06.5	14	29°55.1	16.7
15	45°29.3	·· 14.2	15	45°21.6	·· 35.3	15	45°13.2	·· 52.8	15	45°04.3	·· 06.6	15	44°54.9	·· 16.8
16	60°29.2	14.5	16	60°21.5	35.5	16	60°13.1	53.0	16	60°04.1	06.8	16	59°54.8	16.9
17	75°29.1	14.8	17	75°21.3	35.8	17	75°12.9	53.2	17	75°04.0	07.0	17	74°54.7	17.1
18	90°29.0	N22°15.2	18	90°21.2	N22°36.1	18	90°12.8	N22°53.4	18	90°03.9	N23°07.1	18	89°54.6	N23°17.2
19	105°28.9	15.5	19	105°21.1	36.3	19	105°12.7	53.6	19	105°03.8	07.3	19	104°54.4	17.3
20	120°28.8	15.8	20	120°21.0	36.6	20	120°12.6	53.9	20	120°03.6	07.5	20	119°54.3	17.4
21	135°28.7	·· 16.1	21	135°20.9	·· 36.9	21	135°12.5	·· 54.1	21	135°03.5	·· 07.6	21	134°54.2	·· 17.5
22	150°28.6	16.4	22	150°20.8	37.1	22	150°12.3	54.3	22	150°03.4	07.8	22	149°54.0	17.6
23	165°28.5	16.7	23	165°20.7	37.4	23	165°12.2	54.5	23	165°03.3	07.9	23	164°53.9	17.7
	SD=15.8′	d = 0.3′		SD=15.8′	d = 0.3′		SD=15.8′	d = 0.2′		SD=15.7′	d = 0.2′		SD=15.7′	d = 0.1′

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	179°53.8	N23°17.8	0	179°44.1	N23°23.9	0	179°34.3	N23°26.2	0	179°24.6	N23°24.9	0	179°15.0	N23°19.8
1	194°53.6	18.0	1	194°44.0	24.0	1	194°34.2	26.2	1	194°24.4	24.8	1	194°14.9	19.7
2	209°53.5	18.1	2	209°43.9	24.0	2	209°34.1	26.2	2	209°24.3	24.8	2	209°14.7	19.6
3	224°53.4	·· 18.2	3	224°43.7	·· 24.1	3	224°33.9	·· 26.3	3	224°24.2	·· 24.7	3	224°14.6	·· 19.5
4	239°53.2	18.3	4	239°43.6	24.1	4	239°33.8	26.3	4	239°24.0	24.7	4	239°14.5	19.4
5	254°53.1	18.4	5	254°43.4	24.2	5	254°33.7	26.3	5	254°23.9	24.6	5	254°14.3	19.3
6	269°53.0	N23°18.5	6	269°43.3	N23°24.2	6	269°33.5	N23°26.3	6	269°23.8	N23°24.6	6	269°14.2	N23°19.2
7	284°52.8	18.6	7	284°43.2	24.3	7	284°33.4	26.3	7	284°23.6	24.5	7	284°14.1	19.1
8	299°52.7	18.7	8	299°43.0	24.3	8	299°33.3	26.3	8	299°23.5	24.5	8	299°13.9	19.0
9	314°52.6	·· 18.8	9	314°42.9	·· 24.4	9	314°33.1	·· 26.3	9	314°23.4	·· 24.4	9	314°13.8	·· 18.9
10	329°52.4	18.9	10	329°42.8	24.4	10	329°33.0	26.3	10	329°23.2	24.4	10	329°13.7	18.8
11	344°52.3	19.0	11	344°42.6	24.5	11	344°32.9	26.3	11	344°23.1	24.3	11	344°13.5	18.7
12	359°52.2	N23°19.1	12	359°42.5	N23°24.5	12	359°32.7	N23°26.3	12	359°23.0	N23°24.3	12	359°13.4	N23°18.6
13	14°52.0	19.2	13	14°42.4	24.6	13	14°32.6	26.3	13	14°22.8	24.2	13	14°13.3	18.5
14	29°51.9	19.3	14	29°42.2	24.6	14	29°32.4	26.3	14	29°22.7	24.2	14	29°13.2	18.3
15	44°51.8	·· 19.4	15	44°42.1	·· 24.7	15	44°32.3	·· 26.3	15	44°22.6	·· 24.1	15	44°13.0	·· 18.2
16	59°51.6	19.5	16	59°42.0	24.7	16	59°32.2	26.3	16	59°22.4	24.0	16	59°12.9	18.1
17	74°51.5	19.6	17	74°41.8	24.8	17	74°32.0	26.2	17	74°22.3	24.0	17	74°12.8	18.0
18	89°51.4	N23°19.7	18	89°41.7	N23°24.8	18	89°31.9	N23°26.2	18	89°22.2	N23°23.9	18	89°12.6	N23°17.9
19	104°51.2	19.8	19	104°41.6	24.9	19	104°31.8	26.2	19	104°22.0	23.9	19	104°12.5	17.8
20	119°51.1	19.9	20	119°41.4	24.9	20	119°31.6	26.2	20	119°21.9	23.8	20	119°12.4	17.7
21	134°51.0	·· 20.0	21	134°41.3	·· 25.0	21	134°31.5	·· 26.2	21	134°21.8	·· 23.8	21	134°12.2	·· 17.6
22	149°50.8	20.1	22	149°41.1	25.0	22	149°31.4	26.2	22	149°21.6	23.7	22	149°12.1	17.5
23	164°50.7	20.2	23	164°41.0	25.0	23	164°31.2	26.2	23	164°21.5	23.6	23	164°12.0	17.4
	SD=15.7′	d = 0.1′		SD=15.7′	d = 0.1′		SD=15.7′	d = 0.0′		SD=15.7′	d = -0.0′		SD=15.7′	d = -0.1′

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	179°50.6	N23°20.3	0	179°40.9	N23°25.1	0	179°31.1	N23°26.2	0	179°21.4	N23°23.6	0	179°11.9	N23°17.2
1	194°50.4	20.4	1	194°40.7	25.1	1	194°30.9	26.2	1	194°21.2	23.5	1	194°11.7	17.1
2	209°50.3	20.5	2	209°40.6	25.2	2	209°30.8	26.2	2	209°21.1	23.4	2	209°11.6	17.0
3	224°50.2	·· 20.5	3	224°40.5	·· 25.2	3	224°30.7	·· 26.2	3	224°21.0	·· 23.4	3	224°11.5	·· 16.9
4	239°50.0	20.6	4	239°40.3	25.2	4	239°30.5	26.1	4	239°20.8	23.3	4	239°11.3	16.8
5	254°49.9	20.7	5	254°40.2	25.3	5	254°30.4	26.1	5	254°20.7	23.3	5	254°11.2	16.7
6	269°49.8	N23°20.8	6	269°40.1	N23°25.3	6	269°30.3	N23°26.1	6	269°20.5	N23°23.2	6	269°11.1	N23°16.6
7	284°49.6	20.9	7	284°39.9	25.4	7	284°30.1	26.1	7	284°20.4	23.1	7	284°11.0	16.4
8	299°49.5	21.0	8	299°39.8	25.4	8	299°30.0	26.1	8	299°20.3	23.1	8	299°10.8	16.3
9	314°49.4	·· 21.1	9	314°39.7	·· 25.4	9	314°29.9	·· 26.1	9	314°20.1	·· 23.0	9	314°10.7	·· 16.2
10	329°49.2	21.2	10	329°39.5	25.5	10	329°29.7	26.0	10	329°20.0	22.9	10	329°10.6	16.1
11	344°49.1	21.2	11	344°39.4	25.5	11	344°29.6	26.0	11	344°19.9	22.8	11	344°10.4	16.0
12	359°49.0	N23°21.3	12	359°39.2	N23°25.5	12	359°29.5	N23°26.0	12	359°19.7	N23°22.8	12	359°10.3	N23°15.8
13	14°48.8	21.4	13	14°39.1	25.6	13	14°29.3	26.0	13	14°19.6	22.7	13	14°10.2	15.7
14	29°48.7	21.5	14	29°39.0	25.6	14	29°29.2	26.0	14	29°19.5	22.6	14	29°10.1	15.6
15	44°48.6	·· 21.6	15	44°38.8	·· 25.6	15	44°29.0	·· 26.0	15	44°19.3	·· 22.6	15	44°09.9	·· 15.5
16	59°48.4	21.7	16	59°38.7	25.7	16	59°28.9	25.9	16	59°19.2	22.5	16	59°09.8	15.3
17	74°48.3	21.7	17	74°38.6	25.7	17	74°28.8	25.9	17	74°19.1	22.4	17	74°09.7	15.2
18	89°48.2	N23°21.8	18	89°38.4	N23°25.7	18	89°28.6	N23°25.9	18	89°18.9	N23°22.3	18	89°09.5	N23°15.1
19	104°48.0	21.9	19	104°38.3	25.7	19	104°28.5	25.9	19	104°18.8	22.3	19	104°09.4	15.0
20	119°47.9	22.0	20	119°38.2	25.8	20	119°28.4	25.8	20	119°18.7	22.2	20	119°09.3	14.8
21	134°47.8	·· 22.1	21	134°38.0	·· 25.8	21	134°28.2	·· 25.8	21	134°18.6	·· 22.1	21	134°09.2	·· 14.7
22	149°47.6	22.1	22	149°37.9	25.8	22	149°28.1	25.8	22	149°18.4	22.0	22	149°09.0	14.6
23	164°47.5	22.2	23	164°37.8	25.8	23	164°28.0	25.8	23	164°18.3	22.0	23	164°08.9	14.5
	SD=15.7′	d = 0.1′		SD=15.7′	d = 0.0′		SD=15.7′	d = -0.0′		SD=15.7′	d = -0.1′		SD=15.7′	d = -0.1′

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	179°47.4	N23°22.3	0	179°37.6	N23°25.9	0	179°27.8	N23°25.7	0	179°18.2	N23°21.9	0	179°08.8	N23°14.3
1	194°47.2	22.4	1	194°37.5	25.9	1	194°27.7	25.7	1	194°18.0	21.8	1	194°08.6	14.2
2	209°47.1	22.4	2	209°37.3	25.9	2	209°27.6	25.7	2	209°17.9	21.7	2	209°08.5	14.1
3	224°47.0	·· 22.5	3	224°37.2	·· 25.9	3	224°27.4	·· 25.6	3	224°17.8	·· 21.6	3	224°08.4	·· 13.9
4	239°46.8	22.6	4	239°37.1	26.0	4	239°27.3	25.6	4	239°17.6	21.6	4	239°08.3	13.8
5	254°46.7	22.7	5	254°36.9	26.0	5	254°27.1	25.6	5	254°17.5	21.5	5	254°08.1	13.7
6	269°46.6	N23°22.7	6	269°36.8	N23°26.0	6	269°27.0	N23°25.6	6	269°17.4	N23°21.4	6	269°08.0	N23°13.5
7	284°46.4	22.8	7	284°36.7	26.0	7	284°26.9	25.5	7	284°17.2	21.3	7	284°07.9	13.4
8	299°46.3	22.9	8	299°36.5	26.0	8	299°26.7	25.5	8	299°17.1	21.2	8	299°07.8	13.3
9	314°46.1	·· 22.9	9	314°36.4	·· 26.1	9	314°26.6	·· 25.5	9	314°17.0	·· 21.1	9	314°07.6	·· 13.1
10	329°46.0	23.0	10	329°36.3	26.1	10	329°26.5	25.4	10	329°16.8	21.0	10	329°07.5	13.0
11	344°45.9	23.1	11	344°36.1	26.1	11	344°26.3	25.4	11	344°16.7	21.0	11	344°07.4	12.8
12	359°45.7	N23°23.1	12	359°36.0	N23°26.1	12	359°26.2	N23°25.3	12	359°16.6	N23°20.9	12	359°07.3	N23°12.7
13	14°45.6	23.2	13	14°35.8	26.1	13	14°26.1	25.3	13	14°16.4	20.8	13	14°07.1	12.6
14	29°45.5	23.3	14	29°35.7	26.1	14	29°25.9	25.3	14	29°16.3	20.7	14	29°07.0	12.4
15	44°45.3	·· 23.3	15	44°35.6	·· 26.1	15	44°25.8	·· 25.2	15	44°16.2	·· 20.6	15	44°06.9	·· 12.3
16	59°45.2	23.4	16	59°35.4	26.2	16	59°25.7	25.2	16	59°16.0	20.5	16	59°06.7	12.1
17	74°45.1	23.5	17	74°35.3	26.2	17	74°25.5	25.2	17	74°15.9	20.4	17	74°06.6	12.0
18	89°44.9	N23°23.5	18	89°35.2	N23°26.2	18	89°25.4	N23°25.1	18	89°15.8	N23°20.3	18	89°06.5	N23°11.9
19	104°44.8	23.6	19	104°35.0	26.2	19	104°25.3	25.1	19	104°15.6	20.2	19	104°06.4	11.7
20	119°44.7	23.7	20	119°34.9	26.2	20	119°25.1	25.0	20	119°15.5	20.1	20	119°06.2	11.6
21	134°44.5	·· 23.7	21	134°34.8	·· 26.2	21	134°25.0	·· 25.0	21	134°15.4	·· 20.1	21	134°06.1	·· 11.4
22	149°44.4	23.8	22	149°34.6	26.2	22	149°24.8	24.9	22	149°15.2	20.0	22	149°06.0	11.3
23	164°44.3	23.8	23	164°34.5	26.2	23	164°24.7	24.9	23	164°15.1	19.9	23	164°05.9	11.1
	SD=15.7′	d = 0.1′		SD=15.7′	d = 0.0′		SD=15.7′	d = -0.0′		SD=15.7′	d = -0.1′		SD=15.7′	d = -0.1′

30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	179°05.7	N23°11.0	0	178°57.0	N22°58.5	0	178°49.0	N22°42.5	0	178°41.8	N22°22.9	0	178°35.6	N21°59.8
1	194°05.6	10.8	1	193°56.9	58.3	1	193°48.9	42.3	1	193°41.7	22.6	1	193°35.5	59.5
2	209°05.5	10.7	2	208°56.8	58.1	2	208°48.8	42.0	2	208°41.6	22.3	2	208°35.5	59.1
3	224°05.4	·· 10.5	3	223°56.7	·· 57.9	3	223°48.7	·· 41.8	3	223°41.6	·· 22.0	3	223°35.4	·· 58.8
4	239°05.2	10.4	4	238°56.6	57.7	4	238°48.6	41.5	4	238°41.5	21.7	4	238°35.3	58.5
5	254°05.1	10.2	5	253°56.4	57.5	5	253°48.5	41.3	5	253°41.4	21.4	5	253°35.2	58.1
6	269°05.0	N23°10.1	6	268°56.3	N22°57.3	6	268°48.4	N22°41.0	6	268°41.3	N22°21.1	6	268°35.2	N21°57.8
7	284°04.9	09.9	7	283°56.2	57.1	7	283°48.3	40.7	7	283°41.2	20.8	7	283°35.1	57.4
8	299°04.7	09.8	8	298°56.1	56.9	8	298°48.2	40.5	8	298°41.1	20.5	8	298°35.0	57.1
9	314°04.6	·· 09.6	9	313°56.0	·· 56.7	9	313°48.1	·· 40.2	9	313°41.0	·· 20.2	9	313°34.9	·· 56.7
10	329°04.5	09.5	10	328°55.9	56.5	10	328°48.0	40.0	10	328°40.9	19.9	10	328°34.8	56.4
11	344°04.4	09.3	11	343°55.8	56.3	11	343°47.9	39.7	11	343°40.8	19.6	11	343°34.8	56.0
12	359°04.2	N23°09.2	12	358°55.6	N22°56.1	12	358°47.8	N22°39.5	12	358°40.7	N22°19.3	12	358°34.7	N21°55.7
13	14°04.1	09.0	13	13°55.5	55.9	13	13°47.6	39.2	13	13°40.6	19.0	13	13°34.6	55.3
14	29°04.0	08.9	14	28°55.4	55.7	14	28°47.5	39.0	14	28°40.5	18.7	14	28°34.5	55.0
15	44°03.9	·· 08.7	15	43°55.3	·· 55.5	15	43°47.4	·· 38.7	15	43°40.5	·· 18.4	15	43°34.5	·· 54.6
16	59°03.8	08.5	16	58°55.2	55.3	16	58°47.3	38.4	16	58°40.4	18.1	16	58°34.4	54.3
17	74°03.6	08.4	17	73°55.1	55.1	17	73°47.2	38.2	17	73°40.3	17.8	17	73°34.3	53.9
18	89°03.5	N23°08.2	18	88°55.0	N22°54.9	18	88°47.1	N22°37.9	18	88°40.2	N22°17.5	18	88°34.2	N21°53.5
19	104°03.4	08.1	19	103°54.8	54.7	19	103°47.0	37.7	19	103°40.1	17.2	19	103°34.2	53.2
20	119°03.3	07.9	20	118°54.7	54.4	20	118°46.9	37.4	20	118°40.0	16.8	20	118°34.1	52.8
21	134°03.1	·· 07.7	21	133°54.6	·· 54.2	21	133°46.8	·· 37.1	21	133°39.9	·· 16.5	21	133°34.0	·· 52.5
22	149°03.0	07.6	22	148°54.5	54.0	22	148°46.7	36.9	22	148°39.8	16.2	22	148°33.9	52.1
23	164°02.9	07.4	23	163°54.4	53.8	23	163°46.6	36.6	23	163°39.7	15.9	23	163°33.9	51.8
	SD=15.7′	d = -0.1′		SD=15.7′	d = -0.2′		SD=15.7′	d = -0.2′		SD=15.7′	d = -0.3′		SD=15.7′	d = -0.3′

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	179°02.8	N23°07.2	0	178°54.3	N22°53.6	0	178°46.5	N22°36.4	0	178°39.7	N22°15.6	0	178°33.8	N21°51.4
1	194°02.6	07.1	1	193°54.2	53.4	1	193°46.4	36.1	1	193°39.6	15.3	1	193°33.7	51.0
2	209°02.5	06.9	2	208°54.0	53.2	2	208°46.3	35.8	2	208°39.5	15.0	2	208°33.6	50.7
3	224°02.4	·· 06.7	3	223°53.9	·· 52.9	3	223°46.2	·· 35.6	3	223°39.4	·· 14.7	3	223°33.6	·· 50.3
4	239°02.3	06.6	4	238°53.8	52.7	4	238°46.1	35.3	4	238°39.3	14.3	4	238°33.5	50.0
5	254°02.2	06.4	5	253°53.7	52.5	5	253°46.0	35.0	5	253°39.2	14.0	5	253°33.4	49.6
6	269°02.0	N23°06.2	6	268°53.6	N22°52.3	6	268°45.9	N22°34.8	6	268°39.1	N22°13.7	6	268°33.3	N21°49.2
7	284°01.9	06.1	7	283°53.5	52.1	7	283°45.8	34.5	7	283°39.0	13.4	7	283°33.3	48.9
8	299°01.8	05.9	8	298°53.4	51.9	8	298°45.7	34.2	8	298°39.0	13.1	8	298°33.2	48.5
9	314°01.7	·· 05.7	9	313°53.3	·· 51.6	9	313°45.6	·· 34.0	9	313°38.9	·· 12.8	9	313°33.1	·· 48.1
10	329°01.6	05.6	10	328°53.1	51.4	10	328°45.5	33.7	10	328°38.8	12.4	10	328°33.1	47.8
11	344°01.4	05.4	11	343°53.0	51.2	11	343°45.4	33.4	11	343°38.7	12.1	11	343°33.0	47.4
12	359°01.3	N23°05.2	12	358°52.9	N22°51.0	12	358°45.3	N22°33.1	12	358°38.6	N22°11.8	12	358°32.9	N21°47.0
13	14°01.2	05.0	13	13°52.8	50.7	13	13°45.2	32.9	13	13°38.5	11.5	13	13°32.8	46.7
14	29°01.1	04.9	14	28°52.7	50.5	14	28°45.1	32.6	14	28°38.4	11.2	14	28°32.8	46.3
15	44°00.9	·· 04.7	15	43°52.6	·· 50.3	15	43°45.0	·· 32.3	15	43°38.3	·· 10.8	15	43°32.7	·· 45.9
16	59°00.8	04.5	16	58°52.5	50.1	16	58°44.9	32.0	16	58°38.3	10.5	16	58°32.6	45.6
17	74°00.7	04.3	17	73°52.4	49.8	17	73°44.8	31.8	17	73°38.2	10.2	17	73°32.6	45.2
18	89°00.6	N23°04.2	18	88°52.3	N22°49.6	18	88°44.7	N22°31.5	18	88°38.1	N22°09.9	18	88°32.5	N21°44.8
19	104°00.5	04.0	19	103°52.1	49.4	19	103°44.6	31.2	19	103°38.0	09.5	19	103°32.4	44.4
20	119°00.3	03.8	20	118°52.0	49.2	20	118°44.5	30.9	20	118°37.9	09.2	20	118°32.3	44.1
21	134°00.2	·· 03.6	21	133°51.9	·· 48.9	21	133°44.4	·· 30.7	21	133°37.8	·· 08.9	21	133°32.3	·· 43.7
22	149°00.1	03.5	22	148°51.8	48.7	22	148°44.3	30.4	22	148°37.8	08.6	22	148°32.2	43.3
23	164°00.0	03.3	23	163°51.7	48.5	23	163°44.2	30.1	23	163°37.7	08.2	23	163°32.1	43.0
	SD=15.7′	d = -0.2′		SD=15.7′	d = -0.2′		SD=15.7′	d = -0.3′		SD=15.7′	d = -0.3′		SD=15.7′	d = -0.4′

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	178°59.9	N23°03.1	0	178°51.6	N22°48.2	0	178°44.1	N22°29.8	0	178°37.6	N22°07.9	0	178°32.1	N21°42.6
1	193°59.7	02.9	1	193°51.5	48.0	1	193°44.0	29.5	1	193°37.5	07.6	1	193°32.0	42.2
2	208°59.6	02.7	2	208°51.4	47.8	2	208°43.9	29.3	2	208°37.4	07.2	2	208°31.9	41.8
3	223°59.5	·· 02.5	3	223°51.3	·· 47.5	3	223°43.8	·· 29.0	3	223°37.3	·· 06.9	3	223°31.9	·· 41.4
4	238°59.4	02.4	4	238°51.2	47.3	4	238°43.7	28.7	4	238°37.2	06.6	4	238°31.8	41.1
5	253°59.3	02.2	5	253°51.1	47.1	5	253°43.6	28.4	5	253°37.2	06.3	5	253°31.7	40.7
6	268°59.1	N23°02.0	6	268°50.9	N22°46.8	6	268°43.5	N22°28.1	6	268°37.1	N22°05.9	6	268°31.7	N21°40.3
7	283°59.0	01.8	7	283°50.8	46.6	7	283°43.4	27.8	7	283°37.0	05.6	7	283°31.6	39.9
8	298°58.9	01.6	8	298°50.7	46.4	8	298°43.4	27.6	8	298°36.9	05.3	8	298°31.5	39.6
9	313°58.8	·· 01.4	9	313°50.6	·· 46.1	9	313°43.3	·· 27.3	9	313°36.8	·· 04.9	9	313°31.5	·· 39.2
10	328°58.7	01.2	10	328°50.5	45.9	10	328°43.2	27.0	10	328°36.8	04.6	10	328°31.4	38.8
11	343°58.6	01.1	11	343°50.4	45.7	11	343°43.1	26.7	11	343°36.7	04.3	11	343°31.3	38.4
12	358°58.4	N23°00.9	12	358°50.3	N22°45.4	12	358°43.0	N22°26.4	12	358°36.6	N22°03.9	12	358°31.3	N21°38.0
13	13°58.3	00.7	13	13°50.2	45.2	13	13°42.9	26.1	13	13°36.5	03.6	13	13°31.2	37.6
14	28°58.2	00.5	14	28°50.1	44.9	14	28°42.8	25.8	14	28°36.4	03.2	14	28°31.1	37.3
15	43°58.1	·· 00.3	15	43°50.0	·· 44.7	15	43°42.7	·· 25.5	15	43°36.3	·· 02.9	15	43°31.1	·· 36.9
16	58°58.0	23°00.1	16	58°49.9	44.5	16	58°42.6	25.3	16	58°36.3	02.6	16	58°31.0	36.5
17	73°57.8	22°59.9	17	73°49.8	44.2	17	73°42.5	25.0	17	73°36.2	02.2	17	73°30.9	36.1
18	88°57.7	N22°59.7	18	88°49.6	N22°44.0	18	88°42.4	N22°24.7	18	88°36.1	N22°01.9	18	88°30.9	N21°35.7
19	103°57.6	59.5	19	103°49.5	43.7	19	103°42.3	24.4	19	103°36.0	01.6	19	103°30.8	35.3
20	118°57.5	59.3	20	118°49.4	43.5	20	118°42.2	24.1	20	118°35.9	01.2	20	118°30.7	34.9
21	133°57.4	·· 59.1	21	133°49.3	·· 43.2	21	133°42.1	·· 23.8	21	133°35.9	·· 00.9	21	133°30.7	·· 34.6
22	148°57.3	58.9	22	148°49.2	43.0	22	148°42.0	23.5	22	148°35.8	00.5	22	148°30.6	34.2
23	163°57.1	58.7	23	163°49.1	42.7	23	163°41.9	23.2	23	163°35.7	00.2	23	163°30.5	33.8
	SD=15.7′	d = -0.2′		SD=15.7′	d = -0.2′		SD=15.7′	d = -0.3′		SD=15.7′	d = -0.3′		SD=15.7′	d = -0.4′

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	178°30.5	N21°33.4	0	178°26.4	N21°03.6	0	178°23.5	N20°30.7	0	178°21.9	N19°54.6	0	178°21.5	N19°15.6
1	193°30.4	33.0	1	193°26.4	03.2	1	193°23.5	30.2	1	193°21.9	54.1	1	193°21.5	15.0
2	208°30.3	32.6	2	208°26.3	02.8	2	208°23.5	29.7	2	208°21.9	53.6	2	208°21.5	14.5
3	223°30.3	·· 32.2	3	223°26.3	·· 02.3	3	223°23.4	·· 29.3	3	223°21.8	·· 53.1	3	223°21.5	·· 13.9
4	238°30.2	31.8	4	238°26.2	01.9	4	238°23.4	28.8	4	238°21.8	52.5	4	238°21.5	13.3
5	253°30.1	31.4	5	253°26.2	01.5	5	253°23.4	28.3	5	253°21.8	52.0	5	253°21.5	12.8
6	268°30.1	N21°31.0	6	268°26.1	N21°01.0	6	268°23.4	N20°27.8	6	268°21.8	N19°51.5	6	268°21.5	N19°12.2
7	283°30.0	30.6	7	283°26.1	00.6	7	283°23.3	27.3	7	283°21.8	51.0	7	283°21.6	11.6
8	298°30.0	30.2	8	298°26.0	21°00.1	8	298°23.3	26.8	8	298°21.8	50.4	8	298°21.6	11.1
9	313°29.9	·· 29.9	9	313°26.0	20°59.7	9	313°23.3	·· 26.4	9	313°21.8	·· 49.9	9	313°21.6	·· 10.5
10	328°29.8	29.5	10	328°25.9	59.3	10	328°23.2	25.9	10	328°21.8	49.4	10	328°21.6	09.9
11	343°29.8	29.1	11	343°25.9	58.8	11	343°23.2	25.4	11	343°21.7	48.9	11	343°21.6	09.4
12	358°29.7	N21°28.7	12	358°25.9	N20°58.4	12	358°23.2	N20°24.9	12	358°21.7	N19°48.3	12	358°21.6	N19°08.8
13	13°29.7	28.3	13	13°25.8	57.9	13	13°23.1	24.4	13	13°21.7	47.8	13	13°21.6	08.2
14	28°29.6	27.9	14	28°25.8	57.5	14	28°23.1	23.9	14	28°21.7	47.3	14	28°21.6	07.7
15	43°29.5	·· 27.5	15	43°25.7	·· 57.0	15	43°23.1	·· 23.4	15	43°21.7	·· 46.7	15	43°21.6	·· 07.1
16	58°29.5	27.1	16	58°25.7	56.6	16	58°23.1	22.9	16	58°21.7	46.2	16	58°21.6	06.5
17	73°29.4	26.7	17	73°25.6	56.2	17	73°23.0	22.5	17	73°21.7	45.7	17	73°21.6	05.9
18	88°29.3	N21°26.3	18	88°25.6	N20°55.7	18	88°23.0	N20°22.0	18	88°21.7	N19°45.1	18	88°21.6	N19°05.4
19	103°29.3	25.9	19	103°25.5	55.3	19	103°23.0	21.5	19	103°21.7	44.6	19	103°21.6	04.8
20	118°29.2	25.5	20	118°25.5	54.8	20	118°23.0	21.0	20	118°21.7	44.1	20	118°21.7	04.2
21	133°29.2	·· 25.1	21	133°25.5	·· 54.4	21	133°22.9	·· 20.5	21	133°21.6	·· 43.5	21	133°21.7	·· 03.6
22	148°29.1	24.6	22	148°25.4	53.9	22	148°22.9	20.0	22	148°21.6	43.0	22	148°21.7	03.1
23	163°29.0	24.2	23	163°25.4	53.5	23	163°22.9	19.5	23	163°21.6	42.5	23	163°21.7	02.5
	SD=15.7′	d = -0.4′		SD=15.7′	d = -0.4′		SD=15.7′	d = -0.5′		SD=15.7′	d = -0.5′		SD=15.7′	d = -0.6′

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	178°29.0	N21°23.8	0	178°25.3	N20°53.0	0	178°22.8	N20°19.0	0	178°21.6	N19°41.9	0	178°21.7	N19°01.9
1	193°28.9	23.4	1	193°25.3	52.6	1	193°22.8	18.5	1	193°21.6	41.4	1	193°21.7	01.3
2	208°28.9	23.0	2	208°25.2	52.1	2	208°22.8	18.0	2	208°21.6	40.9	2	208°21.7	00.8
3	223°28.8	·· 22.6	3	223°25.2	·· 51.7	3	223°22.8	·· 17.5	3	223°21.6	·· 40.3	3	223°21.7	19°00.2
4	238°28.8	22.2	4	238°25.2	51.2	4	238°22.7	17.0	4	238°21.6	39.8	4	238°21.7	18°59.6
5	253°28.7	21.8	5	253°25.1	50.8	5	253°22.7	16.5	5	253°21.6	39.3	5	253°21.7	59.0
6	268°28.6	N21°21.4	6	268°25.1	N20°50.3	6	268°22.7	N20°16.0	6	268°21.6	N19°38.7	6	268°21.8	N18°58.5
7	283°28.6	21.0	7	283°25.0	49.8	7	283°22.7	15.5	7	283°21.6	38.2	7	283°21.8	57.9
8	298°28.5	20.6	8	298°25.0	49.4	8	298°22.6	15.0	8	298°21.6	37.6	8	298°21.8	57.3
9	313°28.5	·· 20.2	9	313°25.0	·· 48.9	9	313°22.6	·· 14.5	9	313°21.6	·· 37.1	9	313°21.8	·· 56.7
10	328°28.4	19.7	10	328°24.9	48.5	10	328°22.6	14.0	10	328°21.5	36.6	10	328°21.8	56.1
11	343°28.4	19.3	11	343°24.9	48.0	11	343°22.6	13.5	11	343°21.5	36.0	11	343°21.8	55.6
12	358°28.3	N21°18.9	12	358°24.8	N20°47.6	12	358°22.6	N20°13.0	12	358°21.5	N19°35.5	12	358°21.8	N18°55.0
13	13°28.2	18.5	13	13°24.8	47.1	13	13°22.5	12.5	13	13°21.5	34.9	13	13°21.9	54.4
14	28°28.2	18.1	14	28°24.7	46.6	14	28°22.5	12.0	14	28°21.5	34.4	14	28°21.9	53.8
15	43°28.1	·· 17.7	15	43°24.7	·· 46.2	15	43°22.5	·· 11.5	15	43°21.5	·· 33.8	15	43°21.9	·· 53.2
16	58°28.1	17.3	16	58°24.7	45.7	16	58°22.5	11.0	16	58°21.5	33.3	16	58°21.9	52.6
17	73°28.0	16.9	17	73°24.6	45.3	17	73°22.4	10.5	17	73°21.5	32.8	17	73°21.9	52.1
18	88°28.0	N21°16.4	18	88°24.6	N20°44.8	18	88°22.4	N20°10.0	18	88°21.5	N19°32.2	18	88°21.9	N18°51.5
19	103°27.9	16.0	19	103°24.6	44.3	19	103°22.4	09.5	19	103°21.5	31.7	19	103°21.9	50.9
20	118°27.9	15.6	20	118°24.5	43.9	20	118°22.4	09.0	20	118°21.5	31.1	20	118°22.0	50.3
21	133°27.8	·· 15.2	21	133°24.5	·· 43.4	21	133°22.4	·· 08.5	21	133°21.5	·· 30.6	21	133°22.0	·· 49.7
22	148°27.7	14.8	22	148°24.4	43.0	22	148°22.3	08.0	22	148°21.5	30.0	22	148°22.0	49.1
23	163°27.7	14.3	23	163°24.4	42.5	23	163°22.3	07.5	23	163°21.5	29.5	23	163°22.0	48.5
	SD=15.7′	d = -0.4′		SD=15.7′	d = -0.5′		SD=15.7′	d = -0.5′		SD=15.7′	d = -0.5′		SD=15.7′	d = -0.6′

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	178°27.6	N21°13.9	0	178°24.4	N20°42.0	0	178°22.3	N20°07.0	0	178°21.5	N19°28.9	0	178°22.0	N18°47.9
1	193°27.6	13.5	1	193°24.3	41.6	1	193°22.3	06.5	1	193°21.5	28.4	1	193°22.0	47.4
2	208°27.5	13.1	2	208°24.3	41.1	2	208°22.3	06.0	2	208°21.5	27.8	2	208°22.1	46.8
3	223°27.5	·· 12.7	3	223°24.3	·· 40.6	3	223°22.2	·· 05.5	3	223°21.5	·· 27.3	3	223°22.1	·· 46.2
4	238°27.4	12.2	4	238°24.2	40.2	4	238°22.2	05.0	4	238°21.5	26.7	4	238°22.1	45.6
5	253°27.4	11.8	5	253°24.2	39.7	5	253°22.2	04.4	5	253°21.5	26.2	5	253°22.1	45.0
6	268°27.3	N21°11.4	6	268°24.1	N20°39.2	6	268°22.2	N20°03.9	6	268°21.5	N19°25.6	6	268°22.1	N18°44.4
7	283°27.3	11.0	7	283°24.1	38.8	7	283°22.2	03.4	7	283°21.5	25.1	7	283°22.1	43.8
8	298°27.2	10.5	8	298°24.1	38.3	8	298°22.1	02.9	8	298°21.5	24.5	8	298°22.2	43.2
9	313°27.2	·· 10.1	9	313°24.0	·· 37.8	9	313°22.1	·· 02.4	9	313°21.5	·· 24.0	9	313°22.2	·· 42.6
10	328°27.1	09.7	10	328°24.0	37.3	10	328°22.1	01.9	10	328°21.5	23.4	10	328°22.2	42.0
11	343°27.1	09.3	11	343°24.0	36.9	11	343°22.1	01.4	11	343°21.5	22.8	11	343°22.2	41.4
12	358°27.0	N21°08.8	12	358°23.9	N20°36.4	12	358°22.1	N20°00.9	12	358°21.5	N19°22.3	12	358°22.2	N18°40.8
13	13°27.0	08.4	13	13°23.9	35.9	13	13°22.1	20°00.3	13	13°21.5	21.7	13	13°22.3	40.2
14	28°26.9	08.0	14	28°23.9	35.5	14	28°22.0	19°59.8	14	28°21.5	21.2	14	28°22.3	39.7
15	43°26.9	·· 07.5	15	43°23.8	·· 35.0	15	43°22.0	·· 59.3	15	43°21.5	·· 20.6	15	43°22.3	·· 39.1
16	58°26.8	07.1	16	58°23.8	34.5	16	58°22.0	58.8	16	58°21.5	20.1	16	58°22.3	38.5
17	73°26.8	06.7	17	73°23.8	34.0	17	73°22.0	58.3	17	73°21.5	19.5	17	73°22.3	37.9
18	88°26.7	N21°06.2	18	88°23.7	N20°33.6	18	88°22.0	N19°57.8	18	88°21.5	N19°18.9	18	88°22.4	N18°37.3
19	103°26.7	05.8	19	103°23.7	33.1	19	103°22.0	57.2	19	103°21.5	18.4	19	103°22.4	36.7
20	118°26.6	05.4	20	118°23.7	32.6	20	118°21.9	56.7	20	118°21.5	17.8	20	118°22.4	36.1
21	133°26.6	·· 04.9	21	133°23.6	·· 32.1	21	133°21.9	·· 56.2	21	133°21.5	·· 17.3	21	133°22.4	·· 35.5
22	148°26.5	04.5	22	148°23.6	31.6	22	148°21.9	55.7	22	148°21.5	16.7	22	148°22.4	34.9
23	163°26.5	04.1	23	163°23.6	31.2	23	163°21.9	55.2	23	163°21.5	16.1	23	163°22.5	34.3
	SD=15.7′	d = -0.4′		SD=15.7′	d = -0.5′		SD=15.7′	d = -0.5′		SD=15.7′	d = -0.5′		SD=15.7′	d = -0.6′

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	178°22.5	N18°33.7	0	178°24.8	N17°49.0	0	178°28.6	N17°01.7	0	178°33.7	N16°12.0	0	178°40.2	N15°19.9
1	193°22.5	33.1	1	193°24.9	48.4	1	193°28.7	01.1	1	193°33.8	11.3	1	193°40.3	19.2
2	208°22.5	32.5	2	208°24.9	47.7	2	208°28.7	17°00.4	2	208°33.9	10.6	2	208°40.4	18.5
3	223°22.6	·· 31.9	3	223°25.0	·· 47.1	3	223°28.8	16°59.7	3	223°34.0	·· 09.9	3	223°40.5	·· 17.7
4	238°22.6	31.3	4	238°25.0	46.4	4	238°28.8	59.0	4	238°34.1	09.2	4	238°40.6	17.0
5	253°22.6	30.6	5	253°25.1	45.8	5	253°28.9	58.4	5	253°34.1	08.5	5	253°40.7	16.2
6	268°22.6	N18°30.0	6	268°25.1	N17°45.2	6	268°29.0	N16°57.7	6	268°34.2	N16°07.7	6	268°40.8	N15°15.5
7	283°22.7	29.4	7	283°25.1	44.5	7	283°29.0	57.0	7	283°34.3	07.0	7	283°40.9	14.8
8	298°22.7	28.8	8	298°25.2	43.9	8	298°29.1	56.3	8	298°34.4	06.3	8	298°41.0	14.0
9	313°22.7	·· 28.2	9	313°25.2	·· 43.2	9	313°29.2	·· 55.7	9	313°34.5	·· 05.6	9	313°41.1	·· 13.3
10	328°22.7	27.6	10	328°25.3	42.6	10	328°29.2	55.0	10	328°34.6	04.9	10	328°41.2	12.5
11	343°22.8	27.0	11	343°25.3	41.9	11	343°29.3	54.3	11	343°34.6	04.2	11	343°41.4	11.8
12	358°22.8	N18°26.4	12	358°25.4	N17°41.3	12	358°29.4	N16°53.6	12	358°34.7	N16°03.5	12	358°41.5	N15°11.0
13	13°22.8	25.8	13	13°25.4	40.7	13	13°29.4	52.9	13	13°34.8	02.8	13	13°41.6	10.3
14	28°22.8	25.2	14	28°25.5	40.0	14	28°29.5	52.3	14	28°34.9	02.1	14	28°41.7	09.6
15	43°22.9	·· 24.6	15	43°25.5	·· 39.4	15	43°29.6	·· 51.6	15	43°35.0	·· 01.3	15	43°41.8	·· 08.8
16	58°22.9	24.0	16	58°25.6	38.7	16	58°29.6	50.9	16	58°35.1	16°00.6	16	58°41.9	08.1
17	73°22.9	23.4	17	73°25.6	38.1	17	73°29.7	50.2	17	73°35.2	15°59.9	17	73°42.0	07.3
18	88°23.0	N18°22.8	18	88°25.7	N17°37.4	18	88°29.8	N16°49.5	18	88°35.2	N15°59.2	18	88°42.1	N15°06.6
19	103°23.0	22.1	19	103°25.7	36.8	19	103°29.8	48.8	19	103°35.3	58.5	19	103°42.2	05.8
20	118°23.0	21.5	20	118°25.7	36.1	20	118°29.9	48.2	20	118°35.4	57.8	20	118°42.3	05.1
21	133°23.0	·· 20.9	21	133°25.8	·· 35.5	21	133°30.0	·· 47.5	21	133°35.5	·· 57.0	21	133°42.4	·· 04.3
22	148°23.1	20.3	22	148°25.8	34.8	22	148°30.0	46.8	22	148°35.6	56.3	22	148°42.5	03.6
23	163°23.1	19.7	23	163°25.9	34.2	23	163°30.1	46.1	23	163°35.7	55.6	23	163°42.6	02.8
	SD=15.7′	d=-0.6′		SD=15.8′	d=-0.6′		SD=15.8′	d=-0.7′		SD=15.8′	d=-0.7′		SD=15.8′	d=-0.7′

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	178°23.1	N18°19.1	0	178°25.9	N17°33.5	0	178°30.2	N16°45.4	0	178°35.8	N15°54.9	0	178°42.7	N15°02.1
1	193°23.2	18.5	1	193°26.0	32.9	1	193°30.2	44.7	1	193°35.8	54.2	1	193°42.8	01.3
2	208°23.2	17.8	2	208°26.0	32.2	2	208°30.3	44.1	2	208°35.9	53.5	2	208°42.9	15°00.6
3	223°23.2	·· 17.2	3	223°26.1	·· 31.6	3	223°30.4	·· 43.4	3	223°36.0	·· 52.7	3	223°43.0	14°59.8
4	238°23.2	16.6	4	238°26.1	30.9	4	238°30.4	42.7	4	238°36.1	52.0	4	238°43.1	59.1
5	253°23.3	16.0	5	253°26.2	30.3	5	253°30.5	42.0	5	253°36.2	51.3	5	253°43.2	58.3
6	268°23.3	N18°15.4	6	268°26.2	N17°29.6	6	268°30.6	N16°41.3	6	268°36.3	N15°50.6	6	268°43.3	N14°57.6
7	283°23.3	14.8	7	283°26.3	29.0	7	283°30.6	40.6	7	283°36.4	49.9	7	283°43.4	56.8
8	298°23.4	14.1	8	298°26.3	28.3	8	298°30.7	39.9	8	298°36.5	49.1	8	298°43.6	56.1
9	313°23.4	·· 13.5	9	313°26.4	·· 27.7	9	313°30.8	·· 39.2	9	313°36.6	·· 48.4	9	313°43.7	·· 55.3
10	328°23.4	12.9	10	328°26.4	27.0	10	328°30.9	38.5	10	328°36.6	47.7	10	328°43.8	54.6
11	343°23.5	12.3	11	343°26.5	26.3	11	343°30.9	37.9	11	343°36.7	47.0	11	343°43.9	53.8
12	358°23.5	N18°11.7	12	358°26.5	N17°25.7	12	358°31.0	N16°37.2	12	358°36.8	N15°46.3	12	358°44.0	N14°53.1
13	13°23.5	11.0	13	13°26.6	25.0	13	13°31.1	36.5	13	13°36.9	45.5	13	13°44.1	52.3
14	28°23.6	10.4	14	28°26.6	24.4	14	28°31.1	35.8	14	28°37.0	44.8	14	28°44.2	51.6
15	43°23.6	·· 09.8	15	43°26.7	·· 23.7	15	43°31.2	·· 35.1	15	43°37.1	·· 44.1	15	43°44.3	·· 50.8
16	58°23.6	09.2	16	58°26.8	23.1	16	58°31.3	34.4	16	58°37.2	43.4	16	58°44.4	50.1
17	73°23.7	08.6	17	73°26.8	22.4	17	73°31.4	33.7	17	73°37.3	42.6	17	73°44.5	49.3
18	88°23.7	N18°07.9	18	88°26.9	N17°21.7	18	88°31.4	N16°33.0	18	88°37.4	N15°41.9	18	88°44.6	N14°48.6
19	103°23.7	07.3	19	103°26.9	21.1	19	103°31.5	32.3	19	103°37.5	41.2	19	103°44.7	47.8
20	118°23.8	06.7	20	118°27.0	20.4	20	118°31.6	31.6	20	118°37.6	40.5	20	118°44.9	47.0
21	133°23.8	·· 06.1	21	133°27.0	·· 19.8	21	133°31.6	·· 30.9	21	133°37.6	·· 39.7	21	133°45.0	·· 46.3
22	148°23.8	05.4	22	148°27.1	19.1	22	148°31.7	30.2	22	148°37.7	39.0	22	148°45.1	45.5
23	163°23.9	04.8	23	163°27.1	18.4	23	163°31.8	29.5	23	163°37.8	38.3	23	163°45.2	44.8
	SD=15.7′	d=-0.6′		SD=15.8′	d=-0.7′		SD=15.8′	d=-0.7′		SD=15.8′	d=-0.7′		SD=15.8′	d=-0.7′

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	178°23.9	N18°04.2	0	178°27.2	N17°17.8	0	178°31.9	N16°28.8	0	178°37.9	N15°37.5	0	178°45.3	N14°44.0
1	193°23.9	03.6	1	193°27.2	17.1	1	193°31.9	28.1	1	193°38.0	36.8	1	193°45.4	43.2
2	208°24.0	02.9	2	208°27.3	16.4	2	208°32.0	27.5	2	208°38.1	36.1	2	208°45.5	42.5
3	223°24.0	·· 02.3	3	223°27.4	·· 15.8	3	223°32.1	·· 26.8	3	223°38.2	·· 35.4	3	223°45.6	·· 41.7
4	238°24.1	01.7	4	238°27.4	15.1	4	238°32.2	26.1	4	238°38.3	34.6	4	238°45.7	41.0
5	253°24.1	01.0	5	253°27.5	14.5	5	253°32.2	25.4	5	253°38.4	33.9	5	253°45.9	40.2
6	268°24.1	N18°00.4	6	268°27.5	N17°13.8	6	268°32.3	N16°24.7	6	268°38.5	N15°33.2	6	268°46.0	N14°39.4
7	283°24.2	17°59.8	7	283°27.6	13.1	7	283°32.4	24.0	7	283°38.6	32.4	7	283°46.1	38.7
8	298°24.2	59.2	8	298°27.6	12.5	8	298°32.5	23.3	8	298°38.7	31.7	8	298°46.2	37.9
9	313°24.2	·· 58.5	9	313°27.7	·· 11.8	9	313°32.6	·· 22.6	9	313°38.8	·· 31.0	9	313°46.3	·· 37.2
10	328°24.3	57.9	10	328°27.8	11.1	10	328°32.6	21.9	10	328°38.9	30.2	10	328°46.4	36.4
11	343°24.3	57.3	11	343°27.8	10.5	11	343°32.7	21.2	11	343°39.0	29.5	11	343°46.5	35.6
12	358°24.4	N17°56.6	12	358°27.9	N17°09.8	12	358°32.8	N16°20.5	12	358°39.1	N15°28.8	12	358°46.6	N14°34.9
13	13°24.4	56.0	13	13°27.9	09.1	13	13°32.9	19.8	13	13°39.2	28.0	13	13°46.8	34.1
14	28°24.4	55.4	14	28°28.0	08.5	14	28°32.9	19.1	14	28°39.3	27.3	14	28°46.9	33.3
15	43°24.5	·· 54.7	15	43°28.1	·· 07.8	15	43°33.0	·· 18.3	15	43°39.4	·· 26.6	15	43°47.0	·· 32.6
16	58°24.5	54.1	16	58°28.1	07.1	16	58°33.1	17.6	16	58°39.5	25.8	16	58°47.1	31.8
17	73°24.6	53.5	17	73°28.2	06.4	17	73°33.2	16.9	17	73°39.6	25.1	17	73°47.2	31.1
18	88°24.6	N17°52.8	18	88°28.2	N17°05.8	18	88°33.3	N16°16.2	18	88°39.6	N15°24.4	18	88°47.3	N14°30.3
19	103°24.6	52.2	19	103°28.3	05.1	19	103°33.3	15.5	19	103°39.7	23.6	19	103°47.5	29.5
20	118°24.7	51.6	20	118°28.4	04.4	20	118°33.4	14.8	20	118°39.8	22.9	20	118°47.6	28.8
21	133°24.7	·· 50.9	21	133°28.4	·· 03.8	21	133°33.5	·· 14.1	21	133°39.9	·· 22.2	21	133°47.7	·· 28.0
22	148°24.8	50.3	22	148°28.5	03.1	22	148°33.6	13.4	22	148°40.0	21.4	22	148°47.8	27.2
23	163°24.8	49.6	23	163°28.5	02.4	23	163°33.7	12.7	23	163°40.1	20.7	23	163°47.9	26.5
	SD=15.7′	d=-0.6′		SD=15.8′	d=-0.7′		SD=15.8′	d=-0.7′		SD=15.8′	d=-0.7′		SD=15.8′	d=-0.8′

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	178°48.0	N14°25.7	0	178°57.0	N13°29.4	0	179°07.1	N12°31.1	0	179°18.3	N11°31.1	0	179°30.4	N10°29.4
1	193°48.1	24.9	1	193°57.2	28.6	1	194°07.3	30.3	1	194°18.4	30.2	1	194°30.6	28.5
2	208°48.3	24.1	2	208°57.3	27.8	2	209°07.4	29.5	2	209°18.6	29.4	2	209°30.8	27.6
3	223°48.4	·· 23.4	3	223°57.4	·· 27.0	3	224°07.6	·· 28.6	3	224°18.8	·· 28.5	3	224°30.9	·· 26.8
4	238°48.5	22.6	4	238°57.6	26.2	4	239°07.7	27.8	4	239°18.9	27.7	4	239°31.1	25.9
5	253°48.6	21.8	5	253°57.7	25.4	5	254°07.9	27.0	5	254°19.1	26.8	5	254°31.3	25.0
6	268°48.7	N14°21.1	6	268°57.8	N13°24.6	6	269°08.0	N12°26.2	6	269°19.3	N11°26.0	6	269°31.5	N10°24.2
7	283°48.9	20.3	7	283°58.0	23.8	7	284°08.2	25.4	7	284°19.4	25.1	7	284°31.6	23.3
8	298°49.0	19.5	8	298°58.1	23.0	8	299°08.3	24.5	8	299°19.6	24.3	8	299°31.8	22.4
9	313°49.1	·· 18.8	9	313°58.2	·· 22.2	9	314°08.5	·· 23.7	9	314°19.7	·· 23.4	9	314°32.0	·· 21.5
10	328°49.2	18.0	10	328°58.4	21.4	10	329°08.6	22.9	10	329°19.9	22.6	10	329°32.2	20.7
11	343°49.3	17.2	11	343°58.5	20.6	11	344°08.8	22.1	11	344°20.1	21.7	11	344°32.3	19.8
12	358°49.5	N14°16.4	12	358°58.6	N13°19.8	12	359°08.9	N12°21.2	12	359°20.2	N11°20.9	12	359°32.5	N10°18.9
13	13°49.6	15.7	13	13°58.8	19.0	13	14°09.1	20.4	13	14°20.4	20.0	13	14°32.7	18.1
14	28°49.7	14.9	14	28°58.9	18.2	14	29°09.2	19.6	14	29°20.6	19.2	14	29°32.9	17.2
15	43°49.8	·· 14.1	15	43°59.0	·· 17.4	15	44°09.4	·· 18.7	15	44°20.7	·· 18.3	15	44°33.0	·· 16.3
16	58°49.9	13.3	16	58°59.2	16.6	16	59°09.5	17.9	16	59°20.9	17.5	16	59°33.2	15.4
17	73°50.1	12.6	17	73°59.3	15.8	17	74°09.7	17.1	17	74°21.1	16.6	17	74°33.4	14.6
18	88°50.2	N14°11.8	18	88°59.5	N13°15.0	18	89°09.8	N12°16.3	18	89°21.2	N11°15.8	18	89°33.6	N10°13.7
19	103°50.3	11.0	19	103°59.6	14.2	19	104°10.0	15.4	19	104°21.4	14.9	19	104°33.8	12.8
20	118°50.4	10.2	20	118°59.7	13.4	20	119°10.1	14.6	20	119°21.6	14.1	20	119°33.9	12.0
21	133°50.5	·· 09.5	21	133°59.9	·· 12.6	21	134°10.3	·· 13.8	21	134°21.7	·· 13.2	21	134°34.1	·· 11.1
22	148°50.7	08.7	22	149°00.0	11.8	22	149°10.4	13.0	22	149°21.9	12.4	22	149°34.3	10.2
23	163°50.8	07.9	23	164°00.1	11.0	23	164°10.6	12.1	23	164°22.1	11.5	23	164°34.5	09.3
	SD=15.8′	d = -0.8′		SD=15.8′	d = -0.8′		SD=15.8′	d = -0.8′		SD=15.8′	d = -0.8′		SD=15.8′	d = -0.9′

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	178°50.9	N14°07.1	0	179°00.3	N13°10.2	0	179°10.7	N12°11.3	0	179°22.2	N11°10.7	0	179°34.6	N10°08.5
1	193°51.0	06.4	1	194°00.4	09.4	1	194°10.9	10.5	1	194°22.4	09.8	1	194°34.8	07.6
2	208°51.1	05.6	2	209°00.6	08.5	2	209°11.0	09.6	2	209°22.6	09.0	2	209°35.0	06.7
3	223°51.3	·· 04.8	3	224°00.7	·· 07.7	3	224°11.2	·· 08.8	3	224°22.7	·· 08.1	3	224°35.2	·· 05.8
4	238°51.4	04.0	4	239°00.8	06.9	4	239°11.4	08.0	4	239°22.9	07.3	4	239°35.4	05.0
5	253°51.5	03.2	5	254°01.0	06.1	5	254°11.5	07.1	5	254°23.1	06.4	5	254°35.5	04.1
6	268°51.6	N14°02.5	6	269°01.1	N13°05.3	6	269°11.7	N12°06.3	6	269°23.2	N11°05.5	6	269°35.7	N10°03.2
7	283°51.8	01.7	7	284°01.2	04.5	7	284°11.8	05.5	7	284°23.4	04.7	7	284°35.9	02.3
8	298°51.9	00.9	8	299°01.4	03.7	8	299°12.0	04.6	8	299°23.6	03.8	8	299°36.1	01.4
9	313°52.0	14°00.1	9	314°01.5	·· 02.9	9	314°12.1	·· 03.8	9	314°23.7	·· 03.0	9	314°36.3	10°00.6
10	328°52.1	13°59.3	10	329°01.7	02.1	10	329°12.3	03.0	10	329°23.9	02.1	10	329°36.4	09°59.7
11	343°52.3	58.6	11	344°01.8	01.3	11	344°12.4	02.1	11	344°24.1	01.3	11	344°36.6	58.8
12	358°52.4	N13°57.8	12	359°01.9	N13°00.5	12	359°12.6	N12°01.3	12	359°24.2	N11°00.4	12	359°36.8	N09°57.9
13	13°52.5	57.0	13	14°02.1	12°59.7	13	14°12.7	12°00.5	13	14°24.4	10°59.6	13	14°37.0	57.1
14	28°52.6	56.2	14	29°02.2	58.9	14	29°12.9	11°59.6	14	29°24.6	58.7	14	29°37.2	56.2
15	43°52.8	·· 55.4	15	44°02.4	·· 58.0	15	44°13.1	·· 58.8	15	44°24.7	·· 57.8	15	44°37.3	·· 55.3
16	58°52.9	54.6	16	59°02.5	57.2	16	59°13.2	58.0	16	59°24.9	57.0	16	59°37.5	54.4
17	73°53.0	53.9	17	74°02.7	56.4	17	74°13.4	57.1	17	74°25.1	56.1	17	74°37.7	53.5
18	88°53.1	N13°53.1	18	89°02.8	N12°55.6	18	89°13.5	N11°56.3	18	89°25.2	N10°55.3	18	89°37.9	N09°52.7
19	103°53.3	52.3	19	104°02.9	54.8	19	104°13.7	55.5	19	104°25.4	54.4	19	104°38.1	51.8
20	118°53.4	51.5	20	119°03.1	54.0	20	119°13.8	54.6	20	119°25.6	53.5	20	119°38.2	50.9
21	133°53.5	·· 50.7	21	134°03.2	·· 53.2	21	134°14.0	·· 53.8	21	134°25.8	·· 52.7	21	134°38.4	·· 50.0
22	148°53.6	49.9	22	149°03.4	52.4	22	149°14.1	52.9	22	149°25.9	51.8	22	149°38.6	49.1
23	163°53.8	49.2	23	164°03.5	51.6	23	164°14.3	52.1	23	164°26.1	51.0	23	164°38.8	48.3
	SD=15.8′	d = -0.8′		SD=15.8′	d = -0.8′		SD=15.8′	d = -0.8′		SD=15.8′	d = -0.9′		SD=15.8′	d = -0.9′

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	178°53.9	N13°48.4	0	179°03.6	N12°50.7	0	179°14.5	N11°51.3	0	179°26.3	N10°50.1	0	179°39.0	N09°47.4
1	193°54.0	47.6	1	194°03.8	49.9	1	194°14.6	50.4	1	194°26.4	49.2	1	194°39.2	46.5
2	208°54.2	46.8	2	209°03.9	49.1	2	209°14.8	49.6	2	209°26.6	48.4	2	209°39.3	45.6
3	223°54.3	·· 46.0	3	224°04.1	·· 48.3	3	224°14.9	·· 48.8	3	224°26.8	·· 47.5	3	224°39.5	·· 44.7
4	238°54.4	45.2	4	239°04.2	47.5	4	239°15.1	47.9	4	239°26.9	46.7	4	239°39.7	43.9
5	253°54.5	44.4	5	254°04.4	46.7	5	254°15.2	47.1	5	254°27.1	45.8	5	254°39.9	43.0
6	268°54.7	N13°43.6	6	269°04.5	N12°45.9	6	269°15.4	N11°46.2	6	269°27.3	N10°44.9	6	269°40.1	N09°42.1
7	283°54.8	42.8	7	284°04.7	45.0	7	284°15.6	45.4	7	284°27.5	44.1	7	284°40.3	41.2
8	298°54.9	42.1	8	299°04.8	44.2	8	299°15.7	44.6	8	299°27.6	43.2	8	299°40.4	40.3
9	313°55.1	·· 41.3	9	314°04.9	·· 43.4	9	314°15.9	·· 43.7	9	314°27.8	·· 42.3	9	314°40.6	·· 39.4
10	328°55.2	40.5	10	329°05.1	42.6	10	329°16.0	42.9	10	329°28.0	41.5	10	329°40.8	38.6
11	343°55.3	39.7	11	344°05.2	41.8	11	344°16.2	42.0	11	344°28.1	40.6	11	344°41.0	37.7
12	358°55.4	N13°38.9	12	359°05.4	N12°41.0	12	359°16.4	N11°41.2	12	359°28.3	N10°39.8	12	359°41.2	N09°36.8
13	13°55.6	38.1	13	14°05.5	40.1	13	14°16.5	40.3	13	14°28.5	38.9	13	14°41.4	35.9
14	28°55.7	37.3	14	29°05.7	39.3	14	29°16.7	39.5	14	29°28.7	38.0	14	29°41.5	35.0
15	43°55.8	·· 36.5	15	44°05.8	·· 38.5	15	44°16.8	·· 38.7	15	44°28.8	·· 37.2	15	44°41.7	·· 34.1
16	58°56.0	35.7	16	59°06.0	37.7	16	59°17.0	37.8	16	59°29.0	36.3	16	59°41.9	33.3
17	73°56.1	34.9	17	74°06.1	36.9	17	74°17.2	37.0	17	74°29.2	35.4	17	74°42.1	32.4
18	88°56.2	N13°34.1	18	89°06.3	N12°36.0	18	89°17.3	N11°36.1	18	89°29.4	N10°34.6	18	89°42.3	N09°31.5
19	103°56.4	33.3	19	104°06.4	35.2	19	104°17.5	35.3	19	104°29.5	33.7	19	104°42.5	30.6
20	118°56.5	32.6	20	119°06.5	34.4	20	119°17.6	34.4	20	119°29.7	32.8	20	119°42.7	29.7
21	133°56.6	·· 31.8	21	134°06.7	·· 33.6	21	134°17.8	·· 33.6	21	134°29.9	·· 32.0	21	134°42.8	·· 28.8
22	148°56.8	31.0	22	149°06.8	32.8	22	149°18.0	32.8	22	149°30.1	31.1	22	149°43.0	27.9
23	163°56.9	30.2	23	164°07.0	31.9	23	164°18.1	31.9	23	164°30.2	30.2	23	164°43.2	27.0
	SD=15.8′	d = -0.8′		SD=15.8′	d = -0.8′		SD=15.8′	d = -0.8′		SD=15.8′	d = -0.9′		SD=15.8′	d = -0.9′

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	179°43.4	N09°26.2	0	179°57.2	N08°21.6	0	180°11.7	N07°15.9	0	180°26.9	N06°09.1	0	180°42.5	N05°01.4
1	194°43.6	25.3	1	194°57.4	20.7	1	195°11.9	14.9	1	195°27.1	08.1	1	195°42.7	05°00.4
2	209°43.8	24.4	2	209°57.6	19.8	2	210°12.1	14.0	2	210°27.3	07.2	2	210°42.9	04°59.5
3	224°44.0	·· 23.5	3	224°57.8	·· 18.9	3	225°12.4	·· 13.1	3	225°27.5	·· 06.3	3	225°43.1	·· 58.5
4	239°44.2	22.6	4	239°58.0	18.0	4	240°12.6	12.2	4	240°27.7	05.3	4	240°43.3	57.6
5	254°44.3	21.7	5	254°58.2	17.1	5	255°12.8	11.3	5	255°27.9	04.4	5	255°43.6	56.7
6	269°44.5	N09°20.8	6	269°58.4	N08°16.2	6	270°13.0	N07°10.3	6	270°28.1	N06°03.5	6	270°43.8	N04°55.7
7	284°44.7	19.9	7	284°58.6	15.3	7	285°13.2	09.4	7	285°28.4	02.5	7	285°44.0	54.8
8	299°44.9	19.1	8	299°58.8	14.4	8	300°13.4	08.5	8	300°28.6	01.6	8	300°44.2	53.8
9	314°45.1	·· 18.2	9	314°59.0	·· 13.5	9	315°13.6	·· 07.6	9	315°28.8	06°00.7	9	315°44.4	·· 52.9
10	329°45.3	17.3	10	329°59.2	12.5	10	330°13.8	06.6	10	330°29.0	05°59.7	10	330°44.7	51.9
11	344°45.5	16.4	11	344°59.4	11.6	11	345°14.0	05.7	11	345°29.2	58.8	11	345°44.9	51.0
12	359°45.7	N09°15.5	12	359°59.6	N08°10.7	12	0°14.2	N07°04.8	12	0°29.4	N05°57.8	12	0°45.1	N04°50.0
13	14°45.8	14.6	13	14°59.8	09.8	13	15°14.4	03.9	13	15°29.6	56.9	13	15°45.3	49.1
14	29°46.0	13.7	14	30°00.0	08.9	14	30°14.6	02.9	14	30°29.9	56.0	14	30°45.5	48.1
15	44°46.2	·· 12.8	15	45°00.2	·· 08.0	15	45°14.8	·· 02.0	15	45°30.1	·· 55.0	15	45°45.8	·· 47.2
16	59°46.4	11.9	16	60°00.4	07.1	16	60°15.0	01.1	16	60°30.3	54.1	16	60°46.0	46.2
17	74°46.6	11.0	17	75°00.6	06.2	17	75°15.3	07°00.2	17	75°30.5	53.2	17	75°46.2	45.3
18	89°46.8	N09°10.1	18	90°00.8	N08°05.3	18	90°15.5	N06°59.3	18	90°30.7	N05°52.2	18	90°46.4	N04°44.3
19	104°47.0	09.3	19	105°01.0	04.4	19	105°15.7	58.3	19	105°30.9	51.3	19	105°46.6	43.4
20	119°47.2	08.4	20	120°01.2	03.5	20	120°15.9	57.4	20	120°31.2	50.4	20	120°46.9	42.4
21	134°47.4	·· 07.5	21	135°01.4	·· 02.5	21	135°16.1	·· 56.5	21	135°31.4	·· 49.4	21	135°47.1	·· 41.5
22	149°47.5	06.6	22	150°01.6	01.6	22	150°16.3	55.6	22	150°31.6	48.5	22	150°47.3	40.5
23	164°47.7	05.7	23	165°01.8	00.7	23	165°16.5	54.6	23	165°31.8	47.5	23	165°47.5	39.6
	SD=15.8′	d=-0.9′		SD=15.8′	d=-0.9′		SD=15.9′	d=-0.9′		SD=15.9′	d=-0.9′		SD=15.9′	d=-0.9′

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	179°47.9	N09°04.8	0	180°02.0	N07°59.8	0	180°16.7	N06°53.7	0	180°32.0	N05°46.6	0	180°47.7	N04°38.6
1	194°48.1	03.9	1	195°02.2	58.9	1	195°16.9	52.8	1	195°32.2	45.7	1	195°48.0	37.7
2	209°48.3	03.0	2	210°02.4	58.0	2	210°17.1	51.9	2	210°32.4	44.7	2	210°48.2	36.7
3	224°48.5	·· 02.1	3	225°02.6	·· 57.1	3	225°17.3	·· 50.9	3	225°32.7	·· 43.8	3	225°48.4	·· 35.8
4	239°48.7	01.2	4	240°02.8	56.2	4	240°17.6	50.0	4	240°32.9	42.8	4	240°48.6	34.8
5	254°48.9	09°00.3	5	255°03.0	55.3	5	255°17.8	49.1	5	255°33.1	41.9	5	255°48.8	33.9
6	269°49.1	N08°59.4	6	270°03.2	N07°54.4	6	270°18.0	N06°48.1	6	270°33.3	N05°41.0	6	270°49.1	N04°32.9
7	284°49.3	58.5	7	285°03.4	53.4	7	285°18.2	47.2	7	285°33.5	40.0	7	285°49.3	32.0
8	299°49.4	57.6	8	300°03.6	52.5	8	300°18.4	46.3	8	300°33.7	39.1	8	300°49.5	31.0
9	314°49.6	·· 56.7	9	315°03.8	·· 51.6	9	315°18.6	·· 45.4	9	315°34.0	·· 38.1	9	315°49.7	·· 30.1
10	329°49.8	55.8	10	330°04.0	50.7	10	330°18.8	44.4	10	330°34.2	37.2	10	330°49.9	29.1
11	344°50.0	54.9	11	345°04.2	49.8	11	345°19.0	43.5	11	345°34.4	36.3	11	345°50.2	28.2
12	359°50.2	N08°54.0	12	0°04.4	N07°48.9	12	0°19.2	N06°42.6	12	0°34.6	N05°35.3	12	0°50.4	N04°27.2
13	14°50.4	53.1	13	15°04.6	48.0	13	15°19.4	41.7	13	15°34.8	34.4	13	15°50.6	26.3
14	29°50.6	52.3	14	30°04.8	47.0	14	30°19.7	40.7	14	30°35.0	33.4	14	30°50.8	25.3
15	44°50.8	·· 51.4	15	45°05.0	·· 46.1	15	45°19.9	·· 39.8	15	45°35.3	·· 32.5	15	45°51.0	·· 24.4
16	59°51.0	50.5	16	60°05.2	45.2	16	60°20.1	38.9	16	60°35.5	31.6	16	60°51.3	23.4
17	74°51.2	49.6	17	75°05.4	44.3	17	75°20.3	37.9	17	75°35.7	30.6	17	75°51.5	22.5
18	89°51.4	N08°48.7	18	90°05.6	N07°43.4	18	90°20.5	N06°37.0	18	90°35.9	N05°29.7	18	90°51.7	N04°21.5
19	104°51.6	47.8	19	105°05.8	42.5	19	105°20.7	36.1	19	105°36.1	28.7	19	105°51.9	20.6
20	119°51.8	46.9	20	120°06.0	41.6	20	120°20.9	35.2	20	120°36.3	27.8	20	120°52.2	19.6
21	134°51.9	·· 46.0	21	135°06.2	·· 40.6	21	135°21.1	·· 34.2	21	135°36.6	·· 26.9	21	135°52.4	·· 18.7
22	149°52.1	45.1	22	150°06.4	39.7	22	150°21.3	33.3	22	150°36.8	25.9	22	150°52.6	17.7
23	164°52.3	44.2	23	165°06.6	38.8	23	165°21.5	32.4	23	165°37.0	25.0	23	165°52.8	16.8
	SD=15.8′	d=-0.9′		SD=15.8′	d=-0.9′		SD=15.9′	d=-0.9′		SD=15.9′	d=-0.9′		SD=15.9′	d=-0.9′

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	179°52.5	N08°43.3	0	180°06.8	N07°37.9	0	180°21.8	N06°31.4	0	180°37.2	N05°24.0	0	180°53.0	N04°15.8
1	194°52.7	42.4	1	195°07.0	37.0	1	195°22.0	30.5	1	195°37.4	23.1	1	195°53.3	14.9
2	209°52.9	41.5	2	210°07.2	36.1	2	210°22.2	29.6	2	210°37.7	22.2	2	210°53.5	13.9
3	224°53.1	·· 40.6	3	225°07.4	·· 35.2	3	225°22.4	·· 28.6	3	225°37.9	·· 21.2	3	225°53.7	·· 13.0
4	239°53.3	39.7	4	240°07.6	34.2	4	240°22.6	27.7	4	240°38.1	20.3	4	240°53.9	12.0
5	254°53.5	38.8	5	255°07.8	33.3	5	255°22.8	26.8	5	255°38.3	19.3	5	255°54.2	11.1
6	269°53.7	N08°37.9	6	270°08.0	N07°32.4	6	270°23.0	N06°25.9	6	270°38.5	N05°18.4	6	270°54.4	N04°10.1
7	284°53.9	37.0	7	285°08.2	31.5	7	285°23.2	24.9	7	285°38.7	17.4	7	285°54.6	09.2
8	299°54.1	36.1	8	300°08.5	30.6	8	300°23.5	24.0	8	300°39.0	16.5	8	300°54.8	08.2
9	314°54.3	·· 35.2	9	315°08.7	·· 29.6	9	315°23.7	·· 23.1	9	315°39.2	·· 15.6	9	315°55.0	·· 07.3
10	329°54.5	34.3	10	330°08.9	28.7	10	330°23.9	22.1	10	330°39.4	14.6	10	330°55.3	06.3
11	344°54.7	33.4	11	345°09.1	27.8	11	345°24.1	21.2	11	345°39.6	13.7	11	345°55.5	05.3
12	359°54.9	N08°32.5	12	0°09.3	N07°26.9	12	0°24.3	N06°20.3	12	0°39.8	N05°12.7	12	0°55.7	N04°04.4
13	14°55.1	31.6	13	15°09.5	26.0	13	15°24.5	19.3	13	15°40.1	11.8	13	15°55.9	03.4
14	29°55.3	30.6	14	30°09.7	25.1	14	30°24.7	18.4	14	30°40.3	10.8	14	30°56.1	02.5
15	44°55.4	·· 29.7	15	45°09.9	·· 24.1	15	45°24.9	·· 17.5	15	45°40.5	·· 09.9	15	45°56.4	·· 01.5
16	59°55.6	28.8	16	60°10.1	23.2	16	60°25.2	16.5	16	60°40.7	08.9	16	60°56.6	04°00.6
17	74°55.8	27.9	17	75°10.3	22.3	17	75°25.4	15.6	17	75°40.9	08.0	17	75°56.8	03°59.6
18	89°56.0	N08°27.0	18	90°10.5	N07°21.4	18	90°25.6	N06°14.7	18	90°41.1	N05°07.1	18	90°57.0	N03°58.7
19	104°56.2	26.1	19	105°10.7	20.5	19	105°25.8	13.7	19	105°41.4	06.1	19	105°57.3	57.7
20	119°56.4	25.2	20	120°10.9	19.5	20	120°26.0	12.8	20	120°41.6	05.2	20	120°57.5	56.8
21	134°56.6	·· 24.3	21	135°11.1	·· 18.6	21	135°26.2	·· 11.9	21	135°41.8	·· 04.2	21	135°57.7	·· 55.8
22	149°56.8	23.4	22	150°11.3	17.7	22	150°26.4	10.9	22	150°42.0	03.3	22	150°57.9	54.8
23	164°57.0	22.5	23	165°11.5	16.8	23	165°26.6	10.0	23	165°42.2	02.3	23	165°58.1	53.9
	SD=15.8′	d=-0.9′		SD=15.8′	d=-0.9′		SD=15.9′	d=-0.9′		SD=15.9′	d=-0.9′		SD=15.9′	d=-1.0′

13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	180°58.4	N03°52.9	0	181°14.4	N02°43.9	0	181°30.5	N01°34.3	0	181°46.5	N00°24.4	0	182°02.2	S00°45.7
1	195°58.6	52.0	1	196°14.7	42.9	1	196°30.8	33.3	1	196°46.7	23.4	1	197°02.5	46.7
2	210°58.8	51.0	2	211°14.9	41.9	2	211°31.0	32.4	2	211°47.0	22.4	2	212°02.7	47.6
3	225°59.0	·· 50.1	3	226°15.1	·· 41.0	3	226°31.2	·· 31.4	3	226°47.2	·· 21.5	3	227°02.9	·· 48.6
4	240°59.3	49.1	4	241°15.3	40.0	4	241°31.4	30.4	4	241°47.4	20.5	4	242°03.1	49.6
5	255°59.5	48.2	5	256°15.6	39.0	5	256°31.7	29.5	5	256°47.6	19.5	5	257°03.3	50.6
6	270°59.7	N03°47.2	6	271°15.8	N02°38.1	6	271°31.9	N01°28.5	6	271°47.8	N00°18.6	6	272°03.5	S00°51.5
7	285°59.9	46.2	7	286°16.0	37.1	7	286°32.1	27.5	7	286°48.1	17.6	7	287°03.8	52.5
8	301°00.2	45.3	8	301°16.2	36.2	8	301°32.3	26.5	8	301°48.3	16.6	8	302°04.0	53.5
9	316°00.4	·· 44.3	9	316°16.5	·· 35.2	9	316°32.5	·· 25.6	9	316°48.5	·· 15.6	9	317°04.2	·· 54.5
10	331°00.6	43.4	10	331°16.7	34.2	10	331°32.8	24.6	10	331°48.7	14.7	10	332°04.4	55.4
11	346°00.8	42.4	11	346°16.9	33.3	11	346°33.0	23.6	11	346°48.9	13.7	11	347°04.6	56.4
12	1°01.0	N03°41.5	12	1°17.1	N02°32.3	12	1°33.2	N01°22.7	12	1°49.2	N00°12.7	12	2°04.8	S00°57.4
13	16°01.3	40.5	13	16°17.4	31.3	13	16°33.4	21.7	13	16°49.4	11.7	13	17°05.0	58.4
14	31°01.5	39.6	14	31°17.6	30.4	14	31°33.7	20.7	14	31°49.6	10.8	14	32°05.3	00°59.3
15	46°01.7	·· 38.6	15	46°17.8	·· 29.4	15	46°33.9	·· 19.8	15	46°49.8	·· 09.8	15	47°05.5	01°00.3
16	61°01.9	37.6	16	61°18.0	28.4	16	61°34.1	18.8	16	61°50.0	08.8	16	62°05.7	01.3
17	76°02.2	36.7	17	76°18.3	27.5	17	76°34.3	17.8	17	76°50.3	07.9	17	77°05.9	02.2
18	91°02.4	N03°35.7	18	91°18.5	N02°26.5	18	91°34.5	N01°16.8	18	91°50.5	N00°06.9	18	92°06.1	S01°03.2
19	106°02.6	34.8	19	106°18.7	25.5	19	106°34.8	15.9	19	106°50.7	05.9	19	107°06.3	04.2
20	121°02.8	33.8	20	121°18.9	24.6	20	121°35.0	14.9	20	121°50.9	04.9	20	122°06.6	05.2
21	136°03.1	·· 32.8	21	136°19.1	·· 23.6	21	136°35.2	·· 13.9	21	136°51.1	·· 04.0	21	137°06.8	·· 06.1
22	151°03.3	31.9	22	151°19.4	22.7	22	151°35.4	13.0	22	151°51.4	03.0	22	152°07.0	07.1
23	166°03.5	30.9	23	166°19.6	21.7	23	166°35.7	12.0	23	166°51.6	02.0	23	167°07.2	08.1
	SD=15.9′	d=-1.0′		SD=15.9′	d=-1.0′		SD=15.9′	d=-1.0′		SD=15.9′	d=-1.0′		SD=15.9′	d=1.0′

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	181°03.7	N03°30.0	0	181°19.8	N02°20.7	0	181°35.9	N01°11.0	0	181°51.8	N00°01.0	0	182°07.4	S01°09.1
1	196°03.9	29.0	1	196°20.0	19.8	1	196°36.1	10.1	1	196°52.0	N00°00.1	1	197°07.6	10.0
2	211°04.2	28.1	2	211°20.3	18.8	2	211°36.3	09.1	2	211°52.2	S00°00.9	2	212°07.8	11.0
3	226°04.4	·· 27.1	3	226°20.5	·· 17.8	3	226°36.6	·· 08.1	3	226°52.4	·· 01.9	3	227°08.1	·· 12.0
4	241°04.6	26.1	4	241°20.7	16.9	4	241°36.8	07.1	4	241°52.7	02.8	4	242°08.3	13.0
5	256°04.8	25.2	5	256°20.9	15.9	5	256°37.0	06.2	5	256°52.9	03.8	5	257°08.5	13.9
6	271°05.1	N03°24.2	6	271°21.2	N02°14.9	6	271°37.2	N01°05.2	6	271°53.1	S00°04.8	6	272°08.7	S01°14.9
7	286°05.3	23.3	7	286°21.4	14.0	7	286°37.4	04.2	7	286°53.3	05.8	7	287°08.9	15.9
8	301°05.5	22.3	8	301°21.6	13.0	8	301°37.7	03.3	8	301°53.5	06.7	8	302°09.1	16.9
9	316°05.7	·· 21.3	9	316°21.8	·· 12.0	9	316°37.9	·· 02.3	9	316°53.8	·· 07.7	9	317°09.3	·· 17.8
10	331°06.0	20.4	10	331°22.1	11.1	10	331°38.1	01.3	10	331°54.0	08.7	10	332°09.5	18.8
11	346°06.2	19.4	11	346°22.3	10.1	11	346°38.3	01°00.4	11	346°54.2	09.7	11	347°09.8	19.8
12	1°06.4	N03°18.5	12	1°22.5	N02°09.1	12	1°38.5	N00°59.4	12	1°54.4	S00°10.6	12	2°10.0	S01°20.8
13	16°06.6	17.5	13	16°22.7	08.2	13	16°38.8	58.4	13	16°54.6	11.6	13	17°10.2	21.7
14	31°06.8	16.6	14	31°22.9	07.2	14	31°39.0	57.4	14	31°54.9	12.6	14	32°10.4	22.7
15	46°07.1	·· 15.6	15	46°23.2	·· 06.2	15	46°39.2	·· 56.5	15	46°55.1	·· 13.6	15	47°10.6	·· 23.7
16	61°07.3	14.6	16	61°23.4	05.3	16	61°39.4	55.5	16	61°55.3	14.5	16	62°10.8	24.6
17	76°07.5	13.7	17	76°23.6	04.3	17	76°39.7	54.5	17	76°55.5	15.5	17	77°11.0	25.6
18	91°07.7	N03°12.7	18	91°23.8	N02°03.3	18	91°39.9	N00°53.6	18	91°55.7	S00°16.5	18	92°11.3	S01°26.6
19	106°08.0	11.8	19	106°24.1	02.4	19	106°40.1	52.6	19	106°55.9	17.5	19	107°11.5	27.6
20	121°08.2	10.8	20	121°24.3	01.4	20	121°40.3	51.6	20	121°56.2	18.4	20	122°11.7	28.5
21	136°08.4	·· 09.8	21	136°24.5	02°00.4	21	136°40.5	·· 50.6	21	136°56.4	·· 19.4	21	137°11.9	·· 29.5
22	151°08.6	08.9	22	151°24.7	01°59.5	22	151°40.8	49.7	22	151°56.6	20.4	22	152°12.1	30.5
23	166°08.9	07.9	23	166°25.0	58.5	23	166°41.0	48.7	23	166°56.8	21.3	23	167°12.3	31.5
	SD=15.9′	d=-1.0′		SD=15.9′	d=-1.0′		SD=15.9′	d=-1.0′		SD=15.9′	d=-1.0′		SD=15.9′	d=1.0′

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	181°09.1	N03°06.9	0	181°25.2	N01°57.5	0	181°41.2	N00°47.7	0	181°57.0	S00°22.3	0	182°12.5	S01°32.4
1	196°09.3	06.0	1	196°25.4	56.6	1	196°41.4	46.8	1	196°57.3	23.3	1	197°12.7	33.4
2	211°09.5	05.0	2	211°25.6	55.6	2	211°41.7	45.8	2	211°57.5	24.3	2	212°13.0	34.4
3	226°09.8	·· 04.1	3	226°25.9	·· 54.6	3	226°41.9	·· 44.8	3	226°57.7	·· 25.2	3	227°13.2	·· 35.4
4	241°10.0	03.1	4	241°26.1	53.7	4	241°42.1	43.8	4	241°57.9	26.2	4	242°13.4	36.3
5	256°10.2	02.1	5	256°26.3	52.7	5	256°42.3	42.9	5	256°58.1	27.2	5	257°13.6	37.3
6	271°10.4	N03°01.2	6	271°26.5	N01°51.7	6	271°42.5	N00°41.9	6	271°58.3	S00°28.2	6	272°13.8	S01°38.3
7	286°10.6	03°00.2	7	286°26.7	50.8	7	286°42.8	40.9	7	286°58.6	29.1	7	287°14.0	39.3
8	301°10.9	02°59.3	8	301°27.0	49.8	8	301°43.0	40.0	8	301°58.8	30.1	8	302°14.2	40.2
9	316°11.1	·· 58.3	9	316°27.2	·· 48.8	9	316°43.2	·· 39.0	9	316°59.0	·· 31.1	9	317°14.4	·· 41.2
10	331°11.3	57.3	10	331°27.4	47.9	10	331°43.4	38.0	10	331°59.2	32.1	10	332°14.7	42.2
11	346°11.5	56.4	11	346°27.6	46.9	11	346°43.6	37.0	11	346°59.4	33.0	11	347°14.9	43.1
12	1°11.8	N02°55.4	12	1°27.9	N01°45.9	12	1°43.9	N00°36.1	12	1°59.6	S00°34.0	12	2°15.1	S01°44.1
13	16°12.0	54.5	13	16°28.1	45.0	13	16°44.1	35.1	13	16°59.9	35.0	13	17°15.3	45.1
14	31°12.2	53.5	14	31°28.3	44.0	14	31°44.3	34.1	14	32°00.1	36.0	14	32°15.5	46.1
15	46°12.4	·· 52.5	15	46°28.5	·· 43.0	15	46°44.5	·· 33.1	15	47°00.3	·· 36.9	15	47°15.7	·· 47.0
16	61°12.7	51.6	16	61°28.8	42.0	16	61°44.7	32.2	16	62°00.5	37.9	16	62°15.9	48.0
17	76°12.9	50.6	17	76°29.0	41.1	17	76°45.0	31.2	17	77°00.7	38.9	17	77°16.1	49.0
18	91°13.1	N02°49.6	18	91°29.2	N01°40.1	18	91°45.2	N00°30.2	18	92°00.9	S00°39.8	18	92°16.3	S01°50.0
19	106°13.3	48.7	19	106°29.4	39.1	19	106°45.4	29.3	19	107°01.2	40.8	19	107°16.6	50.9
20	121°13.6	47.7	20	121°29.6	38.2	20	121°45.6	28.3	20	122°01.4	41.8	20	122°16.8	51.9
21	136°13.8	·· 46.8	21	136°29.9	·· 37.2	21	136°45.9	·· 27.3	21	137°01.6	·· 42.8	21	137°17.0	·· 52.9
22	151°14.0	45.8	22	151°30.1	36.2	22	151°46.1	26.3	22	152°01.8	43.7	22	152°17.2	53.9
23	166°14.2	44.8	23	166°30.3	35.3	23	166°46.3	25.4	23	167°02.0	44.7	23	167°17.4	54.8
	SD=15.9′	d=-1.0′		SD=15.9′	d=-1.0′		SD=15.9′	d=-1.0′		SD=15.9′	d=1.0′		SD=15.9′	d=1.0′

28	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	182°17.6	S01°55.8	0	182°32.5	S03°05.8	0	182°46.8	S04°15.4	0	183°00.3	S05°24.6	0	183°13.0	S06°33.1
1	197°17.8	56.8	1	197°32.7	06.7	1	197°47.0	16.4	1	198°00.5	25.5	1	198°13.2	34.1
2	212°18.0	57.7	2	212°32.9	07.7	2	212°47.2	17.3	2	213°00.7	26.5	2	213°13.3	35.0
3	227°18.2	·· 58.7	3	227°33.1	·· 08.7	3	227°47.3	·· 18.3	3	228°00.9	·· 27.5	3	228°13.5	·· 36.0
4	242°18.4	01°59.7	4	242°33.3	09.6	4	242°47.5	19.3	4	243°01.0	28.4	4	243°13.7	36.9
5	257°18.7	02°00.7	5	257°33.5	10.6	5	257°47.7	20.2	5	258°01.2	29.4	5	258°13.8	37.9
6	272°18.9	S02°01.6	6	272°33.7	S03°11.6	6	272°47.9	S04°21.2	6	273°01.4	S05°30.3	6	273°14.0	S06°38.8
7	287°19.1	02.6	7	287°33.9	12.6	7	287°48.1	22.2	7	288°01.6	31.3	7	288°14.2	39.8
8	302°19.3	03.6	8	302°34.1	13.5	8	302°48.3	23.1	8	303°01.8	32.2	8	303°14.3	40.7
9	317°19.5	·· 04.6	9	317°34.3	·· 14.5	9	317°48.5	·· 24.1	9	318°02.0	·· 33.2	9	318°14.5	·· 41.6
10	332°19.7	05.5	10	332°34.5	15.5	10	332°48.7	25.1	10	333°02.1	34.2	10	333°14.7	42.6
11	347°19.9	06.5	11	347°34.7	16.4	11	347°48.9	26.0	11	348°02.3	35.1	11	348°14.8	43.5
12	2°20.1	S02°07.5	12	2°34.9	S03°17.4	12	2°49.1	S04°27.0	12	3°02.5	S05°36.1	12	3°15.0	S06°44.5
13	17°20.3	08.4	13	17°35.1	18.4	13	17°49.3	27.9	13	18°02.7	37.0	13	18°15.2	45.4
14	32°20.5	09.4	14	32°35.3	19.3	14	32°49.5	28.9	14	33°02.9	38.0	14	33°15.3	46.4
15	47°20.7	·· 10.4	15	47°35.5	·· 20.3	15	47°49.7	·· 29.9	15	48°03.0	·· 38.9	15	48°15.5	·· 47.3
16	62°21.0	11.4	16	62°35.7	21.3	16	62°49.8	30.8	16	63°03.2	39.9	16	63°15.7	48.3
17	77°21.2	12.3	17	77°35.9	22.2	17	77°50.0	31.8	17	78°03.4	40.8	17	78°15.8	49.2
18	92°21.4	S02°13.3	18	92°36.1	S03°23.2	18	92°50.2	S04°32.8	18	93°03.6	S05°41.8	18	93°16.0	S06°50.1
19	107°21.6	14.3	19	107°36.3	24.2	19	107°50.4	33.7	19	108°03.8	42.7	19	108°16.2	51.1
20	122°21.8	15.3	20	122°36.5	25.2	20	122°50.6	34.7	20	123°03.9	43.7	20	123°16.3	52.0
21	137°22.0	·· 16.2	21	137°36.7	·· 26.1	21	137°50.8	·· 35.6	21	138°04.1	·· 44.7	21	138°16.5	·· 53.0
22	152°22.2	17.2	22	152°36.9	27.1	22	152°51.0	36.6	22	153°04.3	45.6	22	153°16.7	53.9
23	167°22.4	18.2	23	167°37.1	28.1	23	167°51.2	37.6	23	168°04.5	46.6	23	168°16.8	54.9
	SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 0.9′

29	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	182°22.6	S02°19.1	0	182°37.3	S03°29.0	0	182°51.4	S04°38.5	0	183°04.6	S05°47.5	0	183°17.0	S06°55.8
1	197°22.8	20.1	1	197°37.5	30.0	1	197°51.6	39.5	1	198°04.8	48.5	1	198°17.1	56.7
2	212°23.0	21.1	2	212°37.7	31.0	2	212°51.8	40.5	2	213°05.0	49.4	2	213°17.3	57.7
3	227°23.2	·· 22.1	3	227°37.9	·· 31.9	3	227°51.9	·· 41.4	3	228°05.2	·· 50.4	3	228°17.5	·· 58.6
4	242°23.5	23.0	4	242°38.1	32.9	4	242°52.1	42.4	4	243°05.4	51.3	4	243°17.6	06°59.6
5	257°23.7	24.0	5	257°38.3	33.9	5	257°52.3	43.3	5	258°05.5	52.3	5	258°17.8	07°00.5
6	272°23.9	S02°25.0	6	272°38.5	S03°34.8	6	272°52.5	S04°44.3	6	273°05.7	S05°53.2	6	273°18.0	S07°01.5
7	287°24.1	26.0	7	287°38.7	35.8	7	287°52.7	45.3	7	288°05.9	54.2	7	288°18.1	02.4
8	302°24.3	26.9	8	302°38.9	36.8	8	302°52.9	46.2	8	303°06.1	55.1	8	303°18.3	03.3
9	317°24.5	·· 27.9	9	317°39.1	·· 37.7	9	317°53.1	·· 47.2	9	318°06.2	·· 56.1	9	318°18.5	·· 04.3
10	332°24.7	28.9	10	332°39.3	38.7	10	332°53.3	48.2	10	333°06.4	57.0	10	333°18.6	05.2
11	347°24.9	29.8	11	347°39.5	39.7	11	347°53.5	49.1	11	348°06.6	58.0	11	348°18.8	06.2
12	2°25.1	S02°30.8	12	2°39.7	S03°40.6	12	2°53.6	S04°50.1	12	3°06.8	S05°58.9	12	3°18.9	S07°07.1
13	17°25.3	31.8	13	17°39.9	41.6	13	17°53.8	51.0	13	18°06.9	05°59.9	13	18°19.1	08.1
14	32°25.5	32.8	14	32°40.1	42.6	14	32°54.0	52.0	14	33°07.1	06°00.9	14	33°19.3	09.0
15	47°25.7	·· 33.7	15	47°40.3	·· 43.5	15	47°54.2	·· 53.0	15	48°07.3	·· 01.8	15	48°19.4	·· 09.9
16	62°25.9	34.7	16	62°40.5	44.5	16	62°54.4	53.9	16	63°07.5	02.8	16	63°19.6	10.9
17	77°26.1	35.7	17	77°40.7	45.5	17	77°54.6	54.9	17	78°07.6	03.7	17	78°19.7	11.8
18	92°26.4	S02°36.6	18	92°40.9	S03°46.4	18	92°54.8	S04°55.8	18	93°07.8	S06°04.7	18	93°19.9	S07°12.8
19	107°26.6	37.6	19	107°41.1	47.4	19	107°55.0	56.8	19	108°08.0	05.6	19	108°20.1	13.7
20	122°26.8	38.6	20	122°41.3	48.4	20	122°55.1	57.8	20	123°08.2	06.6	20	123°20.2	14.6
21	137°27.0	·· 39.6	21	137°41.5	·· 49.3	21	137°55.3	·· 58.7	21	138°08.3	·· 07.5	21	138°20.4	·· 15.6
22	152°27.2	40.5	22	152°41.7	50.3	22	152°55.5	04°59.7	22	153°08.5	08.5	22	153°20.5	16.5
23	167°27.4	41.5	23	167°41.9	51.3	23	167°55.7	05°00.6	23	168°08.7	09.4	23	168°20.7	17.5
	SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 0.9′

30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	182°27.6	S02°42.5	0	182°42.1	S03°52.2	0	182°55.9	S05°01.6	0	183°08.9	S06°10.4	0	183°20.9	S07°18.4
1	197°27.8	43.4	1	197°42.3	53.2	1	197°56.1	02.6	1	198°09.0	11.3	1	198°21.0	19.3
2	212°28.0	44.4	2	212°42.5	54.2	2	212°56.3	03.5	2	213°09.2	12.3	2	213°21.2	20.3
3	227°28.2	·· 45.4	3	227°42.7	·· 55.1	3	227°56.5	·· 04.5	3	228°09.4	·· 13.2	3	228°21.3	·· 21.2
4	242°28.4	46.4	4	242°42.9	56.1	4	242°56.6	05.4	4	243°09.6	14.2	4	243°21.5	22.1
5	257°28.6	47.3	5	257°43.1	57.1	5	257°56.8	06.4	5	258°09.7	15.1	5	258°21.7	23.1
6	272°28.8	S02°48.3	6	272°43.3	S03°58.0	6	272°57.0	S05°07.4	6	273°09.9	S06°16.1	6	273°21.8	S07°24.0
7	287°29.0	49.3	7	287°43.5	03°59.0	7	287°57.2	08.3	7	288°10.1	17.0	7	288°22.0	25.0
8	302°29.2	50.2	8	302°43.7	04°00.0	8	302°57.4	09.3	8	303°10.3	18.0	8	303°22.1	25.9
9	317°29.4	·· 51.2	9	317°43.8	·· 00.9	9	317°57.6	·· 10.2	9	318°10.4	·· 18.9	9	318°22.3	·· 26.8
10	332°29.6	52.2	10	332°44.0	01.9	10	332°57.7	11.2	10	333°10.6	19.9	10	333°22.4	27.8
11	347°29.8	53.1	11	347°44.2	02.9	11	347°57.9	12.1	11	348°10.8	20.8	11	348°22.6	28.7
12	2°30.0	S02°54.1	12	2°44.4	S04°03.8	12	2°58.1	S05°13.1	12	3°10.9	S06°21.8	12	3°22.8	S07°29.6
13	17°30.2	55.1	13	17°44.6	04.8	13	17°58.3	14.1	13	18°11.1	22.7	13	18°22.9	30.6
14	32°30.5	56.1	14	32°44.8	05.8	14	32°58.5	15.0	14	33°11.3	23.7	14	33°23.1	31.5
15	47°30.7	·· 57.0	15	47°45.0	·· 06.7	15	47°58.7	·· 16.0	15	48°11.5	·· 24.6	15	48°23.2	·· 32.5
16	62°30.9	58.0	16	62°45.2	07.7	16	62°58.9	16.9	16	63°11.6	25.5	16	63°23.4	33.4
17	77°31.1	59.0	17	77°45.4	08.7	17	77°59.0	17.9	17	78°11.8	26.5	17	78°23.5	34.3
18	92°31.3	S02°59.9	18	92°45.6	S04°09.6	18	92°59.2	S05°18.8	18	93°12.0	S06°27.4	18	93°23.7	S07°35.3
19	107°31.5	03°00.9	19	107°45.8	10.6	19	107°59.4	19.8	19	108°12.1	28.4	19	108°23.8	36.2
20	122°31.7	01.9	20	122°46.0	11.6	20	122°59.6	20.8	20	123°12.3	29.3	20	123°24.0	37.1
21	137°31.9	·· 02.9	21	137°46.2	·· 12.5	21	137°59.8	·· 21.7	21	138°12.5	·· 30.3	21	138°24.2	·· 38.1
22	152°32.1	03.8	22	152°46.4	13.5	22	153°00.0	22.7	22	153°12.6	31.2	22	153°24.3	39.0
23	167°32.3	04.8	23	167°46.6	14.5	23	168°00.1	23.6	23	168°12.8	32.2	23	168°24.5	39.9
	SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 1.0′		SD=16.0′	d = 0.9′

13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	183°24.6	S07°40.9	0	183°35.1	S08°47.7	0	183°44.2	S09°53.4	0	183°51.9	S10°57.8	0	183°58.0	S12°00.8
1	198°24.8	41.8	1	198°35.2	48.6	1	198°44.3	54.3	1	198°52.0	58.7	1	198°58.1	01.7
2	213°24.9	42.7	2	213°35.3	49.5	2	213°44.4	55.2	2	213°52.1	10°59.6	2	213°58.2	02.5
3	228°25.1	·· 43.7	3	228°35.5	·· 50.5	3	228°44.5	·· 56.1	3	228°52.2	11°00.5	3	228°58.2	·· 03.4
4	243°25.2	44.6	4	243°35.6	51.4	4	243°44.6	57.0	4	243°52.2	01.4	4	243°58.3	04.3
5	258°25.4	45.6	5	258°35.7	52.3	5	258°44.8	57.9	5	258°52.3	02.3	5	258°58.4	05.1
6	273°25.5	S07°46.5	6	273°35.9	S08°53.2	6	273°44.9	S09°58.8	6	273°52.4	S11°03.1	6	273°58.5	S12°06.0
7	288°25.7	47.4	7	288°36.0	54.1	7	288°45.0	09°59.7	7	288°52.5	04.0	7	288°58.5	06.8
8	303°25.8	48.4	8	303°36.1	55.1	8	303°45.1	10°00.6	8	303°52.6	04.9	8	303°58.6	07.7
9	318°26.0	·· 49.3	9	318°36.3	·· 56.0	9	318°45.2	·· 01.5	9	318°52.7	·· 05.8	9	318°58.7	·· 08.6
10	333°26.1	50.2	10	333°36.4	56.9	10	333°45.3	02.4	10	333°52.8	06.7	10	333°58.8	09.4
11	348°26.3	51.2	11	348°36.5	57.8	11	348°45.4	03.3	11	348°52.9	07.6	11	348°58.8	10.3
12	3°26.4	S07°52.1	12	3°36.7	S08°58.7	12	3°45.6	S10°04.2	12	3°53.0	S11°08.4	12	3°58.9	S12°11.1
13	18°26.6	53.0	13	18°36.8	08°59.6	13	18°45.7	05.1	13	18°53.1	09.3	13	18°59.0	12.0
14	33°26.7	54.0	14	33°36.9	09°00.6	14	33°45.8	06.0	14	33°53.2	10.2	14	33°59.0	12.9
15	48°26.9	·· 54.9	15	48°37.1	·· 01.5	15	48°45.9	·· 06.9	15	48°53.3	·· 11.1	15	48°59.1	·· 13.7
16	63°27.0	55.8	16	63°37.2	02.4	16	63°46.0	07.8	16	63°53.4	12.0	16	63°59.2	14.6
17	78°27.2	56.7	17	78°37.3	03.3	17	78°46.1	08.7	17	78°53.5	12.8	17	78°59.2	15.4
18	93°27.3	S07°57.7	18	93°37.5	S09°04.2	18	93°46.2	S10°09.6	18	93°53.6	S11°13.7	18	93°59.3	S12°16.3
19	108°27.5	58.6	19	108°37.6	05.1	19	108°46.4	10.5	19	108°53.6	14.6	19	108°59.4	17.2
20	123°27.6	07°59.5	20	123°37.7	06.1	20	123°46.5	11.4	20	123°53.7	15.5	20	123°59.4	18.0
21	138°27.8	08°00.5	21	138°37.9	·· 07.0	21	138°46.6	·· 12.3	21	138°53.8	·· 16.4	21	138°59.5	·· 18.9
22	153°27.9	01.4	22	153°38.0	07.9	22	153°46.7	13.2	22	153°53.9	17.2	22	153°59.6	19.7
23	168°28.1	02.3	23	168°38.1	08.8	23	168°46.8	14.1	23	168°54.0	18.1	23	168°59.7	20.6
	SD=16.0′	d = 0.9′		SD=16.0′	d = 0.9′		SD=16.0′	d = 0.9′		SD=16.1′	d = 0.9′		SD=16.1′	d = 0.9′

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	183°28.2	S08°03.3	0	183°38.2	S09°09.7	0	183°46.9	S10°15.0	0	183°54.1	S11°19.0	0	183°59.7	S12°21.4
1	198°28.4	04.2	1	198°38.4	10.6	1	198°47.0	15.9	1	198°54.2	19.9	1	198°59.8	22.3
2	213°28.5	05.1	2	213°38.5	11.6	2	213°47.1	16.8	2	213°54.3	20.7	2	213°59.9	23.1
3	228°28.7	·· 06.1	3	228°38.6	·· 12.5	3	228°47.2	·· 17.7	3	228°54.4	·· 21.6	3	228°59.9	·· 24.0
4	243°28.8	07.0	4	243°38.8	13.4	4	243°47.3	18.6	4	243°54.4	22.5	4	244°00.0	24.9
5	258°29.0	07.9	5	258°38.9	14.3	5	258°47.5	19.5	5	258°54.5	23.4	5	259°00.0	25.7
6	273°29.1	S08°08.8	6	273°39.0	S09°15.2	6	273°47.6	S10°20.4	6	273°54.6	S11°24.3	6	274°00.1	S12°26.6
7	288°29.3	09.8	7	288°39.2	16.1	7	288°47.7	21.3	7	288°54.7	25.1	7	289°00.2	27.4
8	303°29.4	10.7	8	303°39.3	17.0	8	303°47.8	22.2	8	303°54.8	26.0	8	304°00.2	28.3
9	318°29.6	·· 11.6	9	318°39.4	·· 18.0	9	318°47.9	·· 23.1	9	318°54.9	·· 26.9	9	319°00.3	·· 29.1
10	333°29.7	12.6	10	333°39.5	18.9	10	333°48.0	24.0	10	333°55.0	27.8	10	334°00.4	30.0
11	348°29.8	13.5	11	348°39.7	19.8	11	348°48.1	24.9	11	348°55.1	28.6	11	349°00.4	30.8
12	3°30.0	S08°14.4	12	3°39.8	S09°20.7	12	3°48.2	S10°25.8	12	3°55.1	S11°29.5	12	4°00.5	S12°31.7
13	18°30.1	15.3	13	18°39.9	21.6	13	18°48.3	26.7	13	18°55.2	30.4	13	19°00.6	32.5
14	33°30.3	16.3	14	33°40.0	22.5	14	33°48.4	27.6	14	33°55.3	31.3	14	34°00.6	33.4
15	48°30.4	·· 17.2	15	48°40.2	·· 23.4	15	48°48.5	·· 28.5	15	48°55.4	·· 32.1	15	49°00.7	·· 34.2
16	63°30.6	18.1	16	63°40.3	24.3	16	63°48.6	29.4	16	63°55.5	33.0	16	64°00.7	35.1
17	78°30.7	19.1	17	78°40.4	25.3	17	78°48.7	30.3	17	78°55.6	33.9	17	79°00.8	35.9
18	93°30.9	S08°20.0	18	93°40.5	S09°26.2	18	93°48.8	S10°31.2	18	93°55.6	S11°34.8	18	94°00.9	S12°36.8
19	108°31.0	20.9	19	108°40.7	27.1	19	108°48.9	32.0	19	108°55.7	35.6	19	109°00.9	37.6
20	123°31.1	21.8	20	123°40.8	28.0	20	123°49.1	32.9	20	123°55.8	36.5	20	124°01.0	38.5
21	138°31.3	·· 22.8	21	138°40.9	·· 28.9	21	138°49.2	·· 33.8	21	138°55.9	·· 37.4	21	139°01.1	·· 39.3
22	153°31.4	23.7	22	153°41.0	29.8	22	153°49.3	34.7	22	153°56.0	38.2	22	154°01.1	40.2
23	168°31.6	24.6	23	168°41.2	30.7	23	168°49.4	35.6	23	168°56.1	39.1	23	169°01.2	41.0
	SD=16.0′	d = 0.9′		SD=16.0′	d = 0.9′		SD=16.1′	d = 0.9′		SD=16.1′	d = 0.9′		SD=16.1′	d = 0.9′

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	183°31.7	S08°25.5	0	183°41.3	S09°31.6	0	183°49.5	S10°36.5	0	183°56.1	S11°40.0	0	184°01.2	S12°41.9
1	198°31.9	26.5	1	198°41.4	32.5	1	198°49.6	37.4	1	198°56.2	40.9	1	199°01.3	42.7
2	213°32.0	27.4	2	213°41.5	33.5	2	213°49.7	38.3	2	213°56.3	41.7	2	214°01.4	43.6
3	228°32.1	·· 28.3	3	228°41.7	·· 34.4	3	228°49.8	·· 39.2	3	228°56.4	·· 42.6	3	229°01.4	·· 44.4
4	243°32.3	29.2	4	243°41.8	35.3	4	243°49.9	40.1	4	243°56.5	43.5	4	244°01.5	45.3
5	258°32.4	30.2	5	258°41.9	36.2	5	258°50.0	41.0	5	258°56.6	44.3	5	259°01.5	46.1
6	273°32.6	S08°31.1	6	273°42.0	S09°37.1	6	273°50.1	S10°41.9	6	273°56.6	S11°45.2	6	274°01.6	S12°47.0
7	288°32.7	32.0	7	288°42.1	38.0	7	288°50.2	42.7	7	288°56.7	46.1	7	289°01.6	47.8
8	303°32.8	32.9	8	303°42.3	38.9	8	303°50.3	43.6	8	303°56.8	46.9	8	304°01.7	48.6
9	318°33.0	·· 33.9	9	318°42.4	·· 39.8	9	318°50.4	·· 44.5	9	318°56.9	·· 47.8	9	319°01.8	·· 49.5
10	333°33.1	34.8	10	333°42.5	40.7	10	333°50.5	45.4	10	333°56.9	48.7	10	334°01.8	50.3
11	348°33.3	35.7	11	348°42.6	41.6	11	348°50.6	46.3	11	348°57.0	49.5	11	349°01.9	51.2
12	3°33.4	S08°36.6	12	3°42.8	S09°42.5	12	3°50.7	S10°47.2	12	3°57.1	S11°50.4	12	4°01.9	S12°52.0
13	18°33.5	37.6	13	18°42.9	43.4	13	18°50.8	48.1	13	18°57.2	51.3	13	19°02.0	52.9
14	33°33.7	38.5	14	33°43.0	44.3	14	33°50.9	49.0	14	33°57.3	52.2	14	34°02.0	53.7
15	48°33.8	·· 39.4	15	48°43.1	·· 45.3	15	48°51.0	·· 49.9	15	48°57.3	·· 53.0	15	49°02.1	·· 54.6
16	63°34.0	40.3	16	63°43.2	46.2	16	63°51.1	50.7	16	63°57.4	53.9	16	64°02.1	55.4
17	78°34.1	41.2	17	78°43.4	47.1	17	78°51.2	51.6	17	78°57.5	54.7	17	79°02.2	56.2
18	93°34.2	S08°42.2	18	93°43.5	S09°48.0	18	93°51.3	S10°52.5	18	93°57.6	S11°55.6	18	94°02.3	S12°57.1
19	108°34.4	43.1	19	108°43.6	48.9	19	108°51.4	53.4	19	108°57.6	56.5	19	109°02.3	57.9
20	123°34.5	44.0	20	123°43.7	49.8	20	123°51.5	54.3	20	123°57.7	57.3	20	124°02.4	58.8
21	138°34.6	·· 44.9	21	138°43.8	·· 50.7	21	138°51.6	·· 55.2	21	138°57.8	·· 58.2	21	139°02.4	12°59.6
22	153°34.8	45.9	22	153°43.9	51.6	22	153°51.7	56.1	22	153°57.9	59.1	22	154°02.5	13°00.4
23	168°34.9	46.8	23	168°44.1	52.5	23	168°51.8	56.9	23	168°57.9	59.9	23	169°02.5	01.3
	SD=16.0′	d = 0.9′		SD=16.0′	d = 0.9′		SD=16.1′	d = 0.9′		SD=16.1′	d = 0.9′		SD=16.1′	d = 0.8′

28	GHA	Dec	31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec
0	184°02.6	S13°02.1	0	184°05.4	S14°01.6	0	184°06.6	S14°59.1	0	184°06.0	S15°54.3	0	184°03.5	S16°47.2
1	199°02.6	03.0	1	199°05.5	02.4	1	199°06.6	14°59.8	1	199°05.9	55.0	1	199°03.4	47.9
2	214°02.7	03.8	2	214°05.5	03.2	2	214°06.6	15°00.6	2	214°05.9	55.8	2	214°03.4	48.6
3	229°02.7	·· 04.6	3	229°05.5	·· 04.0	3	229°06.6	·· 01.4	3	229°05.9	·· 56.5	3	229°03.3	·· 49.3
4	244°02.8	05.5	4	244°05.6	04.9	4	244°06.6	02.2	4	244°05.9	57.3	4	244°03.3	50.0
5	259°02.8	06.3	5	259°05.6	05.7	5	259°06.6	03.0	5	259°05.8	58.0	5	259°03.2	50.7
6	274°02.9	S13°07.2	6	274°05.6	S14°06.5	6	274°06.6	S15°03.7	6	274°05.8	S15°58.8	6	274°03.2	S16°51.4
7	289°02.9	08.0	7	289°05.6	07.3	7	289°06.6	04.5	7	289°05.8	15°59.5	7	289°03.1	52.2
8	304°03.0	08.8	8	304°05.7	08.1	8	304°06.6	05.3	8	304°05.8	16°00.3	8	304°03.1	52.9
9	319°03.0	·· 09.7	9	319°05.7	·· 08.9	9	319°06.6	·· 06.1	9	319°05.7	·· 01.0	9	319°03.0	·· 53.6
10	334°03.1	10.5	10	334°05.7	09.7	10	334°06.6	06.9	10	334°05.7	01.8	10	334°03.0	54.3
11	349°03.1	11.3	11	349°05.7	10.5	11	349°06.6	07.6	11	349°05.7	02.5	11	349°02.9	55.0
12	4°03.2	S13°12.2	12	4°05.8	S14°11.3	12	4°06.6	S15°08.4	12	4°05.7	S16°03.3	12	4°02.9	S16°55.7
13	19°03.2	13.0	13	19°05.8	12.1	13	19°06.6	09.2	13	19°05.6	04.0	13	19°02.8	56.4
14	34°03.3	13.8	14	34°05.8	12.9	14	34°06.6	10.0	14	34°05.6	04.8	14	34°02.8	57.1
15	49°03.3	·· 14.7	15	49°05.8	·· 13.7	15	49°06.6	·· 10.8	15	49°05.6	·· 05.5	15	49°02.7	·· 57.8
16	64°03.4	15.5	16	64°05.8	14.6	16	64°06.6	11.5	16	64°05.6	06.3	16	64°02.7	58.6
17	79°03.4	16.3	17	79°05.9	15.4	17	79°06.6	12.3	17	79°05.5	07.0	17	79°02.6	16°59.3
18	94°03.4	S13°17.2	18	94°05.9	S14°16.2	18	94°06.6	S15°13.1	18	94°05.5	S16°07.7	18	94°02.5	S17°00.0
19	109°03.5	18.0	19	109°05.9	17.0	19	109°06.6	13.9	19	109°05.5	08.5	19	109°02.5	00.7
20	124°03.5	18.8	20	124°05.9	17.8	20	124°06.6	14.6	20	124°05.5	09.2	20	124°02.4	01.4
21	139°03.6	·· 19.7	21	139°06.0	·· 18.6	21	139°06.6	·· 15.4	21	139°05.4	·· 10.0	21	139°02.4	·· 02.1
22	154°03.6	20.5	22	154°06.0	19.4	22	154°06.6	16.2	22	154°05.4	10.7	22	154°02.3	02.8
23	169°03.7	21.3	23	169°06.0	20.2	23	169°06.6	17.0	23	169°05.4	11.4	23	169°02.3	03.5
	SD=16.1′	d = 0.8′		SD=16.1′	d = 0.8′		SD=16.1′	d = 0.8′		SD=16.1′	d = 0.8′		SD=16.1′	d = 0.7′

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	184°03.7	S13°22.2	0	184°06.0	S14°21.0	0	184°06.6	S15°17.7	0	184°05.3	S16°12.2	0	184°02.2	S17°04.2
1	199°03.8	23.0	1	199°06.0	21.8	1	199°06.6	18.5	1	199°05.3	12.9	1	199°02.2	04.9
2	214°03.8	23.8	2	214°06.1	22.6	2	214°06.6	19.3	2	214°05.3	13.7	2	214°02.1	05.6
3	229°03.8	·· 24.7	3	229°06.1	·· 23.4	3	229°06.6	·· 20.0	3	229°05.2	·· 14.4	3	229°02.0	·· 06.3
4	244°03.9	25.5	4	244°06.1	24.2	4	244°06.6	20.8	4	244°05.2	15.1	4	244°02.0	07.0
5	259°03.9	26.3	5	259°06.1	25.0	5	259°06.6	21.6	5	259°05.2	15.9	5	259°01.9	07.7
6	274°04.0	S13°27.1	6	274°06.1	S14°25.8	6	274°06.5	S15°22.4	6	274°05.1	S16°16.6	6	274°01.9	S17°08.4
7	289°04.0	28.0	7	289°06.2	26.6	7	289°06.5	23.1	7	289°05.1	17.4	7	289°01.8	09.1
8	304°04.1	28.8	8	304°06.2	27.4	8	304°06.5	23.9	8	304°05.1	18.1	8	304°01.8	09.8
9	319°04.1	·· 29.6	9	319°06.2	·· 28.2	9	319°06.5	·· 24.7	9	319°05.0	·· 18.8	9	319°01.7	·· 10.5
10	334°04.1	30.5	10	334°06.2	29.0	10	334°06.5	25.4	10	334°05.0	19.6	10	334°01.6	11.2
11	349°04.2	31.3	11	349°06.2	29.8	11	349°06.5	26.2	11	349°05.0	20.3	11	349°01.6	11.9
12	4°04.2	S13°32.1	12	4°06.2	S14°30.6	12	4°06.5	S15°27.0	12	4°04.9	S16°21.0	12	4°01.5	S17°12.6
13	19°04.3	32.9	13	19°06.3	31.4	13	19°06.5	27.7	13	19°04.9	21.8	13	19°01.4	13.3
14	34°04.3	33.8	14	34°06.3	32.2	14	34°06.5	28.5	14	34°04.9	22.5	14	34°01.4	14.0
15	49°04.3	·· 34.6	15	49°06.3	·· 33.0	15	49°06.5	·· 29.3	15	49°04.8	·· 23.2	15	49°01.3	·· 14.7
16	64°04.4	35.4	16	64°06.3	33.8	16	64°06.5	30.0	16	64°04.8	24.0	16	64°01.3	15.4
17	79°04.4	36.2	17	79°06.3	34.6	17	79°06.5	30.8	17	79°04.8	24.7	17	79°01.2	16.1
18	94°04.4	S13°37.1	18	94°06.3	S14°35.4	18	94°06.4	S15°31.6	18	94°04.7	S16°25.4	18	94°01.1	S17°16.8
19	109°04.5	37.9	19	109°06.3	36.2	19	109°06.4	32.3	19	109°04.7	26.2	19	109°01.1	17.5
20	124°04.5	38.7	20	124°06.4	37.0	20	124°06.4	33.1	20	124°04.7	26.9	20	124°01.0	18.2
21	139°04.6	·· 39.5	21	139°06.4	·· 37.8	21	139°06.4	·· 33.9	21	139°04.6	·· 27.6	21	139°00.9	·· 18.9
22	154°04.6	40.3	22	154°06.4	38.6	22	154°06.4	34.6	22	154°04.6	28.4	22	154°00.9	19.6
23	169°04.6	41.2	23	169°06.4	39.4	23	169°06.4	35.4	23	169°04.5	29.1	23	169°00.8	20.3
	SD=16.1′	d = 0.8′		SD=16.1′	d = 0.8′		SD=16.1′	d = 0.8′		SD=16.1′	d = 0.7′		SD=16.1′	d = 0.7′

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	184°04.7	S13°42.0	0	184°06.4	S14°40.1	0	184°06.4	S15°36.1	0	184°04.5	S16°29.8	0	184°00.8	S17°21.0
1	199°04.7	42.8	1	199°06.4	40.9	1	199°06.4	36.9	1	199°04.5	30.5	1	199°00.7	21.7
2	214°04.7	43.6	2	214°06.4	41.7	2	214°06.3	37.7	2	214°04.4	31.3	2	214°00.6	22.4
3	229°04.8	·· 44.5	3	229°06.4	·· 42.5	3	229°06.3	·· 38.4	3	229°04.4	·· 32.0	3	229°00.6	·· 23.1
4	244°04.8	45.3	4	244°06.4	43.3	4	244°06.3	39.2	4	244°04.3	32.7	4	244°00.5	23.7
5	259°04.8	46.1	5	259°06.5	44.1	5	259°06.3	39.9	5	259°04.3	33.4	5	259°00.4	24.4
6	274°04.9	S13°46.9	6	274°06.5	S14°44.9	6	274°06.3	S15°40.7	6	274°04.3	S16°34.2	6	274°00.4	S17°25.1
7	289°04.9	47.7	7	289°06.5	45.7	7	289°06.3	41.5	7	289°04.2	34.9	7	289°00.3	25.8
8	304°04.9	48.6	8	304°06.5	46.5	8	304°06.3	42.2	8	304°04.2	35.6	8	304°00.2	26.5
9	319°05.0	·· 49.4	9	319°06.5	·· 47.3	9	319°06.2	·· 43.0	9	319°04.1	·· 36.3	9	319°00.1	·· 27.2
10	334°05.0	50.2	10	334°06.5	48.1	10	334°06.2	43.7	10	334°04.1	37.1	10	334°00.1	27.9
11	349°05.0	51.0	11	349°06.5	48.8	11	349°06.2	44.5	11	349°04.1	37.8	11	349°00.0	28.6
12	4°05.1	S13°51.8	12	4°06.5	S14°49.6	12	4°06.2	S15°45.3	12	4°04.0	S16°38.5	12	3°59.9	S17°29.3
13	19°05.1	52.6	13	19°06.5	50.4	13	19°06.2	46.0	13	19°04.0	39.2	13	18°59.9	29.9
14	34°05.1	53.5	14	34°06.5	51.2	14	34°06.2	46.8	14	34°03.9	40.0	14	33°59.8	30.6
15	49°05.2	·· 54.3	15	49°06.5	·· 52.0	15	49°06.1	·· 47.5	15	49°03.9	·· 40.7	15	48°59.7	·· 31.3
16	64°05.2	55.1	16	64°06.6	52.8	16	64°06.1	48.3	16	64°03.8	41.4	16	63°59.7	32.0
17	79°05.2	55.9	17	79°06.6	53.6	17	79°06.1	49.0	17	79°03.8	42.1	17	78°59.6	32.7
18	94°05.3	S13°56.7	18	94°06.6	S14°54.4	18	94°06.1	S15°49.8	18	94°03.7	S16°42.8	18	93°59.5	S17°33.4
19	109°05.3	57.5	19	109°06.6	55.1	19	109°06.1	50.5	19	109°03.7	43.6	19	108°59.4	34.0
20	124°05.3	58.4	20	124°06.6	55.9	20	124°06.0	51.3	20	124°03.7	44.3	20	123°59.4	34.7
21	139°05.4	13°59.2	21	139°06.6	·· 56.7	21	139°06.0	·· 52.0	21	139°03.6	·· 45.0	21	138°59.3	·· 35.4
22	154°05.4	14°00.0	22	154°06.6	57.5	22	154°06.0	52.8	22	154°03.6	45.7	22	153°59.2	36.1
23	169°05.4	00.8	23	169°06.6	58.3	23	169°06.0	53.5	23	169°03.5	46.4	23	168°59.1	36.8
	SD=16.1′	d = 0.8′		SD=16.1′	d = 0.8′		SD=16.1′	d = 0.8′		SD=16.1′	d = 0.7′		SD=16.1′	d = 0.7′

12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec
0	183°59.1	S17°37.5	0	183°52.7	S18°25.0	0	183°44.5	S19°09.7	0	183°34.3	S19°51.3	0	183°22.3	S20°29.7
1	198°59.0	38.1	1	198°52.6	25.7	1	198°44.4	10.3	1	198°34.2	51.9	1	198°22.1	30.2
2	213°58.9	38.8	2	213°52.5	26.3	2	213°44.2	10.9	2	213°34.0	52.4	2	213°21.9	30.7
3	228°58.8	·· 39.5	3	228°52.4	·· 27.0	3	228°44.1	·· 11.5	3	228°33.9	·· 53.0	3	228°21.8	·· 31.2
4	243°58.8	40.2	4	243°52.3	27.6	4	243°44.0	12.1	4	243°33.7	53.5	4	243°21.6	31.7
5	258°58.7	40.8	5	258°52.2	28.2	5	258°43.8	12.7	5	258°33.5	54.1	5	258°21.4	32.2
6	273°58.6	S17°41.5	6	273°52.1	S18°28.9	6	273°43.7	S19°13.3	6	273°33.4	S19°54.6	6	273°21.2	S20°32.7
7	288°58.5	42.2	7	288°52.0	29.5	7	288°43.6	13.9	7	288°33.2	55.2	7	288°21.0	33.2
8	303°58.5	42.9	8	303°51.9	30.1	8	303°43.4	14.5	8	303°33.1	55.7	8	303°20.9	33.7
9	318°58.4	·· 43.6	9	318°51.8	·· 30.8	9	318°43.3	·· 15.1	9	318°32.9	·· 56.3	9	318°20.7	·· 34.2
10	333°58.3	44.2	10	333°51.7	31.4	10	333°43.2	15.7	10	333°32.8	56.8	10	333°20.5	34.7
11	348°58.2	44.9	11	348°51.6	32.1	11	348°43.1	16.3	11	348°32.6	57.4	11	348°20.3	35.2
12	3°58.2	S17°45.6	12	3°51.5	S18°32.7	12	3°42.9	S19°16.9	12	3°32.4	S19°57.9	12	3°20.1	S20°35.7
13	18°58.1	46.3	13	18°51.4	33.3	13	18°42.8	17.5	13	18°32.3	58.5	13	18°19.9	36.2
14	33°58.0	46.9	14	33°51.3	34.0	14	33°42.7	18.1	14	33°32.1	59.0	14	33°19.8	36.7
15	48°57.9	·· 47.6	15	48°51.2	·· 34.6	15	48°42.5	·· 18.6	15	48°32.0	19°59.6	15	48°19.6	·· 37.2
16	63°57.8	48.3	16	63°51.1	35.2	16	63°42.4	19.2	16	63°31.8	20°00.1	16	63°19.4	37.7
17	78°57.8	48.9	17	78°51.0	35.9	17	78°42.3	19.8	17	78°31.6	00.7	17	78°19.2	38.2
18	93°57.7	S17°49.6	18	93°50.9	S18°36.5	18	93°42.1	S19°20.4	18	93°31.5	S20°01.2	18	93°19.0	S20°38.7
19	108°57.6	50.3	19	108°50.8	37.1	19	108°42.0	21.0	19	108°31.3	01.8	19	108°18.8	39.2
20	123°57.5	51.0	20	123°50.6	37.7	20	123°41.8	21.6	20	123°31.2	02.3	20	123°18.7	39.7
21	138°57.4	·· 51.6	21	138°50.5	·· 38.4	21	138°41.7	·· 22.2	21	138°31.0	·· 02.9	21	138°18.5	·· 40.2
22	153°57.3	52.3	22	153°50.4	39.0	22	153°41.6	22.8	22	153°30.8	03.4	22	153°18.3	40.7
23	168°57.3	53.0	23	168°50.3	39.6	23	168°41.4	23.3	23	168°30.7	03.9	23	168°18.1	41.2
	SD=16.1′	$d=0.7'$		SD=16.2′	$d=0.6'$		SD=16.2′	$d=0.6'$		SD=16.2′	$d=0.6'$		SD=16.2′	$d=0.5'$

13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	183°57.2	S17°53.6	0	183°50.2	S18°40.3	0	183°41.3	S19°23.9	0	183°30.5	S20°04.5	0	183°17.9	S20°41.7
1	198°57.1	54.3	1	198°50.1	40.9	1	198°41.2	24.5	1	198°30.4	05.0	1	198°17.7	42.2
2	213°57.0	55.0	2	213°50.0	41.5	2	213°41.0	25.1	2	213°30.2	05.6	2	213°17.5	42.7
3	228°56.9	·· 55.6	3	228°49.9	·· 42.1	3	228°40.9	·· 25.7	3	228°30.0	·· 06.1	3	228°17.3	·· 43.2
4	243°56.8	56.3	4	243°49.8	42.8	4	243°40.8	26.3	4	243°29.9	06.6	4	243°17.2	43.7
5	258°56.8	57.0	5	258°49.7	43.4	5	258°40.6	26.9	5	258°29.7	07.2	5	258°17.0	44.2
6	273°56.7	S17°57.6	6	273°49.5	S18°44.0	6	273°40.5	S19°27.4	6	273°29.5	S20°07.7	6	273°16.8	S20°44.7
7	288°56.6	58.3	7	288°49.4	44.6	7	288°40.3	28.0	7	288°29.4	08.2	7	288°16.6	45.2
8	303°56.5	58.9	8	303°49.3	45.3	8	303°40.2	28.6	8	303°29.2	08.8	8	303°16.4	45.6
9	318°56.4	17°59.6	9	318°49.2	·· 45.9	9	318°40.1	·· 29.2	9	318°29.0	·· 09.3	9	318°16.2	·· 46.1
10	333°56.3	18°00.3	10	333°49.1	46.5	10	333°39.9	29.8	10	333°28.9	09.8	10	333°16.0	46.6
11	348°56.2	00.9	11	348°49.0	47.1	11	348°39.8	30.3	11	348°28.7	10.4	11	348°15.8	47.1
12	3°56.2	S18°01.6	12	3°48.9	S18°47.7	12	3°39.6	S19°30.9	12	3°28.5	S20°10.9	12	3°15.6	S20°47.6
13	18°56.1	02.3	13	18°48.7	48.4	13	18°39.5	31.5	13	18°28.4	11.4	13	18°15.4	48.1
14	33°56.0	02.9	14	33°48.6	49.0	14	33°39.4	32.1	14	33°28.2	12.0	14	33°15.3	48.6
15	48°55.9	·· 03.6	15	48°48.5	·· 49.6	15	48°39.2	·· 32.6	15	48°28.0	·· 12.5	15	48°15.1	·· 49.0
16	63°55.8	04.2	16	63°48.4	50.2	16	63°39.1	33.2	16	63°27.9	13.0	16	63°14.9	49.5
17	78°55.7	04.9	17	78°48.3	50.8	17	78°38.9	33.8	17	78°27.7	13.6	17	78°14.7	50.0
18	93°55.6	S18°05.6	18	93°48.2	S18°51.5	18	93°38.8	S19°34.4	18	93°27.5	S20°14.1	18	93°14.5	S20°50.5
19	108°55.5	06.2	19	108°48.0	52.1	19	108°38.6	34.9	19	108°27.4	14.6	19	108°14.3	51.0
20	123°55.4	06.9	20	123°47.9	52.7	20	123°38.5	35.5	20	123°27.2	15.2	20	123°14.1	51.5
21	138°55.3	·· 07.5	21	138°47.8	·· 53.3	21	138°38.3	·· 36.1	21	138°27.0	·· 15.7	21	138°13.9	·· 51.9
22	153°55.3	08.2	22	153°47.7	53.9	22	153°38.2	36.7	22	153°26.8	16.2	22	153°13.7	52.4
23	168°55.2	08.8	23	168°47.6	54.5	23	168°38.1	37.2	23	168°26.7	16.7	23	168°13.5	52.9
	SD=16.2′	$d=0.7'$		SD=16.2′	$d=0.6'$		SD=16.2′	$d=0.6'$		SD=16.2′	$d=0.5'$		SD=16.2′	$d=0.5'$

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	183°55.1	S18°09.5	0	183°47.5	S18°55.2	0	183°37.9	S19°37.8	0	183°26.5	S20°17.3	0	183°13.3	S20°53.4
1	198°55.0	10.1	1	198°47.3	55.8	1	198°37.8	38.4	1	198°26.3	17.8	1	198°13.1	53.8
2	213°54.9	10.8	2	213°47.2	56.4	2	213°37.6	38.9	2	213°26.2	18.3	2	213°12.9	54.3
3	228°54.8	·· 11.4	3	228°47.1	·· 57.0	3	228°37.5	·· 39.5	3	228°26.0	·· 18.8	3	228°12.7	·· 54.8
4	243°54.7	12.1	4	243°47.0	57.6	4	243°37.3	40.1	4	243°25.8	19.4	4	243°12.5	55.3
5	258°54.6	12.8	5	258°46.9	58.2	5	258°37.2	40.6	5	258°25.6	19.9	5	258°12.3	55.7
6	273°54.5	S18°13.4	6	273°46.7	S18°58.8	6	273°37.0	S19°41.2	6	273°25.5	S20°20.4	6	273°12.2	S20°56.2
7	288°54.4	14.1	7	288°46.6	18°59.4	7	288°36.9	41.8	7	288°25.3	20.9	7	288°12.0	56.7
8	303°54.3	14.7	8	303°46.5	19°00.0	8	303°36.7	42.3	8	303°25.1	21.4	8	303°11.8	57.2
9	318°54.2	·· 15.4	9	318°46.4	·· 00.7	9	318°36.6	·· 42.9	9	318°25.0	·· 22.0	9	318°11.6	·· 57.6
10	333°54.1	16.0	10	333°46.2	01.3	10	333°36.4	43.5	10	333°24.8	22.5	10	333°11.4	58.1
11	348°54.0	16.7	11	348°46.1	01.9	11	348°36.3	44.0	11	348°24.6	23.0	11	348°11.2	58.6
12	3°53.9	S18°17.3	12	3°46.0	S19°02.5	12	3°36.1	S19°44.6	12	3°24.4	S20°23.5	12	3°11.0	S20°59.0
13	18°53.8	17.9	13	18°45.9	03.1	13	18°36.0	45.2	13	18°24.3	24.0	13	18°10.8	20°59.5
14	33°53.7	18.6	14	33°45.7	03.7	14	33°35.8	45.7	14	33°24.1	24.6	14	33°10.6	21°00.0
15	48°53.6	·· 19.2	15	48°45.6	·· 04.3	15	48°35.7	·· 46.3	15	48°23.9	·· 25.1	15	48°10.4	·· 00.5
16	63°53.5	19.9	16	63°45.5	04.9	16	63°35.5	46.9	16	63°23.7	25.6	16	63°10.2	00.9
17	78°53.4	20.5	17	78°45.4	05.5	17	78°35.4	47.4	17	78°23.6	26.1	17	78°10.0	01.4
18	93°53.3	S18°21.2	18	93°45.2	S19°06.1	18	93°35.2	S19°48.0	18	93°23.4	S20°26.6	18	93°09.8	S21°01.8
19	108°53.2	21.8	19	108°45.1	06.7	19	108°35.1	48.5	19	108°23.2	27.1	19	108°09.6	02.3
20	123°53.1	22.5	20	123°45.0	07.3	20	123°34.9	49.1	20	123°23.0	27.6	20	123°09.4	02.8
21	138°53.0	·· 23.1	21	138°44.9	·· 07.9	21	138°34.8	·· 49.7	21	138°22.8	·· 28.1	21	138°09.2	·· 03.2
22	153°52.9	23.8	22	153°44.7	08.5	22	153°34.6	50.2	22	153°22.7	28.7	22	153°09.0	03.7
23	168°52.8	24.4	23	168°44.6	09.1	23	168°34.5	50.8	23	168°22.5	29.2	23	168°08.8	04.2
	SD=16.2′	$d=0.7'$		SD=16.2′	$d=0.6'$		SD=16.2′	$d=0.6'$		SD=16.2′	$d=0.5'$		SD=16.2′	$d=0.5'$

27	GHA	Dec	30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec
0	183°08.6	S21°04.6	0	182°53.2	S21°36.0	0	182°36.4	S22°03.7	0	182°18.3	S22°27.5	0	181°58.9	S22°47.4
1	198°08.4	05.1	1	197°53.0	36.4	1	197°36.1	04.0	1	197°18.0	27.8	1	196°58.7	47.7
2	213°08.2	05.5	2	212°52.8	36.8	2	212°35.9	04.4	2	212°17.7	28.1	2	211°58.4	47.9
3	228°07.9	·· 06.0	3	227°52.5	·· 37.2	3	227°35.7	·· 04.7	3	227°17.5	·· 28.4	3	226°58.1	·· 48.2
4	243°07.7	06.5	4	242°52.3	37.6	4	242°35.4	05.1	4	242°17.2	28.7	4	241°57.8	48.4
5	258°07.5	06.9	5	257°52.1	38.0	5	257°35.2	05.5	5	257°16.9	29.0	5	256°57.5	48.6
6	273°07.3	S21°07.4	6	272°51.9	S21°38.5	6	272°34.9	S22°05.8	6	272°16.7	S22°29.3	6	271°57.3	S22°48.9
7	288°07.1	07.8	7	287°51.6	38.9	7	287°34.7	06.2	7	287°16.4	29.6	7	286°57.0	49.1
8	303°06.9	08.3	8	302°51.4	39.3	8	302°34.4	06.5	8	302°16.2	29.9	8	301°56.7	49.4
9	318°06.7	·· 08.7	9	317°51.2	·· 39.7	9	317°34.2	·· 06.9	9	317°15.9	·· 30.2	9	316°56.4	·· 49.6
10	333°06.5	09.2	10	332°51.0	40.1	10	332°33.9	07.2	10	332°15.6	30.5	10	331°56.2	49.9
11	348°06.3	09.7	11	347°50.7	40.5	11	347°33.7	07.6	11	347°15.4	30.8	11	346°55.9	50.1
12	3°06.1	S21°10.1	12	2°50.5	S21°40.9	12	2°33.5	S22°07.9	12	2°15.1	S22°31.1	12	1°55.6	S22°50.3
13	18°05.9	10.6	13	17°50.3	41.3	13	17°33.2	08.3	13	17°14.8	31.4	13	16°55.3	50.6
14	33°05.7	11.0	14	32°50.0	41.7	14	32°33.0	08.6	14	32°14.6	31.7	14	31°55.0	50.8
15	48°05.5	·· 11.5	15	47°49.8	·· 42.1	15	47°32.7	·· 09.0	15	47°14.3	·· 32.0	15	46°54.8	·· 51.1
16	63°05.3	11.9	16	62°49.6	42.5	16	62°32.5	09.3	16	62°14.1	32.3	16	61°54.5	51.3
17	78°05.1	12.4	17	77°49.4	42.9	17	77°32.2	09.7	17	77°13.8	32.6	17	76°54.2	51.5
18	93°04.9	S21°12.8	18	92°49.1	S21°43.3	18	92°32.0	S22°10.0	18	92°13.5	S22°32.9	18	91°53.9	S22°51.8
19	108°04.7	13.3	19	107°48.9	43.7	19	107°31.7	10.3	19	107°13.3	33.1	19	106°53.6	52.0
20	123°04.4	13.7	20	122°48.7	44.1	20	122°31.5	10.7	20	122°13.0	33.4	20	121°53.4	52.2
21	138°04.2	·· 14.2	21	137°48.4	·· 44.5	21	137°31.2	·· 11.0	21	137°12.7	·· 33.7	21	136°53.1	·· 52.5
22	153°04.0	14.6	22	152°48.2	44.9	22	152°31.0	11.4	22	152°12.5	34.0	22	151°52.8	52.7
23	168°03.8	15.0	23	167°48.0	45.3	23	167°30.7	11.7	23	167°12.2	34.3	23	166°52.5	52.9
	SD=16.2′	$d=0.5'$		SD=16.2′	$d=0.4'$		SD=16.2′	$d=0.4'$		SD=16.2′	$d=0.3'$		SD=16.2′	$d=0.2'$

28	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	183°03.6	S21°15.5	0	182°47.8	S21°45.6	0	182°30.5	S22°12.1	0	182°11.9	S22°34.6	0	181°52.2	S22°53.2
1	198°03.4	15.9	1	197°47.5	46.0	1	197°30.2	12.4	1	197°11.7	34.9	1	196°52.0	53.4
2	213°03.2	16.4	2	212°47.3	46.4	2	212°30.0	12.7	2	212°11.4	35.2	2	211°51.7	53.6
3	228°03.0	·· 16.8	3	227°47.1	·· 46.8	3	227°29.7	·· 13.1	3	227°11.1	·· 35.4	3	226°51.4	·· 53.8
4	243°02.8	17.3	4	242°46.8	47.2	4	242°29.5	13.4	4	242°10.9	35.7	4	241°51.1	54.1
5	258°02.6	17.7	5	257°46.6	47.6	5	257°29.2	13.7	5	257°10.6	36.0	5	256°50.8	54.3
6	273°02.3	S21°18.1	6	272°46.4	S21°48.0	6	272°29.0	S22°14.1	6	272°10.3	S22°36.3	6	271°50.6	S22°54.5
7	288°02.1	18.6	7	287°46.1	48.4	7	287°28.7	14.4	7	287°10.1	36.6	7	286°50.3	54.7
8	303°01.9	19.0	8	302°45.9	48.8	8	302°28.5	14.7	8	302°09.8	36.8	8	301°50.0	55.0
9	318°01.7	·· 19.5	9	317°45.7	·· 49.2	9	317°28.2	·· 15.1	9	317°09.5	·· 37.1	9	316°49.7	·· 55.2
10	333°01.5	19.9	10	332°45.4	49.5	10	332°28.0	15.4	10	332°09.3	37.4	10	331°49.4	55.4
11	348°01.3	20.3	11	347°45.2	49.9	11	347°27.7	15.7	11	347°09.0	37.7	11	346°49.2	55.6
12	3°01.1	S21°20.8	12	2°45.0	S21°50.3	12	2°27.5	S22°16.1	12	2°08.7	S22°38.0	12	1°48.9	S22°55.9
13	18°00.9	21.2	13	17°44.7	50.7	13	17°27.2	16.4	13	17°08.5	38.2	13	16°48.6	56.1
14	33°00.6	21.6	14	32°44.5	51.1	14	32°27.0	16.7	14	32°08.2	38.5	14	31°48.3	56.3
15	48°00.4	·· 22.1	15	47°44.3	·· 51.5	15	47°26.7	·· 17.1	15	47°07.9	·· 38.8	15	46°48.0	·· 56.5
16	63°00.2	22.5	16	62°44.0	51.8	16	62°26.5	17.4	16	62°07.7	39.1	16	61°47.7	56.7
17	78°00.0	22.9	17	77°43.8	52.2	17	77°26.2	17.7	17	77°07.4	39.3	17	76°47.5	57.0
18	92°59.8	S21°23.4	18	92°43.6	S21°52.6	18	92°26.0	S22°18.1	18	92°07.1	S22°39.6	18	91°47.2	S22°57.2
19	107°59.6	23.8	19	107°43.3	53.0	19	107°25.7	18.4	19	107°06.8	39.9	19	106°46.9	57.4
20	122°59.4	24.2	20	122°43.1	53.4	20	122°25.5	18.7	20	122°06.6	40.1	20	121°46.6	57.6
21	137°59.1	·· 24.7	21	137°42.9	·· 53.7	21	137°25.2	·· 19.0	21	137°06.3	·· 40.4	21	136°46.3	·· 57.8
22	152°58.9	25.1	22	152°42.6	54.1	22	152°24.9	19.4	22	152°06.0	40.7	22	151°46.0	58.0
23	167°58.7	25.5	23	167°42.4	54.5	23	167°24.7	19.7	23	167°05.8	41.0	23	166°45.7	58.2
	SD=16.2′	$d=0.4'$		SD=16.2′	$d=0.4'$		SD=16.2′	$d=0.3'$		SD=16.2′	$d=0.3'$		SD=16.2′	$d=0.2'$

29	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	182°58.5	S21°26.0	0	182°42.2	S21°54.9	0	182°24.4	S22°20.0	0	182°05.5	S22°41.2	0	181°45.5	S22°58.5
1	197°58.3	26.4	1	197°41.9	55.2	1	197°24.2	20.3	1	197°05.2	41.5	1	196°45.2	58.7
2	212°58.1	26.8	2	212°41.7	55.6	2	212°23.9	20.6	2	212°04.9	41.8	2	211°44.9	58.9
3	227°57.8	·· 27.2	3	227°41.4	·· 56.0	3	227°23.7	·· 21.0	3	227°04.7	·· 42.0	3	226°44.6	·· 59.1
4	242°57.6	27.7	4	242°41.2	56.4	4	242°23.4	21.3	4	242°04.4	42.3	4	241°44.3	59.3
5	257°57.4	28.1	5	257°41.0	56.7	5	257°23.2	21.6	5	257°04.1	42.5	5	256°44.0	59.5
6	272°57.2	S21°28.5	6	272°40.7	S21°57.1	6	272°22.9	S22°21.9	6	272°03.9	S22°42.8	6	271°43.8	S22°59.7
7	287°57.0	28.9	7	287°40.5	57.5	7	287°22.6	22.2	7	287°03.6	43.1	7	286°43.5	22°59.9
8	302°56.7	29.3	8	302°40.2	57.9	8	302°22.4	22.6	8	302°03.3	43.3	8	301°43.2	23°00.1
9	317°56.5	·· 29.8	9	317°40.0	·· 58.2	9	317°22.1	·· 22.9	9	317°03.0	·· 43.6	9	316°42.9	·· 00.3
10	332°56.3	30.2	10	332°39.8	58.6	10	332°21.9	23.2	10	332°02.8	43.9	10	331°42.6	00.5
11	347°56.1	30.6	11	347°39.5	59.0	11	347°21.6	23.5	11	347°02.5	44.1	11	346°42.3	00.7
12	2°55.9	S21°31.0	12	2°39.3	S21°59.3	12	2°21.4	S22°23.8	12	2°02.2	S22°44.4	12	1°42.0	S23°00.9
13	17°55.6	31.4	13	17°39.1	21°59.7	13	17°21.1	24.1	13	17°01.9	44.6	13	16°41.7	01.1
14	32°55.4	31.9	14	32°38.8	22°00.1	14	32°20.8	24.4	14	32°01.7	44.9	14	31°41.5	01.3
15	47°55.2	·· 32.3	15	47°38.6	·· 00.4	15	47°20.6	·· 24.7	15	47°01.4	·· 45.1	15	46°41.2	·· 01.5
16	62°55.0	32.7	16	62°38.3	00.8	16	62°20.3	25.1	16	62°01.1	45.4	16	61°40.9	01.7
17	77°54.8	33.1	17	77°38.1	01.2	17	77°20.1	25.4	17	77°00.9	45.7	17	76°40.6	01.9
18	92°54.5	S21°33.5	18	92°37.8	S22°01.5	18	92°19.8	S22°25.7	18	92°00.6	S22°45.9	18	91°40.3	S23°02.1
19	107°54.3	33.9	19	107°37.6	01.9	19	107°19.6	26.0	19	107°00.3	46.2	19	106°40.0	02.3
20	122°54.1	34.4	20	122°37.4	02.2	20	122°19.3	26.3	20	122°00.0	46.4	20	121°39.7	02.5
21	137°53.9	·· 34.8	21	137°37.1	·· 02.6	21	137°19.0	·· 26.6	21	136°59.8	·· 46.7	21	136°39.4	·· 02.7
22	152°53.7	35.2	22	152°36.9	03.0	22	152°18.8	26.9	22	151°59.5	46.9	22	151°39.2	02.9
23	167°53.4	35.6	23	167°36.6	03.3	23	167°18.5	27.2	23	166°59.2	47.2	23	166°38.9	03.1
	SD=16.2′	$d=0.4'$		SD=16.2′	$d=0.4'$		SD=16.2′	$d=0.3'$		SD=16.2′	$d=0.3'$		SD=16.2′	$d=0.2'$

12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec
0	181°38.6	S23°03.3	0	181°17.4	S23°15.1	0	180°55.6	S23°22.7	0	180°33.3	S23°26.1	0	180°10.9	S23°25.3
1	196°38.3	03.5	1	196°17.1	15.2	1	195°55.2	22.8	1	195°33.0	26.1	1	195°10.5	25.2
2	211°38.0	03.7	2	211°16.8	15.3	2	210°54.9	22.8	2	210°32.7	26.1	2	210°10.2	25.2
3	226°37.7	·· 03.9	3	226°16.5	·· 15.5	3	225°54.6	·· 22.9	3	225°32.4	·· 26.1	3	225°09.9	·· 25.1
4	241°37.4	04.1	4	241°16.2	15.6	4	240°54.3	23.0	4	240°32.1	26.2	4	240°09.6	25.1
5	256°37.1	04.2	5	256°15.9	15.7	5	255°54.0	23.1	5	255°31.7	26.2	5	255°09.3	25.0
6	271°36.8	S23°04.4	6	271°15.6	S23°15.9	6	270°53.7	S23°23.1	6	270°31.4	S23°26.2	6	270°09.0	S23°25.0
7	286°36.6	04.6	7	286°15.3	16.0	7	285°53.4	23.2	7	285°31.1	26.2	7	285°08.7	25.0
8	301°36.3	04.8	8	301°15.0	16.1	8	300°53.1	23.3	8	300°30.8	26.2	8	300°08.4	24.9
9	316°36.0	·· 05.0	9	316°14.7	·· 16.3	9	315°52.8	·· 23.3	9	315°30.5	·· 26.2	9	315°08.0	·· 24.9
10	331°35.7	05.2	10	331°14.4	16.4	10	330°52.5	23.4	10	330°30.2	26.2	10	330°07.7	24.8
11	346°35.4	05.4	11	346°14.1	16.5	11	345°52.2	23.5	11	345°29.9	26.2	11	345°07.4	24.8
12	1°35.1	S23°05.5	12	1°13.8	S23°16.6	12	0°51.9	S23°23.5	12	0°29.6	S23°26.2	12	0°07.1	S23°24.7
13	16°34.8	05.7	13	16°13.5	16.8	13	15°51.6	23.6	13	15°29.2	26.3	13	15°06.8	24.7
14	31°34.5	05.9	14	31°13.2	16.9	14	30°51.3	23.7	14	30°28.9	26.3	14	30°06.5	24.6
15	46°34.2	·· 06.1	15	46°12.9	·· 17.0	15	45°50.9	·· 23.7	15	45°28.6	·· 26.3	15	45°06.2	·· 24.6
16	61°33.9	06.3	16	61°12.6	17.1	16	60°50.6	23.8	16	60°28.3	26.3	16	60°05.9	24.5
17	76°33.6	06.4	17	76°12.3	17.2	17	75°50.3	23.9	17	75°28.0	26.3	17	75°05.6	24.4
18	91°33.4	S23°06.6	18	91°12.0	S23°17.4	18	90°50.0	S23°23.9	18	90°27.7	S23°26.3	18	90°05.2	S23°24.4
19	106°33.1	06.8	19	106°11.7	17.5	19	105°49.7	24.0	19	105°27.4	26.3	19	105°04.9	24.3
20	121°32.8	07.0	20	121°11.4	17.6	20	120°49.4	24.1	20	120°27.1	26.3	20	120°04.6	24.3
21	136°32.5	·· 07.2	21	136°11.1	·· 17.7	21	135°49.1	·· 24.1	21	135°26.8	·· 26.3	21	135°04.3	·· 24.2
22	151°32.2	07.3	22	151°10.8	17.8	22	150°48.8	24.2	22	150°26.4	26.3	22	150°04.0	24.2
23	166°31.9	07.5	23	166°10.5	18.0	23	165°48.5	24.2	23	165°26.1	26.3	23	165°03.7	24.1
	SD=16.2′	d = 0.2′		SD=16.2′	d = 0.1′		SD=16.2′	d = 0.1′		SD=16.2′	d = 0.0′		SD=16.3′	d = -0.0′

13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	181°31.6	S23°07.7	0	181°10.2	S23°18.1	0	180°48.2	S23°24.3	0	180°25.8	S23°26.3	0	180°03.4	S23°24.0
1	196°31.3	07.9	1	196°09.9	18.2	1	195°47.9	24.3	1	195°25.5	26.3	1	195°03.1	24.0
2	211°31.0	08.0	2	211°09.6	18.3	2	210°47.6	24.4	2	210°25.2	26.3	2	210°02.8	23.9
3	226°30.7	·· 08.2	3	226°09.3	·· 18.4	3	225°47.2	·· 24.5	3	225°24.9	·· 26.3	3	225°02.4	·· 23.9
4	241°30.4	08.4	4	241°09.0	18.5	4	240°46.9	24.5	4	240°24.6	26.3	4	240°02.1	23.8
5	256°30.1	08.5	5	256°08.7	18.6	5	255°46.6	24.6	5	255°24.3	26.3	5	255°01.8	23.7
6	271°29.8	S23°08.7	6	271°08.4	S23°18.8	6	270°46.3	S23°24.6	6	270°24.0	S23°26.3	6	270°01.5	S23°23.7
7	286°29.5	08.9	7	286°08.1	18.9	7	285°46.0	24.7	7	285°23.6	26.3	7	285°01.2	23.6
8	301°29.3	09.0	8	301°07.8	19.0	8	300°45.7	24.7	8	300°23.3	26.2	8	300°00.9	23.5
9	316°29.0	·· 09.2	9	316°07.4	·· 19.1	9	315°45.4	·· 24.8	9	315°23.0	·· 26.2	9	315°00.6	·· 23.5
10	331°28.7	09.4	10	331°07.1	19.2	10	330°45.1	24.8	10	330°22.7	26.2	10	330°00.3	23.4
11	346°28.4	09.5	11	346°06.8	19.3	11	345°44.8	24.9	11	345°22.4	26.2	11	345°00.0	23.3
12	1°28.1	S23°09.7	12	1°06.5	S23°19.4	12	0°44.5	S23°24.9	12	0°22.1	S23°26.2	12	359°59.6	S23°23.3
13	16°27.8	09.9	13	16°06.2	19.5	13	15°44.2	25.0	13	15°21.8	26.2	13	14°59.3	23.2
14	31°27.5	10.0	14	31°05.9	19.6	14	30°43.8	25.0	14	30°21.5	26.2	14	29°59.0	23.1
15	46°27.2	·· 10.2	15	46°05.6	·· 19.7	15	45°43.5	·· 25.1	15	45°21.1	·· 26.2	15	44°58.7	·· 23.0
16	61°26.9	10.3	16	61°05.3	19.8	16	60°43.2	25.1	16	60°20.8	26.2	16	59°58.4	23.0
17	76°26.6	10.5	17	76°05.0	19.9	17	75°42.9	25.1	17	75°20.5	26.1	17	74°58.1	22.9
18	91°26.3	S23°10.7	18	91°04.7	S23°20.0	18	90°42.6	S23°25.2	18	90°20.2	S23°26.1	18	89°57.8	S23°22.8
19	106°26.0	10.8	19	106°04.4	20.1	19	105°42.3	25.2	19	105°19.9	26.1	19	104°57.5	22.7
20	121°25.7	11.0	20	121°04.1	20.2	20	120°42.0	25.3	20	120°19.6	26.1	20	119°57.2	22.7
21	136°25.4	·· 11.1	21	136°03.8	·· 20.3	21	135°41.7	·· 25.3	21	135°19.3	·· 26.1	21	134°56.9	·· 22.6
22	151°25.1	11.3	22	151°03.5	20.4	22	150°41.4	25.4	22	150°19.0	26.1	22	149°56.5	22.5
23	166°24.8	11.5	23	166°03.2	20.5	23	165°41.1	25.4	23	165°18.6	26.0	23	164°56.2	22.4
	SD=16.2′	d = 0.2′		SD=16.2′	d = 0.1′		SD=16.2′	d = 0.1′		SD=16.3′	d = -0.0′		SD=16.3′	d = -0.1′

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	181°24.5	S23°11.6	0	181°02.9	S23°20.6	0	180°40.7	S23°25.4	0	180°18.3	S23°26.0	0	179°55.9	S23°22.4
1	196°24.2	11.8	1	196°02.6	20.7	1	195°40.4	25.5	1	195°18.0	26.0	1	194°55.6	22.3
2	211°23.9	11.9	2	211°02.3	20.8	2	210°40.1	25.5	2	210°17.7	26.0	2	209°55.3	22.2
3	226°23.6	·· 12.1	3	226°02.0	·· 20.9	3	225°39.8	·· 25.5	3	225°17.4	·· 25.9	3	224°55.0	·· 22.1
4	241°23.3	12.2	4	241°01.7	21.0	4	240°39.5	25.6	4	240°17.1	25.9	4	239°54.7	22.0
5	256°23.1	12.4	5	256°01.4	21.1	5	255°39.2	25.6	5	255°16.8	25.9	5	254°54.4	21.9
6	271°22.8	S23°12.5	6	271°01.1	S23°21.2	6	270°38.9	S23°25.6	6	270°16.5	S23°25.9	6	269°54.1	S23°21.9
7	286°22.5	12.7	7	286°00.8	21.3	7	285°38.6	25.7	7	285°16.2	25.8	7	284°53.8	21.8
8	301°22.2	12.8	8	301°00.5	21.4	8	300°38.3	25.7	8	300°15.8	25.8	8	299°53.4	21.7
9	316°21.9	·· 13.0	9	316°00.1	·· 21.4	9	315°38.0	·· 25.7	9	315°15.5	·· 25.8	9	314°53.1	·· 21.6
10	331°21.6	13.1	10	330°59.8	21.5	10	330°37.6	25.8	10	330°15.2	25.8	10	329°52.8	21.5
11	346°21.3	13.3	11	345°59.5	21.6	11	345°37.3	25.8	11	345°14.9	25.7	11	344°52.5	21.4
12	1°21.0	S23°13.4	12	0°59.2	S23°21.7	12	0°37.0	S23°25.8	12	0°14.6	S23°25.7	12	359°52.2	S23°21.3
13	16°20.7	13.5	13	15°58.9	21.8	13	15°36.7	25.8	13	15°14.3	25.7	13	14°51.9	21.2
14	31°20.4	13.7	14	30°58.6	21.9	14	30°36.4	25.9	14	30°14.0	25.6	14	29°51.6	21.1
15	46°20.1	·· 13.8	15	45°58.3	·· 22.0	15	45°36.1	·· 25.9	15	45°13.7	·· 25.6	15	44°51.3	·· 21.1
16	61°19.8	14.0	16	60°58.0	22.1	16	60°35.8	25.9	16	60°13.3	25.6	16	59°51.0	21.0
17	76°19.5	14.1	17	75°57.7	22.1	17	75°35.5	25.9	17	75°13.0	25.5	17	74°50.7	20.9
18	91°19.2	S23°14.3	18	90°57.4	S23°22.2	18	90°35.2	S23°26.0	18	90°12.7	S23°25.5	18	89°50.4	S23°20.8
19	106°18.9	14.4	19	105°57.1	22.3	19	105°34.8	26.0	19	105°12.4	25.5	19	104°50.0	20.7
20	121°18.6	14.5	20	120°56.8	22.4	20	120°34.5	26.0	20	120°12.1	25.4	20	119°49.7	20.6
21	136°18.3	·· 14.7	21	135°56.5	·· 22.5	21	135°34.2	·· 26.0	21	135°11.8	·· 25.4	21	134°49.4	·· 20.5
22	151°18.0	14.8	22	150°56.2	22.5	22	150°33.9	26.1	22	150°11.5	25.3	22	149°49.1	20.4
23	166°17.7	14.9	23	165°55.9	22.6	23	165°33.6	26.1	23	165°11.2	25.3	23	164°48.8	20.3
	SD=16.2′	d = 0.2′		SD=16.2′	d = 0.1′		SD=16.2′	d = 0.0′		SD=16.3′	d = -0.0′		SD=16.3′	d = -0.1′

27	GHA	Dec	30	GHA	Dec
0	179°48.5	S23°20.2	0	179°26.5	S23°10.9
1	194°48.2	20.1	1	194°26.2	10.7
2	209°47.9	20.0	2	209°25.9	10.6
3	224°47.6	·· 19.9	3	224°25.6	·· 10.4
4	239°47.3	19.8	4	239°25.3	10.3
5	254°47.0	19.7	5	254°25.0	10.1
6	269°46.6	S23°19.6	6	269°24.7	S23°09.9
7	284°46.3	19.5	7	284°24.4	09.8
8	299°46.0	19.4	8	299°24.1	09.6
9	314°45.7	·· 19.3	9	314°23.8	·· 09.4
10	329°45.4	19.2	10	329°23.5	09.3
11	344°45.1	19.0	11	344°23.2	09.1
12	359°44.8	S23°18.9	12	359°22.9	S23°08.9
13	14°44.5	18.8	13	14°22.6	08.8
14	29°44.2	18.7	14	29°22.3	08.6
15	44°43.9	·· 18.6	15	44°22.0	·· 08.4
16	59°43.6	18.5	16	59°21.7	08.3
17	74°43.3	18.4	17	74°21.4	08.1
18	89°43.0	S23°18.3	18	89°21.1	S23°07.9
19	104°42.6	18.1	19	104°20.8	07.8
20	119°42.3	18.0	20	119°20.5	07.6
21	134°42.0	·· 17.9	21	134°20.2	·· 07.4
22	149°41.7	17.8	22	149°19.9	07.2
23	164°41.4	17.7	23	164°19.6	07.1
	SD=16.3′	d = -0.1′		SD=16.3′	d = -0.2′

28	GHA	Dec	31	GHA	Dec
0	179°41.1	S23°17.6	0	179°19.3	S23°06.9
1	194°40.8	17.4	1	194°19.0	06.7
2	209°40.5	17.3	2	209°18.7	06.5
3	224°40.2	·· 17.2	3	224°18.4	·· 06.3
4	239°39.9	17.1	4	239°18.1	06.2
5	254°39.6	17.0	5	254°17.8	06.0
6	269°39.3	S23°16.8	6	269°17.5	S23°05.8
7	284°39.0	16.7	7	284°17.2	05.6
8	299°38.7	16.6	8	299°16.9	05.4
9	314°38.4	·· 16.5	9	314°16.6	·· 05.2
10	329°38.1	16.3	10	329°16.3	05.1
11	344°37.7	16.2	11	344°16.0	04.9
12	359°37.4	S23°16.1	12	359°15.7	S23°04.7
13	14°37.1	15.9	13	14°15.4	04.5
14	29°36.8	15.8	14	29°15.1	04.3
15	44°36.5	·· 15.7	15	44°14.8	·· 04.1
16	59°36.2	15.5	16	59°14.5	03.9
17	74°35.9	15.4	17	74°14.2	03.7
18	89°35.6	S23°15.3	18	89°13.9	S23°03.5
19	104°35.3	15.1	19	104°13.6	03.4
20	119°35.0	15.0	20	119°13.3	03.2
21	134°34.7	·· 14.9	21	134°13.0	·· 03.0
22	149°34.4	14.7	22	149°12.7	02.8
23	164°34.1	14.6	23	164°12.4	02.6
	SD=16.3′	d = -0.1′		SD=16.3′	d = -0.2′

29	GHA	Dec
0	179°33.8	S23°14.5
1	194°33.5	14.3
2	209°33.2	14.2
3	224°32.9	·· 14.0
4	239°32.6	13.9
5	254°32.3	13.8
6	269°32.0	S23°13.6
7	284°31.6	13.5
8	299°31.3	13.3
9	314°31.0	·· 13.2
10	329°30.7	13.0
11	344°30.4	12.9
12	359°30.1	S23°12.7
13	14°29.8	12.6
14	29°29.5	12.4
15	44°29.2	·· 12.3
16	59°28.9	12.1
17	74°28.6	12.0
18	89°28.3	S23°11.8
19	104°28.0	11.7
20	119°27.7	11.5
21	134°27.4	·· 11.4
22	149°27.1	11.2
23	164°26.8	11.1
	SD=16.3′	d = -0.1′

Increments and Corrections

m 0	Sun Plan.	Aries	Moon	v and d corr		
0	0°00.0	0°00.0	0°00.0	0.0 - 0.0	6.0 - 0.1	12.0 - 0.1
1	0°00.3	0°00.3	0°00.2	0.1 - 0.0	6.1 - 0.1	12.1 - 0.1
2	0°00.5	0°00.5	0°00.5	0.2 - 0.0	6.2 - 0.1	12.2 - 0.1
3	0°00.8	0°00.8	0°00.7	0.3 - 0.0	6.3 - 0.1	12.3 - 0.1
4	0°01.0	0°01.0	0°01.0	0.4 - 0.0	6.4 - 0.1	12.4 - 0.1
5	0°01.3	0°01.3	0°01.2	0.5 - 0.0	6.5 - 0.1	12.5 - 0.1
6	0°01.5	0°01.5	0°01.4	0.6 - 0.0	6.6 - 0.1	12.6 - 0.1
7	0°01.8	0°01.8	0°01.7	0.7 - 0.0	6.7 - 0.1	12.7 - 0.1
8	0°02.0	0°02.0	0°01.9	0.8 - 0.0	6.8 - 0.1	12.8 - 0.1
9	0°02.3	0°02.3	0°02.1	0.9 - 0.0	6.9 - 0.1	12.9 - 0.1
10	0°02.5	0°02.5	0°02.4	1.0 - 0.0	7.0 - 0.1	13.0 - 0.1
11	0°02.8	0°02.8	0°02.6	1.1 - 0.0	7.1 - 0.1	13.1 - 0.1
12	0°03.0	0°03.0	0°02.9	1.2 - 0.0	7.2 - 0.1	13.2 - 0.1
13	0°03.3	0°03.3	0°03.1	1.3 - 0.0	7.3 - 0.1	13.3 - 0.1
14	0°03.5	0°03.5	0°03.3	1.4 - 0.0	7.4 - 0.1	13.4 - 0.1
15	0°03.8	0°03.8	0°03.6	1.5 - 0.0	7.5 - 0.1	13.5 - 0.1
16	0°04.0	0°04.0	0°03.8	1.6 - 0.0	7.6 - 0.1	13.6 - 0.1
17	0°04.3	0°04.3	0°04.1	1.7 - 0.0	7.7 - 0.1	13.7 - 0.1
18	0°04.5	0°04.5	0°04.3	1.8 - 0.0	7.8 - 0.1	13.8 - 0.1
19	0°04.8	0°04.8	0°04.5	1.9 - 0.0	7.9 - 0.1	13.9 - 0.1
20	0°05.0	0°05.0	0°04.8	2.0 - 0.0	8.0 - 0.1	14.0 - 0.1
21	0°05.3	0°05.3	0°05.0	2.1 - 0.0	8.1 - 0.1	14.1 - 0.1
22	0°05.5	0°05.5	0°05.2	2.2 - 0.0	8.2 - 0.1	14.2 - 0.1
23	0°05.8	0°05.8	0°05.5	2.3 - 0.0	8.3 - 0.1	14.3 - 0.1
24	0°06.0	0°06.0	0°05.7	2.4 - 0.0	8.4 - 0.1	14.4 - 0.1
25	0°06.3	0°06.3	0°06.0	2.5 - 0.0	8.5 - 0.1	14.5 - 0.1
26	0°06.5	0°06.5	0°06.2	2.6 - 0.0	8.6 - 0.1	14.6 - 0.1
27	0°06.8	0°06.8	0°06.4	2.7 - 0.0	8.7 - 0.1	14.7 - 0.1
28	0°07.0	0°07.0	0°06.7	2.8 - 0.0	8.8 - 0.1	14.8 - 0.1
29	0°07.3	0°07.3	0°06.9	2.9 - 0.0	8.9 - 0.1	14.9 - 0.1
30	0°07.5	0°07.5	0°07.2	3.0 - 0.0	9.0 - 0.1	15.0 - 0.1
31	0°07.8	0°07.8	0°07.4	3.1 - 0.0	9.1 - 0.1	15.1 - 0.1
32	0°08.0	0°08.0	0°07.6	3.2 - 0.0	9.2 - 0.1	15.2 - 0.1
33	0°08.3	0°08.3	0°07.9	3.3 - 0.0	9.3 - 0.1	15.3 - 0.1
34	0°08.5	0°08.5	0°08.1	3.4 - 0.0	9.4 - 0.1	15.4 - 0.1
35	0°08.8	0°08.8	0°08.4	3.5 - 0.0	9.5 - 0.1	15.5 - 0.1
36	0°09.0	0°09.0	0°08.6	3.6 - 0.0	9.6 - 0.1	15.6 - 0.1
37	0°09.3	0°09.3	0°08.8	3.7 - 0.0	9.7 - 0.1	15.7 - 0.1
38	0°09.5	0°09.5	0°09.1	3.8 - 0.0	9.8 - 0.1	15.8 - 0.1
39	0°09.8	0°09.8	0°09.3	3.9 - 0.0	9.9 - 0.1	15.9 - 0.1
40	0°10.0	0°10.0	0°09.5	4.0 - 0.0	10.0 - 0.1	16.0 - 0.1
41	0°10.3	0°10.3	0°09.8	4.1 - 0.0	10.1 - 0.1	16.1 - 0.1
42	0°10.5	0°10.5	0°10.0	4.2 - 0.0	10.2 - 0.1	16.2 - 0.1
43	0°10.8	0°10.8	0°10.3	4.3 - 0.0	10.3 - 0.1	16.3 - 0.1
44	0°11.0	0°11.0	0°10.5	4.4 - 0.0	10.4 - 0.1	16.4 - 0.1
45	0°11.3	0°11.3	0°10.7	4.5 - 0.0	10.5 - 0.1	16.5 - 0.1
46	0°11.5	0°11.5	0°11.0	4.6 - 0.0	10.6 - 0.1	16.6 - 0.1
47	0°11.8	0°11.8	0°11.2	4.7 - 0.0	10.7 - 0.1	16.7 - 0.1
48	0°12.0	0°12.0	0°11.5	4.8 - 0.0	10.8 - 0.1	16.8 - 0.1
49	0°12.3	0°12.3	0°11.7	4.9 - 0.0	10.9 - 0.1	16.9 - 0.1
50	0°12.5	0°12.5	0°11.9	5.0 - 0.0	11.0 - 0.1	17.0 - 0.1
51	0°12.8	0°12.8	0°12.2	5.1 - 0.0	11.1 - 0.1	17.1 - 0.1
52	0°13.0	0°13.0	0°12.4	5.2 - 0.0	11.2 - 0.1	17.2 - 0.1
53	0°13.3	0°13.3	0°12.6	5.3 - 0.0	11.3 - 0.1	17.3 - 0.1
54	0°13.5	0°13.5	0°12.9	5.4 - 0.0	11.4 - 0.1	17.4 - 0.1
55	0°13.8	0°13.8	0°13.1	5.5 - 0.0	11.5 - 0.1	17.5 - 0.1
56	0°14.0	0°14.0	0°13.4	5.6 - 0.0	11.6 - 0.1	17.6 - 0.1
57	0°14.2	0°14.3	0°13.6	5.7 - 0.0	11.7 - 0.1	17.7 - 0.1
58	0°14.5	0°14.5	0°13.8	5.8 - 0.0	11.8 - 0.1	17.8 - 0.1
59	0°14.7	0°14.8	0°14.1	5.9 - 0.0	11.9 - 0.1	17.9 - 0.1

m 1	Sun Plan.	Aries	Moon	v and d corr		
0	0°15.0	0°15.0	0°14.3	0.0 - 0.0	6.0 - 0.2	12.0 - 0.3
1	0°15.3	0°15.3	0°14.6	0.1 - 0.0	6.1 - 0.2	12.1 - 0.3
2	0°15.5	0°15.5	0°14.8	0.2 - 0.0	6.2 - 0.2	12.2 - 0.3
3	0°15.8	0°15.8	0°15.0	0.3 - 0.0	6.3 - 0.2	12.3 - 0.3
4	0°16.0	0°16.0	0°15.3	0.4 - 0.0	6.4 - 0.2	12.4 - 0.3
5	0°16.3	0°16.3	0°15.5	0.5 - 0.0	6.5 - 0.2	12.5 - 0.3
6	0°16.5	0°16.5	0°15.7	0.6 - 0.0	6.6 - 0.2	12.6 - 0.3
7	0°16.8	0°16.8	0°16.0	0.7 - 0.0	6.7 - 0.2	12.7 - 0.3
8	0°17.0	0°17.0	0°16.2	0.8 - 0.0	6.8 - 0.2	12.8 - 0.3
9	0°17.3	0°17.3	0°16.5	0.9 - 0.0	6.9 - 0.2	12.9 - 0.3
10	0°17.5	0°17.5	0°16.7	1.0 - 0.0	7.0 - 0.2	13.0 - 0.3
11	0°17.8	0°17.8	0°16.9	1.1 - 0.0	7.1 - 0.2	13.1 - 0.3
12	0°18.0	0°18.0	0°17.2	1.2 - 0.0	7.2 - 0.2	13.2 - 0.3
13	0°18.3	0°18.3	0°17.4	1.3 - 0.0	7.3 - 0.2	13.3 - 0.3
14	0°18.5	0°18.6	0°17.7	1.4 - 0.0	7.4 - 0.2	13.4 - 0.3
15	0°18.8	0°18.8	0°17.9	1.5 - 0.0	7.5 - 0.2	13.5 - 0.3
16	0°19.0	0°19.1	0°18.1	1.6 - 0.0	7.6 - 0.2	13.6 - 0.3
17	0°19.3	0°19.3	0°18.4	1.7 - 0.0	7.7 - 0.2	13.7 - 0.3
18	0°19.5	0°19.6	0°18.6	1.8 - 0.0	7.8 - 0.2	13.8 - 0.3
19	0°19.8	0°19.8	0°18.9	1.9 - 0.0	7.9 - 0.2	13.9 - 0.3
20	0°20.0	0°20.1	0°19.1	2.0 - 0.1	8.0 - 0.2	14.0 - 0.4
21	0°20.3	0°20.3	0°19.3	2.1 - 0.1	8.1 - 0.2	14.1 - 0.4
22	0°20.5	0°20.6	0°19.6	2.2 - 0.1	8.2 - 0.2	14.2 - 0.4
23	0°20.8	0°20.8	0°19.8	2.3 - 0.1	8.3 - 0.2	14.3 - 0.4
24	0°21.0	0°21.1	0°20.0	2.4 - 0.1	8.4 - 0.2	14.4 - 0.4
25	0°21.3	0°21.3	0°20.3	2.5 - 0.1	8.5 - 0.2	14.5 - 0.4
26	0°21.5	0°21.6	0°20.5	2.6 - 0.1	8.6 - 0.2	14.6 - 0.4
27	0°21.8	0°21.8	0°20.8	2.7 - 0.1	8.7 - 0.2	14.7 - 0.4
28	0°22.0	0°22.1	0°21.0	2.8 - 0.1	8.8 - 0.2	14.8 - 0.4
29	0°22.3	0°22.3	0°21.2	2.9 - 0.1	8.9 - 0.2	14.9 - 0.4
30	0°22.5	0°22.6	0°21.5	3.0 - 0.1	9.0 - 0.2	15.0 - 0.4
31	0°22.8	0°22.8	0°21.7	3.1 - 0.1	9.1 - 0.2	15.1 - 0.4
32	0°23.0	0°23.1	0°22.0	3.2 - 0.1	9.2 - 0.2	15.2 - 0.4
33	0°23.3	0°23.3	0°22.2	3.3 - 0.1	9.3 - 0.2	15.3 - 0.4
34	0°23.5	0°23.6	0°22.4	3.4 - 0.1	9.4 - 0.2	15.4 - 0.4
35	0°23.8	0°23.8	0°22.7	3.5 - 0.1	9.5 - 0.2	15.5 - 0.4
36	0°24.0	0°24.1	0°22.9	3.6 - 0.1	9.6 - 0.2	15.6 - 0.4
37	0°24.3	0°24.3	0°23.1	3.7 - 0.1	9.7 - 0.2	15.7 - 0.4
38	0°24.5	0°24.6	0°23.4	3.8 - 0.1	9.8 - 0.2	15.8 - 0.4
39	0°24.8	0°24.8	0°23.6	3.9 - 0.1	9.9 - 0.2	15.9 - 0.4
40	0°25.0	0°25.1	0°23.9	4.0 - 0.1	10.0 - 0.3	16.0 - 0.4
41	0°25.3	0°25.3	0°24.1	4.1 - 0.1	10.1 - 0.3	16.1 - 0.4
42	0°25.5	0°25.6	0°24.3	4.2 - 0.1	10.2 - 0.3	16.2 - 0.4
43	0°25.8	0°25.8	0°24.6	4.3 - 0.1	10.3 - 0.3	16.3 - 0.4
44	0°26.0	0°26.1	0°24.8	4.4 - 0.1	10.4 - 0.3	16.4 - 0.4
45	0°26.3	0°26.3	0°25.1	4.5 - 0.1	10.5 - 0.3	16.5 - 0.4
46	0°26.5	0°26.6	0°25.3	4.6 - 0.1	10.6 - 0.3	16.6 - 0.4
47	0°26.8	0°26.8	0°25.5	4.7 - 0.1	10.7 - 0.3	16.7 - 0.4
48	0°27.0	0°27.1	0°25.8	4.8 - 0.1	10.8 - 0.3	16.8 - 0.4
49	0°27.3	0°27.3	0°26.0	4.9 - 0.1	10.9 - 0.3	16.9 - 0.4
50	0°27.5	0°27.6	0°26.2	5.0 - 0.1	11.0 - 0.3	17.0 - 0.4
51	0°27.8	0°27.8	0°26.5	5.1 - 0.1	11.1 - 0.3	17.1 - 0.4
52	0°28.0	0°28.1	0°26.7	5.2 - 0.1	11.2 - 0.3	17.2 - 0.4
53	0°28.3	0°28.3	0°27.0	5.3 - 0.1	11.3 - 0.3	17.3 - 0.4
54	0°28.5	0°28.6	0°27.2	5.4 - 0.1	11.4 - 0.3	17.4 - 0.4
55	0°28.7	0°28.8	0°27.4	5.5 - 0.1	11.5 - 0.3	17.5 - 0.4
56	0°29.0	0°29.1	0°27.7	5.6 - 0.1	11.6 - 0.3	17.6 - 0.4
57	0°29.3	0°29.3	0°27.9	5.7 - 0.1	11.7 - 0.3	17.7 - 0.4
58	0°29.5	0°29.6	0°28.2	5.8 - 0.1	11.8 - 0.3	17.8 - 0.4
59	0°29.7	0°29.8	0°28.4	5.9 - 0.1	11.9 - 0.3	17.9 - 0.4

m 2	Sun Plan.	Aries	Moon	v and d corr		
0	0°30.0	0°30.1	0°28.6	0.0 - 0.0	6.0 - 0.3	12.0 - 0.5
1	0°30.3	0°30.3	0°28.9	0.1 - 0.0	6.1 - 0.3	12.1 - 0.5
2	0°30.5	0°30.6	0°29.1	0.2 - 0.0	6.2 - 0.3	12.2 - 0.5
3	0°30.7	0°30.8	0°29.3	0.3 - 0.0	6.3 - 0.3	12.3 - 0.5
4	0°31.0	0°31.1	0°29.6	0.4 - 0.0	6.4 - 0.3	12.4 - 0.5
5	0°31.3	0°31.3	0°29.8	0.5 - 0.0	6.5 - 0.3	12.5 - 0.5
6	0°31.5	0°31.6	0°30.1	0.6 - 0.0	6.6 - 0.3	12.6 - 0.5
7	0°31.8	0°31.8	0°30.3	0.7 - 0.0	6.7 - 0.3	12.7 - 0.5
8	0°32.0	0°32.1	0°30.5	0.8 - 0.0	6.8 - 0.3	12.8 - 0.5
9	0°32.3	0°32.3	0°30.8	0.9 - 0.0	6.9 - 0.3	12.9 - 0.5
10	0°32.5	0°32.6	0°31.0	1.0 - 0.0	7.0 - 0.3	13.0 - 0.5
11	0°32.8	0°32.8	0°31.3	1.1 - 0.0	7.1 - 0.3	13.1 - 0.5
12	0°33.0	0°33.1	0°31.5	1.2 - 0.1	7.2 - 0.3	13.2 - 0.5
13	0°33.3	0°33.3	0°31.7	1.3 - 0.1	7.3 - 0.3	13.3 - 0.6
14	0°33.5	0°33.6	0°32.0	1.4 - 0.1	7.4 - 0.3	13.4 - 0.6
15	0°33.8	0°33.8	0°32.2	1.5 - 0.1	7.5 - 0.3	13.5 - 0.6
16	0°34.0	0°34.1	0°32.5	1.6 - 0.1	7.6 - 0.3	13.6 - 0.6
17	0°34.3	0°34.3	0°32.7	1.7 - 0.1	7.7 - 0.3	13.7 - 0.6
18	0°34.5	0°34.6	0°32.9	1.8 - 0.1	7.8 - 0.3	13.8 - 0.6
19	0°34.8	0°34.8	0°33.2	1.9 - 0.1	7.9 - 0.3	13.9 - 0.6
20	0°35.0	0°35.1	0°33.4	2.0 - 0.1	8.0 - 0.3	14.0 - 0.6
21	0°35.3	0°35.3	0°33.6	2.1 - 0.1	8.1 - 0.3	14.1 - 0.6
22	0°35.5	0°35.6	0°33.9	2.2 - 0.1	8.2 - 0.3	14.2 - 0.6
23	0°35.8	0°35.8	0°34.1	2.3 - 0.1	8.3 - 0.3	14.3 - 0.6
24	0°36.0	0°36.1	0°34.4	2.4 - 0.1	8.4 - 0.3	14.4 - 0.6
25	0°36.3	0°36.3	0°34.6	2.5 - 0.1	8.5 - 0.4	14.5 - 0.6
26	0°36.5	0°36.6	0°34.8	2.6 - 0.1	8.6 - 0.4	14.6 - 0.6
27	0°36.8	0°36.9	0°35.1	2.7 - 0.1	8.7 - 0.4	14.7 - 0.6
28	0°37.0	0°37.1	0°35.3	2.8 - 0.1	8.8 - 0.4	14.8 - 0.6
29	0°37.3	0°37.4	0°35.6	2.9 - 0.1	8.9 - 0.4	14.9 - 0.6
30	0°37.5	0°37.6	0°35.8	3.0 - 0.1	9.0 - 0.4	15.0 - 0.6
31	0°37.8	0°37.9	0°36.0	3.1 - 0.1	9.1 - 0.4	15.1 - 0.6
32	0°38.0	0°38.1	0°36.3	3.2 - 0.1	9.2 - 0.4	15.2 - 0.6
33	0°38.3	0°38.4	0°36.5	3.3 - 0.1	9.3 - 0.4	15.3 - 0.6
34	0°38.5	0°38.6	0°36.7	3.4 - 0.1	9.4 - 0.4	15.4 - 0.6
35	0°38.8	0°38.9	0°37.0	3.5 - 0.1	9.5 - 0.4	15.5 - 0.6
36	0°39.0	0°39.1	0°37.2	3.6 - 0.1	9.6 - 0.4	15.6 - 0.6
37	0°39.3	0°39.4	0°37.5	3.7 - 0.2	9.7 - 0.4	15.7 - 0.7
38	0°39.5	0°39.6	0°37.7	3.8 - 0.2	9.8 - 0.4	15.8 - 0.7
39	0°39.8	0°39.9	0°37.9	3.9 - 0.2	9.9 - 0.4	15.9 - 0.7
40	0°40.0	0°40.1	0°38.2	4.0 - 0.2	10.0 - 0.4	16.0 - 0.7
41	0°40.3	0°40.4	0°38.4	4.1 - 0.2	10.1 - 0.4	16.1 - 0.7
42	0°40.5	0°40.6	0°38.7	4.2 - 0.2	10.2 - 0.4	16.2 - 0.7
43	0°40.8	0°40.9	0°38.9	4.3 - 0.2	10.3 - 0.4	16.3 - 0.7
44	0°41.0	0°41.1	0°39.1	4.4 - 0.2	10.4 - 0.4	16.4 - 0.7
45	0°41.3	0°41.4	0°39.4	4.5 - 0.2	10.5 - 0.4	16.5 - 0.7
46	0°41.5	0°41.6	0°39.6	4.6 - 0.2	10.6 - 0.4	16.6 - 0.7
47	0°41.8	0°41.9	0°39.8	4.7 - 0.2	10.7 - 0.4	16.7 - 0.7
48	0°42.0	0°42.1	0°40.1	4.8 - 0.2	10.8 - 0.5	16.8 - 0.7
49	0°42.3	0°42.4	0°40.3	4.9 - 0.2	10.9 - 0.5	16.9 - 0.7
50	0°42.5	0°42.6	0°40.6	5.0 - 0.2	11.0 - 0.5	17.0 - 0.7
51	0°42.8	0°42.9	0°40.8	5.1 - 0.2	11.1 - 0.5	17.1 - 0.7
52	0°43.0	0°43.1	0°41.0	5.2 - 0.2	11.2 - 0.5	17.2 - 0.7
53	0°43.3	0°43.4	0°41.3	5.3 - 0.2	11.3 - 0.5	17.3 - 0.7
54	0°43.5	0°43.6	0°41.5	5.4 - 0.2	11.4 - 0.5	17.4 - 0.7
55	0°43.8	0°43.9	0°41.8	5.5 - 0.2	11.5 - 0.5	17.5 - 0.7
56	0°44.0	0°44.1	0°42.0	5.6 - 0.2	11.6 - 0.5	17.6 - 0.7
57	0°44.3	0°44.4	0°42.2	5.7 - 0.2	11.7 - 0.5	17.7 - 0.7
58	0°44.5	0°44.6	0°42.5	5.8 - 0.2	11.8 - 0.5	17.8 - 0.7
59	0°44.8	0°44.9	0°42.7	5.9 - 0.2	11.9 - 0.5	17.9 - 0.7

Increments and Corrections

m 3	Sun Plan.	Aries	Moon	v and d corr		
0	0°45.0	0°45.1	0°43.0	0.0 - 0.0	6.0 - 0.3	12.0 - 0.7
1	0°45.3	0°45.4	0°43.2	0.1 - 0.0	6.1 - 0.4	12.1 - 0.7
2	0°45.5	0°45.6	0°43.4	0.2 - 0.0	6.2 - 0.4	12.2 - 0.7
3	0°45.8	0°45.9	0°43.7	0.3 - 0.0	6.3 - 0.4	12.3 - 0.7
4	0°46.0	0°46.1	0°43.9	0.4 - 0.0	6.4 - 0.4	12.4 - 0.7
5	0°46.3	0°46.4	0°44.1	0.5 - 0.0	6.5 - 0.4	12.5 - 0.7
6	0°46.5	0°46.6	0°44.4	0.6 - 0.0	6.6 - 0.4	12.6 - 0.7
7	0°46.8	0°46.9	0°44.6	0.7 - 0.0	6.7 - 0.4	12.7 - 0.7
8	0°47.0	0°47.1	0°44.9	0.8 - 0.0	6.8 - 0.4	12.8 - 0.7
9	0°47.3	0°47.4	0°45.1	0.9 - 0.1	6.9 - 0.4	12.9 - 0.8
10	0°47.5	0°47.6	0°45.3	1.0 - 0.1	7.0 - 0.4	13.0 - 0.8
11	0°47.8	0°47.9	0°45.6	1.1 - 0.1	7.1 - 0.4	13.1 - 0.8
12	0°48.0	0°48.1	0°45.8	1.2 - 0.1	7.2 - 0.4	13.2 - 0.8
13	0°48.3	0°48.4	0°46.1	1.3 - 0.1	7.3 - 0.4	13.3 - 0.8
14	0°48.5	0°48.6	0°46.3	1.4 - 0.1	7.4 - 0.4	13.4 - 0.8
15	0°48.8	0°48.9	0°46.5	1.5 - 0.1	7.5 - 0.4	13.5 - 0.8
16	0°49.0	0°49.1	0°46.8	1.6 - 0.1	7.6 - 0.4	13.6 - 0.8
17	0°49.3	0°49.4	0°47.0	1.7 - 0.1	7.7 - 0.4	13.7 - 0.8
18	0°49.5	0°49.6	0°47.2	1.8 - 0.1	7.8 - 0.5	13.8 - 0.8
19	0°49.8	0°49.9	0°47.5	1.9 - 0.1	7.9 - 0.5	13.9 - 0.8
20	0°50.0	0°50.1	0°47.7	2.0 - 0.1	8.0 - 0.5	14.0 - 0.8
21	0°50.3	0°50.4	0°48.0	2.1 - 0.1	8.1 - 0.5	14.1 - 0.8
22	0°50.5	0°50.6	0°48.2	2.2 - 0.1	8.2 - 0.5	14.2 - 0.8
23	0°50.8	0°50.9	0°48.4	2.3 - 0.1	8.3 - 0.5	14.3 - 0.8
24	0°51.0	0°51.1	0°48.7	2.4 - 0.1	8.4 - 0.5	14.4 - 0.8
25	0°51.3	0°51.4	0°48.9	2.5 - 0.1	8.5 - 0.5	14.5 - 0.8
26	0°51.5	0°51.6	0°49.2	2.6 - 0.2	8.6 - 0.5	14.6 - 0.9
27	0°51.8	0°51.9	0°49.4	2.7 - 0.2	8.7 - 0.5	14.7 - 0.9
28	0°52.0	0°52.1	0°49.6	2.8 - 0.2	8.8 - 0.5	14.8 - 0.9
29	0°52.3	0°52.4	0°49.9	2.9 - 0.2	8.9 - 0.5	14.9 - 0.9
30	0°52.5	0°52.6	0°50.1	3.0 - 0.2	9.0 - 0.5	15.0 - 0.9
31	0°52.8	0°52.9	0°50.3	3.1 - 0.2	9.1 - 0.5	15.1 - 0.9
32	0°53.0	0°53.1	0°50.6	3.2 - 0.2	9.2 - 0.5	15.2 - 0.9
33	0°53.3	0°53.4	0°50.8	3.3 - 0.2	9.3 - 0.5	15.3 - 0.9
34	0°53.5	0°53.6	0°51.1	3.4 - 0.2	9.4 - 0.5	15.4 - 0.9
35	0°53.8	0°53.9	0°51.3	3.5 - 0.2	9.5 - 0.6	15.5 - 0.9
36	0°54.0	0°54.1	0°51.5	3.6 - 0.2	9.6 - 0.6	15.6 - 0.9
37	0°54.3	0°54.4	0°51.8	3.7 - 0.2	9.7 - 0.6	15.7 - 0.9
38	0°54.5	0°54.6	0°52.0	3.8 - 0.2	9.8 - 0.6	15.8 - 0.9
39	0°54.8	0°54.9	0°52.3	3.9 - 0.2	9.9 - 0.6	15.9 - 0.9
40	0°55.0	0°55.2	0°52.5	4.0 - 0.2	10.0 - 0.6	16.0 - 0.9
41	0°55.3	0°55.4	0°52.7	4.1 - 0.2	10.1 - 0.6	16.1 - 0.9
42	0°55.5	0°55.7	0°53.0	4.2 - 0.2	10.2 - 0.6	16.2 - 0.9
43	0°55.8	0°55.9	0°53.2	4.3 - 0.3	10.3 - 0.6	16.3 - 1.0
44	0°56.0	0°56.2	0°53.4	4.4 - 0.3	10.4 - 0.6	16.4 - 1.0
45	0°56.3	0°56.4	0°53.7	4.5 - 0.3	10.5 - 0.6	16.5 - 1.0
46	0°56.5	0°56.7	0°53.9	4.6 - 0.3	10.6 - 0.6	16.6 - 1.0
47	0°56.8	0°56.9	0°54.2	4.7 - 0.3	10.7 - 0.6	16.7 - 1.0
48	0°57.0	0°57.2	0°54.4	4.8 - 0.3	10.8 - 0.6	16.8 - 1.0
49	0°57.3	0°57.4	0°54.6	4.9 - 0.3	10.9 - 0.6	16.9 - 1.0
50	0°57.5	0°57.7	0°54.9	5.0 - 0.3	11.0 - 0.6	17.0 - 1.0
51	0°57.7	0°57.9	0°55.1	5.1 - 0.3	11.1 - 0.6	17.1 - 1.0
52	0°58.0	0°58.2	0°55.4	5.2 - 0.3	11.2 - 0.7	17.2 - 1.0
53	0°58.3	0°58.4	0°55.6	5.3 - 0.3	11.3 - 0.7	17.3 - 1.0
54	0°58.5	0°58.7	0°55.8	5.4 - 0.3	11.4 - 0.7	17.4 - 1.0
55	0°58.8	0°58.9	0°56.1	5.5 - 0.3	11.5 - 0.7	17.5 - 1.0
56	0°59.0	0°59.2	0°56.3	5.6 - 0.3	11.6 - 0.7	17.6 - 1.0
57	0°59.3	0°59.4	0°56.6	5.7 - 0.3	11.7 - 0.7	17.7 - 1.0
58	0°59.5	0°59.7	0°56.8	5.8 - 0.3	11.8 - 0.7	17.8 - 1.0
59	0°59.8	0°59.9	0°57.0	5.9 - 0.3	11.9 - 0.7	17.9 - 1.0

m 4	Sun Plan.	Aries	Moon	v and d corr		
0	1°00.0	1°00.2	0°57.3	0.0 - 0.0	6.0 - 0.4	12.0 - 0.9
1	1°00.2	1°00.4	0°57.5	0.1 - 0.0	6.1 - 0.5	12.1 - 0.9
2	1°00.5	1°00.7	0°57.7	0.2 - 0.0	6.2 - 0.5	12.2 - 0.9
3	1°00.7	1°00.9	0°58.0	0.3 - 0.0	6.3 - 0.5	12.3 - 0.9
4	1°01.0	1°01.2	0°58.2	0.4 - 0.0	6.4 - 0.5	12.4 - 0.9
5	1°01.2	1°01.4	0°58.5	0.5 - 0.0	6.5 - 0.5	12.5 - 0.9
6	1°01.5	1°01.7	0°58.7	0.6 - 0.0	6.6 - 0.5	12.6 - 0.9
7	1°01.7	1°01.9	0°58.9	0.7 - 0.1	6.7 - 0.5	12.7 - 1.0
8	1°02.0	1°02.2	0°59.2	0.8 - 0.1	6.8 - 0.5	12.8 - 1.0
9	1°02.3	1°02.4	0°59.4	0.9 - 0.1	6.9 - 0.5	12.9 - 1.0
10	1°02.5	1°02.7	0°59.7	1.0 - 0.1	7.0 - 0.5	13.0 - 1.0
11	1°02.8	1°02.9	0°59.9	1.1 - 0.1	7.1 - 0.5	13.1 - 1.0
12	1°03.0	1°03.2	1°00.1	1.2 - 0.1	7.2 - 0.5	13.2 - 1.0
13	1°03.3	1°03.4	1°00.4	1.3 - 0.1	7.3 - 0.5	13.3 - 1.0
14	1°03.5	1°03.7	1°00.6	1.4 - 0.1	7.4 - 0.6	13.4 - 1.0
15	1°03.8	1°03.9	1°00.8	1.5 - 0.1	7.5 - 0.6	13.5 - 1.0
16	1°04.0	1°04.2	1°01.1	1.6 - 0.1	7.6 - 0.6	13.6 - 1.0
17	1°04.2	1°04.4	1°01.3	1.7 - 0.1	7.7 - 0.6	13.7 - 1.0
18	1°04.5	1°04.7	1°01.6	1.8 - 0.1	7.8 - 0.6	13.8 - 1.0
19	1°04.7	1°04.9	1°01.8	1.9 - 0.1	7.9 - 0.6	13.9 - 1.0
20	1°05.0	1°05.2	1°02.0	2.0 - 0.1	8.0 - 0.6	14.0 - 1.1
21	1°05.2	1°05.4	1°02.3	2.1 - 0.2	8.1 - 0.6	14.1 - 1.1
22	1°05.5	1°05.7	1°02.5	2.2 - 0.2	8.2 - 0.6	14.2 - 1.1
23	1°05.8	1°05.9	1°02.8	2.3 - 0.2	8.3 - 0.6	14.3 - 1.1
24	1°06.0	1°06.2	1°03.0	2.4 - 0.2	8.4 - 0.6	14.4 - 1.1
25	1°06.3	1°06.4	1°03.2	2.5 - 0.2	8.5 - 0.6	14.5 - 1.1
26	1°06.5	1°06.7	1°03.5	2.6 - 0.2	8.6 - 0.6	14.6 - 1.1
27	1°06.8	1°06.9	1°03.7	2.7 - 0.2	8.7 - 0.7	14.7 - 1.1
28	1°07.0	1°07.2	1°03.9	2.8 - 0.2	8.8 - 0.7	14.8 - 1.1
29	1°07.3	1°07.4	1°04.2	2.9 - 0.2	8.9 - 0.7	14.9 - 1.1
30	1°07.5	1°07.7	1°04.4	3.0 - 0.2	9.0 - 0.7	15.0 - 1.1
31	1°07.7	1°07.9	1°04.7	3.1 - 0.2	9.1 - 0.7	15.1 - 1.1
32	1°08.0	1°08.2	1°04.9	3.2 - 0.2	9.2 - 0.7	15.2 - 1.1
33	1°08.2	1°08.4	1°05.1	3.3 - 0.2	9.3 - 0.7	15.3 - 1.1
34	1°08.5	1°08.7	1°05.4	3.4 - 0.3	9.4 - 0.7	15.4 - 1.2
35	1°08.7	1°08.9	1°05.6	3.5 - 0.3	9.5 - 0.7	15.5 - 1.2
36	1°09.0	1°09.2	1°05.9	3.6 - 0.3	9.6 - 0.7	15.6 - 1.2
37	1°09.3	1°09.4	1°06.1	3.7 - 0.3	9.7 - 0.7	15.7 - 1.2
38	1°09.5	1°09.7	1°06.3	3.8 - 0.3	9.8 - 0.7	15.8 - 1.2
39	1°09.8	1°09.9	1°06.6	3.9 - 0.3	9.9 - 0.7	15.9 - 1.2
40	1°10.0	1°10.2	1°06.8	4.0 - 0.3	10.0 - 0.8	16.0 - 1.2
41	1°10.3	1°10.4	1°07.0	4.1 - 0.3	10.1 - 0.8	16.1 - 1.2
42	1°10.5	1°10.7	1°07.3	4.2 - 0.3	10.2 - 0.8	16.2 - 1.2
43	1°10.8	1°10.9	1°07.5	4.3 - 0.3	10.3 - 0.8	16.3 - 1.2
44	1°11.0	1°11.2	1°07.8	4.4 - 0.3	10.4 - 0.8	16.4 - 1.2
45	1°11.3	1°11.4	1°08.0	4.5 - 0.3	10.5 - 0.8	16.5 - 1.2
46	1°11.5	1°11.7	1°08.2	4.6 - 0.3	10.6 - 0.8	16.6 - 1.2
47	1°11.7	1°11.9	1°08.5	4.7 - 0.4	10.7 - 0.8	16.7 - 1.3
48	1°12.0	1°12.2	1°08.7	4.8 - 0.4	10.8 - 0.8	16.8 - 1.3
49	1°12.2	1°12.4	1°09.0	4.9 - 0.4	10.9 - 0.8	16.9 - 1.3
50	1°12.5	1°12.7	1°09.2	5.0 - 0.4	11.0 - 0.8	17.0 - 1.3
51	1°12.7	1°12.9	1°09.4	5.1 - 0.4	11.1 - 0.8	17.1 - 1.3
52	1°13.0	1°13.2	1°09.7	5.2 - 0.4	11.2 - 0.8	17.2 - 1.3
53	1°13.2	1°13.5	1°09.9	5.3 - 0.4	11.3 - 0.8	17.3 - 1.3
54	1°13.5	1°13.7	1°10.2	5.4 - 0.4	11.4 - 0.9	17.4 - 1.3
55	1°13.8	1°14.0	1°10.4	5.5 - 0.4	11.5 - 0.9	17.5 - 1.3
56	1°14.0	1°14.2	1°10.6	5.6 - 0.4	11.6 - 0.9	17.6 - 1.3
57	1°14.3	1°14.5	1°10.9	5.7 - 0.4	11.7 - 0.9	17.7 - 1.3
58	1°14.5	1°14.7	1°11.1	5.8 - 0.4	11.8 - 0.9	17.8 - 1.3
59	1°14.8	1°15.0	1°11.3	5.9 - 0.4	11.9 - 0.9	17.9 - 1.3

m 5	Sun Plan.	Aries	Moon	v and d corr		
0	1°15.0	1°15.2	1°11.6	0.0 - 0.0	6.0 - 0.5	12.0 - 1.1
1	1°15.3	1°15.5	1°11.8	0.1 - 0.0	6.1 - 0.6	12.1 - 1.1
2	1°15.5	1°15.7	1°12.1	0.2 - 0.0	6.2 - 0.6	12.2 - 1.1
3	1°15.7	1°16.0	1°12.3	0.3 - 0.0	6.3 - 0.6	12.3 - 1.1
4	1°16.0	1°16.2	1°12.5	0.4 - 0.0	6.4 - 0.6	12.4 - 1.1
5	1°16.2	1°16.5	1°12.8	0.5 - 0.0	6.5 - 0.6	12.5 - 1.1
6	1°16.5	1°16.7	1°13.0	0.6 - 0.1	6.6 - 0.6	12.6 - 1.2
7	1°16.7	1°17.0	1°13.3	0.7 - 0.1	6.7 - 0.6	12.7 - 1.2
8	1°17.0	1°17.2	1°13.5	0.8 - 0.1	6.8 - 0.6	12.8 - 1.2
9	1°17.3	1°17.5	1°13.7	0.9 - 0.1	6.9 - 0.6	12.9 - 1.2
10	1°17.5	1°17.7	1°14.0	1.0 - 0.1	7.0 - 0.6	13.0 - 1.2
11	1°17.8	1°18.0	1°14.2	1.1 - 0.1	7.1 - 0.7	13.1 - 1.2
12	1°18.0	1°18.2	1°14.4	1.2 - 0.1	7.2 - 0.7	13.2 - 1.2
13	1°18.3	1°18.5	1°14.7	1.3 - 0.1	7.3 - 0.7	13.3 - 1.2
14	1°18.5	1°18.7	1°14.9	1.4 - 0.1	7.4 - 0.7	13.4 - 1.2
15	1°18.8	1°19.0	1°15.2	1.5 - 0.1	7.5 - 0.7	13.5 - 1.2
16	1°19.0	1°19.2	1°15.4	1.6 - 0.1	7.6 - 0.7	13.6 - 1.2
17	1°19.3	1°19.5	1°15.6	1.7 - 0.2	7.7 - 0.7	13.7 - 1.3
18	1°19.5	1°19.7	1°15.9	1.8 - 0.2	7.8 - 0.7	13.8 - 1.3
19	1°19.7	1°20.0	1°16.1	1.9 - 0.2	7.9 - 0.7	13.9 - 1.3
20	1°20.0	1°20.2	1°16.4	2.0 - 0.2	8.0 - 0.7	14.0 - 1.3
21	1°20.2	1°20.5	1°16.6	2.1 - 0.2	8.1 - 0.7	14.1 - 1.3
22	1°20.5	1°20.7	1°16.8	2.2 - 0.2	8.2 - 0.8	14.2 - 1.3
23	1°20.8	1°21.0	1°17.1	2.3 - 0.2	8.3 - 0.8	14.3 - 1.3
24	1°21.0	1°21.2	1°17.3	2.4 - 0.2	8.4 - 0.8	14.4 - 1.3
25	1°21.3	1°21.5	1°17.5	2.5 - 0.2	8.5 - 0.8	14.5 - 1.3
26	1°21.5	1°21.7	1°17.8	2.6 - 0.2	8.6 - 0.8	14.6 - 1.3
27	1°21.8	1°22.0	1°18.0	2.7 - 0.2	8.7 - 0.8	14.7 - 1.3
28	1°22.0	1°22.2	1°18.3	2.8 - 0.3	8.8 - 0.8	14.8 - 1.4
29	1°22.3	1°22.5	1°18.5	2.9 - 0.3	8.9 - 0.8	14.9 - 1.4
30	1°22.5	1°22.7	1°18.7	3.0 - 0.3	9.0 - 0.8	15.0 - 1.4
31	1°22.8	1°23.0	1°19.0	3.1 - 0.3	9.1 - 0.8	15.1 - 1.4
32	1°23.0	1°23.2	1°19.2	3.2 - 0.3	9.2 - 0.8	15.2 - 1.4
33	1°23.2	1°23.5	1°19.5	3.3 - 0.3	9.3 - 0.9	15.3 - 1.4
34	1°23.5	1°23.7	1°19.7	3.4 - 0.3	9.4 - 0.9	15.4 - 1.4
35	1°23.7	1°24.0	1°19.9	3.5 - 0.3	9.5 - 0.9	15.5 - 1.4
36	1°24.0	1°24.2	1°20.2	3.6 - 0.3	9.6 - 0.9	15.6 - 1.4
37	1°24.3	1°24.5	1°20.4	3.7 - 0.3	9.7 - 0.9	15.7 - 1.4
38	1°24.5	1°24.7	1°20.7	3.8 - 0.3	9.8 - 0.9	15.8 - 1.4
39	1°24.8	1°25.0	1°20.9	3.9 - 0.4	9.9 - 0.9	15.9 - 1.5
40	1°25.0	1°25.2	1°21.1	4.0 - 0.4	10.0 - 0.9	16.0 - 1.5
41	1°25.3	1°25.5	1°21.4	4.1 - 0.4	10.1 - 0.9	16.1 - 1.5
42	1°25.5	1°25.7	1°21.6	4.2 - 0.4	10.2 - 0.9	16.2 - 1.5
43	1°25.8	1°26.0	1°21.8	4.3 - 0.4	10.3 - 0.9	16.3 - 1.5
44	1°26.0	1°26.2	1°22.1	4.4 - 0.4	10.4 - 1.0	16.4 - 1.5
45	1°26.3	1°26.5	1°22.3	4.5 - 0.4	10.5 - 1.0	16.5 - 1.5
46	1°26.5	1°26.7	1°22.6	4.6 - 0.4	10.6 - 1.0	16.6 - 1.5
47	1°26.8	1°27.0	1°22.8	4.7 - 0.4	10.7 - 1.0	16.7 - 1.5
48	1°27.0	1°27.2	1°23.0	4.8 - 0.4	10.8 - 1.0	16.8 - 1.5
49	1°27.2	1°27.5	1°23.3	4.9 - 0.4	10.9 - 1.0	16.9 - 1.5
50	1°27.5	1°27.7	1°23.5	5.0 - 0.5	11.0 - 1.0	17.0 - 1.6
51	1°27.7	1°28.0	1°23.8	5.1 - 0.5	11.1 - 1.0	17.1 - 1.6
52	1°28.0	1°28.2	1°24.0	5.2 - 0.5	11.2 - 1.0	17.2 - 1.6
53	1°28.2	1°28.5	1°24.2	5.3 - 0.5	11.3 - 1.0	17.3 - 1.6
54	1°28.5	1°28.7	1°24.5	5.4 - 0.5	11.4 - 1.0	17.4 - 1.6
55	1°28.8	1°29.0	1°24.7	5.5 - 0.5	11.5 - 1.1	17.5 - 1.6
56	1°29.0	1°29.2	1°24.9	5.6 - 0.5	11.6 - 1.1	17.6 - 1.6
57	1°29.3	1°29.5	1°25.2	5.7 - 0.5	11.7 - 1.1	17.7 - 1.6
58	1°29.5	1°29.7	1°25.4	5.8 - 0.5	11.8 - 1.1	17.8 - 1.6
59	1°29.8	1°30.0	1°25.7	5.9 - 0.5	11.9 - 1.1	17.9 - 1.6

Increments and Corrections

m 6	Sun Plan.	Aries	Moon	v and d corr		
0	1°30.0	1°30.2	1°25.9	0.0 - 0.0	6.0 - 0.7	12.0 - 1.3
1	1°30.3	1°30.5	1°26.1	0.1 - 0.0	6.1 - 0.7	12.1 - 1.3
2	1°30.5	1°30.7	1°26.4	0.2 - 0.0	6.2 - 0.7	12.2 - 1.3
3	1°30.7	1°31.0	1°26.6	0.3 - 0.0	6.3 - 0.7	12.3 - 1.3
4	1°31.0	1°31.2	1°26.9	0.4 - 0.0	6.4 - 0.7	12.4 - 1.3
5	1°31.2	1°31.5	1°27.1	0.5 - 0.1	6.5 - 0.7	12.5 - 1.4
6	1°31.5	1°31.8	1°27.3	0.6 - 0.1	6.6 - 0.7	12.6 - 1.4
7	1°31.7	1°32.0	1°27.6	0.7 - 0.1	6.7 - 0.7	12.7 - 1.4
8	1°32.0	1°32.3	1°27.8	0.8 - 0.1	6.8 - 0.7	12.8 - 1.4
9	1°32.3	1°32.5	1°28.0	0.9 - 0.1	6.9 - 0.7	12.9 - 1.4
10	1°32.5	1°32.8	1°28.3	1.0 - 0.1	7.0 - 0.8	13.0 - 1.4
11	1°32.8	1°33.0	1°28.5	1.1 - 0.1	7.1 - 0.8	13.1 - 1.4
12	1°33.0	1°33.3	1°28.8	1.2 - 0.1	7.2 - 0.8	13.2 - 1.4
13	1°33.3	1°33.5	1°29.0	1.3 - 0.1	7.3 - 0.8	13.3 - 1.4
14	1°33.5	1°33.8	1°29.2	1.4 - 0.2	7.4 - 0.8	13.4 - 1.5
15	1°33.8	1°34.0	1°29.5	1.5 - 0.2	7.5 - 0.8	13.5 - 1.5
16	1°34.0	1°34.3	1°29.7	1.6 - 0.2	7.6 - 0.8	13.6 - 1.5
17	1°34.3	1°34.5	1°30.0	1.7 - 0.2	7.7 - 0.8	13.7 - 1.5
18	1°34.5	1°34.8	1°30.2	1.8 - 0.2	7.8 - 0.8	13.8 - 1.5
19	1°34.8	1°35.0	1°30.4	1.9 - 0.2	7.9 - 0.9	13.9 - 1.5
20	1°35.0	1°35.3	1°30.7	2.0 - 0.2	8.0 - 0.9	14.0 - 1.5
21	1°35.2	1°35.5	1°30.9	2.1 - 0.2	8.1 - 0.9	14.1 - 1.5
22	1°35.5	1°35.8	1°31.1	2.2 - 0.2	8.2 - 0.9	14.2 - 1.5
23	1°35.8	1°36.0	1°31.4	2.3 - 0.2	8.3 - 0.9	14.3 - 1.5
24	1°36.0	1°36.3	1°31.6	2.4 - 0.3	8.4 - 0.9	14.4 - 1.6
25	1°36.3	1°36.5	1°31.9	2.5 - 0.3	8.5 - 0.9	14.5 - 1.6
26	1°36.5	1°36.8	1°32.1	2.6 - 0.3	8.6 - 0.9	14.6 - 1.6
27	1°36.8	1°37.0	1°32.3	2.7 - 0.3	8.7 - 0.9	14.7 - 1.6
28	1°37.0	1°37.3	1°32.6	2.8 - 0.3	8.8 - 1.0	14.8 - 1.6
29	1°37.3	1°37.5	1°32.8	2.9 - 0.3	8.9 - 1.0	14.9 - 1.6
30	1°37.5	1°37.8	1°33.1	3.0 - 0.3	9.0 - 1.0	15.0 - 1.6
31	1°37.8	1°38.0	1°33.3	3.1 - 0.3	9.1 - 1.0	15.1 - 1.6
32	1°38.0	1°38.3	1°33.5	3.2 - 0.3	9.2 - 1.0	15.2 - 1.6
33	1°38.3	1°38.5	1°33.8	3.3 - 0.4	9.3 - 1.0	15.3 - 1.7
34	1°38.5	1°38.8	1°34.0	3.4 - 0.4	9.4 - 1.0	15.4 - 1.7
35	1°38.7	1°39.0	1°34.3	3.5 - 0.4	9.5 - 1.0	15.5 - 1.7
36	1°39.0	1°39.3	1°34.5	3.6 - 0.4	9.6 - 1.0	15.6 - 1.7
37	1°39.3	1°39.5	1°34.7	3.7 - 0.4	9.7 - 1.1	15.7 - 1.7
38	1°39.5	1°39.8	1°35.0	3.8 - 0.4	9.8 - 1.1	15.8 - 1.7
39	1°39.8	1°40.0	1°35.2	3.9 - 0.4	9.9 - 1.1	15.9 - 1.7
40	1°40.0	1°40.3	1°35.4	4.0 - 0.4	10.0 - 1.1	16.0 - 1.7
41	1°40.3	1°40.5	1°35.7	4.1 - 0.4	10.1 - 1.1	16.1 - 1.7
42	1°40.5	1°40.8	1°35.9	4.2 - 0.5	10.2 - 1.1	16.2 - 1.8
43	1°40.8	1°41.0	1°36.2	4.3 - 0.5	10.3 - 1.1	16.3 - 1.8
44	1°41.0	1°41.3	1°36.4	4.4 - 0.5	10.4 - 1.1	16.4 - 1.8
45	1°41.3	1°41.5	1°36.6	4.5 - 0.5	10.5 - 1.1	16.5 - 1.8
46	1°41.5	1°41.8	1°36.9	4.6 - 0.5	10.6 - 1.1	16.6 - 1.8
47	1°41.8	1°42.0	1°37.1	4.7 - 0.5	10.7 - 1.2	16.7 - 1.8
48	1°42.0	1°42.3	1°37.4	4.8 - 0.5	10.8 - 1.2	16.8 - 1.8
49	1°42.3	1°42.5	1°37.6	4.9 - 0.5	10.9 - 1.2	16.9 - 1.8
50	1°42.5	1°42.8	1°37.8	5.0 - 0.5	11.0 - 1.2	17.0 - 1.8
51	1°42.7	1°43.0	1°38.1	5.1 - 0.6	11.1 - 1.2	17.1 - 1.9
52	1°43.0	1°43.3	1°38.3	5.2 - 0.6	11.2 - 1.2	17.2 - 1.9
53	1°43.2	1°43.5	1°38.5	5.3 - 0.6	11.3 - 1.2	17.3 - 1.9
54	1°43.5	1°43.8	1°38.8	5.4 - 0.6	11.4 - 1.2	17.4 - 1.9
55	1°43.8	1°44.0	1°39.0	5.5 - 0.6	11.5 - 1.2	17.5 - 1.9
56	1°44.0	1°44.3	1°39.3	5.6 - 0.6	11.6 - 1.3	17.6 - 1.9
57	1°44.3	1°44.5	1°39.5	5.7 - 0.6	11.7 - 1.3	17.7 - 1.9
58	1°44.5	1°44.8	1°39.7	5.8 - 0.6	11.8 - 1.3	17.8 - 1.9
59	1°44.8	1°45.0	1°40.0	5.9 - 0.6	11.9 - 1.3	17.9 - 1.9

m 7	Sun Plan.	Aries	Moon	v and d corr		
0	1°45.0	1°45.3	1°40.2	0.0 - 0.0	6.0 - 0.8	12.0 - 1.5
1	1°45.3	1°45.5	1°40.5	0.1 - 0.0	6.1 - 0.8	12.1 - 1.5
2	1°45.5	1°45.8	1°40.7	0.2 - 0.0	6.2 - 0.8	12.2 - 1.5
3	1°45.8	1°46.0	1°40.9	0.3 - 0.0	6.3 - 0.8	12.3 - 1.5
4	1°46.0	1°46.3	1°41.2	0.4 - 0.1	6.4 - 0.8	12.4 - 1.6
5	1°46.2	1°46.5	1°41.4	0.5 - 0.1	6.5 - 0.8	12.5 - 1.6
6	1°46.5	1°46.8	1°41.6	0.6 - 0.1	6.6 - 0.8	12.6 - 1.6
7	1°46.7	1°47.0	1°41.9	0.7 - 0.1	6.7 - 0.8	12.7 - 1.6
8	1°47.0	1°47.3	1°42.1	0.8 - 0.1	6.8 - 0.8	12.8 - 1.6
9	1°47.3	1°47.5	1°42.4	0.9 - 0.1	6.9 - 0.9	12.9 - 1.6
10	1°47.5	1°47.8	1°42.6	1.0 - 0.1	7.0 - 0.9	13.0 - 1.6
11	1°47.8	1°48.0	1°42.8	1.1 - 0.1	7.1 - 0.9	13.1 - 1.6
12	1°48.0	1°48.3	1°43.1	1.2 - 0.2	7.2 - 0.9	13.2 - 1.6
13	1°48.3	1°48.5	1°43.3	1.3 - 0.2	7.3 - 0.9	13.3 - 1.7
14	1°48.5	1°48.8	1°43.6	1.4 - 0.2	7.4 - 0.9	13.4 - 1.7
15	1°48.8	1°49.0	1°43.8	1.5 - 0.2	7.5 - 0.9	13.5 - 1.7
16	1°49.0	1°49.3	1°44.0	1.6 - 0.2	7.6 - 0.9	13.6 - 1.7
17	1°49.3	1°49.5	1°44.3	1.7 - 0.2	7.7 - 1.0	13.7 - 1.7
18	1°49.5	1°49.8	1°44.5	1.8 - 0.2	7.8 - 1.0	13.8 - 1.7
19	1°49.8	1°50.0	1°44.8	1.9 - 0.2	7.9 - 1.0	13.9 - 1.7
20	1°50.0	1°50.3	1°45.0	2.0 - 0.3	8.0 - 1.0	14.0 - 1.8
21	1°50.2	1°50.6	1°45.2	2.1 - 0.3	8.1 - 1.0	14.1 - 1.8
22	1°50.5	1°50.8	1°45.5	2.2 - 0.3	8.2 - 1.0	14.2 - 1.8
23	1°50.8	1°51.1	1°45.7	2.3 - 0.3	8.3 - 1.0	14.3 - 1.8
24	1°51.0	1°51.3	1°45.9	2.4 - 0.3	8.4 - 1.1	14.4 - 1.8
25	1°51.3	1°51.6	1°46.2	2.5 - 0.3	8.5 - 1.1	14.5 - 1.8
26	1°51.5	1°51.8	1°46.4	2.6 - 0.3	8.6 - 1.1	14.6 - 1.8
27	1°51.8	1°52.1	1°46.7	2.7 - 0.3	8.7 - 1.1	14.7 - 1.8
28	1°52.0	1°52.3	1°46.9	2.8 - 0.4	8.8 - 1.1	14.8 - 1.9
29	1°52.3	1°52.6	1°47.1	2.9 - 0.4	8.9 - 1.1	14.9 - 1.9
30	1°52.5	1°52.8	1°47.4	3.0 - 0.4	9.0 - 1.1	15.0 - 1.9
31	1°52.7	1°53.1	1°47.6	3.1 - 0.4	9.1 - 1.1	15.1 - 1.9
32	1°53.0	1°53.3	1°47.9	3.2 - 0.4	9.2 - 1.1	15.2 - 1.9
33	1°53.3	1°53.6	1°48.1	3.3 - 0.4	9.3 - 1.2	15.3 - 1.9
34	1°53.5	1°53.8	1°48.3	3.4 - 0.4	9.4 - 1.2	15.4 - 1.9
35	1°53.7	1°54.1	1°48.6	3.5 - 0.4	9.5 - 1.2	15.5 - 1.9
36	1°54.0	1°54.3	1°48.8	3.6 - 0.5	9.6 - 1.2	15.6 - 1.9
37	1°54.2	1°54.6	1°49.0	3.7 - 0.5	9.7 - 1.2	15.7 - 2.0
38	1°54.5	1°54.8	1°49.3	3.8 - 0.5	9.8 - 1.2	15.8 - 2.0
39	1°54.8	1°55.1	1°49.5	3.9 - 0.5	9.9 - 1.2	15.9 - 2.0
40	1°55.0	1°55.3	1°49.8	4.0 - 0.5	10.0 - 1.3	16.0 - 2.0
41	1°55.3	1°55.6	1°50.0	4.1 - 0.5	10.1 - 1.3	16.1 - 2.0
42	1°55.5	1°55.8	1°50.2	4.2 - 0.5	10.2 - 1.3	16.2 - 2.0
43	1°55.8	1°56.1	1°50.5	4.3 - 0.5	10.3 - 1.3	16.3 - 2.0
44	1°56.0	1°56.3	1°50.7	4.4 - 0.6	10.4 - 1.3	16.4 - 2.0
45	1°56.3	1°56.6	1°51.0	4.5 - 0.6	10.5 - 1.3	16.5 - 2.1
46	1°56.5	1°56.8	1°51.2	4.6 - 0.6	10.6 - 1.3	16.6 - 2.1
47	1°56.7	1°57.1	1°51.4	4.7 - 0.6	10.7 - 1.3	16.7 - 2.1
48	1°57.0	1°57.3	1°51.7	4.8 - 0.6	10.8 - 1.4	16.8 - 2.1
49	1°57.3	1°57.6	1°51.9	4.9 - 0.6	10.9 - 1.4	16.9 - 2.1
50	1°57.5	1°57.8	1°52.1	5.0 - 0.6	11.0 - 1.4	17.0 - 2.1
51	1°57.7	1°58.1	1°52.4	5.1 - 0.6	11.1 - 1.4	17.1 - 2.1
52	1°58.0	1°58.3	1°52.6	5.2 - 0.7	11.2 - 1.4	17.2 - 2.1
53	1°58.2	1°58.6	1°52.9	5.3 - 0.7	11.3 - 1.4	17.3 - 2.2
54	1°58.5	1°58.8	1°53.1	5.4 - 0.7	11.4 - 1.4	17.4 - 2.2
55	1°58.8	1°59.1	1°53.3	5.5 - 0.7	11.5 - 1.4	17.5 - 2.2
56	1°59.0	1°59.3	1°53.6	5.6 - 0.7	11.6 - 1.5	17.6 - 2.2
57	1°59.3	1°59.6	1°53.8	5.7 - 0.7	11.7 - 1.5	17.7 - 2.2
58	1°59.5	1°59.8	1°54.1	5.8 - 0.7	11.8 - 1.5	17.8 - 2.2
59	1°59.8	2°00.1	1°54.3	5.9 - 0.7	11.9 - 1.5	17.9 - 2.2

m 8	Sun Plan.	Aries	Moon	v and d corr		
0	2°00.0	2°00.3	1°54.5	0.0 - 0.0	6.0 - 0.8	12.0 - 1.7
1	2°00.3	2°00.6	1°54.8	0.1 - 0.0	6.1 - 0.9	12.1 - 1.7
2	2°00.5	2°00.8	1°55.0	0.2 - 0.0	6.2 - 0.9	12.2 - 1.7
3	2°00.8	2°01.1	1°55.2	0.3 - 0.0	6.3 - 0.9	12.3 - 1.7
4	2°01.0	2°01.3	1°55.5	0.4 - 0.1	6.4 - 0.9	12.4 - 1.8
5	2°01.3	2°01.6	1°55.7	0.5 - 0.1	6.5 - 0.9	12.5 - 1.8
6	2°01.5	2°01.8	1°56.0	0.6 - 0.1	6.6 - 0.9	12.6 - 1.8
7	2°01.8	2°02.1	1°56.2	0.7 - 0.1	6.7 - 0.9	12.7 - 1.8
8	2°02.0	2°02.3	1°56.4	0.8 - 0.1	6.8 - 1.0	12.8 - 1.8
9	2°02.3	2°02.6	1°56.7	0.9 - 0.1	6.9 - 1.0	12.9 - 1.8
10	2°02.5	2°02.8	1°56.9	1.0 - 0.1	7.0 - 1.0	13.0 - 1.8
11	2°02.8	2°03.1	1°57.2	1.1 - 0.2	7.1 - 1.0	13.1 - 1.9
12	2°03.0	2°03.3	1°57.4	1.2 - 0.2	7.2 - 1.0	13.2 - 1.9
13	2°03.3	2°03.6	1°57.6	1.3 - 0.2	7.3 - 1.0	13.3 - 1.9
14	2°03.5	2°03.8	1°57.9	1.4 - 0.2	7.4 - 1.0	13.4 - 1.9
15	2°03.8	2°04.1	1°58.1	1.5 - 0.2	7.5 - 1.1	13.5 - 1.9
16	2°04.0	2°04.3	1°58.4	1.6 - 0.2	7.6 - 1.1	13.6 - 1.9
17	2°04.2	2°04.6	1°58.6	1.7 - 0.2	7.7 - 1.1	13.7 - 1.9
18	2°04.5	2°04.8	1°58.8	1.8 - 0.3	7.8 - 1.1	13.8 - 2.0
19	2°04.7	2°05.1	1°59.1	1.9 - 0.3	7.9 - 1.1	13.9 - 2.0
20	2°05.0	2°05.3	1°59.3	2.0 - 0.3	8.0 - 1.1	14.0 - 2.0
21	2°05.2	2°05.6	1°59.5	2.1 - 0.3	8.1 - 1.1	14.1 - 2.0
22	2°05.5	2°05.8	1°59.8	2.2 - 0.3	8.2 - 1.2	14.2 - 2.0
23	2°05.7	2°06.1	2°00.0	2.3 - 0.3	8.3 - 1.2	14.3 - 2.0
24	2°06.0	2°06.3	2°00.3	2.4 - 0.3	8.4 - 1.2	14.4 - 2.0
25	2°06.2	2°06.6	2°00.5	2.5 - 0.4	8.5 - 1.2	14.5 - 2.1
26	2°06.5	2°06.8	2°00.7	2.6 - 0.4	8.6 - 1.2	14.6 - 2.1
27	2°06.7	2°07.1	2°01.0	2.7 - 0.4	8.7 - 1.2	14.7 - 2.1
28	2°07.0	2°07.3	2°01.2	2.8 - 0.4	8.8 - 1.2	14.8 - 2.1
29	2°07.2	2°07.6	2°01.5	2.9 - 0.4	8.9 - 1.3	14.9 - 2.1
30	2°07.5	2°07.8	2°01.7	3.0 - 0.4	9.0 - 1.3	15.0 - 2.1
31	2°07.8	2°08.1	2°01.9	3.1 - 0.4	9.1 - 1.3	15.1 - 2.1
32	2°08.0	2°08.3	2°02.2	3.2 - 0.5	9.2 - 1.3	15.2 - 2.2
33	2°08.3	2°08.6	2°02.4	3.3 - 0.5	9.3 - 1.3	15.3 - 2.2
34	2°08.5	2°08.9	2°02.6	3.4 - 0.5	9.4 - 1.3	15.4 - 2.2
35	2°08.8	2°09.1	2°02.9	3.5 - 0.5	9.5 - 1.3	15.5 - 2.2
36	2°09.0	2°09.4	2°03.1	3.6 - 0.5	9.6 - 1.4	15.6 - 2.2
37	2°09.3	2°09.6	2°03.4	3.7 - 0.5	9.7 - 1.4	15.7 - 2.2
38	2°09.5	2°09.9	2°03.6	3.8 - 0.5	9.8 - 1.4	15.8 - 2.2
39	2°09.8	2°10.1	2°03.8	3.9 - 0.6	9.9 - 1.4	15.9 - 2.3
40	2°10.0	2°10.4	2°04.1	4.0 - 0.6	10.0 - 1.4	16.0 - 2.3
41	2°10.3	2°10.6	2°04.3	4.1 - 0.6	10.1 - 1.4	16.1 - 2.3
42	2°10.5	2°10.9	2°04.6	4.2 - 0.6	10.2 - 1.4	16.2 - 2.3
43	2°10.8	2°11.1	2°04.8	4.3 - 0.6	10.3 - 1.5	16.3 - 2.3
44	2°11.0	2°11.4	2°05.0	4.4 - 0.6	10.4 - 1.5	16.4 - 2.3
45	2°11.3	2°11.6	2°05.3	4.5 - 0.6	10.5 - 1.5	16.5 - 2.3
46	2°11.5	2°11.9	2°05.5	4.6 - 0.7	10.6 - 1.5	16.6 - 2.4
47	2°11.7	2°12.1	2°05.7	4.7 - 0.7	10.7 - 1.5	16.7 - 2.4
48	2°12.0	2°12.4	2°06.0	4.8 - 0.7	10.8 - 1.5	16.8 - 2.4
49	2°12.2	2°12.6	2°06.2	4.9 - 0.7	10.9 - 1.5	16.9 - 2.4
50	2°12.5	2°12.9	2°06.5	5.0 - 0.7	11.0 - 1.6	17.0 - 2.4
51	2°12.7	2°13.1	2°06.7	5.1 - 0.7	11.1 - 1.6	17.1 - 2.4
52	2°13.0	2°13.4	2°06.9	5.2 - 0.7	11.2 - 1.6	17.2 - 2.4
53	2°13.2	2°13.6	2°07.2	5.3 - 0.8	11.3 - 1.6	17.3 - 2.5
54	2°13.5	2°13.9	2°07.4	5.4 - 0.8	11.4 - 1.6	17.4 - 2.5
55	2°13.7	2°14.1	2°07.7	5.5 - 0.8	11.5 - 1.6	17.5 - 2.5
56	2°14.0	2°14.4	2°07.9	5.6 - 0.8	11.6 - 1.6	17.6 - 2.5
57	2°14.2	2°14.6	2°08.1	5.7 - 0.8	11.7 - 1.7	17.7 - 2.5
58	2°14.5	2°14.9	2°08.4	5.8 - 0.8	11.8 - 1.7	17.8 - 2.5
59	2°14.7	2°15.1	2°08.6	5.9 - 0.8	11.9 - 1.7	17.9 - 2.5

Increments and Corrections

m 9	Sun Plan.	Aries	Moon	v and d corr		
0	2°15.0	2°15.4	2°08.8	0.0 - 0.0	6.0 - 0.9	12.0 - 1.9
1	2°15.3	2°15.6	2°09.1	0.1 - 0.0	6.1 - 1.0	12.1 - 1.9
2	2°15.5	2°15.9	2°09.3	0.2 - 0.0	6.2 - 1.0	12.2 - 1.9
3	2°15.8	2°16.1	2°09.6	0.3 - 0.0	6.3 - 1.0	12.3 - 1.9
4	2°16.0	2°16.4	2°09.8	0.4 - 0.1	6.4 - 1.0	12.4 - 2.0
5	2°16.3	2°16.6	2°10.0	0.5 - 0.1	6.5 - 1.0	12.5 - 2.0
6	2°16.5	2°16.9	2°10.3	0.6 - 0.1	6.6 - 1.0	12.6 - 2.0
7	2°16.8	2°17.1	2°10.5	0.7 - 0.1	6.7 - 1.1	12.7 - 2.0
8	2°17.0	2°17.4	2°10.8	0.8 - 0.1	6.8 - 1.1	12.8 - 2.0
9	2°17.3	2°17.6	2°11.0	0.9 - 0.1	6.9 - 1.1	12.9 - 2.0
10	2°17.5	2°17.9	2°11.2	1.0 - 0.2	7.0 - 1.1	13.0 - 2.1
11	2°17.8	2°18.1	2°11.5	1.1 - 0.2	7.1 - 1.1	13.1 - 2.1
12	2°18.0	2°18.4	2°11.7	1.2 - 0.2	7.2 - 1.1	13.2 - 2.1
13	2°18.3	2°18.6	2°12.0	1.3 - 0.2	7.3 - 1.2	13.3 - 2.1
14	2°18.5	2°18.9	2°12.2	1.4 - 0.2	7.4 - 1.2	13.4 - 2.1
15	2°18.8	2°19.1	2°12.4	1.5 - 0.2	7.5 - 1.2	13.5 - 2.1
16	2°19.0	2°19.4	2°12.7	1.6 - 0.3	7.6 - 1.2	13.6 - 2.2
17	2°19.3	2°19.6	2°12.9	1.7 - 0.3	7.7 - 1.2	13.7 - 2.2
18	2°19.5	2°19.9	2°13.1	1.8 - 0.3	7.8 - 1.2	13.8 - 2.2
19	2°19.7	2°20.1	2°13.4	1.9 - 0.3	7.9 - 1.3	13.9 - 2.2
20	2°20.0	2°20.4	2°13.6	2.0 - 0.3	8.0 - 1.3	14.0 - 2.2
21	2°20.2	2°20.6	2°13.9	2.1 - 0.3	8.1 - 1.3	14.1 - 2.2
22	2°20.5	2°20.9	2°14.1	2.2 - 0.3	8.2 - 1.3	14.2 - 2.2
23	2°20.7	2°21.1	2°14.3	2.3 - 0.4	8.3 - 1.3	14.3 - 2.3
24	2°21.0	2°21.4	2°14.6	2.4 - 0.4	8.4 - 1.3	14.4 - 2.3
25	2°21.2	2°21.6	2°14.8	2.5 - 0.4	8.5 - 1.3	14.5 - 2.3
26	2°21.5	2°21.9	2°15.1	2.6 - 0.4	8.6 - 1.4	14.6 - 2.3
27	2°21.7	2°22.1	2°15.3	2.7 - 0.4	8.7 - 1.4	14.7 - 2.3
28	2°22.0	2°22.4	2°15.5	2.8 - 0.4	8.8 - 1.4	14.8 - 2.3
29	2°22.2	2°22.6	2°15.8	2.9 - 0.5	8.9 - 1.4	14.9 - 2.4
30	2°22.5	2°22.9	2°16.0	3.0 - 0.5	9.0 - 1.4	15.0 - 2.4
31	2°22.8	2°23.1	2°16.2	3.1 - 0.5	9.1 - 1.4	15.1 - 2.4
32	2°23.0	2°23.4	2°16.5	3.2 - 0.5	9.2 - 1.5	15.2 - 2.4
33	2°23.3	2°23.6	2°16.7	3.3 - 0.5	9.3 - 1.5	15.3 - 2.4
34	2°23.5	2°23.9	2°17.0	3.4 - 0.5	9.4 - 1.5	15.4 - 2.4
35	2°23.8	2°24.1	2°17.2	3.5 - 0.6	9.5 - 1.5	15.5 - 2.5
36	2°24.0	2°24.4	2°17.4	3.6 - 0.6	9.6 - 1.5	15.6 - 2.5
37	2°24.3	2°24.6	2°17.7	3.7 - 0.6	9.7 - 1.5	15.7 - 2.5
38	2°24.5	2°24.9	2°17.9	3.8 - 0.6	9.8 - 1.6	15.8 - 2.5
39	2°24.8	2°25.1	2°18.2	3.9 - 0.6	9.9 - 1.6	15.9 - 2.5
40	2°25.0	2°25.4	2°18.4	4.0 - 0.6	10.0 - 1.6	16.0 - 2.5
41	2°25.3	2°25.6	2°18.6	4.1 - 0.6	10.1 - 1.6	16.1 - 2.5
42	2°25.5	2°25.9	2°18.9	4.2 - 0.7	10.2 - 1.6	16.2 - 2.6
43	2°25.8	2°26.1	2°19.1	4.3 - 0.7	10.3 - 1.6	16.3 - 2.6
44	2°26.0	2°26.4	2°19.3	4.4 - 0.7	10.4 - 1.6	16.4 - 2.6
45	2°26.3	2°26.6	2°19.6	4.5 - 0.7	10.5 - 1.7	16.5 - 2.6
46	2°26.5	2°26.9	2°19.8	4.6 - 0.7	10.6 - 1.7	16.6 - 2.6
47	2°26.8	2°27.2	2°20.1	4.7 - 0.7	10.7 - 1.7	16.7 - 2.6
48	2°27.0	2°27.4	2°20.3	4.8 - 0.8	10.8 - 1.7	16.8 - 2.7
49	2°27.2	2°27.7	2°20.5	4.9 - 0.8	10.9 - 1.7	16.9 - 2.7
50	2°27.5	2°27.9	2°20.8	5.0 - 0.8	11.0 - 1.7	17.0 - 2.7
51	2°27.7	2°28.2	2°21.0	5.1 - 0.8	11.1 - 1.8	17.1 - 2.7
52	2°28.0	2°28.4	2°21.3	5.2 - 0.8	11.2 - 1.8	17.2 - 2.7
53	2°28.2	2°28.7	2°21.5	5.3 - 0.8	11.3 - 1.8	17.3 - 2.7
54	2°28.5	2°28.9	2°21.7	5.4 - 0.9	11.4 - 1.8	17.4 - 2.8
55	2°28.7	2°29.2	2°22.0	5.5 - 0.9	11.5 - 1.8	17.5 - 2.8
56	2°29.0	2°29.4	2°22.2	5.6 - 0.9	11.6 - 1.8	17.6 - 2.8
57	2°29.2	2°29.7	2°22.5	5.7 - 0.9	11.7 - 1.9	17.7 - 2.8
58	2°29.5	2°29.9	2°22.7	5.8 - 0.9	11.8 - 1.9	17.8 - 2.8
59	2°29.7	2°30.2	2°22.9	5.9 - 0.9	11.9 - 1.9	17.9 - 2.8

m 10	Sun Plan.	Aries	Moon	v and d corr		
0	2°30.0	2°30.4	2°23.2	0.0 - 0.0	6.0 - 1.0	12.0 - 2.1
1	2°30.3	2°30.7	2°23.4	0.1 - 0.0	6.1 - 1.1	12.1 - 2.1
2	2°30.5	2°30.9	2°23.6	0.2 - 0.0	6.2 - 1.1	12.2 - 2.1
3	2°30.8	2°31.2	2°23.9	0.3 - 0.1	6.3 - 1.1	12.3 - 2.2
4	2°31.0	2°31.4	2°24.1	0.4 - 0.1	6.4 - 1.1	12.4 - 2.2
5	2°31.3	2°31.7	2°24.4	0.5 - 0.1	6.5 - 1.1	12.5 - 2.2
6	2°31.5	2°31.9	2°24.6	0.6 - 0.1	6.6 - 1.2	12.6 - 2.2
7	2°31.8	2°32.2	2°24.8	0.7 - 0.1	6.7 - 1.2	12.7 - 2.2
8	2°32.0	2°32.4	2°25.1	0.8 - 0.1	6.8 - 1.2	12.8 - 2.2
9	2°32.3	2°32.7	2°25.3	0.9 - 0.2	6.9 - 1.2	12.9 - 2.3
10	2°32.5	2°32.9	2°25.6	1.0 - 0.2	7.0 - 1.2	13.0 - 2.3
11	2°32.8	2°33.2	2°25.8	1.1 - 0.2	7.1 - 1.2	13.1 - 2.3
12	2°33.0	2°33.4	2°26.0	1.2 - 0.2	7.2 - 1.3	13.2 - 2.3
13	2°33.3	2°33.7	2°26.3	1.3 - 0.2	7.3 - 1.3	13.3 - 2.3
14	2°33.5	2°33.9	2°26.5	1.4 - 0.2	7.4 - 1.3	13.4 - 2.3
15	2°33.8	2°34.2	2°26.7	1.5 - 0.3	7.5 - 1.3	13.5 - 2.4
16	2°34.0	2°34.4	2°27.0	1.6 - 0.3	7.6 - 1.3	13.6 - 2.4
17	2°34.3	2°34.7	2°27.2	1.7 - 0.3	7.7 - 1.3	13.7 - 2.4
18	2°34.5	2°34.9	2°27.5	1.8 - 0.3	7.8 - 1.4	13.8 - 2.4
19	2°34.8	2°35.2	2°27.7	1.9 - 0.3	7.9 - 1.4	13.9 - 2.4
20	2°35.0	2°35.4	2°27.9	2.0 - 0.3	8.0 - 1.4	14.0 - 2.4
21	2°35.2	2°35.7	2°28.2	2.1 - 0.4	8.1 - 1.4	14.1 - 2.5
22	2°35.5	2°35.9	2°28.4	2.2 - 0.4	8.2 - 1.4	14.2 - 2.5
23	2°35.7	2°36.2	2°28.7	2.3 - 0.4	8.3 - 1.5	14.3 - 2.5
24	2°36.0	2°36.4	2°28.9	2.4 - 0.4	8.4 - 1.5	14.4 - 2.5
25	2°36.2	2°36.7	2°29.1	2.5 - 0.4	8.5 - 1.5	14.5 - 2.5
26	2°36.5	2°36.9	2°29.4	2.6 - 0.5	8.6 - 1.5	14.6 - 2.6
27	2°36.7	2°37.2	2°29.6	2.7 - 0.5	8.7 - 1.5	14.7 - 2.6
28	2°37.0	2°37.4	2°29.8	2.8 - 0.5	8.8 - 1.5	14.8 - 2.6
29	2°37.2	2°37.7	2°30.1	2.9 - 0.5	8.9 - 1.6	14.9 - 2.6
30	2°37.5	2°37.9	2°30.3	3.0 - 0.5	9.0 - 1.6	15.0 - 2.6
31	2°37.8	2°38.2	2°30.6	3.1 - 0.5	9.1 - 1.6	15.1 - 2.6
32	2°38.0	2°38.4	2°30.8	3.2 - 0.6	9.2 - 1.6	15.2 - 2.7
33	2°38.3	2°38.7	2°31.0	3.3 - 0.6	9.3 - 1.6	15.3 - 2.7
34	2°38.5	2°38.9	2°31.3	3.4 - 0.6	9.4 - 1.6	15.4 - 2.7
35	2°38.8	2°39.2	2°31.5	3.5 - 0.6	9.5 - 1.7	15.5 - 2.7
36	2°39.0	2°39.4	2°31.8	3.6 - 0.6	9.6 - 1.7	15.6 - 2.7
37	2°39.3	2°39.7	2°32.0	3.7 - 0.6	9.7 - 1.7	15.7 - 2.7
38	2°39.5	2°39.9	2°32.2	3.8 - 0.7	9.8 - 1.7	15.8 - 2.8
39	2°39.8	2°40.2	2°32.5	3.9 - 0.7	9.9 - 1.7	15.9 - 2.8
40	2°40.0	2°40.4	2°32.7	4.0 - 0.7	10.0 - 1.8	16.0 - 2.8
41	2°40.3	2°40.7	2°32.9	4.1 - 0.7	10.1 - 1.8	16.1 - 2.8
42	2°40.5	2°40.9	2°33.2	4.2 - 0.7	10.2 - 1.8	16.2 - 2.8
43	2°40.8	2°41.2	2°33.4	4.3 - 0.8	10.3 - 1.8	16.3 - 2.9
44	2°41.0	2°41.4	2°33.7	4.4 - 0.8	10.4 - 1.8	16.4 - 2.9
45	2°41.3	2°41.7	2°33.9	4.5 - 0.8	10.5 - 1.8	16.5 - 2.9
46	2°41.5	2°41.9	2°34.1	4.6 - 0.8	10.6 - 1.9	16.6 - 2.9
47	2°41.8	2°42.2	2°34.4	4.7 - 0.8	10.7 - 1.9	16.7 - 2.9
48	2°42.0	2°42.4	2°34.6	4.8 - 0.8	10.8 - 1.9	16.8 - 2.9
49	2°42.3	2°42.7	2°34.9	4.9 - 0.9	10.9 - 1.9	16.9 - 3.0
50	2°42.5	2°42.9	2°35.1	5.0 - 0.9	11.0 - 1.9	17.0 - 3.0
51	2°42.7	2°43.2	2°35.3	5.1 - 0.9	11.1 - 1.9	17.1 - 3.0
52	2°43.0	2°43.4	2°35.6	5.2 - 0.9	11.2 - 2.0	17.2 - 3.0
53	2°43.2	2°43.7	2°35.8	5.3 - 0.9	11.3 - 2.0	17.3 - 3.0
54	2°43.5	2°43.9	2°36.1	5.4 - 0.9	11.4 - 2.0	17.4 - 3.0
55	2°43.7	2°44.2	2°36.3	5.5 - 1.0	11.5 - 2.0	17.5 - 3.1
56	2°44.0	2°44.4	2°36.5	5.6 - 1.0	11.6 - 2.0	17.6 - 3.1
57	2°44.2	2°44.7	2°36.8	5.7 - 1.0	11.7 - 2.0	17.7 - 3.1
58	2°44.5	2°44.9	2°37.0	5.8 - 1.0	11.8 - 2.1	17.8 - 3.1
59	2°44.7	2°45.2	2°37.2	5.9 - 1.0	11.9 - 2.1	17.9 - 3.1

m 11	Sun Plan.	Aries	Moon	v and d corr		
0	2°45.0	2°45.5	2°37.5	0.0 - 0.0	6.0 - 1.2	12.0 - 2.3
1	2°45.3	2°45.7	2°37.7	0.1 - 0.0	6.1 - 1.2	12.1 - 2.3
2	2°45.5	2°46.0	2°38.0	0.2 - 0.0	6.2 - 1.2	12.2 - 2.3
3	2°45.8	2°46.2	2°38.2	0.3 - 0.1	6.3 - 1.2	12.3 - 2.4
4	2°46.0	2°46.5	2°38.4	0.4 - 0.1	6.4 - 1.2	12.4 - 2.4
5	2°46.3	2°46.7	2°38.7	0.5 - 0.1	6.5 - 1.2	12.5 - 2.4
6	2°46.5	2°47.0	2°38.9	0.6 - 0.1	6.6 - 1.3	12.6 - 2.4
7	2°46.8	2°47.2	2°39.2	0.7 - 0.1	6.7 - 1.3	12.7 - 2.4
8	2°47.0	2°47.5	2°39.4	0.8 - 0.2	6.8 - 1.3	12.8 - 2.5
9	2°47.3	2°47.7	2°39.6	0.9 - 0.2	6.9 - 1.3	12.9 - 2.5
10	2°47.5	2°48.0	2°39.9	1.0 - 0.2	7.0 - 1.3	13.0 - 2.5
11	2°47.8	2°48.2	2°40.1	1.1 - 0.2	7.1 - 1.4	13.1 - 2.5
12	2°48.0	2°48.5	2°40.3	1.2 - 0.2	7.2 - 1.4	13.2 - 2.5
13	2°48.3	2°48.7	2°40.6	1.3 - 0.2	7.3 - 1.4	13.3 - 2.5
14	2°48.5	2°49.0	2°40.8	1.4 - 0.3	7.4 - 1.4	13.4 - 2.6
15	2°48.8	2°49.2	2°41.1	1.5 - 0.3	7.5 - 1.4	13.5 - 2.6
16	2°49.0	2°49.5	2°41.3	1.6 - 0.3	7.6 - 1.5	13.6 - 2.6
17	2°49.3	2°49.7	2°41.5	1.7 - 0.3	7.7 - 1.5	13.7 - 2.6
18	2°49.5	2°50.0	2°41.8	1.8 - 0.3	7.8 - 1.5	13.8 - 2.6
19	2°49.8	2°50.2	2°42.0	1.9 - 0.4	7.9 - 1.5	13.9 - 2.7
20	2°50.0	2°50.5	2°42.3	2.0 - 0.4	8.0 - 1.5	14.0 - 2.7
21	2°50.2	2°50.7	2°42.5	2.1 - 0.4	8.1 - 1.6	14.1 - 2.7
22	2°50.5	2°51.0	2°42.7	2.2 - 0.4	8.2 - 1.6	14.2 - 2.7
23	2°50.7	2°51.2	2°43.0	2.3 - 0.4	8.3 - 1.6	14.3 - 2.7
24	2°51.0	2°51.5	2°43.2	2.4 - 0.5	8.4 - 1.6	14.4 - 2.8
25	2°51.2	2°51.7	2°43.4	2.5 - 0.5	8.5 - 1.6	14.5 - 2.8
26	2°51.5	2°52.0	2°43.7	2.6 - 0.5	8.6 - 1.6	14.6 - 2.8
27	2°51.7	2°52.2	2°43.9	2.7 - 0.5	8.7 - 1.7	14.7 - 2.8
28	2°52.0	2°52.5	2°44.2	2.8 - 0.5	8.8 - 1.7	14.8 - 2.8
29	2°52.2	2°52.7	2°44.4	2.9 - 0.6	8.9 - 1.7	14.9 - 2.9
30	2°52.5	2°53.0	2°44.6	3.0 - 0.6	9.0 - 1.7	15.0 - 2.9
31	2°52.8	2°53.2	2°44.9	3.1 - 0.6	9.1 - 1.7	15.1 - 2.9
32	2°53.0	2°53.5	2°45.1	3.2 - 0.6	9.2 - 1.8	15.2 - 2.9
33	2°53.3	2°53.7	2°45.4	3.3 - 0.6	9.3 - 1.8	15.3 - 2.9
34	2°53.5	2°54.0	2°45.6	3.4 - 0.7	9.4 - 1.8	15.4 - 3.0
35	2°53.8	2°54.2	2°45.8	3.5 - 0.7	9.5 - 1.8	15.5 - 3.0
36	2°54.0	2°54.5	2°46.1	3.6 - 0.7	9.6 - 1.8	15.6 - 3.0
37	2°54.3	2°54.7	2°46.3	3.7 - 0.7	9.7 - 1.9	15.7 - 3.0
38	2°54.5	2°55.0	2°46.6	3.8 - 0.7	9.8 - 1.9	15.8 - 3.0
39	2°54.8	2°55.2	2°46.8	3.9 - 0.7	9.9 - 1.9	15.9 - 3.0
40	2°55.0	2°55.5	2°47.0	4.0 - 0.8	10.0 - 1.9	16.0 - 3.1
41	2°55.3	2°55.7	2°47.3	4.1 - 0.8	10.1 - 1.9	16.1 - 3.1
42	2°55.5	2°56.0	2°47.5	4.2 - 0.8	10.2 - 2.0	16.2 - 3.1
43	2°55.8	2°56.2	2°47.7	4.3 - 0.8	10.3 - 2.0	16.3 - 3.1
44	2°56.0	2°56.5	2°48.0	4.4 - 0.8	10.4 - 2.0	16.4 - 3.1
45	2°56.3	2°56.7	2°48.2	4.5 - 0.9	10.5 - 2.0	16.5 - 3.2
46	2°56.5	2°57.0	2°48.5	4.6 - 0.9	10.6 - 2.0	16.6 - 3.2
47	2°56.8	2°57.2	2°48.7	4.7 - 0.9	10.7 - 2.1	16.7 - 3.2
48	2°57.0	2°57.5	2°48.9	4.8 - 0.9	10.8 - 2.1	16.8 - 3.2
49	2°57.3	2°57.7	2°49.2	4.9 - 0.9	10.9 - 2.1	16.9 - 3.2
50	2°57.5	2°58.0	2°49.4	5.0 - 1.0	11.0 - 2.1	17.0 - 3.3
51	2°57.7	2°58.2	2°49.7	5.1 - 1.0	11.1 - 2.1	17.1 - 3.3
52	2°58.0	2°58.5	2°49.9	5.2 - 1.0	11.2 - 2.1	17.2 - 3.3
53	2°58.2	2°58.7	2°50.1	5.3 - 1.0	11.3 - 2.2	17.3 - 3.3
54	2°58.5	2°59.0	2°50.4	5.4 - 1.0	11.4 - 2.2	17.4 - 3.3
55	2°58.7	2°59.2	2°50.6	5.5 - 1.1	11.5 - 2.2	17.5 - 3.4
56	2°59.0	2°59.5	2°50.8	5.6 - 1.1	11.6 - 2.2	17.6 - 3.4
57	2°59.2	2°59.7	2°51.1	5.7 - 1.1	11.7 - 2.2	17.7 - 3.4
58	2°59.5	3°00.0	2°51.3	5.8 - 1.1	11.8 - 2.3	17.8 - 3.4
59	2°59.7	3°00.2	2°51.6	5.9 - 1.1	11.9 - 2.3	17.9 - 3.4

Increments and Corrections

m 12	Sun Plan.	Aries	Moon	v and d corr		
0	3°00.0	3°00.5	2°51.8	0.0 - 0.0	6.0 - 1.3	12.0 - 2.5
1	3°00.3	3°00.7	2°52.0	0.1 - 0.0	6.1 - 1.3	12.1 - 2.5
2	3°00.5	3°01.0	2°52.3	0.2 - 0.0	6.2 - 1.3	12.2 - 2.5
3	3°00.8	3°01.2	2°52.5	0.3 - 0.1	6.3 - 1.3	12.3 - 2.6
4	3°01.0	3°01.5	2°52.8	0.4 - 0.1	6.4 - 1.3	12.4 - 2.6
5	3°01.3	3°01.7	2°53.0	0.5 - 0.1	6.5 - 1.4	12.5 - 2.6
6	3°01.5	3°02.0	2°53.2	0.6 - 0.1	6.6 - 1.4	12.6 - 2.6
7	3°01.8	3°02.2	2°53.5	0.7 - 0.1	6.7 - 1.4	12.7 - 2.6
8	3°02.0	3°02.5	2°53.7	0.8 - 0.2	6.8 - 1.4	12.8 - 2.7
9	3°02.3	3°02.7	2°53.9	0.9 - 0.2	6.9 - 1.4	12.9 - 2.7
10	3°02.5	3°03.0	2°54.2	1.0 - 0.2	7.0 - 1.5	13.0 - 2.7
11	3°02.8	3°03.2	2°54.4	1.1 - 0.2	7.1 - 1.5	13.1 - 2.7
12	3°03.0	3°03.5	2°54.7	1.2 - 0.3	7.2 - 1.5	13.2 - 2.8
13	3°03.3	3°03.8	2°54.9	1.3 - 0.3	7.3 - 1.5	13.3 - 2.8
14	3°03.5	3°04.0	2°55.1	1.4 - 0.3	7.4 - 1.5	13.4 - 2.8
15	3°03.8	3°04.3	2°55.4	1.5 - 0.3	7.5 - 1.6	13.5 - 2.8
16	3°04.0	3°04.5	2°55.6	1.6 - 0.3	7.6 - 1.6	13.6 - 2.8
17	3°04.2	3°04.8	2°55.9	1.7 - 0.4	7.7 - 1.6	13.7 - 2.9
18	3°04.5	3°05.0	2°56.1	1.8 - 0.4	7.8 - 1.6	13.8 - 2.9
19	3°04.7	3°05.3	2°56.3	1.9 - 0.4	7.9 - 1.6	13.9 - 2.9
20	3°05.0	3°05.5	2°56.6	2.0 - 0.4	8.0 - 1.7	14.0 - 2.9
21	3°05.2	3°05.8	2°56.8	2.1 - 0.4	8.1 - 1.7	14.1 - 2.9
22	3°05.5	3°06.0	2°57.0	2.2 - 0.5	8.2 - 1.7	14.2 - 3.0
23	3°05.7	3°06.3	2°57.3	2.3 - 0.5	8.3 - 1.7	14.3 - 3.0
24	3°06.0	3°06.5	2°57.5	2.4 - 0.5	8.4 - 1.8	14.4 - 3.0
25	3°06.2	3°06.8	2°57.8	2.5 - 0.5	8.5 - 1.8	14.5 - 3.0
26	3°06.5	3°07.0	2°58.0	2.6 - 0.5	8.6 - 1.8	14.6 - 3.0
27	3°06.7	3°07.3	2°58.2	2.7 - 0.6	8.7 - 1.8	14.7 - 3.1
28	3°07.0	3°07.5	2°58.5	2.8 - 0.6	8.8 - 1.8	14.8 - 3.1
29	3°07.2	3°07.8	2°58.7	2.9 - 0.6	8.9 - 1.9	14.9 - 3.1
30	3°07.5	3°08.0	2°59.0	3.0 - 0.6	9.0 - 1.9	15.0 - 3.1
31	3°07.8	3°08.3	2°59.2	3.1 - 0.6	9.1 - 1.9	15.1 - 3.1
32	3°08.0	3°08.5	2°59.4	3.2 - 0.7	9.2 - 1.9	15.2 - 3.2
33	3°08.3	3°08.8	2°59.7	3.3 - 0.7	9.3 - 1.9	15.3 - 3.2
34	3°08.5	3°09.0	2°59.9	3.4 - 0.7	9.4 - 2.0	15.4 - 3.2
35	3°08.8	3°09.3	3°00.2	3.5 - 0.7	9.5 - 2.0	15.5 - 3.2
36	3°09.0	3°09.5	3°00.4	3.6 - 0.8	9.6 - 2.0	15.6 - 3.3
37	3°09.3	3°09.8	3°00.6	3.7 - 0.8	9.7 - 2.0	15.7 - 3.3
38	3°09.5	3°10.0	3°00.9	3.8 - 0.8	9.8 - 2.0	15.8 - 3.3
39	3°09.8	3°10.3	3°01.1	3.9 - 0.8	9.9 - 2.1	15.9 - 3.3
40	3°10.0	3°10.5	3°01.3	4.0 - 0.8	10.0 - 2.1	16.0 - 3.3
41	3°10.3	3°10.8	3°01.6	4.1 - 0.9	10.1 - 2.1	16.1 - 3.4
42	3°10.5	3°11.0	3°01.8	4.2 - 0.9	10.2 - 2.1	16.2 - 3.4
43	3°10.8	3°11.3	3°02.1	4.3 - 0.9	10.3 - 2.1	16.3 - 3.4
44	3°11.0	3°11.5	3°02.3	4.4 - 0.9	10.4 - 2.2	16.4 - 3.4
45	3°11.3	3°11.8	3°02.5	4.5 - 0.9	10.5 - 2.2	16.5 - 3.4
46	3°11.5	3°12.0	3°02.8	4.6 - 1.0	10.6 - 2.2	16.6 - 3.5
47	3°11.7	3°12.3	3°03.0	4.7 - 1.0	10.7 - 2.2	16.7 - 3.5
48	3°12.0	3°12.5	3°03.3	4.8 - 1.0	10.8 - 2.3	16.8 - 3.5
49	3°12.2	3°12.8	3°03.5	4.9 - 1.0	10.9 - 2.3	16.9 - 3.5
50	3°12.5	3°13.0	3°03.7	5.0 - 1.0	11.0 - 2.3	17.0 - 3.5
51	3°12.7	3°13.3	3°04.0	5.1 - 1.1	11.1 - 2.3	17.1 - 3.6
52	3°13.0	3°13.5	3°04.2	5.2 - 1.1	11.2 - 2.3	17.2 - 3.6
53	3°13.2	3°13.8	3°04.4	5.3 - 1.1	11.3 - 2.4	17.3 - 3.6
54	3°13.5	3°14.0	3°04.7	5.4 - 1.1	11.4 - 2.4	17.4 - 3.6
55	3°13.7	3°14.3	3°04.9	5.5 - 1.1	11.5 - 2.4	17.5 - 3.6
56	3°14.0	3°14.5	3°05.2	5.6 - 1.2	11.6 - 2.4	17.6 - 3.7
57	3°14.2	3°14.8	3°05.4	5.7 - 1.2	11.7 - 2.4	17.7 - 3.7
58	3°14.5	3°15.0	3°05.6	5.8 - 1.2	11.8 - 2.5	17.8 - 3.7
59	3°14.7	3°15.3	3°05.9	5.9 - 1.2	11.9 - 2.5	17.9 - 3.7

m 13	Sun Plan.	Aries	Moon	v and d corr		
0	3°15.0	3°15.5	3°06.1	0.0 - 0.0	6.0 - 1.4	12.0 - 2.7
1	3°15.3	3°15.8	3°06.4	0.1 - 0.0	6.1 - 1.4	12.1 - 2.7
2	3°15.5	3°16.0	3°06.6	0.2 - 0.0	6.2 - 1.4	12.2 - 2.7
3	3°15.8	3°16.3	3°06.8	0.3 - 0.1	6.3 - 1.4	12.3 - 2.8
4	3°16.0	3°16.5	3°07.1	0.4 - 0.1	6.4 - 1.4	12.4 - 2.8
5	3°16.3	3°16.8	3°07.3	0.5 - 0.1	6.5 - 1.5	12.5 - 2.8
6	3°16.5	3°17.0	3°07.5	0.6 - 0.1	6.6 - 1.5	12.6 - 2.8
7	3°16.8	3°17.3	3°07.8	0.7 - 0.2	6.7 - 1.5	12.7 - 2.9
8	3°17.0	3°17.5	3°08.0	0.8 - 0.2	6.8 - 1.5	12.8 - 2.9
9	3°17.3	3°17.8	3°08.3	0.9 - 0.2	6.9 - 1.6	12.9 - 2.9
10	3°17.5	3°18.0	3°08.5	1.0 - 0.2	7.0 - 1.6	13.0 - 2.9
11	3°17.8	3°18.3	3°08.7	1.1 - 0.2	7.1 - 1.6	13.1 - 2.9
12	3°18.0	3°18.5	3°09.0	1.2 - 0.3	7.2 - 1.6	13.2 - 3.0
13	3°18.3	3°18.8	3°09.2	1.3 - 0.3	7.3 - 1.6	13.3 - 3.0
14	3°18.5	3°19.0	3°09.5	1.4 - 0.3	7.4 - 1.7	13.4 - 3.0
15	3°18.8	3°19.3	3°09.7	1.5 - 0.3	7.5 - 1.7	13.5 - 3.0
16	3°19.0	3°19.5	3°09.9	1.6 - 0.4	7.6 - 1.7	13.6 - 3.1
17	3°19.3	3°19.8	3°10.2	1.7 - 0.4	7.7 - 1.7	13.7 - 3.1
18	3°19.5	3°20.0	3°10.4	1.8 - 0.4	7.8 - 1.8	13.8 - 3.1
19	3°19.7	3°20.3	3°10.7	1.9 - 0.4	7.9 - 1.8	13.9 - 3.1
20	3°20.0	3°20.5	3°10.9	2.0 - 0.5	8.0 - 1.8	14.0 - 3.1
21	3°20.2	3°20.8	3°11.1	2.1 - 0.5	8.1 - 1.8	14.1 - 3.2
22	3°20.5	3°21.0	3°11.4	2.2 - 0.5	8.2 - 1.8	14.2 - 3.2
23	3°20.7	3°21.3	3°11.6	2.3 - 0.5	8.3 - 1.9	14.3 - 3.2
24	3°21.0	3°21.5	3°11.8	2.4 - 0.5	8.4 - 1.9	14.4 - 3.2
25	3°21.2	3°21.8	3°12.1	2.5 - 0.6	8.5 - 1.9	14.5 - 3.3
26	3°21.5	3°22.1	3°12.3	2.6 - 0.6	8.6 - 1.9	14.6 - 3.3
27	3°21.7	3°22.3	3°12.6	2.7 - 0.6	8.7 - 2.0	14.7 - 3.3
28	3°22.0	3°22.6	3°12.8	2.8 - 0.6	8.8 - 2.0	14.8 - 3.3
29	3°22.2	3°22.8	3°13.0	2.9 - 0.7	8.9 - 2.0	14.9 - 3.4
30	3°22.5	3°23.1	3°13.3	3.0 - 0.7	9.0 - 2.0	15.0 - 3.4
31	3°22.8	3°23.3	3°13.5	3.1 - 0.7	9.1 - 2.0	15.1 - 3.4
32	3°23.0	3°23.6	3°13.8	3.2 - 0.7	9.2 - 2.1	15.2 - 3.4
33	3°23.3	3°23.8	3°14.0	3.3 - 0.7	9.3 - 2.1	15.3 - 3.4
34	3°23.5	3°24.1	3°14.2	3.4 - 0.8	9.4 - 2.1	15.4 - 3.5
35	3°23.8	3°24.3	3°14.5	3.5 - 0.8	9.5 - 2.1	15.5 - 3.5
36	3°24.0	3°24.6	3°14.7	3.6 - 0.8	9.6 - 2.2	15.6 - 3.5
37	3°24.3	3°24.8	3°14.9	3.7 - 0.8	9.7 - 2.2	15.7 - 3.5
38	3°24.5	3°25.1	3°15.2	3.8 - 0.9	9.8 - 2.2	15.8 - 3.6
39	3°24.8	3°25.3	3°15.4	3.9 - 0.9	9.9 - 2.2	15.9 - 3.6
40	3°25.0	3°25.6	3°15.7	4.0 - 0.9	10.0 - 2.3	16.0 - 3.6
41	3°25.3	3°25.8	3°15.9	4.1 - 0.9	10.1 - 2.3	16.1 - 3.6
42	3°25.5	3°26.1	3°16.1	4.2 - 0.9	10.2 - 2.3	16.2 - 3.6
43	3°25.8	3°26.3	3°16.4	4.3 - 1.0	10.3 - 2.3	16.3 - 3.7
44	3°26.0	3°26.6	3°16.6	4.4 - 1.0	10.4 - 2.3	16.4 - 3.7
45	3°26.3	3°26.8	3°16.9	4.5 - 1.0	10.5 - 2.4	16.5 - 3.7
46	3°26.5	3°27.1	3°17.1	4.6 - 1.0	10.6 - 2.4	16.6 - 3.7
47	3°26.8	3°27.3	3°17.3	4.7 - 1.1	10.7 - 2.4	16.7 - 3.8
48	3°27.0	3°27.6	3°17.6	4.8 - 1.1	10.8 - 2.4	16.8 - 3.8
49	3°27.2	3°27.8	3°17.8	4.9 - 1.1	10.9 - 2.5	16.9 - 3.8
50	3°27.5	3°28.1	3°18.0	5.0 - 1.1	11.0 - 2.5	17.0 - 3.8
51	3°27.7	3°28.3	3°18.3	5.1 - 1.1	11.1 - 2.5	17.1 - 3.8
52	3°28.0	3°28.6	3°18.5	5.2 - 1.2	11.2 - 2.5	17.2 - 3.9
53	3°28.2	3°28.8	3°18.8	5.3 - 1.2	11.3 - 2.5	17.3 - 3.9
54	3°28.5	3°29.1	3°19.0	5.4 - 1.2	11.4 - 2.6	17.4 - 3.9
55	3°28.7	3°29.3	3°19.2	5.5 - 1.2	11.5 - 2.6	17.5 - 3.9
56	3°29.0	3°29.6	3°19.5	5.6 - 1.3	11.6 - 2.6	17.6 - 4.0
57	3°29.2	3°29.8	3°19.7	5.7 - 1.3	11.7 - 2.6	17.7 - 4.0
58	3°29.5	3°30.1	3°20.0	5.8 - 1.3	11.8 - 2.7	17.8 - 4.0
59	3°29.7	3°30.3	3°20.2	5.9 - 1.3	11.9 - 2.7	17.9 - 4.0

m 14	Sun Plan.	Aries	Moon	v and d corr		
0	3°30.0	3°30.6	3°20.4	0.0 - 0.0	6.0 - 1.4	12.0 - 2.9
1	3°30.3	3°30.8	3°20.7	0.1 - 0.0	6.1 - 1.5	12.1 - 2.9
2	3°30.5	3°31.1	3°20.9	0.2 - 0.0	6.2 - 1.5	12.2 - 2.9
3	3°30.8	3°31.3	3°21.1	0.3 - 0.1	6.3 - 1.5	12.3 - 3.0
4	3°31.0	3°31.6	3°21.4	0.4 - 0.1	6.4 - 1.5	12.4 - 3.0
5	3°31.3	3°31.8	3°21.6	0.5 - 0.1	6.5 - 1.6	12.5 - 3.0
6	3°31.5	3°32.1	3°21.9	0.6 - 0.1	6.6 - 1.6	12.6 - 3.0
7	3°31.8	3°32.3	3°22.1	0.7 - 0.2	6.7 - 1.6	12.7 - 3.1
8	3°32.0	3°32.6	3°22.3	0.8 - 0.2	6.8 - 1.6	12.8 - 3.1
9	3°32.3	3°32.8	3°22.6	0.9 - 0.2	6.9 - 1.7	12.9 - 3.1
10	3°32.5	3°33.1	3°22.8	1.0 - 0.2	7.0 - 1.7	13.0 - 3.1
11	3°32.8	3°33.3	3°23.1	1.1 - 0.3	7.1 - 1.7	13.1 - 3.2
12	3°33.0	3°33.6	3°23.3	1.2 - 0.3	7.2 - 1.7	13.2 - 3.2
13	3°33.3	3°33.8	3°23.5	1.3 - 0.3	7.3 - 1.8	13.3 - 3.2
14	3°33.5	3°34.1	3°23.8	1.4 - 0.3	7.4 - 1.8	13.4 - 3.2
15	3°33.8	3°34.3	3°24.0	1.5 - 0.4	7.5 - 1.8	13.5 - 3.3
16	3°34.0	3°34.6	3°24.3	1.6 - 0.4	7.6 - 1.8	13.6 - 3.3
17	3°34.3	3°34.8	3°24.5	1.7 - 0.4	7.7 - 1.9	13.7 - 3.3
18	3°34.5	3°35.1	3°24.7	1.8 - 0.4	7.8 - 1.9	13.8 - 3.3
19	3°34.8	3°35.3	3°25.0	1.9 - 0.5	7.9 - 1.9	13.9 - 3.4
20	3°35.0	3°35.6	3°25.2	2.0 - 0.5	8.0 - 1.9	14.0 - 3.4
21	3°35.2	3°35.8	3°25.4	2.1 - 0.5	8.1 - 2.0	14.1 - 3.4
22	3°35.5	3°36.1	3°25.7	2.2 - 0.5	8.2 - 2.0	14.2 - 3.4
23	3°35.7	3°36.3	3°25.9	2.3 - 0.6	8.3 - 2.0	14.3 - 3.5
24	3°36.0	3°36.6	3°26.2	2.4 - 0.6	8.4 - 2.0	14.4 - 3.5
25	3°36.2	3°36.8	3°26.4	2.5 - 0.6	8.5 - 2.1	14.5 - 3.5
26	3°36.5	3°37.1	3°26.6	2.6 - 0.6	8.6 - 2.1	14.6 - 3.5
27	3°36.7	3°37.3	3°26.9	2.7 - 0.7	8.7 - 2.1	14.7 - 3.6
28	3°37.0	3°37.6	3°27.1	2.8 - 0.7	8.8 - 2.1	14.8 - 3.6
29	3°37.2	3°37.8	3°27.4	2.9 - 0.7	8.9 - 2.2	14.9 - 3.6
30	3°37.5	3°38.1	3°27.6	3.0 - 0.7	9.0 - 2.2	15.0 - 3.6
31	3°37.8	3°38.3	3°27.8	3.1 - 0.7	9.1 - 2.2	15.1 - 3.6
32	3°38.0	3°38.6	3°28.1	3.2 - 0.8	9.2 - 2.2	15.2 - 3.7
33	3°38.3	3°38.8	3°28.3	3.3 - 0.8	9.3 - 2.2	15.3 - 3.7
34	3°38.5	3°39.1	3°28.5	3.4 - 0.8	9.4 - 2.3	15.4 - 3.7
35	3°38.8	3°39.3	3°28.8	3.5 - 0.8	9.5 - 2.3	15.5 - 3.7
36	3°39.0	3°39.6	3°29.0	3.6 - 0.9	9.6 - 2.3	15.6 - 3.8
37	3°39.3	3°39.8	3°29.3	3.7 - 0.9	9.7 - 2.3	15.7 - 3.8
38	3°39.5	3°40.1	3°29.5	3.8 - 0.9	9.8 - 2.4	15.8 - 3.8
39	3°39.8	3°40.4	3°29.7	3.9 - 0.9	9.9 - 2.4	15.9 - 3.8
40	3°40.0	3°40.6	3°30.0	4.0 - 1.0	10.0 - 2.4	16.0 - 3.9
41	3°40.3	3°40.9	3°30.2	4.1 - 1.0	10.1 - 2.4	16.1 - 3.9
42	3°40.5	3°41.1	3°30.5	4.2 - 1.0	10.2 - 2.5	16.2 - 3.9
43	3°40.8	3°41.4	3°30.7	4.3 - 1.0	10.3 - 2.5	16.3 - 3.9
44	3°41.0	3°41.6	3°30.9	4.4 - 1.1	10.4 - 2.5	16.4 - 4.0
45	3°41.3	3°41.9	3°31.2	4.5 - 1.1	10.5 - 2.5	16.5 - 4.0
46	3°41.5	3°42.1	3°31.4	4.6 - 1.1	10.6 - 2.6	16.6 - 4.0
47	3°41.8	3°42.4	3°31.6	4.7 - 1.1	10.7 - 2.6	16.7 - 4.0
48	3°42.0	3°42.6	3°31.9	4.8 - 1.2	10.8 - 2.6	16.8 - 4.1
49	3°42.3	3°42.9	3°32.1	4.9 - 1.2	10.9 - 2.6	16.9 - 4.1
50	3°42.5	3°43.1	3°32.4	5.0 - 1.2	11.0 - 2.7	17.0 - 4.1
51	3°42.7	3°43.4	3°32.6	5.1 - 1.2	11.1 - 2.7	17.1 - 4.1
52	3°43.0	3°43.6	3°32.8	5.2 - 1.3	11.2 - 2.7	17.2 - 4.2
53	3°43.2	3°43.9	3°33.1	5.3 - 1.3	11.3 - 2.7	17.3 - 4.2
54	3°43.5	3°44.1	3°33.3	5.4 - 1.3	11.4 - 2.8	17.4 - 4.2
55	3°43.7	3°44.4	3°33.6	5.5 - 1.3	11.5 - 2.8	17.5 - 4.2
56	3°44.0	3°44.6	3°33.8	5.6 - 1.4	11.6 - 2.8	17.6 - 4.3
57	3°44.2	3°44.9	3°34.0	5.7 - 1.4	11.7 - 2.8	17.7 - 4.3
58	3°44.5	3°45.1	3°34.3	5.8 - 1.4	11.8 - 2.9	17.8 - 4.3
59	3°44.7	3°45.4	3°34.5	5.9 - 1.4	11.9 - 2.9	17.9 - 4.3

Increments and Corrections

m 15	Sun Plan.	Aries	Moon	v and d corr		
0	3°45.0	3°45.6	3°34.8	0.0 - 0.0	6.0 - 1.6	12.0 - 3.1
1	3°45.2	3°45.9	3°35.0	0.1 - 0.0	6.1 - 1.6	12.1 - 3.1
2	3°45.5	3°46.1	3°35.2	0.2 - 0.1	6.2 - 1.6	12.2 - 3.2
3	3°45.8	3°46.4	3°35.5	0.3 - 0.1	6.3 - 1.6	12.3 - 3.2
4	3°46.0	3°46.6	3°35.7	0.4 - 0.1	6.4 - 1.7	12.4 - 3.2
5	3°46.2	3°46.9	3°35.9	0.5 - 0.1	6.5 - 1.7	12.5 - 3.2
6	3°46.5	3°47.1	3°36.2	0.6 - 0.2	6.6 - 1.7	12.6 - 3.3
7	3°46.8	3°47.4	3°36.4	0.7 - 0.2	6.7 - 1.7	12.7 - 3.3
8	3°47.0	3°47.6	3°36.7	0.8 - 0.2	6.8 - 1.8	12.8 - 3.3
9	3°47.3	3°47.9	3°36.9	0.9 - 0.2	6.9 - 1.8	12.9 - 3.3
10	3°47.5	3°48.1	3°37.1	1.0 - 0.3	7.0 - 1.8	13.0 - 3.4
11	3°47.7	3°48.4	3°37.4	1.1 - 0.3	7.1 - 1.8	13.1 - 3.4
12	3°48.0	3°48.6	3°37.6	1.2 - 0.3	7.2 - 1.9	13.2 - 3.4
13	3°48.3	3°48.9	3°37.9	1.3 - 0.3	7.3 - 1.9	13.3 - 3.4
14	3°48.5	3°49.1	3°38.1	1.4 - 0.4	7.4 - 1.9	13.4 - 3.5
15	3°48.8	3°49.4	3°38.3	1.5 - 0.4	7.5 - 1.9	13.5 - 3.5
16	3°49.0	3°49.6	3°38.6	1.6 - 0.4	7.6 - 2.0	13.6 - 3.5
17	3°49.3	3°49.9	3°38.8	1.7 - 0.4	7.7 - 2.0	13.7 - 3.5
18	3°49.5	3°50.1	3°39.0	1.8 - 0.5	7.8 - 2.0	13.8 - 3.6
19	3°49.8	3°50.4	3°39.3	1.9 - 0.5	7.9 - 2.0	13.9 - 3.6
20	3°50.0	3°50.6	3°39.5	2.0 - 0.5	8.0 - 2.1	14.0 - 3.6
21	3°50.2	3°50.9	3°39.8	2.1 - 0.5	8.1 - 2.1	14.1 - 3.6
22	3°50.5	3°51.1	3°40.0	2.2 - 0.6	8.2 - 2.1	14.2 - 3.7
23	3°50.7	3°51.4	3°40.2	2.3 - 0.6	8.3 - 2.1	14.3 - 3.7
24	3°51.0	3°51.6	3°40.5	2.4 - 0.6	8.4 - 2.2	14.4 - 3.7
25	3°51.2	3°51.9	3°40.7	2.5 - 0.6	8.5 - 2.2	14.5 - 3.7
26	3°51.5	3°52.1	3°41.0	2.6 - 0.7	8.6 - 2.2	14.6 - 3.8
27	3°51.8	3°52.4	3°41.2	2.7 - 0.7	8.7 - 2.2	14.7 - 3.8
28	3°52.0	3°52.6	3°41.4	2.8 - 0.7	8.8 - 2.3	14.8 - 3.8
29	3°52.2	3°52.9	3°41.7	2.9 - 0.7	8.9 - 2.3	14.9 - 3.8
30	3°52.5	3°53.1	3°41.9	3.0 - 0.8	9.0 - 2.3	15.0 - 3.9
31	3°52.8	3°53.4	3°42.1	3.1 - 0.8	9.1 - 2.4	15.1 - 3.9
32	3°53.0	3°53.6	3°42.4	3.2 - 0.8	9.2 - 2.4	15.2 - 3.9
33	3°53.2	3°53.9	3°42.6	3.3 - 0.9	9.3 - 2.4	15.3 - 4.0
34	3°53.5	3°54.1	3°42.9	3.4 - 0.9	9.4 - 2.4	15.4 - 4.0
35	3°53.8	3°54.4	3°43.1	3.5 - 0.9	9.5 - 2.5	15.5 - 4.0
36	3°54.0	3°54.6	3°43.3	3.6 - 0.9	9.6 - 2.5	15.6 - 4.0
37	3°54.3	3°54.9	3°43.6	3.7 - 1.0	9.7 - 2.5	15.7 - 4.1
38	3°54.5	3°55.1	3°43.8	3.8 - 1.0	9.8 - 2.5	15.8 - 4.1
39	3°54.8	3°55.4	3°44.1	3.9 - 1.0	9.9 - 2.6	15.9 - 4.1
40	3°55.0	3°55.6	3°44.3	4.0 - 1.0	10.0 - 2.6	16.0 - 4.1
41	3°55.3	3°55.9	3°44.5	4.1 - 1.1	10.1 - 2.6	16.1 - 4.2
42	3°55.5	3°56.1	3°44.8	4.2 - 1.1	10.2 - 2.6	16.2 - 4.2
43	3°55.7	3°56.4	3°45.0	4.3 - 1.1	10.3 - 2.7	16.3 - 4.2
44	3°56.0	3°56.6	3°45.2	4.4 - 1.1	10.4 - 2.7	16.4 - 4.2
45	3°56.3	3°56.9	3°45.5	4.5 - 1.2	10.5 - 2.7	16.5 - 4.3
46	3°56.5	3°57.1	3°45.7	4.6 - 1.2	10.6 - 2.7	16.6 - 4.3
47	3°56.8	3°57.4	3°46.0	4.7 - 1.2	10.7 - 2.8	16.7 - 4.3
48	3°57.0	3°57.6	3°46.2	4.8 - 1.2	10.8 - 2.8	16.8 - 4.3
49	3°57.3	3°57.9	3°46.4	4.9 - 1.3	10.9 - 2.8	16.9 - 4.4
50	3°57.5	3°58.1	3°46.7	5.0 - 1.3	11.0 - 2.8	17.0 - 4.4
51	3°57.7	3°58.4	3°46.9	5.1 - 1.3	11.1 - 2.9	17.1 - 4.4
52	3°58.0	3°58.7	3°47.2	5.2 - 1.3	11.2 - 2.9	17.2 - 4.4
53	3°58.2	3°58.9	3°47.4	5.3 - 1.4	11.3 - 2.9	17.3 - 4.5
54	3°58.5	3°59.2	3°47.6	5.4 - 1.4	11.4 - 2.9	17.4 - 4.5
55	3°58.7	3°59.4	3°47.9	5.5 - 1.4	11.5 - 3.0	17.5 - 4.5
56	3°59.0	3°59.7	3°48.1	5.6 - 1.4	11.6 - 3.0	17.6 - 4.5
57	3°59.2	3°59.9	3°48.4	5.7 - 1.5	11.7 - 3.0	17.7 - 4.6
58	3°59.5	4°00.2	3°48.6	5.8 - 1.5	11.8 - 3.0	17.8 - 4.6
59	3°59.8	4°00.4	3°48.8	5.9 - 1.5	11.9 - 3.1	17.9 - 4.6

m 16	Sun Plan.	Aries	Moon	v and d corr		
0	4°00.0	4°00.7	3°49.1	0.0 - 0.0	6.0 - 1.7	12.0 - 3.3
1	4°00.2	4°00.9	3°49.3	0.1 - 0.0	6.1 - 1.7	12.1 - 3.3
2	4°00.5	4°01.2	3°49.5	0.2 - 0.1	6.2 - 1.7	12.2 - 3.4
3	4°00.8	4°01.4	3°49.8	0.3 - 0.1	6.3 - 1.7	12.3 - 3.4
4	4°01.0	4°01.7	3°50.0	0.4 - 0.1	6.4 - 1.8	12.4 - 3.4
5	4°01.2	4°01.9	3°50.3	0.5 - 0.1	6.5 - 1.8	12.5 - 3.4
6	4°01.5	4°02.2	3°50.5	0.6 - 0.2	6.6 - 1.8	12.6 - 3.5
7	4°01.8	4°02.4	3°50.7	0.7 - 0.2	6.7 - 1.8	12.7 - 3.5
8	4°02.0	4°02.7	3°51.0	0.8 - 0.2	6.8 - 1.9	12.8 - 3.5
9	4°02.2	4°02.9	3°51.2	0.9 - 0.2	6.9 - 1.9	12.9 - 3.5
10	4°02.5	4°03.2	3°51.5	1.0 - 0.3	7.0 - 1.9	13.0 - 3.6
11	4°02.8	4°03.4	3°51.7	1.1 - 0.3	7.1 - 2.0	13.1 - 3.6
12	4°03.0	4°03.7	3°51.9	1.2 - 0.3	7.2 - 2.0	13.2 - 3.6
13	4°03.2	4°03.9	3°52.2	1.3 - 0.4	7.3 - 2.0	13.3 - 3.7
14	4°03.5	4°04.2	3°52.4	1.4 - 0.4	7.4 - 2.0	13.4 - 3.7
15	4°03.8	4°04.4	3°52.6	1.5 - 0.4	7.5 - 2.1	13.5 - 3.7
16	4°04.0	4°04.7	3°52.9	1.6 - 0.4	7.6 - 2.1	13.6 - 3.7
17	4°04.3	4°04.9	3°53.1	1.7 - 0.5	7.7 - 2.1	13.7 - 3.8
18	4°04.5	4°05.2	3°53.4	1.8 - 0.5	7.8 - 2.1	13.8 - 3.8
19	4°04.7	4°05.4	3°53.6	1.9 - 0.5	7.9 - 2.2	13.9 - 3.8
20	4°05.0	4°05.7	3°53.8	2.0 - 0.6	8.0 - 2.2	14.0 - 3.9
21	4°05.3	4°05.9	3°54.1	2.1 - 0.6	8.1 - 2.2	14.1 - 3.9
22	4°05.5	4°06.2	3°54.3	2.2 - 0.6	8.2 - 2.3	14.2 - 3.9
23	4°05.7	4°06.4	3°54.6	2.3 - 0.6	8.3 - 2.3	14.3 - 3.9
24	4°06.0	4°06.7	3°54.8	2.4 - 0.7	8.4 - 2.3	14.4 - 4.0
25	4°06.3	4°06.9	3°55.0	2.5 - 0.7	8.5 - 2.3	14.5 - 4.0
26	4°06.5	4°07.2	3°55.3	2.6 - 0.7	8.6 - 2.4	14.6 - 4.0
27	4°06.7	4°07.4	3°55.5	2.7 - 0.7	8.7 - 2.4	14.7 - 4.0
28	4°07.0	4°07.7	3°55.7	2.8 - 0.8	8.8 - 2.4	14.8 - 4.1
29	4°07.3	4°07.9	3°56.0	2.9 - 0.8	8.9 - 2.4	14.9 - 4.1
30	4°07.5	4°08.2	3°56.2	3.0 - 0.8	9.0 - 2.5	15.0 - 4.1
31	4°07.7	4°08.4	3°56.5	3.1 - 0.9	9.1 - 2.5	15.1 - 4.2
32	4°08.0	4°08.7	3°56.7	3.2 - 0.9	9.2 - 2.5	15.2 - 4.2
33	4°08.3	4°08.9	3°56.9	3.3 - 0.9	9.3 - 2.6	15.3 - 4.2
34	4°08.5	4°09.2	3°57.2	3.4 - 0.9	9.4 - 2.6	15.4 - 4.2
35	4°08.7	4°09.4	3°57.4	3.5 - 1.0	9.5 - 2.6	15.5 - 4.3
36	4°09.0	4°09.7	3°57.7	3.6 - 1.0	9.6 - 2.6	15.6 - 4.3
37	4°09.3	4°09.9	3°57.9	3.7 - 1.0	9.7 - 2.7	15.7 - 4.3
38	4°09.5	4°10.2	3°58.1	3.8 - 1.0	9.8 - 2.7	15.8 - 4.3
39	4°09.7	4°10.4	3°58.4	3.9 - 1.1	9.9 - 2.7	15.9 - 4.4
40	4°10.0	4°10.7	3°58.6	4.0 - 1.1	10.0 - 2.8	16.0 - 4.4
41	4°10.3	4°10.9	3°58.8	4.1 - 1.1	10.1 - 2.8	16.1 - 4.4
42	4°10.5	4°11.2	3°59.1	4.2 - 1.2	10.2 - 2.8	16.2 - 4.5
43	4°10.7	4°11.4	3°59.3	4.3 - 1.2	10.3 - 2.8	16.3 - 4.5
44	4°11.0	4°11.7	3°59.6	4.4 - 1.2	10.4 - 2.9	16.4 - 4.5
45	4°11.3	4°11.9	3°59.8	4.5 - 1.2	10.5 - 2.9	16.5 - 4.5
46	4°11.5	4°12.2	4°00.0	4.6 - 1.3	10.6 - 2.9	16.6 - 4.6
47	4°11.8	4°12.4	4°00.3	4.7 - 1.3	10.7 - 2.9	16.7 - 4.6
48	4°12.0	4°12.7	4°00.5	4.8 - 1.3	10.8 - 3.0	16.8 - 4.6
49	4°12.2	4°12.9	4°00.8	4.9 - 1.3	10.9 - 3.0	16.9 - 4.6
50	4°12.5	4°13.2	4°01.0	5.0 - 1.4	11.0 - 3.0	17.0 - 4.7
51	4°12.8	4°13.4	4°01.2	5.1 - 1.4	11.1 - 3.1	17.1 - 4.7
52	4°13.0	4°13.7	4°01.5	5.2 - 1.4	11.2 - 3.1	17.2 - 4.7
53	4°13.2	4°13.9	4°01.7	5.3 - 1.5	11.3 - 3.1	17.3 - 4.8
54	4°13.5	4°14.2	4°02.0	5.4 - 1.5	11.4 - 3.1	17.4 - 4.8
55	4°13.8	4°14.4	4°02.2	5.5 - 1.5	11.5 - 3.2	17.5 - 4.8
56	4°14.0	4°14.7	4°02.4	5.6 - 1.5	11.6 - 3.2	17.6 - 4.8
57	4°14.2	4°14.9	4°02.7	5.7 - 1.6	11.7 - 3.2	17.7 - 4.9
58	4°14.5	4°15.2	4°02.9	5.8 - 1.6	11.8 - 3.2	17.8 - 4.9
59	4°14.8	4°15.4	4°03.1	5.9 - 1.6	11.9 - 3.3	17.9 - 4.9

m 17	Sun Plan.	Aries	Moon	v and d corr		
0	4°15.0	4°15.7	4°03.4	0.0 - 0.0	6.0 - 1.8	12.0 - 3.5
1	4°15.2	4°15.9	4°03.6	0.1 - 0.0	6.1 - 1.8	12.1 - 3.5
2	4°15.5	4°16.2	4°03.9	0.2 - 0.1	6.2 - 1.8	12.2 - 3.6
3	4°15.8	4°16.4	4°04.1	0.3 - 0.1	6.3 - 1.8	12.3 - 3.6
4	4°16.0	4°16.7	4°04.3	0.4 - 0.1	6.4 - 1.9	12.4 - 3.6
5	4°16.2	4°17.0	4°04.6	0.5 - 0.1	6.5 - 1.9	12.5 - 3.6
6	4°16.5	4°17.2	4°04.8	0.6 - 0.2	6.6 - 1.9	12.6 - 3.7
7	4°16.8	4°17.5	4°05.1	0.7 - 0.2	6.7 - 2.0	12.7 - 3.7
8	4°17.0	4°17.7	4°05.3	0.8 - 0.2	6.8 - 2.0	12.8 - 3.7
9	4°17.2	4°18.0	4°05.5	0.9 - 0.3	6.9 - 2.0	12.9 - 3.8
10	4°17.5	4°18.2	4°05.8	1.0 - 0.3	7.0 - 2.0	13.0 - 3.8
11	4°17.8	4°18.5	4°06.0	1.1 - 0.3	7.1 - 2.1	13.1 - 3.8
12	4°18.0	4°18.7	4°06.2	1.2 - 0.4	7.2 - 2.1	13.2 - 3.9
13	4°18.2	4°19.0	4°06.5	1.3 - 0.4	7.3 - 2.1	13.3 - 3.9
14	4°18.5	4°19.2	4°06.7	1.4 - 0.4	7.4 - 2.2	13.4 - 3.9
15	4°18.8	4°19.5	4°07.0	1.5 - 0.4	7.5 - 2.2	13.5 - 3.9
16	4°19.0	4°19.7	4°07.2	1.6 - 0.5	7.6 - 2.2	13.6 - 4.0
17	4°19.3	4°20.0	4°07.4	1.7 - 0.5	7.7 - 2.2	13.7 - 4.0
18	4°19.5	4°20.2	4°07.7	1.8 - 0.5	7.8 - 2.3	13.8 - 4.0
19	4°19.7	4°20.5	4°07.9	1.9 - 0.6	7.9 - 2.3	13.9 - 4.1
20	4°20.0	4°20.7	4°08.2	2.0 - 0.6	8.0 - 2.3	14.0 - 4.1
21	4°20.3	4°21.0	4°08.4	2.1 - 0.6	8.1 - 2.4	14.1 - 4.1
22	4°20.5	4°21.2	4°08.6	2.2 - 0.6	8.2 - 2.4	14.2 - 4.1
23	4°20.7	4°21.5	4°08.9	2.3 - 0.7	8.3 - 2.4	14.3 - 4.2
24	4°21.0	4°21.7	4°09.1	2.4 - 0.7	8.4 - 2.5	14.4 - 4.2
25	4°21.3	4°22.0	4°09.3	2.5 - 0.7	8.5 - 2.5	14.5 - 4.2
26	4°21.5	4°22.2	4°09.6	2.6 - 0.8	8.6 - 2.5	14.6 - 4.3
27	4°21.7	4°22.5	4°09.8	2.7 - 0.8	8.7 - 2.5	14.7 - 4.3
28	4°22.0	4°22.7	4°10.1	2.8 - 0.8	8.8 - 2.6	14.8 - 4.3
29	4°22.3	4°23.0	4°10.3	2.9 - 0.8	8.9 - 2.6	14.9 - 4.3
30	4°22.5	4°23.2	4°10.5	3.0 - 0.9	9.0 - 2.6	15.0 - 4.4
31	4°22.7	4°23.5	4°10.8	3.1 - 0.9	9.1 - 2.7	15.1 - 4.4
32	4°23.0	4°23.7	4°11.0	3.2 - 0.9	9.2 - 2.7	15.2 - 4.4
33	4°23.3	4°24.0	4°11.3	3.3 - 1.0	9.3 - 2.7	15.3 - 4.5
34	4°23.5	4°24.2	4°11.5	3.4 - 1.0	9.4 - 2.7	15.4 - 4.5
35	4°23.7	4°24.5	4°11.7	3.5 - 1.0	9.5 - 2.8	15.5 - 4.5
36	4°24.0	4°24.7	4°12.0	3.6 - 1.1	9.6 - 2.8	15.6 - 4.5
37	4°24.3	4°25.0	4°12.2	3.7 - 1.1	9.7 - 2.8	15.7 - 4.6
38	4°24.5	4°25.2	4°12.5	3.8 - 1.1	9.8 - 2.9	15.8 - 4.6
39	4°24.7	4°25.5	4°12.7	3.9 - 1.1	9.9 - 2.9	15.9 - 4.6
40	4°25.0	4°25.7	4°12.9	4.0 - 1.2	10.0 - 2.9	16.0 - 4.7
41	4°25.3	4°26.0	4°13.2	4.1 - 1.2	10.1 - 2.9	16.1 - 4.7
42	4°25.5	4°26.2	4°13.4	4.2 - 1.2	10.2 - 3.0	16.2 - 4.7
43	4°25.7	4°26.5	4°13.6	4.3 - 1.3	10.3 - 3.0	16.3 - 4.8
44	4°26.0	4°26.7	4°13.9	4.4 - 1.3	10.4 - 3.0	16.4 - 4.8
45	4°26.3	4°27.0	4°14.1	4.5 - 1.3	10.5 - 3.1	16.5 - 4.8
46	4°26.5	4°27.2	4°14.4	4.6 - 1.3	10.6 - 3.1	16.6 - 4.8
47	4°26.8	4°27.5	4°14.6	4.7 - 1.4	10.7 - 3.1	16.7 - 4.9
48	4°27.0	4°27.7	4°14.8	4.8 - 1.4	10.8 - 3.2	16.8 - 4.9
49	4°27.2	4°28.0	4°15.1	4.9 - 1.4	10.9 - 3.2	16.9 - 4.9
50	4°27.5	4°28.2	4°15.3	5.0 - 1.5	11.0 - 3.2	17.0 - 5.0
51	4°27.8	4°28.5	4°15.6	5.1 - 1.5	11.1 - 3.2	17.1 - 5.0
52	4°28.0	4°28.7	4°15.8	5.2 - 1.5	11.2 - 3.3	17.2 - 5.0
53	4°28.2	4°29.0	4°16.0	5.3 - 1.5	11.3 - 3.3	17.3 - 5.0
54	4°28.5	4°29.2	4°16.3	5.4 - 1.6	11.4 - 3.3	17.4 - 5.1
55	4°28.8	4°29.5	4°16.5	5.5 - 1.6	11.5 - 3.4	17.5 - 5.1
56	4°29.0	4°29.7	4°16.7	5.6 - 1.6	11.6 - 3.4	17.6 - 5.1
57	4°29.2	4°30.0	4°17.0	5.7 - 1.7	11.7 - 3.4	17.7 - 5.2
58	4°29.5	4°30.2	4°17.2	5.8 - 1.7	11.8 - 3.4	17.8 - 5.2
59	4°29.8	4°30.5	4°17.5	5.9 - 1.7	11.9 - 3.5	17.9 - 5.2

Increments and Corrections

m 18	Sun Plan.	Aries	Moon	v and d corr		
0	4°30.0	4°30.7	4°17.7	0.0 - 0.0	6.0 - 1.9	12.0 - 3.7
1	4°30.2	4°31.0	4°17.9	0.1 - 0.0	6.1 - 1.9	12.1 - 3.7
2	4°30.5	4°31.2	4°18.2	0.2 - 0.1	6.2 - 1.9	12.2 - 3.8
3	4°30.8	4°31.5	4°18.4	0.3 - 0.1	6.3 - 1.9	12.3 - 3.8
4	4°31.0	4°31.7	4°18.7	0.4 - 0.1	6.4 - 2.0	12.4 - 3.8
5	4°31.2	4°32.0	4°18.9	0.5 - 0.2	6.5 - 2.0	12.5 - 3.9
6	4°31.5	4°32.2	4°19.1	0.6 - 0.2	6.6 - 2.0	12.6 - 3.9
7	4°31.8	4°32.5	4°19.4	0.7 - 0.2	6.7 - 2.1	12.7 - 3.9
8	4°32.0	4°32.7	4°19.6	0.8 - 0.2	6.8 - 2.1	12.8 - 3.9
9	4°32.2	4°33.0	4°19.8	0.9 - 0.3	6.9 - 2.1	12.9 - 4.0
10	4°32.5	4°33.2	4°20.1	1.0 - 0.3	7.0 - 2.2	13.0 - 4.0
11	4°32.8	4°33.5	4°20.3	1.1 - 0.3	7.1 - 2.2	13.1 - 4.0
12	4°33.0	4°33.7	4°20.6	1.2 - 0.4	7.2 - 2.2	13.2 - 4.1
13	4°33.2	4°34.0	4°20.8	1.3 - 0.4	7.3 - 2.3	13.3 - 4.1
14	4°33.5	4°34.2	4°21.0	1.4 - 0.4	7.4 - 2.3	13.4 - 4.1
15	4°33.8	4°34.5	4°21.3	1.5 - 0.5	7.5 - 2.3	13.5 - 4.2
16	4°34.0	4°34.7	4°21.5	1.6 - 0.5	7.6 - 2.3	13.6 - 4.2
17	4°34.3	4°35.0	4°21.8	1.7 - 0.5	7.7 - 2.4	13.7 - 4.2
18	4°34.5	4°35.3	4°22.0	1.8 - 0.6	7.8 - 2.4	13.8 - 4.3
19	4°34.8	4°35.5	4°22.2	1.9 - 0.6	7.9 - 2.4	13.9 - 4.3
20	4°35.0	4°35.8	4°22.5	2.0 - 0.6	8.0 - 2.5	14.0 - 4.3
21	4°35.3	4°36.0	4°22.7	2.1 - 0.6	8.1 - 2.5	14.1 - 4.3
22	4°35.5	4°36.3	4°22.9	2.2 - 0.7	8.2 - 2.5	14.2 - 4.4
23	4°35.7	4°36.5	4°23.2	2.3 - 0.7	8.3 - 2.6	14.3 - 4.4
24	4°36.0	4°36.8	4°23.4	2.4 - 0.7	8.4 - 2.6	14.4 - 4.4
25	4°36.3	4°37.0	4°23.7	2.5 - 0.8	8.5 - 2.6	14.5 - 4.5
26	4°36.5	4°37.3	4°23.9	2.6 - 0.8	8.6 - 2.7	14.6 - 4.5
27	4°36.7	4°37.5	4°24.1	2.7 - 0.8	8.7 - 2.7	14.7 - 4.5
28	4°37.0	4°37.8	4°24.4	2.8 - 0.9	8.8 - 2.7	14.8 - 4.6
29	4°37.3	4°38.0	4°24.6	2.9 - 0.9	8.9 - 2.7	14.9 - 4.6
30	4°37.5	4°38.3	4°24.9	3.0 - 0.9	9.0 - 2.8	15.0 - 4.6
31	4°37.7	4°38.5	4°25.1	3.1 - 1.0	9.1 - 2.8	15.1 - 4.7
32	4°38.0	4°38.8	4°25.3	3.2 - 1.0	9.2 - 2.8	15.2 - 4.7
33	4°38.3	4°39.0	4°25.6	3.3 - 1.0	9.3 - 2.9	15.3 - 4.7
34	4°38.5	4°39.3	4°25.8	3.4 - 1.0	9.4 - 2.9	15.4 - 4.7
35	4°38.7	4°39.5	4°26.1	3.5 - 1.1	9.5 - 2.9	15.5 - 4.8
36	4°39.0	4°39.8	4°26.3	3.6 - 1.1	9.6 - 3.0	15.6 - 4.8
37	4°39.3	4°40.0	4°26.5	3.7 - 1.1	9.7 - 3.0	15.7 - 4.8
38	4°39.5	4°40.3	4°26.8	3.8 - 1.2	9.8 - 3.0	15.8 - 4.9
39	4°39.7	4°40.5	4°27.0	3.9 - 1.2	9.9 - 3.1	15.9 - 4.9
40	4°40.0	4°40.8	4°27.2	4.0 - 1.2	10.0 - 3.1	16.0 - 4.9
41	4°40.3	4°41.0	4°27.5	4.1 - 1.3	10.1 - 3.1	16.1 - 5.0
42	4°40.5	4°41.3	4°27.7	4.2 - 1.3	10.2 - 3.1	16.2 - 5.0
43	4°40.7	4°41.5	4°28.0	4.3 - 1.3	10.3 - 3.2	16.3 - 5.0
44	4°41.0	4°41.8	4°28.2	4.4 - 1.4	10.4 - 3.2	16.4 - 5.1
45	4°41.3	4°42.0	4°28.4	4.5 - 1.4	10.5 - 3.2	16.5 - 5.1
46	4°41.5	4°42.3	4°28.7	4.6 - 1.4	10.6 - 3.3	16.6 - 5.1
47	4°41.8	4°42.5	4°28.9	4.7 - 1.4	10.7 - 3.3	16.7 - 5.1
48	4°42.0	4°42.8	4°29.2	4.8 - 1.5	10.8 - 3.3	16.8 - 5.2
49	4°42.3	4°43.0	4°29.4	4.9 - 1.5	10.9 - 3.4	16.9 - 5.2
50	4°42.5	4°43.3	4°29.6	5.0 - 1.5	11.0 - 3.4	17.0 - 5.2
51	4°42.8	4°43.5	4°29.9	5.1 - 1.6	11.1 - 3.4	17.1 - 5.3
52	4°43.0	4°43.8	4°30.1	5.2 - 1.6	11.2 - 3.5	17.2 - 5.3
53	4°43.2	4°44.0	4°30.3	5.3 - 1.6	11.3 - 3.5	17.3 - 5.3
54	4°43.5	4°44.3	4°30.6	5.4 - 1.7	11.4 - 3.5	17.4 - 5.4
55	4°43.8	4°44.5	4°30.8	5.5 - 1.7	11.5 - 3.5	17.5 - 5.4
56	4°44.0	4°44.8	4°31.1	5.6 - 1.7	11.6 - 3.6	17.6 - 5.4
57	4°44.2	4°45.0	4°31.3	5.7 - 1.8	11.7 - 3.6	17.7 - 5.5
58	4°44.5	4°45.3	4°31.5	5.8 - 1.8	11.8 - 3.6	17.8 - 5.5
59	4°44.8	4°45.5	4°31.8	5.9 - 1.8	11.9 - 3.7	17.9 - 5.5

m 19	Sun Plan.	Aries	Moon	v and d corr		
0	4°45.0	4°45.8	4°32.0	0.0 - 0.0	6.0 - 2.0	12.0 - 3.9
1	4°45.2	4°46.0	4°32.3	0.1 - 0.0	6.1 - 2.0	12.1 - 3.9
2	4°45.5	4°46.3	4°32.5	0.2 - 0.1	6.2 - 2.0	12.2 - 4.0
3	4°45.8	4°46.5	4°32.7	0.3 - 0.1	6.3 - 2.0	12.3 - 4.0
4	4°46.0	4°46.8	4°33.0	0.4 - 0.1	6.4 - 2.1	12.4 - 4.0
5	4°46.2	4°47.0	4°33.2	0.5 - 0.2	6.5 - 2.1	12.5 - 4.1
6	4°46.5	4°47.3	4°33.4	0.6 - 0.2	6.6 - 2.1	12.6 - 4.1
7	4°46.8	4°47.5	4°33.7	0.7 - 0.2	6.7 - 2.2	12.7 - 4.1
8	4°47.0	4°47.8	4°33.9	0.8 - 0.3	6.8 - 2.2	12.8 - 4.2
9	4°47.2	4°48.0	4°34.2	0.9 - 0.3	6.9 - 2.2	12.9 - 4.2
10	4°47.5	4°48.3	4°34.4	1.0 - 0.3	7.0 - 2.3	13.0 - 4.2
11	4°47.8	4°48.5	4°34.6	1.1 - 0.4	7.1 - 2.3	13.1 - 4.3
12	4°48.0	4°48.8	4°34.9	1.2 - 0.4	7.2 - 2.3	13.2 - 4.3
13	4°48.2	4°49.0	4°35.1	1.3 - 0.4	7.3 - 2.4	13.3 - 4.3
14	4°48.5	4°49.3	4°35.4	1.4 - 0.5	7.4 - 2.4	13.4 - 4.4
15	4°48.8	4°49.5	4°35.6	1.5 - 0.5	7.5 - 2.4	13.5 - 4.4
16	4°49.0	4°49.8	4°35.8	1.6 - 0.5	7.6 - 2.5	13.6 - 4.4
17	4°49.3	4°50.0	4°36.1	1.7 - 0.6	7.7 - 2.5	13.7 - 4.5
18	4°49.5	4°50.3	4°36.3	1.8 - 0.6	7.8 - 2.5	13.8 - 4.5
19	4°49.8	4°50.5	4°36.6	1.9 - 0.6	7.9 - 2.6	13.9 - 4.5
20	4°50.0	4°50.8	4°36.8	2.0 - 0.7	8.0 - 2.6	14.0 - 4.5
21	4°50.3	4°51.0	4°37.0	2.1 - 0.7	8.1 - 2.6	14.1 - 4.6
22	4°50.5	4°51.3	4°37.3	2.2 - 0.7	8.2 - 2.7	14.2 - 4.6
23	4°50.7	4°51.5	4°37.5	2.3 - 0.7	8.3 - 2.7	14.3 - 4.6
24	4°51.0	4°51.8	4°37.7	2.4 - 0.8	8.4 - 2.7	14.4 - 4.7
25	4°51.3	4°52.0	4°38.0	2.5 - 0.8	8.5 - 2.8	14.5 - 4.7
26	4°51.5	4°52.3	4°38.2	2.6 - 0.8	8.6 - 2.8	14.6 - 4.7
27	4°51.7	4°52.5	4°38.5	2.7 - 0.9	8.7 - 2.8	14.7 - 4.8
28	4°52.0	4°52.8	4°38.7	2.8 - 0.9	8.8 - 2.9	14.8 - 4.8
29	4°52.3	4°53.0	4°38.9	2.9 - 0.9	8.9 - 2.9	14.9 - 4.8
30	4°52.5	4°53.3	4°39.2	3.0 - 1.0	9.0 - 2.9	15.0 - 4.9
31	4°52.7	4°53.6	4°39.4	3.1 - 1.0	9.1 - 3.0	15.1 - 4.9
32	4°53.0	4°53.8	4°39.7	3.2 - 1.0	9.2 - 3.0	15.2 - 4.9
33	4°53.3	4°54.1	4°39.9	3.3 - 1.1	9.3 - 3.0	15.3 - 5.0
34	4°53.5	4°54.3	4°40.1	3.4 - 1.1	9.4 - 3.1	15.4 - 5.0
35	4°53.7	4°54.6	4°40.4	3.5 - 1.1	9.5 - 3.1	15.5 - 5.0
36	4°54.0	4°54.8	4°40.6	3.6 - 1.2	9.6 - 3.1	15.6 - 5.1
37	4°54.3	4°55.1	4°40.8	3.7 - 1.2	9.7 - 3.2	15.7 - 5.1
38	4°54.5	4°55.3	4°41.1	3.8 - 1.2	9.8 - 3.2	15.8 - 5.1
39	4°54.7	4°55.6	4°41.3	3.9 - 1.3	9.9 - 3.2	15.9 - 5.2
40	4°55.0	4°55.8	4°41.6	4.0 - 1.3	10.0 - 3.3	16.0 - 5.2
41	4°55.3	4°56.1	4°41.8	4.1 - 1.3	10.1 - 3.3	16.1 - 5.2
42	4°55.5	4°56.3	4°42.0	4.2 - 1.4	10.2 - 3.3	16.2 - 5.3
43	4°55.7	4°56.6	4°42.3	4.3 - 1.4	10.3 - 3.3	16.3 - 5.3
44	4°56.0	4°56.8	4°42.5	4.4 - 1.4	10.4 - 3.4	16.4 - 5.3
45	4°56.3	4°57.1	4°42.8	4.5 - 1.5	10.5 - 3.4	16.5 - 5.4
46	4°56.5	4°57.3	4°43.0	4.6 - 1.5	10.6 - 3.4	16.6 - 5.4
47	4°56.8	4°57.6	4°43.2	4.7 - 1.5	10.7 - 3.5	16.7 - 5.4
48	4°57.0	4°57.8	4°43.5	4.8 - 1.6	10.8 - 3.5	16.8 - 5.5
49	4°57.3	4°58.1	4°43.7	4.9 - 1.6	10.9 - 3.5	16.9 - 5.5
50	4°57.5	4°58.3	4°43.9	5.0 - 1.6	11.0 - 3.6	17.0 - 5.5
51	4°57.8	4°58.6	4°44.2	5.1 - 1.7	11.1 - 3.6	17.1 - 5.6
52	4°58.0	4°58.8	4°44.4	5.2 - 1.7	11.2 - 3.6	17.2 - 5.6
53	4°58.2	4°59.1	4°44.7	5.3 - 1.7	11.3 - 3.7	17.3 - 5.6
54	4°58.5	4°59.3	4°44.9	5.4 - 1.8	11.4 - 3.7	17.4 - 5.7
55	4°58.8	4°59.6	4°45.1	5.5 - 1.8	11.5 - 3.7	17.5 - 5.7
56	4°59.0	4°59.8	4°45.4	5.6 - 1.8	11.6 - 3.8	17.6 - 5.7
57	4°59.2	5°00.1	4°45.6	5.7 - 1.9	11.7 - 3.8	17.7 - 5.8
58	4°59.5	5°00.3	4°45.9	5.8 - 1.9	11.8 - 3.8	17.8 - 5.8
59	4°59.8	5°00.6	4°46.1	5.9 - 1.9	11.9 - 3.9	17.9 - 5.8

m 20	Sun Plan.	Aries	Moon	v and d corr		
0	5°00.0	5°00.8	4°46.3	0.0 - 0.0	6.0 - 2.0	12.0 - 4.1
1	5°00.2	5°01.1	4°46.6	0.1 - 0.0	6.1 - 2.1	12.1 - 4.1
2	5°00.5	5°01.3	4°46.8	0.2 - 0.1	6.2 - 2.1	12.2 - 4.2
3	5°00.8	5°01.6	4°47.0	0.3 - 0.1	6.3 - 2.2	12.3 - 4.2
4	5°01.0	5°01.8	4°47.3	0.4 - 0.1	6.4 - 2.2	12.4 - 4.2
5	5°01.2	5°02.1	4°47.5	0.5 - 0.2	6.5 - 2.2	12.5 - 4.3
6	5°01.5	5°02.3	4°47.8	0.6 - 0.2	6.6 - 2.3	12.6 - 4.3
7	5°01.8	5°02.6	4°48.0	0.7 - 0.2	6.7 - 2.3	12.7 - 4.3
8	5°02.0	5°02.8	4°48.2	0.8 - 0.3	6.8 - 2.3	12.8 - 4.4
9	5°02.2	5°03.1	4°48.5	0.9 - 0.3	6.9 - 2.4	12.9 - 4.4
10	5°02.5	5°03.3	4°48.7	1.0 - 0.3	7.0 - 2.4	13.0 - 4.4
11	5°02.8	5°03.6	4°49.0	1.1 - 0.4	7.1 - 2.4	13.1 - 4.5
12	5°03.0	5°03.8	4°49.2	1.2 - 0.4	7.2 - 2.5	13.2 - 4.5
13	5°03.2	5°04.1	4°49.4	1.3 - 0.4	7.3 - 2.5	13.3 - 4.5
14	5°03.5	5°04.3	4°49.7	1.4 - 0.5	7.4 - 2.5	13.4 - 4.6
15	5°03.8	5°04.6	4°49.9	1.5 - 0.5	7.5 - 2.6	13.5 - 4.6
16	5°04.0	5°04.8	4°50.2	1.6 - 0.5	7.6 - 2.6	13.6 - 4.6
17	5°04.3	5°05.1	4°50.4	1.7 - 0.6	7.7 - 2.6	13.7 - 4.7
18	5°04.5	5°05.3	4°50.6	1.8 - 0.6	7.8 - 2.7	13.8 - 4.7
19	5°04.7	5°05.6	4°50.9	1.9 - 0.6	7.9 - 2.7	13.9 - 4.7
20	5°05.0	5°05.8	4°51.1	2.0 - 0.7	8.0 - 2.7	14.0 - 4.8
21	5°05.3	5°06.1	4°51.3	2.1 - 0.7	8.1 - 2.8	14.1 - 4.8
22	5°05.5	5°06.3	4°51.6	2.2 - 0.8	8.2 - 2.8	14.2 - 4.9
23	5°05.7	5°06.6	4°51.8	2.3 - 0.8	8.3 - 2.8	14.3 - 4.9
24	5°06.0	5°06.8	4°52.1	2.4 - 0.8	8.4 - 2.9	14.4 - 4.9
25	5°06.3	5°07.1	4°52.3	2.5 - 0.9	8.5 - 2.9	14.5 - 5.0
26	5°06.5	5°07.3	4°52.5	2.6 - 0.9	8.6 - 2.9	14.6 - 5.0
27	5°06.7	5°07.6	4°52.8	2.7 - 0.9	8.7 - 3.0	14.7 - 5.0
28	5°07.0	5°07.8	4°53.0	2.8 - 1.0	8.8 - 3.0	14.8 - 5.1
29	5°07.3	5°08.1	4°53.3	2.9 - 1.0	8.9 - 3.0	14.9 - 5.1
30	5°07.5	5°08.3	4°53.5	3.0 - 1.0	9.0 - 3.1	15.0 - 5.1
31	5°07.7	5°08.6	4°53.7	3.1 - 1.1	9.1 - 3.1	15.1 - 5.2
32	5°08.0	5°08.8	4°54.0	3.2 - 1.1	9.2 - 3.1	15.2 - 5.2
33	5°08.3	5°09.1	4°54.2	3.3 - 1.1	9.3 - 3.2	15.3 - 5.2
34	5°08.5	5°09.3	4°54.4	3.4 - 1.2	9.4 - 3.2	15.4 - 5.3
35	5°08.7	5°09.6	4°54.7	3.5 - 1.2	9.5 - 3.2	15.5 - 5.3
36	5°09.0	5°09.8	4°54.9	3.6 - 1.2	9.6 - 3.3	15.6 - 5.3
37	5°09.3	5°10.1	4°55.2	3.7 - 1.3	9.7 - 3.3	15.7 - 5.4
38	5°09.5	5°10.3	4°55.4	3.8 - 1.3	9.8 - 3.3	15.8 - 5.4
39	5°09.7	5°10.6	4°55.6	3.9 - 1.3	9.9 - 3.4	15.9 - 5.4
40	5°10.0	5°10.8	4°55.9	4.0 - 1.4	10.0 - 3.4	16.0 - 5.5
41	5°10.3	5°11.1	4°56.1	4.1 - 1.4	10.1 - 3.5	16.1 - 5.5
42	5°10.5	5°11.3	4°56.4	4.2 - 1.4	10.2 - 3.5	16.2 - 5.5
43	5°10.7	5°11.6	4°56.6	4.3 - 1.5	10.3 - 3.5	16.3 - 5.6
44	5°11.0	5°11.9	4°56.8	4.4 - 1.5	10.4 - 3.6	16.4 - 5.6
45	5°11.3	5°12.1	4°57.1	4.5 - 1.5	10.5 - 3.6	16.5 - 5.6
46	5°11.5	5°12.4	4°57.3	4.6 - 1.6	10.6 - 3.6	16.6 - 5.7
47	5°11.8	5°12.6	4°57.5	4.7 - 1.6	10.7 - 3.7	16.7 - 5.7
48	5°12.0	5°12.9	4°57.8	4.8 - 1.6	10.8 - 3.7	16.8 - 5.7
49	5°12.2	5°13.1	4°58.0	4.9 - 1.7	10.9 - 3.7	16.9 - 5.8
50	5°12.5	5°13.4	4°58.3	5.0 - 1.7	11.0 - 3.8	17.0 - 5.8
51	5°12.8	5°13.6	4°58.5	5.1 - 1.7	11.1 - 3.8	17.1 - 5.8
52	5°13.0	5°13.9	4°58.7	5.2 - 1.8	11.2 - 3.8	17.2 - 5.9
53	5°13.2	5°14.1	4°59.0	5.3 - 1.8	11.3 - 3.9	17.3 - 5.9
54	5°13.5	5°14.4	4°59.2	5.4 - 1.8	11.4 - 3.9	17.4 - 5.9
55	5°13.8	5°14.6	4°59.5	5.5 - 1.9	11.5 - 3.9	17.5 - 6.0
56	5°14.0	5°14.9	4°59.7	5.6 - 1.9	11.6 - 4.0	17.6 - 6.0
57	5°14.2	5°15.1	4°59.9	5.7 - 1.9	11.7 - 4.0	17.7 - 6.0
58	5°14.5	5°15.4	5°00.2	5.8 - 2.0	11.8 - 4.0	17.8 - 6.1
59	5°14.8	5°15.6	5°00.4	5.9 - 2.0	11.9 - 4.1	17.9 - 6.1

Increments and Corrections

m 21	Sun Plan.	Aries	Moon	v and d corr		
0	5°15.0	5°15.9	5°00.6	0.0 - 0.0	6.0 - 2.1	12.0 - 4.3
1	5°15.2	5°16.1	5°00.9	0.1 - 0.0	6.1 - 2.2	12.1 - 4.3
2	5°15.5	5°16.4	5°01.1	0.2 - 0.1	6.2 - 2.2	12.2 - 4.4
3	5°15.8	5°16.6	5°01.4	0.3 - 0.1	6.3 - 2.3	12.3 - 4.4
4	5°16.0	5°16.9	5°01.6	0.4 - 0.1	6.4 - 2.3	12.4 - 4.4
5	5°16.2	5°17.1	5°01.8	0.5 - 0.2	6.5 - 2.3	12.5 - 4.5
6	5°16.5	5°17.4	5°02.1	0.6 - 0.2	6.6 - 2.4	12.6 - 4.5
7	5°16.8	5°17.6	5°02.3	0.7 - 0.3	6.7 - 2.4	12.7 - 4.6
8	5°17.0	5°17.9	5°02.6	0.8 - 0.3	6.8 - 2.4	12.8 - 4.6
9	5°17.2	5°18.1	5°02.8	0.9 - 0.3	6.9 - 2.5	12.9 - 4.6
10	5°17.5	5°18.4	5°03.0	1.0 - 0.4	7.0 - 2.5	13.0 - 4.7
11	5°17.8	5°18.6	5°03.3	1.1 - 0.4	7.1 - 2.5	13.1 - 4.7
12	5°18.0	5°18.9	5°03.5	1.2 - 0.4	7.2 - 2.6	13.2 - 4.7
13	5°18.2	5°19.1	5°03.8	1.3 - 0.5	7.3 - 2.6	13.3 - 4.8
14	5°18.5	5°19.4	5°04.0	1.4 - 0.5	7.4 - 2.7	13.4 - 4.8
15	5°18.8	5°19.6	5°04.2	1.5 - 0.5	7.5 - 2.7	13.5 - 4.8
16	5°19.0	5°19.9	5°04.5	1.6 - 0.6	7.6 - 2.7	13.6 - 4.9
17	5°19.3	5°20.1	5°04.7	1.7 - 0.6	7.7 - 2.8	13.7 - 4.9
18	5°19.5	5°20.4	5°04.9	1.8 - 0.6	7.8 - 2.8	13.8 - 4.9
19	5°19.7	5°20.6	5°05.2	1.9 - 0.7	7.9 - 2.8	13.9 - 5.0
20	5°20.0	5°20.9	5°05.4	2.0 - 0.7	8.0 - 2.9	14.0 - 5.0
21	5°20.3	5°21.1	5°05.7	2.1 - 0.8	8.1 - 2.9	14.1 - 5.1
22	5°20.5	5°21.4	5°05.9	2.2 - 0.8	8.2 - 2.9	14.2 - 5.1
23	5°20.7	5°21.6	5°06.1	2.3 - 0.8	8.3 - 3.0	14.3 - 5.1
24	5°21.0	5°21.9	5°06.4	2.4 - 0.9	8.4 - 3.0	14.4 - 5.2
25	5°21.3	5°22.1	5°06.6	2.5 - 0.9	8.5 - 3.0	14.5 - 5.2
26	5°21.5	5°22.4	5°06.9	2.6 - 0.9	8.6 - 3.1	14.6 - 5.2
27	5°21.7	5°22.6	5°07.1	2.7 - 1.0	8.7 - 3.1	14.7 - 5.3
28	5°22.0	5°22.9	5°07.3	2.8 - 1.0	8.8 - 3.2	14.8 - 5.3
29	5°22.3	5°23.1	5°07.6	2.9 - 1.0	8.9 - 3.2	14.9 - 5.3
30	5°22.5	5°23.4	5°07.8	3.0 - 1.1	9.0 - 3.2	15.0 - 5.4
31	5°22.7	5°23.6	5°08.0	3.1 - 1.1	9.1 - 3.3	15.1 - 5.4
32	5°23.0	5°23.9	5°08.3	3.2 - 1.1	9.2 - 3.3	15.2 - 5.4
33	5°23.3	5°24.1	5°08.5	3.3 - 1.2	9.3 - 3.3	15.3 - 5.5
34	5°23.5	5°24.4	5°08.8	3.4 - 1.2	9.4 - 3.4	15.4 - 5.5
35	5°23.7	5°24.6	5°09.0	3.5 - 1.3	9.5 - 3.4	15.5 - 5.6
36	5°24.0	5°24.9	5°09.2	3.6 - 1.3	9.6 - 3.4	15.6 - 5.6
37	5°24.3	5°25.1	5°09.5	3.7 - 1.3	9.7 - 3.5	15.7 - 5.6
38	5°24.5	5°25.4	5°09.7	3.8 - 1.4	9.8 - 3.5	15.8 - 5.7
39	5°24.7	5°25.6	5°10.0	3.9 - 1.4	9.9 - 3.5	15.9 - 5.7
40	5°25.0	5°25.9	5°10.2	4.0 - 1.4	10.0 - 3.6	16.0 - 5.7
41	5°25.3	5°26.1	5°10.4	4.1 - 1.5	10.1 - 3.6	16.1 - 5.8
42	5°25.5	5°26.4	5°10.7	4.2 - 1.5	10.2 - 3.7	16.2 - 5.8
43	5°25.7	5°26.6	5°10.9	4.3 - 1.5	10.3 - 3.7	16.3 - 5.8
44	5°26.0	5°26.9	5°11.1	4.4 - 1.6	10.4 - 3.7	16.4 - 5.9
45	5°26.3	5°27.1	5°11.4	4.5 - 1.6	10.5 - 3.8	16.5 - 5.9
46	5°26.5	5°27.4	5°11.6	4.6 - 1.6	10.6 - 3.8	16.6 - 5.9
47	5°26.8	5°27.6	5°11.9	4.7 - 1.7	10.7 - 3.8	16.7 - 6.0
48	5°27.0	5°27.9	5°12.1	4.8 - 1.7	10.8 - 3.9	16.8 - 6.0
49	5°27.2	5°28.1	5°12.3	4.9 - 1.8	10.9 - 3.9	16.9 - 6.1
50	5°27.5	5°28.4	5°12.6	5.0 - 1.8	11.0 - 3.9	17.0 - 6.1
51	5°27.8	5°28.6	5°12.8	5.1 - 1.8	11.1 - 4.0	17.1 - 6.1
52	5°28.0	5°28.9	5°13.1	5.2 - 1.9	11.2 - 4.0	17.2 - 6.2
53	5°28.2	5°29.1	5°13.3	5.3 - 1.9	11.3 - 4.0	17.3 - 6.2
54	5°28.5	5°29.4	5°13.5	5.4 - 1.9	11.4 - 4.1	17.4 - 6.2
55	5°28.8	5°29.6	5°13.8	5.5 - 2.0	11.5 - 4.1	17.5 - 6.3
56	5°29.0	5°29.9	5°14.0	5.6 - 2.0	11.6 - 4.2	17.6 - 6.3
57	5°29.2	5°30.1	5°14.3	5.7 - 2.0	11.7 - 4.2	17.7 - 6.3
58	5°29.5	5°30.4	5°14.5	5.8 - 2.1	11.8 - 4.2	17.8 - 6.4
59	5°29.8	5°30.7	5°14.7	5.9 - 2.1	11.9 - 4.3	17.9 - 6.4

m 22	Sun Plan.	Aries	Moon	v and d corr		
0	5°30.0	5°30.9	5°15.0	0.0 - 0.0	6.0 - 2.3	12.0 - 4.5
1	5°30.2	5°31.2	5°15.2	0.1 - 0.0	6.1 - 2.3	12.1 - 4.5
2	5°30.5	5°31.4	5°15.4	0.2 - 0.1	6.2 - 2.3	12.2 - 4.6
3	5°30.8	5°31.7	5°15.7	0.3 - 0.1	6.3 - 2.4	12.3 - 4.6
4	5°31.0	5°31.9	5°15.9	0.4 - 0.2	6.4 - 2.4	12.4 - 4.7
5	5°31.2	5°32.2	5°16.2	0.5 - 0.2	6.5 - 2.4	12.5 - 4.7
6	5°31.5	5°32.4	5°16.4	0.6 - 0.2	6.6 - 2.5	12.6 - 4.7
7	5°31.8	5°32.7	5°16.6	0.7 - 0.3	6.7 - 2.5	12.7 - 4.8
8	5°32.0	5°32.9	5°16.9	0.8 - 0.3	6.8 - 2.5	12.8 - 4.8
9	5°32.2	5°33.2	5°17.1	0.9 - 0.3	6.9 - 2.6	12.9 - 4.8
10	5°32.5	5°33.4	5°17.4	1.0 - 0.4	7.0 - 2.6	13.0 - 4.9
11	5°32.8	5°33.7	5°17.6	1.1 - 0.4	7.1 - 2.7	13.1 - 4.9
12	5°33.0	5°33.9	5°17.8	1.2 - 0.5	7.2 - 2.7	13.2 - 4.9
13	5°33.2	5°34.2	5°18.1	1.3 - 0.5	7.3 - 2.7	13.3 - 5.0
14	5°33.5	5°34.4	5°18.3	1.4 - 0.5	7.4 - 2.8	13.4 - 5.0
15	5°33.8	5°34.7	5°18.5	1.5 - 0.6	7.5 - 2.8	13.5 - 5.1
16	5°34.0	5°34.9	5°18.8	1.6 - 0.6	7.6 - 2.8	13.6 - 5.1
17	5°34.3	5°35.2	5°19.0	1.7 - 0.6	7.7 - 2.9	13.7 - 5.1
18	5°34.5	5°35.4	5°19.3	1.8 - 0.7	7.8 - 2.9	13.8 - 5.2
19	5°34.8	5°35.7	5°19.5	1.9 - 0.7	7.9 - 3.0	13.9 - 5.2
20	5°35.0	5°35.9	5°19.7	2.0 - 0.8	8.0 - 3.0	14.0 - 5.3
21	5°35.3	5°36.2	5°20.0	2.1 - 0.8	8.1 - 3.0	14.1 - 5.3
22	5°35.5	5°36.4	5°20.2	2.2 - 0.8	8.2 - 3.1	14.2 - 5.3
23	5°35.7	5°36.7	5°20.5	2.3 - 0.9	8.3 - 3.1	14.3 - 5.4
24	5°36.0	5°36.9	5°20.7	2.4 - 0.9	8.4 - 3.2	14.4 - 5.4
25	5°36.3	5°37.2	5°20.9	2.5 - 0.9	8.5 - 3.2	14.5 - 5.4
26	5°36.5	5°37.4	5°21.2	2.6 - 1.0	8.6 - 3.2	14.6 - 5.5
27	5°36.7	5°37.7	5°21.4	2.7 - 1.0	8.7 - 3.3	14.7 - 5.5
28	5°37.0	5°37.9	5°21.6	2.8 - 1.1	8.8 - 3.3	14.8 - 5.6
29	5°37.3	5°38.2	5°21.9	2.9 - 1.1	8.9 - 3.3	14.9 - 5.6
30	5°37.5	5°38.4	5°22.1	3.0 - 1.1	9.0 - 3.4	15.0 - 5.6
31	5°37.7	5°38.7	5°22.4	3.1 - 1.2	9.1 - 3.4	15.1 - 5.7
32	5°38.0	5°38.9	5°22.6	3.2 - 1.2	9.2 - 3.4	15.2 - 5.7
33	5°38.3	5°39.2	5°22.8	3.3 - 1.2	9.3 - 3.5	15.3 - 5.7
34	5°38.5	5°39.4	5°23.1	3.4 - 1.3	9.4 - 3.5	15.4 - 5.8
35	5°38.7	5°39.7	5°23.3	3.5 - 1.3	9.5 - 3.6	15.5 - 5.8
36	5°39.0	5°39.9	5°23.6	3.6 - 1.4	9.6 - 3.6	15.6 - 5.8
37	5°39.3	5°40.2	5°23.8	3.7 - 1.4	9.7 - 3.6	15.7 - 5.9
38	5°39.5	5°40.4	5°24.0	3.8 - 1.4	9.8 - 3.7	15.8 - 5.9
39	5°39.7	5°40.7	5°24.3	3.9 - 1.5	9.9 - 3.7	15.9 - 6.0
40	5°40.0	5°40.9	5°24.5	4.0 - 1.5	10.0 - 3.8	16.0 - 6.0
41	5°40.3	5°41.2	5°24.7	4.1 - 1.5	10.1 - 3.8	16.1 - 6.0
42	5°40.5	5°41.4	5°25.0	4.2 - 1.6	10.2 - 3.8	16.2 - 6.1
43	5°40.7	5°41.7	5°25.2	4.3 - 1.6	10.3 - 3.9	16.3 - 6.1
44	5°41.0	5°41.9	5°25.5	4.4 - 1.7	10.4 - 3.9	16.4 - 6.1
45	5°41.3	5°42.2	5°25.7	4.5 - 1.7	10.5 - 3.9	16.5 - 6.2
46	5°41.5	5°42.4	5°25.9	4.6 - 1.7	10.6 - 4.0	16.6 - 6.2
47	5°41.8	5°42.7	5°26.2	4.7 - 1.8	10.7 - 4.0	16.7 - 6.3
48	5°42.0	5°42.9	5°26.4	4.8 - 1.8	10.8 - 4.1	16.8 - 6.3
49	5°42.3	5°43.2	5°26.7	4.9 - 1.8	10.9 - 4.1	16.9 - 6.3
50	5°42.5	5°43.4	5°26.9	5.0 - 1.9	11.0 - 4.1	17.0 - 6.4
51	5°42.8	5°43.7	5°27.1	5.1 - 1.9	11.1 - 4.2	17.1 - 6.4
52	5°43.0	5°43.9	5°27.4	5.2 - 2.0	11.2 - 4.2	17.2 - 6.4
53	5°43.2	5°44.2	5°27.6	5.3 - 2.0	11.3 - 4.2	17.3 - 6.5
54	5°43.5	5°44.4	5°27.9	5.4 - 2.0	11.4 - 4.3	17.4 - 6.5
55	5°43.8	5°44.7	5°28.1	5.5 - 2.1	11.5 - 4.3	17.5 - 6.6
56	5°44.0	5°44.9	5°28.3	5.6 - 2.1	11.6 - 4.4	17.6 - 6.6
57	5°44.2	5°45.2	5°28.6	5.7 - 2.1	11.7 - 4.4	17.7 - 6.6
58	5°44.5	5°45.4	5°28.8	5.8 - 2.2	11.8 - 4.4	17.8 - 6.7
59	5°44.8	5°45.7	5°29.0	5.9 - 2.2	11.9 - 4.5	17.9 - 6.7

m 23	Sun Plan.	Aries	Moon	v and d corr		
0	5°45.0	5°45.9	5°29.3	0.0 - 0.0	6.0 - 2.4	12.0 - 4.7
1	5°45.2	5°46.2	5°29.5	0.1 - 0.0	6.1 - 2.4	12.1 - 4.7
2	5°45.5	5°46.4	5°29.8	0.2 - 0.1	6.2 - 2.4	12.2 - 4.8
3	5°45.8	5°46.7	5°30.0	0.3 - 0.1	6.3 - 2.5	12.3 - 4.8
4	5°46.0	5°46.9	5°30.2	0.4 - 0.2	6.4 - 2.5	12.4 - 4.9
5	5°46.2	5°47.2	5°30.5	0.5 - 0.2	6.5 - 2.5	12.5 - 4.9
6	5°46.5	5°47.4	5°30.7	0.6 - 0.2	6.6 - 2.6	12.6 - 4.9
7	5°46.8	5°47.7	5°31.0	0.7 - 0.3	6.7 - 2.6	12.7 - 5.0
8	5°47.0	5°47.9	5°31.2	0.8 - 0.3	6.8 - 2.7	12.8 - 5.0
9	5°47.2	5°48.2	5°31.4	0.9 - 0.4	6.9 - 2.7	12.9 - 5.1
10	5°47.5	5°48.4	5°31.7	1.0 - 0.4	7.0 - 2.7	13.0 - 5.1
11	5°47.8	5°48.7	5°31.9	1.1 - 0.4	7.1 - 2.8	13.1 - 5.1
12	5°48.0	5°49.0	5°32.1	1.2 - 0.5	7.2 - 2.8	13.2 - 5.2
13	5°48.2	5°49.2	5°32.4	1.3 - 0.5	7.3 - 2.9	13.3 - 5.2
14	5°48.5	5°49.5	5°32.6	1.4 - 0.5	7.4 - 2.9	13.4 - 5.2
15	5°48.8	5°49.7	5°32.9	1.5 - 0.6	7.5 - 2.9	13.5 - 5.3
16	5°49.0	5°50.0	5°33.1	1.6 - 0.6	7.6 - 3.0	13.6 - 5.3
17	5°49.3	5°50.2	5°33.3	1.7 - 0.7	7.7 - 3.0	13.7 - 5.4
18	5°49.5	5°50.5	5°33.6	1.8 - 0.7	7.8 - 3.1	13.8 - 5.4
19	5°49.8	5°50.7	5°33.8	1.9 - 0.7	7.9 - 3.1	13.9 - 5.4
20	5°50.0	5°51.0	5°34.1	2.0 - 0.8	8.0 - 3.1	14.0 - 5.5
21	5°50.3	5°51.2	5°34.3	2.1 - 0.8	8.1 - 3.2	14.1 - 5.5
22	5°50.5	5°51.5	5°34.5	2.2 - 0.9	8.2 - 3.2	14.2 - 5.6
23	5°50.7	5°51.7	5°34.8	2.3 - 0.9	8.3 - 3.3	14.3 - 5.6
24	5°51.0	5°52.0	5°35.0	2.4 - 0.9	8.4 - 3.3	14.4 - 5.6
25	5°51.3	5°52.2	5°35.2	2.5 - 1.0	8.5 - 3.3	14.5 - 5.7
26	5°51.5	5°52.5	5°35.5	2.6 - 1.0	8.6 - 3.4	14.6 - 5.7
27	5°51.7	5°52.7	5°35.7	2.7 - 1.1	8.7 - 3.4	14.7 - 5.8
28	5°52.0	5°53.0	5°36.0	2.8 - 1.1	8.8 - 3.4	14.8 - 5.8
29	5°52.3	5°53.2	5°36.2	2.9 - 1.1	8.9 - 3.5	14.9 - 5.8
30	5°52.5	5°53.5	5°36.4	3.0 - 1.2	9.0 - 3.5	15.0 - 5.9
31	5°52.7	5°53.7	5°36.7	3.1 - 1.2	9.1 - 3.6	15.1 - 5.9
32	5°53.0	5°54.0	5°36.9	3.2 - 1.3	9.2 - 3.6	15.2 - 6.0
33	5°53.3	5°54.2	5°37.2	3.3 - 1.3	9.3 - 3.6	15.3 - 6.0
34	5°53.5	5°54.5	5°37.4	3.4 - 1.3	9.4 - 3.7	15.4 - 6.0
35	5°53.7	5°54.7	5°37.6	3.5 - 1.4	9.5 - 3.7	15.5 - 6.1
36	5°54.0	5°55.0	5°37.9	3.6 - 1.4	9.6 - 3.8	15.6 - 6.1
37	5°54.3	5°55.2	5°38.1	3.7 - 1.4	9.7 - 3.8	15.7 - 6.1
38	5°54.5	5°55.5	5°38.4	3.8 - 1.5	9.8 - 3.8	15.8 - 6.2
39	5°54.7	5°55.7	5°38.6	3.9 - 1.5	9.9 - 3.9	15.9 - 6.2
40	5°55.0	5°56.0	5°38.8	4.0 - 1.6	10.0 - 3.9	16.0 - 6.3
41	5°55.3	5°56.2	5°39.1	4.1 - 1.6	10.1 - 4.0	16.1 - 6.3
42	5°55.5	5°56.5	5°39.3	4.2 - 1.6	10.2 - 4.0	16.2 - 6.3
43	5°55.7	5°56.7	5°39.5	4.3 - 1.7	10.3 - 4.0	16.3 - 6.4
44	5°56.0	5°57.0	5°39.8	4.4 - 1.7	10.4 - 4.1	16.4 - 6.4
45	5°56.3	5°57.2	5°40.0	4.5 - 1.8	10.5 - 4.1	16.5 - 6.5
46	5°56.5	5°57.5	5°40.3	4.6 - 1.8	10.6 - 4.2	16.6 - 6.5
47	5°56.8	5°57.7	5°40.5	4.7 - 1.8	10.7 - 4.2	16.7 - 6.5
48	5°57.0	5°58.0	5°40.7	4.8 - 1.9	10.8 - 4.2	16.8 - 6.6
49	5°57.3	5°58.2	5°41.0	4.9 - 1.9	10.9 - 4.3	16.9 - 6.6
50	5°57.5	5°58.5	5°41.2	5.0 - 2.0	11.0 - 4.3	17.0 - 6.7
51	5°57.8	5°58.7	5°41.5	5.1 - 2.0	11.1 - 4.3	17.1 - 6.7
52	5°58.0	5°59.0	5°41.7	5.2 - 2.0	11.2 - 4.4	17.2 - 6.7
53	5°58.2	5°59.2	5°41.9	5.3 - 2.1	11.3 - 4.4	17.3 - 6.8
54	5°58.5	5°59.5	5°42.2	5.4 - 2.1	11.4 - 4.5	17.4 - 6.8
55	5°58.8	5°59.7	5°42.4	5.5 - 2.2	11.5 - 4.5	17.5 - 6.9
56	5°59.0	6°00.0	5°42.6	5.6 - 2.2	11.6 - 4.5	17.6 - 6.9
57	5°59.2	6°00.2	5°42.9	5.7 - 2.2	11.7 - 4.6	17.7 - 6.9
58	5°59.5	6°00.5	5°43.1	5.8 - 2.3	11.8 - 4.6	17.8 - 7.0
59	5°59.8	6°00.7	5°43.4	5.9 - 2.3	11.9 - 4.7	17.9 - 7.0

Increments and Corrections

m 24	Sun Plan.	Aries	Moon	v and d corr		
0	6°00.0	6°01.0	5°43.6	0.0 - 0.0	6.0 - 2.5	12.0 - 4.9
1	6°00.2	6°01.2	5°43.8	0.1 - 0.0	6.1 - 2.5	12.1 - 4.9
2	6°00.5	6°01.5	5°44.1	0.2 - 0.1	6.2 - 2.5	12.2 - 5.0
3	6°00.8	6°01.7	5°44.3	0.3 - 0.1	6.3 - 2.6	12.3 - 5.0
4	6°01.0	6°02.0	5°44.6	0.4 - 0.2	6.4 - 2.6	12.4 - 5.1
5	6°01.2	6°02.2	5°44.8	0.5 - 0.2	6.5 - 2.7	12.5 - 5.1
6	6°01.5	6°02.5	5°45.0	0.6 - 0.2	6.6 - 2.7	12.6 - 5.1
7	6°01.8	6°02.7	5°45.3	0.7 - 0.3	6.7 - 2.7	12.7 - 5.2
8	6°02.0	6°03.0	5°45.5	0.8 - 0.3	6.8 - 2.8	12.8 - 5.2
9	6°02.2	6°03.2	5°45.7	0.9 - 0.4	6.9 - 2.8	12.9 - 5.3
10	6°02.5	6°03.5	5°46.0	1.0 - 0.4	7.0 - 2.9	13.0 - 5.3
11	6°02.8	6°03.7	5°46.2	1.1 - 0.4	7.1 - 2.9	13.1 - 5.3
12	6°03.0	6°04.0	5°46.5	1.2 - 0.5	7.2 - 2.9	13.2 - 5.4
13	6°03.2	6°04.2	5°46.7	1.3 - 0.5	7.3 - 3.0	13.3 - 5.4
14	6°03.5	6°04.5	5°46.9	1.4 - 0.6	7.4 - 3.0	13.4 - 5.5
15	6°03.8	6°04.7	5°47.2	1.5 - 0.6	7.5 - 3.1	13.5 - 5.5
16	6°04.0	6°05.0	5°47.4	1.6 - 0.7	7.6 - 3.1	13.6 - 5.6
17	6°04.3	6°05.2	5°47.7	1.7 - 0.7	7.7 - 3.1	13.7 - 5.6
18	6°04.5	6°05.5	5°47.9	1.8 - 0.7	7.8 - 3.2	13.8 - 5.6
19	6°04.7	6°05.7	5°48.1	1.9 - 0.8	7.9 - 3.2	13.9 - 5.7
20	6°05.0	6°06.0	5°48.4	2.0 - 0.8	8.0 - 3.3	14.0 - 5.7
21	6°05.3	6°06.2	5°48.6	2.1 - 0.9	8.1 - 3.3	14.1 - 5.8
22	6°05.5	6°06.5	5°48.8	2.2 - 0.9	8.2 - 3.3	14.2 - 5.8
23	6°05.7	6°06.7	5°49.1	2.3 - 0.9	8.3 - 3.4	14.3 - 5.8
24	6°06.0	6°07.0	5°49.3	2.4 - 1.0	8.4 - 3.4	14.4 - 5.9
25	6°06.3	6°07.3	5°49.6	2.5 - 1.0	8.5 - 3.5	14.5 - 5.9
26	6°06.5	6°07.5	5°49.8	2.6 - 1.1	8.6 - 3.5	14.6 - 6.0
27	6°06.7	6°07.8	5°50.0	2.7 - 1.1	8.7 - 3.6	14.7 - 6.0
28	6°07.0	6°08.0	5°50.3	2.8 - 1.1	8.8 - 3.6	14.8 - 6.0
29	6°07.3	6°08.3	5°50.5	2.9 - 1.2	8.9 - 3.6	14.9 - 6.1
30	6°07.5	6°08.5	5°50.8	3.0 - 1.2	9.0 - 3.7	15.0 - 6.1
31	6°07.7	6°08.8	5°51.0	3.1 - 1.3	9.1 - 3.7	15.1 - 6.2
32	6°08.0	6°09.0	5°51.2	3.2 - 1.3	9.2 - 3.8	15.2 - 6.2
33	6°08.3	6°09.3	5°51.5	3.3 - 1.3	9.3 - 3.8	15.3 - 6.2
34	6°08.5	6°09.5	5°51.7	3.4 - 1.4	9.4 - 3.8	15.4 - 6.3
35	6°08.7	6°09.8	5°52.0	3.5 - 1.4	9.5 - 3.9	15.5 - 6.3
36	6°09.0	6°10.0	5°52.2	3.6 - 1.5	9.6 - 3.9	15.6 - 6.4
37	6°09.3	6°10.3	5°52.4	3.7 - 1.5	9.7 - 4.0	15.7 - 6.4
38	6°09.5	6°10.5	5°52.7	3.8 - 1.6	9.8 - 4.0	15.8 - 6.5
39	6°09.7	6°10.8	5°52.9	3.9 - 1.6	9.9 - 4.0	15.9 - 6.5
40	6°10.0	6°11.0	5°53.1	4.0 - 1.6	10.0 - 4.1	16.0 - 6.5
41	6°10.3	6°11.3	5°53.4	4.1 - 1.7	10.1 - 4.1	16.1 - 6.6
42	6°10.5	6°11.5	5°53.6	4.2 - 1.7	10.2 - 4.2	16.2 - 6.6
43	6°10.7	6°11.8	5°53.9	4.3 - 1.8	10.3 - 4.2	16.3 - 6.7
44	6°11.0	6°12.0	5°54.1	4.4 - 1.8	10.4 - 4.2	16.4 - 6.7
45	6°11.3	6°12.3	5°54.3	4.5 - 1.8	10.5 - 4.3	16.5 - 6.7
46	6°11.5	6°12.5	5°54.6	4.6 - 1.9	10.6 - 4.3	16.6 - 6.8
47	6°11.8	6°12.8	5°54.8	4.7 - 1.9	10.7 - 4.4	16.7 - 6.8
48	6°12.0	6°13.0	5°55.1	4.8 - 2.0	10.8 - 4.4	16.8 - 6.9
49	6°12.2	6°13.3	5°55.3	4.9 - 2.0	10.9 - 4.5	16.9 - 6.9
50	6°12.5	6°13.5	5°55.5	5.0 - 2.0	11.0 - 4.5	17.0 - 6.9
51	6°12.8	6°13.8	5°55.8	5.1 - 2.1	11.1 - 4.5	17.1 - 7.0
52	6°13.0	6°14.0	5°56.0	5.2 - 2.1	11.2 - 4.6	17.2 - 7.0
53	6°13.2	6°14.3	5°56.2	5.3 - 2.2	11.3 - 4.6	17.3 - 7.1
54	6°13.5	6°14.5	5°56.5	5.4 - 2.2	11.4 - 4.7	17.4 - 7.1
55	6°13.8	6°14.8	5°56.7	5.5 - 2.2	11.5 - 4.7	17.5 - 7.1
56	6°14.0	6°15.0	5°57.0	5.6 - 2.3	11.6 - 4.7	17.6 - 7.2
57	6°14.2	6°15.3	5°57.2	5.7 - 2.3	11.7 - 4.8	17.7 - 7.2
58	6°14.5	6°15.5	5°57.4	5.8 - 2.4	11.8 - 4.8	17.8 - 7.3
59	6°14.8	6°15.8	5°57.7	5.9 - 2.4	11.9 - 4.9	17.9 - 7.3

m 25	Sun Plan.	Aries	Moon	v and d corr		
0	6°15.0	6°16.0	5°57.9	0.0 - 0.0	6.0 - 2.5	12.0 - 5.1
1	6°15.2	6°16.3	5°58.2	0.1 - 0.0	6.1 - 2.6	12.1 - 5.1
2	6°15.5	6°16.5	5°58.4	0.2 - 0.1	6.2 - 2.6	12.2 - 5.2
3	6°15.8	6°16.8	5°58.6	0.3 - 0.1	6.3 - 2.7	12.3 - 5.2
4	6°16.0	6°17.0	5°58.9	0.4 - 0.2	6.4 - 2.7	12.4 - 5.3
5	6°16.2	6°17.3	5°59.1	0.5 - 0.2	6.5 - 2.8	12.5 - 5.3
6	6°16.5	6°17.5	5°59.3	0.6 - 0.3	6.6 - 2.8	12.6 - 5.4
7	6°16.8	6°17.8	5°59.6	0.7 - 0.3	6.7 - 2.8	12.7 - 5.4
8	6°17.0	6°18.0	5°59.8	0.8 - 0.3	6.8 - 2.9	12.8 - 5.4
9	6°17.2	6°18.3	6°00.1	0.9 - 0.4	6.9 - 2.9	12.9 - 5.5
10	6°17.5	6°18.5	6°00.3	1.0 - 0.4	7.0 - 3.0	13.0 - 5.5
11	6°17.8	6°18.8	6°00.5	1.1 - 0.5	7.1 - 3.0	13.1 - 5.6
12	6°18.0	6°19.0	6°00.8	1.2 - 0.5	7.2 - 3.1	13.2 - 5.6
13	6°18.2	6°19.3	6°01.0	1.3 - 0.6	7.3 - 3.1	13.3 - 5.7
14	6°18.5	6°19.5	6°01.3	1.4 - 0.6	7.4 - 3.1	13.4 - 5.7
15	6°18.8	6°19.8	6°01.5	1.5 - 0.6	7.5 - 3.2	13.5 - 5.7
16	6°19.0	6°20.0	6°01.7	1.6 - 0.7	7.6 - 3.2	13.6 - 5.8
17	6°19.3	6°20.3	6°02.0	1.7 - 0.7	7.7 - 3.3	13.7 - 5.8
18	6°19.5	6°20.5	6°02.2	1.8 - 0.8	7.8 - 3.3	13.8 - 5.9
19	6°19.7	6°20.8	6°02.5	1.9 - 0.8	7.9 - 3.4	13.9 - 5.9
20	6°20.0	6°21.0	6°02.7	2.0 - 0.8	8.0 - 3.4	14.0 - 6.0
21	6°20.3	6°21.3	6°02.9	2.1 - 0.9	8.1 - 3.4	14.1 - 6.0
22	6°20.5	6°21.5	6°03.2	2.2 - 0.9	8.2 - 3.5	14.2 - 6.0
23	6°20.7	6°21.8	6°03.4	2.3 - 1.0	8.3 - 3.5	14.3 - 6.1
24	6°21.0	6°22.0	6°03.6	2.4 - 1.0	8.4 - 3.6	14.4 - 6.1
25	6°21.3	6°22.3	6°03.9	2.5 - 1.1	8.5 - 3.6	14.5 - 6.2
26	6°21.5	6°22.5	6°04.1	2.6 - 1.1	8.6 - 3.7	14.6 - 6.2
27	6°21.7	6°22.8	6°04.4	2.7 - 1.1	8.7 - 3.7	14.7 - 6.2
28	6°22.0	6°23.0	6°04.6	2.8 - 1.2	8.8 - 3.7	14.8 - 6.3
29	6°22.3	6°23.3	6°04.8	2.9 - 1.2	8.9 - 3.8	14.9 - 6.3
30	6°22.5	6°23.5	6°05.1	3.0 - 1.3	9.0 - 3.8	15.0 - 6.4
31	6°22.7	6°23.8	6°05.3	3.1 - 1.3	9.1 - 3.9	15.1 - 6.4
32	6°23.0	6°24.0	6°05.6	3.2 - 1.4	9.2 - 3.9	15.2 - 6.5
33	6°23.3	6°24.3	6°05.8	3.3 - 1.4	9.3 - 4.0	15.3 - 6.5
34	6°23.5	6°24.5	6°06.0	3.4 - 1.4	9.4 - 4.0	15.4 - 6.5
35	6°23.7	6°24.8	6°06.3	3.5 - 1.5	9.5 - 4.0	15.5 - 6.6
36	6°24.0	6°25.0	6°06.5	3.6 - 1.5	9.6 - 4.1	15.6 - 6.6
37	6°24.3	6°25.3	6°06.7	3.7 - 1.6	9.7 - 4.1	15.7 - 6.7
38	6°24.5	6°25.6	6°07.0	3.8 - 1.6	9.8 - 4.2	15.8 - 6.7
39	6°24.7	6°25.8	6°07.2	3.9 - 1.7	9.9 - 4.2	15.9 - 6.8
40	6°25.0	6°26.1	6°07.5	4.0 - 1.7	10.0 - 4.3	16.0 - 6.8
41	6°25.3	6°26.3	6°07.7	4.1 - 1.7	10.1 - 4.3	16.1 - 6.8
42	6°25.5	6°26.6	6°07.9	4.2 - 1.8	10.2 - 4.3	16.2 - 6.9
43	6°25.7	6°26.8	6°08.2	4.3 - 1.8	10.3 - 4.4	16.3 - 6.9
44	6°26.0	6°27.1	6°08.4	4.4 - 1.9	10.4 - 4.4	16.4 - 7.0
45	6°26.3	6°27.3	6°08.7	4.5 - 1.9	10.5 - 4.5	16.5 - 7.0
46	6°26.5	6°27.6	6°08.9	4.6 - 2.0	10.6 - 4.5	16.6 - 7.1
47	6°26.8	6°27.8	6°09.1	4.7 - 2.0	10.7 - 4.5	16.7 - 7.1
48	6°27.0	6°28.1	6°09.4	4.8 - 2.0	10.8 - 4.6	16.8 - 7.1
49	6°27.2	6°28.3	6°09.6	4.9 - 2.1	10.9 - 4.6	16.9 - 7.2
50	6°27.5	6°28.6	6°09.8	5.0 - 2.1	11.0 - 4.7	17.0 - 7.2
51	6°27.8	6°28.8	6°10.1	5.1 - 2.2	11.1 - 4.7	17.1 - 7.3
52	6°28.0	6°29.1	6°10.3	5.2 - 2.2	11.2 - 4.8	17.2 - 7.3
53	6°28.2	6°29.3	6°10.6	5.3 - 2.3	11.3 - 4.8	17.3 - 7.4
54	6°28.5	6°29.6	6°10.8	5.4 - 2.3	11.4 - 4.8	17.4 - 7.4
55	6°28.8	6°29.8	6°11.0	5.5 - 2.3	11.5 - 4.9	17.5 - 7.4
56	6°29.0	6°30.1	6°11.3	5.6 - 2.4	11.6 - 4.9	17.6 - 7.5
57	6°29.2	6°30.3	6°11.5	5.7 - 2.4	11.7 - 5.0	17.7 - 7.5
58	6°29.5	6°30.6	6°11.8	5.8 - 2.5	11.8 - 5.0	17.8 - 7.6
59	6°29.8	6°30.8	6°12.0	5.9 - 2.5	11.9 - 5.1	17.9 - 7.6

m 26	Sun Plan.	Aries	Moon	v and d corr		
0	6°30.0	6°31.1	6°12.2	0.0 - 0.0	6.0 - 2.6	12.0 - 5.3
1	6°30.2	6°31.3	6°12.5	0.1 - 0.0	6.1 - 2.7	12.1 - 5.3
2	6°30.5	6°31.6	6°12.7	0.2 - 0.1	6.2 - 2.7	12.2 - 5.4
3	6°30.8	6°31.8	6°12.9	0.3 - 0.1	6.3 - 2.8	12.3 - 5.4
4	6°31.0	6°32.1	6°13.2	0.4 - 0.2	6.4 - 2.8	12.4 - 5.5
5	6°31.2	6°32.3	6°13.4	0.5 - 0.2	6.5 - 2.9	12.5 - 5.5
6	6°31.5	6°32.6	6°13.7	0.6 - 0.3	6.6 - 2.9	12.6 - 5.6
7	6°31.8	6°32.8	6°13.9	0.7 - 0.3	6.7 - 3.0	12.7 - 5.6
8	6°32.0	6°33.1	6°14.1	0.8 - 0.4	6.8 - 3.0	12.8 - 5.7
9	6°32.2	6°33.3	6°14.4	0.9 - 0.4	6.9 - 3.0	12.9 - 5.7
10	6°32.5	6°33.6	6°14.6	1.0 - 0.4	7.0 - 3.1	13.0 - 5.7
11	6°32.8	6°33.8	6°14.9	1.1 - 0.5	7.1 - 3.1	13.1 - 5.8
12	6°33.0	6°34.1	6°15.1	1.2 - 0.5	7.2 - 3.2	13.2 - 5.8
13	6°33.2	6°34.3	6°15.3	1.3 - 0.6	7.3 - 3.2	13.3 - 5.9
14	6°33.5	6°34.6	6°15.6	1.4 - 0.6	7.4 - 3.3	13.4 - 5.9
15	6°33.8	6°34.8	6°15.8	1.5 - 0.7	7.5 - 3.3	13.5 - 6.0
16	6°34.0	6°35.1	6°16.1	1.6 - 0.7	7.6 - 3.4	13.6 - 6.0
17	6°34.3	6°35.3	6°16.3	1.7 - 0.8	7.7 - 3.4	13.7 - 6.1
18	6°34.5	6°35.6	6°16.5	1.8 - 0.8	7.8 - 3.4	13.8 - 6.1
19	6°34.8	6°35.8	6°16.8	1.9 - 0.8	7.9 - 3.5	13.9 - 6.1
20	6°35.0	6°36.1	6°17.0	2.0 - 0.9	8.0 - 3.5	14.0 - 6.2
21	6°35.3	6°36.3	6°17.2	2.1 - 0.9	8.1 - 3.6	14.1 - 6.2
22	6°35.5	6°36.6	6°17.5	2.2 - 1.0	8.2 - 3.6	14.2 - 6.3
23	6°35.7	6°36.8	6°17.7	2.3 - 1.0	8.3 - 3.7	14.3 - 6.3
24	6°36.0	6°37.1	6°18.0	2.4 - 1.1	8.4 - 3.7	14.4 - 6.4
25	6°36.3	6°37.3	6°18.2	2.5 - 1.1	8.5 - 3.8	14.5 - 6.4
26	6°36.5	6°37.6	6°18.4	2.6 - 1.1	8.6 - 3.8	14.6 - 6.4
27	6°36.7	6°37.8	6°18.7	2.7 - 1.2	8.7 - 3.8	14.7 - 6.5
28	6°37.0	6°38.1	6°18.9	2.8 - 1.2	8.8 - 3.9	14.8 - 6.5
29	6°37.3	6°38.3	6°19.2	2.9 - 1.3	8.9 - 3.9	14.9 - 6.6
30	6°37.5	6°38.6	6°19.4	3.0 - 1.3	9.0 - 4.0	15.0 - 6.6
31	6°37.7	6°38.8	6°19.6	3.1 - 1.4	9.1 - 4.0	15.1 - 6.7
32	6°38.0	6°39.1	6°19.9	3.2 - 1.4	9.2 - 4.1	15.2 - 6.7
33	6°38.3	6°39.3	6°20.1	3.3 - 1.5	9.3 - 4.1	15.3 - 6.8
34	6°38.5	6°39.6	6°20.3	3.4 - 1.5	9.4 - 4.2	15.4 - 6.8
35	6°38.7	6°39.8	6°20.6	3.5 - 1.5	9.5 - 4.2	15.5 - 6.8
36	6°39.0	6°40.1	6°20.8	3.6 - 1.6	9.6 - 4.2	15.6 - 6.9
37	6°39.3	6°40.3	6°21.1	3.7 - 1.6	9.7 - 4.3	15.7 - 6.9
38	6°39.5	6°40.6	6°21.3	3.8 - 1.7	9.8 - 4.3	15.8 - 7.0
39	6°39.7	6°40.8	6°21.5	3.9 - 1.7	9.9 - 4.4	15.9 - 7.0
40	6°40.0	6°41.1	6°21.8	4.0 - 1.8	10.0 - 4.4	16.0 - 7.1
41	6°40.3	6°41.3	6°22.0	4.1 - 1.8	10.1 - 4.5	16.1 - 7.1
42	6°40.5	6°41.6	6°22.3	4.2 - 1.9	10.2 - 4.5	16.2 - 7.2
43	6°40.7	6°41.8	6°22.5	4.3 - 1.9	10.3 - 4.5	16.3 - 7.2
44	6°41.0	6°42.1	6°22.7	4.4 - 1.9	10.4 - 4.6	16.4 - 7.2
45	6°41.3	6°42.3	6°23.0	4.5 - 2.0	10.5 - 4.6	16.5 - 7.3
46	6°41.5	6°42.6	6°23.2	4.6 - 2.0	10.6 - 4.7	16.6 - 7.3
47	6°41.8	6°42.8	6°23.4	4.7 - 2.1	10.7 - 4.7	16.7 - 7.4
48	6°42.0	6°43.1	6°23.7	4.8 - 2.1	10.8 - 4.8	16.8 - 7.4
49	6°42.3	6°43.3	6°23.9	4.9 - 2.2	10.9 - 4.8	16.9 - 7.5
50	6°42.5	6°43.6	6°24.2	5.0 - 2.2	11.0 - 4.9	17.0 - 7.5
51	6°42.8	6°43.9	6°24.4	5.1 - 2.3	11.1 - 4.9	17.1 - 7.6
52	6°43.0	6°44.1	6°24.6	5.2 - 2.3	11.2 - 4.9	17.2 - 7.6
53	6°43.2	6°44.4	6°24.9	5.3 - 2.3	11.3 - 5.0	17.3 - 7.6
54	6°43.5	6°44.6	6°25.1	5.4 - 2.4	11.4 - 5.0	17.4 - 7.7
55	6°43.8	6°44.9	6°25.4	5.5 - 2.4	11.5 - 5.1	17.5 - 7.7
56	6°44.0	6°45.1	6°25.6	5.6 - 2.5	11.6 - 5.1	17.6 - 7.8
57	6°44.2	6°45.4	6°25.8	5.7 - 2.5	11.7 - 5.2	17.7 - 7.8
58	6°44.5	6°45.6	6°26.1	5.8 - 2.6	11.8 - 5.2	17.8 - 7.9
59	6°44.8	6°45.9	6°26.3	5.9 - 2.6	11.9 - 5.3	17.9 - 7.9

Increments and Corrections

m 27	Sun Plan.	Aries	Moon	v and d corr		
0	6°45.0	6°46.1	6°26.5	0.0 - 0.0	6.0 - 2.8	12.0 - 5.5
1	6°45.2	6°46.4	6°26.8	0.1 - 0.0	6.1 - 2.8	12.1 - 5.5
2	6°45.5	6°46.6	6°27.0	0.2 - 0.1	6.2 - 2.8	12.2 - 5.6
3	6°45.8	6°46.9	6°27.3	0.3 - 0.1	6.3 - 2.9	12.3 - 5.6
4	6°46.0	6°47.1	6°27.5	0.4 - 0.2	6.4 - 2.9	12.4 - 5.7
5	6°46.2	6°47.4	6°27.7	0.5 - 0.2	6.5 - 3.0	12.5 - 5.7
6	6°46.5	6°47.6	6°28.0	0.6 - 0.3	6.6 - 3.0	12.6 - 5.8
7	6°46.8	6°47.9	6°28.2	0.7 - 0.3	6.7 - 3.1	12.7 - 5.8
8	6°47.0	6°48.1	6°28.5	0.8 - 0.4	6.8 - 3.1	12.8 - 5.9
9	6°47.2	6°48.4	6°28.7	0.9 - 0.4	6.9 - 3.2	12.9 - 5.9
10	6°47.5	6°48.6	6°28.9	1.0 - 0.5	7.0 - 3.2	13.0 - 6.0
11	6°47.8	6°48.9	6°29.2	1.1 - 0.5	7.1 - 3.3	13.1 - 6.0
12	6°48.0	6°49.1	6°29.4	1.2 - 0.6	7.2 - 3.3	13.2 - 6.0
13	6°48.2	6°49.4	6°29.7	1.3 - 0.6	7.3 - 3.3	13.3 - 6.1
14	6°48.5	6°49.6	6°29.9	1.4 - 0.6	7.4 - 3.4	13.4 - 6.1
15	6°48.8	6°49.9	6°30.1	1.5 - 0.7	7.5 - 3.4	13.5 - 6.2
16	6°49.0	6°50.1	6°30.4	1.6 - 0.7	7.6 - 3.5	13.6 - 6.2
17	6°49.3	6°50.4	6°30.6	1.7 - 0.8	7.7 - 3.5	13.7 - 6.3
18	6°49.5	6°50.6	6°30.8	1.8 - 0.8	7.8 - 3.6	13.8 - 6.3
19	6°49.8	6°50.9	6°31.1	1.9 - 0.9	7.9 - 3.6	13.9 - 6.4
20	6°50.0	6°51.1	6°31.3	2.0 - 0.9	8.0 - 3.7	14.0 - 6.4
21	6°50.3	6°51.4	6°31.6	2.1 - 1.0	8.1 - 3.7	14.1 - 6.5
22	6°50.5	6°51.6	6°31.8	2.2 - 1.0	8.2 - 3.8	14.2 - 6.5
23	6°50.7	6°51.9	6°32.0	2.3 - 1.1	8.3 - 3.8	14.3 - 6.6
24	6°51.0	6°52.1	6°32.3	2.4 - 1.1	8.4 - 3.9	14.4 - 6.6
25	6°51.3	6°52.4	6°32.5	2.5 - 1.1	8.5 - 3.9	14.5 - 6.6
26	6°51.5	6°52.6	6°32.8	2.6 - 1.2	8.6 - 3.9	14.6 - 6.7
27	6°51.7	6°52.9	6°33.0	2.7 - 1.2	8.7 - 4.0	14.7 - 6.7
28	6°52.0	6°53.1	6°33.2	2.8 - 1.3	8.8 - 4.0	14.8 - 6.8
29	6°52.3	6°53.4	6°33.5	2.9 - 1.3	8.9 - 4.1	14.9 - 6.8
30	6°52.5	6°53.6	6°33.7	3.0 - 1.4	9.0 - 4.1	15.0 - 6.9
31	6°52.7	6°53.9	6°33.9	3.1 - 1.4	9.1 - 4.2	15.1 - 6.9
32	6°53.0	6°54.1	6°34.2	3.2 - 1.5	9.2 - 4.2	15.2 - 7.0
33	6°53.3	6°54.4	6°34.4	3.3 - 1.5	9.3 - 4.3	15.3 - 7.0
34	6°53.5	6°54.6	6°34.7	3.4 - 1.6	9.4 - 4.3	15.4 - 7.1
35	6°53.7	6°54.9	6°34.9	3.5 - 1.6	9.5 - 4.4	15.5 - 7.1
36	6°54.0	6°55.1	6°35.1	3.6 - 1.6	9.6 - 4.4	15.6 - 7.1
37	6°54.3	6°55.4	6°35.4	3.7 - 1.7	9.7 - 4.4	15.7 - 7.2
38	6°54.5	6°55.6	6°35.6	3.8 - 1.7	9.8 - 4.5	15.8 - 7.2
39	6°54.7	6°55.9	6°35.9	3.9 - 1.8	9.9 - 4.5	15.9 - 7.3
40	6°55.0	6°56.1	6°36.1	4.0 - 1.8	10.0 - 4.6	16.0 - 7.3
41	6°55.3	6°56.4	6°36.3	4.1 - 1.9	10.1 - 4.6	16.1 - 7.4
42	6°55.5	6°56.6	6°36.6	4.2 - 1.9	10.2 - 4.7	16.2 - 7.4
43	6°55.7	6°56.9	6°36.8	4.3 - 2.0	10.3 - 4.7	16.3 - 7.5
44	6°56.0	6°57.1	6°37.0	4.4 - 2.0	10.4 - 4.8	16.4 - 7.5
45	6°56.3	6°57.4	6°37.3	4.5 - 2.1	10.5 - 4.8	16.5 - 7.6
46	6°56.5	6°57.6	6°37.5	4.6 - 2.1	10.6 - 4.9	16.6 - 7.6
47	6°56.8	6°57.9	6°37.8	4.7 - 2.2	10.7 - 4.9	16.7 - 7.7
48	6°57.0	6°58.1	6°38.0	4.8 - 2.2	10.8 - 5.0	16.8 - 7.7
49	6°57.3	6°58.4	6°38.2	4.9 - 2.2	10.9 - 5.0	16.9 - 7.7
50	6°57.5	6°58.6	6°38.5	5.0 - 2.3	11.0 - 5.0	17.0 - 7.8
51	6°57.8	6°58.9	6°38.7	5.1 - 2.3	11.1 - 5.1	17.1 - 7.8
52	6°58.0	6°59.1	6°39.0	5.2 - 2.4	11.2 - 5.1	17.2 - 7.9
53	6°58.2	6°59.4	6°39.2	5.3 - 2.4	11.3 - 5.2	17.3 - 7.9
54	6°58.5	6°59.6	6°39.4	5.4 - 2.5	11.4 - 5.2	17.4 - 8.0
55	6°58.8	6°59.9	6°39.7	5.5 - 2.5	11.5 - 5.3	17.5 - 8.0
56	6°59.0	7°00.1	6°39.9	5.6 - 2.6	11.6 - 5.3	17.6 - 8.1
57	6°59.2	7°00.4	6°40.2	5.7 - 2.6	11.7 - 5.4	17.7 - 8.1
58	6°59.5	7°00.6	6°40.4	5.8 - 2.7	11.8 - 5.4	17.8 - 8.2
59	6°59.8	7°00.9	6°40.6	5.9 - 2.7	11.9 - 5.5	17.9 - 8.2

m 28	Sun Plan.	Aries	Moon	v and d corr		
0	7°00.0	7°01.1	6°40.9	0.0 - 0.0	6.0 - 2.8	12.0 - 5.7
1	7°00.2	7°01.4	6°41.1	0.1 - 0.0	6.1 - 2.9	12.1 - 5.7
2	7°00.5	7°01.6	6°41.3	0.2 - 0.1	6.2 - 2.9	12.2 - 5.8
3	7°00.8	7°01.9	6°41.6	0.3 - 0.1	6.3 - 3.0	12.3 - 5.8
4	7°01.0	7°02.2	6°41.8	0.4 - 0.2	6.4 - 3.0	12.4 - 5.9
5	7°01.2	7°02.4	6°42.1	0.5 - 0.2	6.5 - 3.1	12.5 - 5.9
6	7°01.5	7°02.7	6°42.3	0.6 - 0.3	6.6 - 3.1	12.6 - 6.0
7	7°01.8	7°02.9	6°42.5	0.7 - 0.3	6.7 - 3.2	12.7 - 6.0
8	7°02.0	7°03.2	6°42.8	0.8 - 0.4	6.8 - 3.2	12.8 - 6.1
9	7°02.2	7°03.4	6°43.0	0.9 - 0.4	6.9 - 3.3	12.9 - 6.1
10	7°02.5	7°03.7	6°43.3	1.0 - 0.5	7.0 - 3.3	13.0 - 6.2
11	7°02.8	7°03.9	6°43.5	1.1 - 0.5	7.1 - 3.4	13.1 - 6.2
12	7°03.0	7°04.2	6°43.7	1.2 - 0.6	7.2 - 3.4	13.2 - 6.3
13	7°03.2	7°04.4	6°44.0	1.3 - 0.6	7.3 - 3.5	13.3 - 6.3
14	7°03.5	7°04.7	6°44.2	1.4 - 0.7	7.4 - 3.5	13.4 - 6.4
15	7°03.8	7°04.9	6°44.4	1.5 - 0.7	7.5 - 3.6	13.5 - 6.4
16	7°04.0	7°05.2	6°44.7	1.6 - 0.8	7.6 - 3.6	13.6 - 6.5
17	7°04.3	7°05.4	6°44.9	1.7 - 0.8	7.7 - 3.7	13.7 - 6.5
18	7°04.5	7°05.7	6°45.2	1.8 - 0.9	7.8 - 3.7	13.8 - 6.6
19	7°04.7	7°05.9	6°45.4	1.9 - 0.9	7.9 - 3.8	13.9 - 6.6
20	7°05.0	7°06.2	6°45.6	2.0 - 0.9	8.0 - 3.8	14.0 - 6.6
21	7°05.3	7°06.4	6°45.9	2.1 - 1.0	8.1 - 3.8	14.1 - 6.7
22	7°05.5	7°06.7	6°46.1	2.2 - 1.0	8.2 - 3.9	14.2 - 6.7
23	7°05.7	7°06.9	6°46.4	2.3 - 1.1	8.3 - 3.9	14.3 - 6.8
24	7°06.0	7°07.2	6°46.6	2.4 - 1.1	8.4 - 4.0	14.4 - 6.8
25	7°06.3	7°07.4	6°46.8	2.5 - 1.2	8.5 - 4.0	14.5 - 6.9
26	7°06.5	7°07.7	6°47.1	2.6 - 1.2	8.6 - 4.1	14.6 - 6.9
27	7°06.7	7°07.9	6°47.3	2.7 - 1.3	8.7 - 4.1	14.7 - 7.0
28	7°07.0	7°08.2	6°47.5	2.8 - 1.3	8.8 - 4.2	14.8 - 7.0
29	7°07.3	7°08.4	6°47.8	2.9 - 1.4	8.9 - 4.2	14.9 - 7.1
30	7°07.5	7°08.7	6°48.0	3.0 - 1.4	9.0 - 4.3	15.0 - 7.1
31	7°07.7	7°08.9	6°48.3	3.1 - 1.5	9.1 - 4.3	15.1 - 7.2
32	7°08.0	7°09.2	6°48.5	3.2 - 1.5	9.2 - 4.4	15.2 - 7.2
33	7°08.3	7°09.4	6°48.7	3.3 - 1.6	9.3 - 4.4	15.3 - 7.3
34	7°08.5	7°09.7	6°49.0	3.4 - 1.6	9.4 - 4.5	15.4 - 7.3
35	7°08.7	7°09.9	6°49.2	3.5 - 1.7	9.5 - 4.5	15.5 - 7.4
36	7°09.0	7°10.2	6°49.5	3.6 - 1.7	9.6 - 4.6	15.6 - 7.4
37	7°09.3	7°10.4	6°49.7	3.7 - 1.8	9.7 - 4.6	15.7 - 7.5
38	7°09.5	7°10.7	6°49.9	3.8 - 1.8	9.8 - 4.7	15.8 - 7.5
39	7°09.7	7°10.9	6°50.2	3.9 - 1.9	9.9 - 4.7	15.9 - 7.6
40	7°10.0	7°11.2	6°50.4	4.0 - 1.9	10.0 - 4.8	16.0 - 7.6
41	7°10.3	7°11.4	6°50.6	4.1 - 1.9	10.1 - 4.8	16.1 - 7.6
42	7°10.5	7°11.7	6°50.9	4.2 - 2.0	10.2 - 4.8	16.2 - 7.7
43	7°10.7	7°11.9	6°51.1	4.3 - 2.0	10.3 - 4.9	16.3 - 7.7
44	7°11.0	7°12.2	6°51.4	4.4 - 2.1	10.4 - 4.9	16.4 - 7.8
45	7°11.3	7°12.4	6°51.6	4.5 - 2.1	10.5 - 5.0	16.5 - 7.8
46	7°11.5	7°12.7	6°51.8	4.6 - 2.2	10.6 - 5.0	16.6 - 7.9
47	7°11.8	7°12.9	6°52.1	4.7 - 2.2	10.7 - 5.1	16.7 - 7.9
48	7°12.0	7°13.2	6°52.3	4.8 - 2.3	10.8 - 5.1	16.8 - 8.0
49	7°12.2	7°13.4	6°52.6	4.9 - 2.3	10.9 - 5.2	16.9 - 8.0
50	7°12.5	7°13.7	6°52.8	5.0 - 2.4	11.0 - 5.2	17.0 - 8.1
51	7°12.8	7°13.9	6°53.0	5.1 - 2.4	11.1 - 5.3	17.1 - 8.1
52	7°13.0	7°14.2	6°53.3	5.2 - 2.5	11.2 - 5.3	17.2 - 8.2
53	7°13.2	7°14.4	6°53.5	5.3 - 2.5	11.3 - 5.4	17.3 - 8.2
54	7°13.5	7°14.7	6°53.8	5.4 - 2.6	11.4 - 5.4	17.4 - 8.3
55	7°13.8	7°14.9	6°54.0	5.5 - 2.6	11.5 - 5.5	17.5 - 8.3
56	7°14.0	7°15.2	6°54.2	5.6 - 2.7	11.6 - 5.5	17.6 - 8.4
57	7°14.2	7°15.4	6°54.5	5.7 - 2.7	11.7 - 5.6	17.7 - 8.4
58	7°14.5	7°15.7	6°54.7	5.8 - 2.8	11.8 - 5.6	17.8 - 8.5
59	7°14.8	7°15.9	6°54.9	5.9 - 2.8	11.9 - 5.7	17.9 - 8.5

m 29	Sun Plan.	Aries	Moon	v and d corr		
0	7°15.0	7°16.2	6°55.2	0.0 - 0.0	6.0 - 2.9	12.0 - 5.9
1	7°15.2	7°16.4	6°55.4	0.1 - 0.0	6.1 - 3.0	12.1 - 5.9
2	7°15.5	7°16.7	6°55.7	0.2 - 0.1	6.2 - 3.0	12.2 - 6.0
3	7°15.8	7°16.9	6°55.9	0.3 - 0.1	6.3 - 3.1	12.3 - 6.0
4	7°16.0	7°17.2	6°56.1	0.4 - 0.2	6.4 - 3.1	12.4 - 6.1
5	7°16.2	7°17.4	6°56.4	0.5 - 0.2	6.5 - 3.2	12.5 - 6.1
6	7°16.5	7°17.7	6°56.6	0.6 - 0.3	6.6 - 3.2	12.6 - 6.2
7	7°16.8	7°17.9	6°56.9	0.7 - 0.3	6.7 - 3.3	12.7 - 6.2
8	7°17.0	7°18.2	6°57.1	0.8 - 0.4	6.8 - 3.3	12.8 - 6.3
9	7°17.2	7°18.4	6°57.3	0.9 - 0.4	6.9 - 3.4	12.9 - 6.3
10	7°17.5	7°18.7	6°57.6	1.0 - 0.5	7.0 - 3.4	13.0 - 6.4
11	7°17.8	7°18.9	6°57.8	1.1 - 0.5	7.1 - 3.5	13.1 - 6.4
12	7°18.0	7°19.2	6°58.0	1.2 - 0.6	7.2 - 3.5	13.2 - 6.5
13	7°18.2	7°19.4	6°58.3	1.3 - 0.6	7.3 - 3.6	13.3 - 6.5
14	7°18.5	7°19.7	6°58.5	1.4 - 0.7	7.4 - 3.6	13.4 - 6.6
15	7°18.8	7°19.9	6°58.8	1.5 - 0.7	7.5 - 3.7	13.5 - 6.6
16	7°19.0	7°20.2	6°59.0	1.6 - 0.8	7.6 - 3.7	13.6 - 6.7
17	7°19.3	7°20.5	6°59.2	1.7 - 0.8	7.7 - 3.8	13.7 - 6.7
18	7°19.5	7°20.7	6°59.5	1.8 - 0.9	7.8 - 3.8	13.8 - 6.8
19	7°19.7	7°21.0	6°59.7	1.9 - 0.9	7.9 - 3.9	13.9 - 6.8
20	7°20.0	7°21.2	7°00.0	2.0 - 1.0	8.0 - 3.9	14.0 - 6.9
21	7°20.3	7°21.5	7°00.2	2.1 - 1.0	8.1 - 4.0	14.1 - 6.9
22	7°20.5	7°21.7	7°00.4	2.2 - 1.1	8.2 - 4.0	14.2 - 7.0
23	7°20.7	7°22.0	7°00.7	2.3 - 1.1	8.3 - 4.1	14.3 - 7.0
24	7°21.0	7°22.2	7°00.9	2.4 - 1.2	8.4 - 4.1	14.4 - 7.1
25	7°21.3	7°22.5	7°01.1	2.5 - 1.2	8.5 - 4.2	14.5 - 7.1
26	7°21.5	7°22.7	7°01.4	2.6 - 1.3	8.6 - 4.2	14.6 - 7.2
27	7°21.7	7°23.0	7°01.6	2.7 - 1.3	8.7 - 4.3	14.7 - 7.2
28	7°22.0	7°23.2	7°01.9	2.8 - 1.4	8.8 - 4.3	14.8 - 7.3
29	7°22.3	7°23.5	7°02.1	2.9 - 1.4	8.9 - 4.4	14.9 - 7.3
30	7°22.5	7°23.7	7°02.3	3.0 - 1.5	9.0 - 4.4	15.0 - 7.4
31	7°22.7	7°24.0	7°02.6	3.1 - 1.5	9.1 - 4.5	15.1 - 7.4
32	7°23.0	7°24.2	7°02.8	3.2 - 1.6	9.2 - 4.5	15.2 - 7.5
33	7°23.3	7°24.5	7°03.1	3.3 - 1.6	9.3 - 4.6	15.3 - 7.5
34	7°23.5	7°24.7	7°03.3	3.4 - 1.7	9.4 - 4.6	15.4 - 7.6
35	7°23.7	7°25.0	7°03.5	3.5 - 1.7	9.5 - 4.7	15.5 - 7.6
36	7°24.0	7°25.2	7°03.8	3.6 - 1.8	9.6 - 4.7	15.6 - 7.7
37	7°24.3	7°25.5	7°04.0	3.7 - 1.8	9.7 - 4.8	15.7 - 7.7
38	7°24.5	7°25.7	7°04.3	3.8 - 1.9	9.8 - 4.8	15.8 - 7.8
39	7°24.7	7°26.0	7°04.5	3.9 - 1.9	9.9 - 4.9	15.9 - 7.8
40	7°25.0	7°26.2	7°04.7	4.0 - 2.0	10.0 - 4.9	16.0 - 7.9
41	7°25.3	7°26.5	7°05.0	4.1 - 2.0	10.1 - 5.0	16.1 - 7.9
42	7°25.5	7°26.7	7°05.2	4.2 - 2.1	10.2 - 5.0	16.2 - 8.0
43	7°25.7	7°27.0	7°05.4	4.3 - 2.1	10.3 - 5.1	16.3 - 8.0
44	7°26.0	7°27.2	7°05.7	4.4 - 2.2	10.4 - 5.1	16.4 - 8.1
45	7°26.3	7°27.5	7°05.9	4.5 - 2.2	10.5 - 5.2	16.5 - 8.1
46	7°26.5	7°27.7	7°06.2	4.6 - 2.3	10.6 - 5.2	16.6 - 8.2
47	7°26.8	7°28.0	7°06.4	4.7 - 2.3	10.7 - 5.3	16.7 - 8.2
48	7°27.0	7°28.2	7°06.6	4.8 - 2.4	10.8 - 5.3	16.8 - 8.3
49	7°27.2	7°28.5	7°06.9	4.9 - 2.4	10.9 - 5.4	16.9 - 8.3
50	7°27.5	7°28.7	7°07.1	5.0 - 2.5	11.0 - 5.4	17.0 - 8.4
51	7°27.8	7°29.0	7°07.4	5.1 - 2.5	11.1 - 5.5	17.1 - 8.4
52	7°28.0	7°29.2	7°07.6	5.2 - 2.6	11.2 - 5.5	17.2 - 8.5
53	7°28.2	7°29.5	7°07.8	5.3 - 2.6	11.3 - 5.6	17.3 - 8.5
54	7°28.5	7°29.7	7°08.1	5.4 - 2.7	11.4 - 5.6	17.4 - 8.6
55	7°28.8	7°30.0	7°08.3	5.5 - 2.7	11.5 - 5.7	17.5 - 8.6
56	7°29.0	7°30.2	7°08.5	5.6 - 2.8	11.6 - 5.7	17.6 - 8.7
57	7°29.2	7°30.5	7°08.8	5.7 - 2.8	11.7 - 5.8	17.7 - 8.7
58	7°29.5	7°30.7	7°09.0	5.8 - 2.9	11.8 - 5.8	17.8 - 8.8
59	7°29.8	7°31.0	7°09.3	5.9 - 2.9	11.9 - 5.9	17.9 - 8.8

Increments and Corrections

m 30	Sun Plan.	Aries	Moon	v and d corr		
0	7°30.0	7°31.2	7°09.5	0.0 - 0.0	6.0 - 3.0	12.0 - 6.1
1	7°30.2	7°31.5	7°09.7	0.1 - 0.1	6.1 - 3.1	12.1 - 6.2
2	7°30.5	7°31.7	7°10.0	0.2 - 0.1	6.2 - 3.2	12.2 - 6.2
3	7°30.8	7°32.0	7°10.2	0.3 - 0.2	6.3 - 3.2	12.3 - 6.3
4	7°31.0	7°32.2	7°10.5	0.4 - 0.2	6.4 - 3.3	12.4 - 6.3
5	7°31.2	7°32.5	7°10.7	0.5 - 0.3	6.5 - 3.3	12.5 - 6.4
6	7°31.5	7°32.7	7°10.9	0.6 - 0.3	6.6 - 3.4	12.6 - 6.4
7	7°31.7	7°33.0	7°11.2	0.7 - 0.4	6.7 - 3.4	12.7 - 6.5
8	7°32.0	7°33.2	7°11.4	0.8 - 0.4	6.8 - 3.5	12.8 - 6.5
9	7°32.2	7°33.5	7°11.6	0.9 - 0.5	6.9 - 3.5	12.9 - 6.6
10	7°32.5	7°33.7	7°11.9	1.0 - 0.5	7.0 - 3.6	13.0 - 6.6
11	7°32.8	7°34.0	7°12.1	1.1 - 0.6	7.1 - 3.6	13.1 - 6.7
12	7°33.0	7°34.2	7°12.4	1.2 - 0.6	7.2 - 3.7	13.2 - 6.7
13	7°33.3	7°34.5	7°12.6	1.3 - 0.7	7.3 - 3.7	13.3 - 6.8
14	7°33.5	7°34.7	7°12.8	1.4 - 0.7	7.4 - 3.8	13.4 - 6.8
15	7°33.8	7°35.0	7°13.1	1.5 - 0.8	7.5 - 3.8	13.5 - 6.9
16	7°34.0	7°35.2	7°13.3	1.6 - 0.8	7.6 - 3.9	13.6 - 6.9
17	7°34.3	7°35.5	7°13.6	1.7 - 0.9	7.7 - 3.9	13.7 - 7.0
18	7°34.5	7°35.7	7°13.8	1.8 - 0.9	7.8 - 4.0	13.8 - 7.0
19	7°34.8	7°36.0	7°14.0	1.9 - 1.0	7.9 - 4.0	13.9 - 7.1
20	7°35.0	7°36.2	7°14.3	2.0 - 1.0	8.0 - 4.1	14.0 - 7.1
21	7°35.3	7°36.5	7°14.5	2.1 - 1.1	8.1 - 4.1	14.1 - 7.2
22	7°35.5	7°36.7	7°14.7	2.2 - 1.1	8.2 - 4.2	14.2 - 7.2
23	7°35.7	7°37.0	7°15.0	2.3 - 1.2	8.3 - 4.2	14.3 - 7.3
24	7°36.0	7°37.2	7°15.2	2.4 - 1.2	8.4 - 4.3	14.4 - 7.3
25	7°36.2	7°37.5	7°15.5	2.5 - 1.3	8.5 - 4.3	14.5 - 7.4
26	7°36.5	7°37.7	7°15.7	2.6 - 1.3	8.6 - 4.4	14.6 - 7.4
27	7°36.7	7°38.0	7°15.9	2.7 - 1.4	8.7 - 4.4	14.7 - 7.5
28	7°37.0	7°38.2	7°16.2	2.8 - 1.4	8.8 - 4.5	14.8 - 7.5
29	7°37.3	7°38.5	7°16.4	2.9 - 1.5	8.9 - 4.5	14.9 - 7.6
30	7°37.5	7°38.8	7°16.7	3.0 - 1.5	9.0 - 4.6	15.0 - 7.6
31	7°37.7	7°39.0	7°16.9	3.1 - 1.6	9.1 - 4.6	15.1 - 7.7
32	7°38.0	7°39.3	7°17.1	3.2 - 1.6	9.2 - 4.7	15.2 - 7.7
33	7°38.3	7°39.5	7°17.4	3.3 - 1.7	9.3 - 4.7	15.3 - 7.8
34	7°38.5	7°39.8	7°17.6	3.4 - 1.7	9.4 - 4.8	15.4 - 7.8
35	7°38.7	7°40.0	7°17.9	3.5 - 1.8	9.5 - 4.8	15.5 - 7.9
36	7°39.0	7°40.3	7°18.1	3.6 - 1.8	9.6 - 4.9	15.6 - 7.9
37	7°39.3	7°40.5	7°18.3	3.7 - 1.9	9.7 - 4.9	15.7 - 8.0
38	7°39.5	7°40.8	7°18.6	3.8 - 1.9	9.8 - 5.0	15.8 - 8.0
39	7°39.8	7°41.0	7°18.8	3.9 - 2.0	9.9 - 5.0	15.9 - 8.1
40	7°40.0	7°41.3	7°19.0	4.0 - 2.0	10.0 - 5.1	16.0 - 8.1
41	7°40.3	7°41.5	7°19.3	4.1 - 2.1	10.1 - 5.1	16.1 - 8.2
42	7°40.5	7°41.8	7°19.5	4.2 - 2.1	10.2 - 5.2	16.2 - 8.2
43	7°40.7	7°42.0	7°19.8	4.3 - 2.2	10.3 - 5.2	16.3 - 8.3
44	7°41.0	7°42.3	7°20.0	4.4 - 2.2	10.4 - 5.3	16.4 - 8.3
45	7°41.2	7°42.5	7°20.2	4.5 - 2.3	10.5 - 5.3	16.5 - 8.4
46	7°41.5	7°42.8	7°20.5	4.6 - 2.3	10.6 - 5.4	16.6 - 8.4
47	7°41.8	7°43.0	7°20.7	4.7 - 2.4	10.7 - 5.4	16.7 - 8.5
48	7°42.0	7°43.3	7°21.0	4.8 - 2.4	10.8 - 5.5	16.8 - 8.5
49	7°42.3	7°43.5	7°21.2	4.9 - 2.5	10.9 - 5.5	16.9 - 8.6
50	7°42.5	7°43.8	7°21.4	5.0 - 2.5	11.0 - 5.6	17.0 - 8.6
51	7°42.8	7°44.0	7°21.7	5.1 - 2.6	11.1 - 5.6	17.1 - 8.7
52	7°43.0	7°44.3	7°21.9	5.2 - 2.6	11.2 - 5.7	17.2 - 8.7
53	7°43.2	7°44.5	7°22.1	5.3 - 2.7	11.3 - 5.7	17.3 - 8.8
54	7°43.5	7°44.8	7°22.4	5.4 - 2.7	11.4 - 5.8	17.4 - 8.8
55	7°43.8	7°45.0	7°22.6	5.5 - 2.8	11.5 - 5.8	17.5 - 8.9
56	7°44.0	7°45.3	7°22.9	5.6 - 2.8	11.6 - 5.9	17.6 - 8.9
57	7°44.3	7°45.5	7°23.1	5.7 - 2.9	11.7 - 5.9	17.7 - 9.0
58	7°44.5	7°45.8	7°23.3	5.8 - 2.9	11.8 - 6.0	17.8 - 9.0
59	7°44.8	7°46.0	7°23.6	5.9 - 3.0	11.9 - 6.0	17.9 - 9.1

m 31	Sun Plan.	Aries	Moon	v and d corr		
0	7°45.0	7°46.3	7°23.8	0.0 - 0.0	6.0 - 3.2	12.0 - 6.3
1	7°45.2	7°46.5	7°24.1	0.1 - 0.1	6.1 - 3.2	12.1 - 6.4
2	7°45.5	7°46.8	7°24.3	0.2 - 0.1	6.2 - 3.3	12.2 - 6.4
3	7°45.7	7°47.0	7°24.5	0.3 - 0.2	6.3 - 3.3	12.3 - 6.5
4	7°46.0	7°47.3	7°24.8	0.4 - 0.2	6.4 - 3.4	12.4 - 6.5
5	7°46.2	7°47.5	7°25.0	0.5 - 0.3	6.5 - 3.4	12.5 - 6.6
6	7°46.5	7°47.8	7°25.2	0.6 - 0.3	6.6 - 3.5	12.6 - 6.6
7	7°46.8	7°48.0	7°25.5	0.7 - 0.4	6.7 - 3.5	12.7 - 6.7
8	7°47.0	7°48.3	7°25.7	0.8 - 0.4	6.8 - 3.6	12.8 - 6.7
9	7°47.2	7°48.5	7°26.0	0.9 - 0.5	6.9 - 3.6	12.9 - 6.8
10	7°47.5	7°48.8	7°26.2	1.0 - 0.5	7.0 - 3.7	13.0 - 6.8
11	7°47.7	7°49.0	7°26.4	1.1 - 0.6	7.1 - 3.7	13.1 - 6.9
12	7°48.0	7°49.3	7°26.7	1.2 - 0.6	7.2 - 3.8	13.2 - 6.9
13	7°48.2	7°49.5	7°26.9	1.3 - 0.7	7.3 - 3.8	13.3 - 7.0
14	7°48.5	7°49.8	7°27.2	1.4 - 0.7	7.4 - 3.9	13.4 - 7.0
15	7°48.8	7°50.0	7°27.4	1.5 - 0.8	7.5 - 3.9	13.5 - 7.1
16	7°49.0	7°50.3	7°27.6	1.6 - 0.8	7.6 - 4.0	13.6 - 7.1
17	7°49.3	7°50.5	7°27.9	1.7 - 0.9	7.7 - 4.0	13.7 - 7.2
18	7°49.5	7°50.8	7°28.1	1.8 - 0.9	7.8 - 4.1	13.8 - 7.2
19	7°49.8	7°51.0	7°28.4	1.9 - 1.0	7.9 - 4.1	13.9 - 7.3
20	7°50.0	7°51.3	7°28.6	2.0 - 1.1	8.0 - 4.2	14.0 - 7.4
21	7°50.3	7°51.5	7°28.8	2.1 - 1.1	8.1 - 4.3	14.1 - 7.4
22	7°50.5	7°51.8	7°29.1	2.2 - 1.2	8.2 - 4.3	14.2 - 7.5
23	7°50.7	7°52.0	7°29.3	2.3 - 1.2	8.3 - 4.4	14.3 - 7.5
24	7°51.0	7°52.3	7°29.5	2.4 - 1.3	8.4 - 4.4	14.4 - 7.6
25	7°51.3	7°52.5	7°29.8	2.5 - 1.3	8.5 - 4.5	14.5 - 7.6
26	7°51.5	7°52.8	7°30.0	2.6 - 1.4	8.6 - 4.5	14.6 - 7.7
27	7°51.7	7°53.0	7°30.3	2.7 - 1.4	8.7 - 4.6	14.7 - 7.7
28	7°52.0	7°53.3	7°30.5	2.8 - 1.5	8.8 - 4.6	14.8 - 7.8
29	7°52.2	7°53.5	7°30.7	2.9 - 1.5	8.9 - 4.7	14.9 - 7.8
30	7°52.5	7°53.8	7°31.0	3.0 - 1.6	9.0 - 4.7	15.0 - 7.9
31	7°52.7	7°54.0	7°31.2	3.1 - 1.6	9.1 - 4.8	15.1 - 7.9
32	7°53.0	7°54.3	7°31.5	3.2 - 1.7	9.2 - 4.8	15.2 - 8.0
33	7°53.3	7°54.5	7°31.7	3.3 - 1.7	9.3 - 4.9	15.3 - 8.0
34	7°53.5	7°54.8	7°31.9	3.4 - 1.8	9.4 - 4.9	15.4 - 8.1
35	7°53.8	7°55.0	7°32.2	3.5 - 1.8	9.5 - 5.0	15.5 - 8.1
36	7°54.0	7°55.3	7°32.4	3.6 - 1.9	9.6 - 5.0	15.6 - 8.2
37	7°54.3	7°55.5	7°32.6	3.7 - 1.9	9.7 - 5.1	15.7 - 8.2
38	7°54.5	7°55.8	7°32.9	3.8 - 2.0	9.8 - 5.1	15.8 - 8.3
39	7°54.7	7°56.0	7°33.1	3.9 - 2.0	9.9 - 5.2	15.9 - 8.3
40	7°55.0	7°56.3	7°33.4	4.0 - 2.1	10.0 - 5.3	16.0 - 8.4
41	7°55.3	7°56.5	7°33.6	4.1 - 2.2	10.1 - 5.3	16.1 - 8.5
42	7°55.5	7°56.8	7°33.8	4.2 - 2.2	10.2 - 5.4	16.2 - 8.5
43	7°55.7	7°57.1	7°34.1	4.3 - 2.3	10.3 - 5.4	16.3 - 8.6
44	7°56.0	7°57.3	7°34.3	4.4 - 2.3	10.4 - 5.5	16.4 - 8.6
45	7°56.3	7°57.6	7°34.6	4.5 - 2.4	10.5 - 5.5	16.5 - 8.7
46	7°56.5	7°57.8	7°34.8	4.6 - 2.4	10.6 - 5.6	16.6 - 8.7
47	7°56.7	7°58.1	7°35.0	4.7 - 2.5	10.7 - 5.6	16.7 - 8.8
48	7°57.0	7°58.3	7°35.3	4.8 - 2.5	10.8 - 5.7	16.8 - 8.8
49	7°57.2	7°58.6	7°35.5	4.9 - 2.6	10.9 - 5.7	16.9 - 8.9
50	7°57.5	7°58.8	7°35.7	5.0 - 2.6	11.0 - 5.8	17.0 - 8.9
51	7°57.8	7°59.1	7°36.0	5.1 - 2.7	11.1 - 5.8	17.1 - 9.0
52	7°58.0	7°59.3	7°36.2	5.2 - 2.7	11.2 - 5.9	17.2 - 9.0
53	7°58.2	7°59.6	7°36.5	5.3 - 2.8	11.3 - 5.9	17.3 - 9.1
54	7°58.5	7°59.8	7°36.7	5.4 - 2.8	11.4 - 6.0	17.4 - 9.1
55	7°58.8	8°00.1	7°36.9	5.5 - 2.9	11.5 - 6.0	17.5 - 9.2
56	7°59.0	8°00.3	7°37.2	5.6 - 2.9	11.6 - 6.1	17.6 - 9.2
57	7°59.2	8°00.6	7°37.4	5.7 - 3.0	11.7 - 6.1	17.7 - 9.3
58	7°59.5	8°00.8	7°37.7	5.8 - 3.0	11.8 - 6.2	17.8 - 9.3
59	7°59.8	8°01.1	7°37.9	5.9 - 3.1	11.9 - 6.2	17.9 - 9.4

m 32	Sun Plan.	Aries	Moon	v and d corr		
0	8°00.0	8°01.3	7°38.1	0.0 - 0.0	6.0 - 3.3	12.0 - 6.5
1	8°00.2	8°01.6	7°38.4	0.1 - 0.1	6.1 - 3.3	12.1 - 6.6
2	8°00.5	8°01.8	7°38.6	0.2 - 0.1	6.2 - 3.4	12.2 - 6.6
3	8°00.7	8°02.1	7°38.8	0.3 - 0.2	6.3 - 3.4	12.3 - 6.7
4	8°01.0	8°02.3	7°39.1	0.4 - 0.2	6.4 - 3.5	12.4 - 6.7
5	8°01.3	8°02.6	7°39.3	0.5 - 0.3	6.5 - 3.5	12.5 - 6.8
6	8°01.5	8°02.8	7°39.6	0.6 - 0.3	6.6 - 3.6	12.6 - 6.8
7	8°01.8	8°03.1	7°39.8	0.7 - 0.4	6.7 - 3.6	12.7 - 6.9
8	8°02.0	8°03.3	7°40.0	0.8 - 0.4	6.8 - 3.7	12.8 - 6.9
9	8°02.2	8°03.6	7°40.3	0.9 - 0.5	6.9 - 3.7	12.9 - 7.0
10	8°02.5	8°03.8	7°40.5	1.0 - 0.5	7.0 - 3.8	13.0 - 7.0
11	8°02.7	8°04.1	7°40.8	1.1 - 0.6	7.1 - 3.8	13.1 - 7.1
12	8°03.0	8°04.3	7°41.0	1.2 - 0.7	7.2 - 3.9	13.2 - 7.1
13	8°03.3	8°04.6	7°41.2	1.3 - 0.7	7.3 - 4.0	13.3 - 7.2
14	8°03.5	8°04.8	7°41.5	1.4 - 0.8	7.4 - 4.0	13.4 - 7.3
15	8°03.8	8°05.1	7°41.7	1.5 - 0.8	7.5 - 4.1	13.5 - 7.3
16	8°04.0	8°05.3	7°42.0	1.6 - 0.9	7.6 - 4.1	13.6 - 7.4
17	8°04.2	8°05.6	7°42.2	1.7 - 0.9	7.7 - 4.2	13.7 - 7.4
18	8°04.5	8°05.8	7°42.4	1.8 - 1.0	7.8 - 4.2	13.8 - 7.5
19	8°04.8	8°06.1	7°42.7	1.9 - 1.0	7.9 - 4.3	13.9 - 7.5
20	8°05.0	8°06.3	7°42.9	2.0 - 1.1	8.0 - 4.3	14.0 - 7.6
21	8°05.3	8°06.6	7°43.1	2.1 - 1.1	8.1 - 4.4	14.1 - 7.6
22	8°05.5	8°06.8	7°43.4	2.2 - 1.2	8.2 - 4.4	14.2 - 7.7
23	8°05.7	8°07.1	7°43.6	2.3 - 1.2	8.3 - 4.5	14.3 - 7.7
24	8°06.0	8°07.3	7°43.9	2.4 - 1.3	8.4 - 4.5	14.4 - 7.8
25	8°06.2	8°07.6	7°44.1	2.5 - 1.4	8.5 - 4.6	14.5 - 7.9
26	8°06.5	8°07.8	7°44.3	2.6 - 1.4	8.6 - 4.7	14.6 - 7.9
27	8°06.8	8°08.1	7°44.6	2.7 - 1.5	8.7 - 4.7	14.7 - 8.0
28	8°07.0	8°08.3	7°44.8	2.8 - 1.5	8.8 - 4.8	14.8 - 8.0
29	8°07.3	8°08.6	7°45.1	2.9 - 1.6	8.9 - 4.8	14.9 - 8.1
30	8°07.5	8°08.8	7°45.3	3.0 - 1.6	9.0 - 4.9	15.0 - 8.1
31	8°07.7	8°09.1	7°45.5	3.1 - 1.7	9.1 - 4.9	15.1 - 8.2
32	8°08.0	8°09.3	7°45.8	3.2 - 1.7	9.2 - 5.0	15.2 - 8.2
33	8°08.2	8°09.6	7°46.0	3.3 - 1.8	9.3 - 5.0	15.3 - 8.3
34	8°08.5	8°09.8	7°46.2	3.4 - 1.8	9.4 - 5.1	15.4 - 8.3
35	8°08.8	8°10.1	7°46.5	3.5 - 1.9	9.5 - 5.1	15.5 - 8.4
36	8°09.0	8°10.3	7°46.7	3.6 - 1.9	9.6 - 5.2	15.6 - 8.4
37	8°09.3	8°10.6	7°47.0	3.7 - 2.0	9.7 - 5.3	15.7 - 8.5
38	8°09.5	8°10.8	7°47.2	3.8 - 2.1	9.8 - 5.3	15.8 - 8.6
39	8°09.7	8°11.1	7°47.4	3.9 - 2.1	9.9 - 5.4	15.9 - 8.6
40	8°10.0	8°11.3	7°47.7	4.0 - 2.2	10.0 - 5.4	16.0 - 8.7
41	8°10.2	8°11.6	7°47.9	4.1 - 2.2	10.1 - 5.5	16.1 - 8.7
42	8°10.5	8°11.8	7°48.2	4.2 - 2.3	10.2 - 5.5	16.2 - 8.8
43	8°10.8	8°12.1	7°48.4	4.3 - 2.3	10.3 - 5.6	16.3 - 8.8
44	8°11.0	8°12.3	7°48.6	4.4 - 2.4	10.4 - 5.6	16.4 - 8.9
45	8°11.3	8°12.6	7°48.9	4.5 - 2.4	10.5 - 5.7	16.5 - 8.9
46	8°11.5	8°12.8	7°49.1	4.6 - 2.5	10.6 - 5.7	16.6 - 9.0
47	8°11.7	8°13.1	7°49.3	4.7 - 2.5	10.7 - 5.8	16.7 - 9.0
48	8°12.0	8°13.3	7°49.6	4.8 - 2.6	10.8 - 5.8	16.8 - 9.1
49	8°12.3	8°13.6	7°49.8	4.9 - 2.7	10.9 - 5.9	16.9 - 9.2
50	8°12.5	8°13.8	7°50.1	5.0 - 2.7	11.0 - 6.0	17.0 - 9.2
51	8°12.8	8°14.1	7°50.3	5.1 - 2.8	11.1 - 6.0	17.1 - 9.3
52	8°13.0	8°14.3	7°50.5	5.2 - 2.8	11.2 - 6.1	17.2 - 9.3
53	8°13.2	8°14.6	7°50.8	5.3 - 2.9	11.3 - 6.1	17.3 - 9.4
54	8°13.5	8°14.8	7°51.0	5.4 - 2.9	11.4 - 6.2	17.4 - 9.4
55	8°13.7	8°15.1	7°51.3	5.5 - 3.0	11.5 - 6.2	17.5 - 9.5
56	8°14.0	8°15.4	7°51.5	5.6 - 3.0	11.6 - 6.3	17.6 - 9.5
57	8°14.3	8°15.6	7°51.7	5.7 - 3.1	11.7 - 6.3	17.7 - 9.6
58	8°14.5	8°15.9	7°52.0	5.8 - 3.1	11.8 - 6.4	17.8 - 9.6
59	8°14.8	8°16.1	7°52.2	5.9 - 3.2	11.9 - 6.4	17.9 - 9.7

Increments and Corrections

m 33	Sun Plan.	Aries	Moon	v and d corr		
0	8°15.0	8°16.4	7°52.5	0.0 - 0.0	6.0 - 3.4	12.0 - 6.7
1	8°15.2	8°16.6	7°52.7	0.1 - 0.1	6.1 - 3.4	12.1 - 6.8
2	8°15.5	8°16.9	7°52.9	0.2 - 0.1	6.2 - 3.5	12.2 - 6.8
3	8°15.7	8°17.1	7°53.2	0.3 - 0.2	6.3 - 3.5	12.3 - 6.9
4	8°16.0	8°17.4	7°53.4	0.4 - 0.2	6.4 - 3.6	12.4 - 6.9
5	8°16.3	8°17.6	7°53.6	0.5 - 0.3	6.5 - 3.6	12.5 - 7.0
6	8°16.5	8°17.9	7°53.9	0.6 - 0.3	6.6 - 3.7	12.6 - 7.0
7	8°16.8	8°18.1	7°54.1	0.7 - 0.4	6.7 - 3.7	12.7 - 7.1
8	8°17.0	8°18.4	7°54.4	0.8 - 0.4	6.8 - 3.8	12.8 - 7.1
9	8°17.2	8°18.6	7°54.6	0.9 - 0.5	6.9 - 3.9	12.9 - 7.2
10	8°17.5	8°18.9	7°54.8	1.0 - 0.6	7.0 - 3.9	13.0 - 7.3
11	8°17.7	8°19.1	7°55.1	1.1 - 0.6	7.1 - 4.0	13.1 - 7.3
12	8°18.0	8°19.4	7°55.3	1.2 - 0.7	7.2 - 4.0	13.2 - 7.4
13	8°18.3	8°19.6	7°55.6	1.3 - 0.7	7.3 - 4.1	13.3 - 7.4
14	8°18.5	8°19.9	7°55.8	1.4 - 0.8	7.4 - 4.1	13.4 - 7.5
15	8°18.8	8°20.1	7°56.0	1.5 - 0.8	7.5 - 4.2	13.5 - 7.5
16	8°19.0	8°20.4	7°56.3	1.6 - 0.9	7.6 - 4.2	13.6 - 7.6
17	8°19.2	8°20.6	7°56.5	1.7 - 0.9	7.7 - 4.3	13.7 - 7.6
18	8°19.5	8°20.9	7°56.7	1.8 - 1.0	7.8 - 4.4	13.8 - 7.7
19	8°19.8	8°21.1	7°57.0	1.9 - 1.1	7.9 - 4.4	13.9 - 7.8
20	8°20.0	8°21.4	7°57.2	2.0 - 1.1	8.0 - 4.5	14.0 - 7.8
21	8°20.3	8°21.6	7°57.5	2.1 - 1.2	8.1 - 4.5	14.1 - 7.9
22	8°20.5	8°21.9	7°57.7	2.2 - 1.2	8.2 - 4.6	14.2 - 7.9
23	8°20.7	8°22.1	7°57.9	2.3 - 1.3	8.3 - 4.6	14.3 - 8.0
24	8°21.0	8°22.4	7°58.2	2.4 - 1.3	8.4 - 4.7	14.4 - 8.0
25	8°21.2	8°22.6	7°58.4	2.5 - 1.4	8.5 - 4.7	14.5 - 8.1
26	8°21.5	8°22.9	7°58.7	2.6 - 1.5	8.6 - 4.8	14.6 - 8.2
27	8°21.8	8°23.1	7°58.9	2.7 - 1.5	8.7 - 4.9	14.7 - 8.2
28	8°22.0	8°23.4	7°59.1	2.8 - 1.6	8.8 - 4.9	14.8 - 8.3
29	8°22.3	8°23.6	7°59.4	2.9 - 1.6	8.9 - 5.0	14.9 - 8.3
30	8°22.5	8°23.9	7°59.6	3.0 - 1.7	9.0 - 5.0	15.0 - 8.4
31	8°22.7	8°24.1	7°59.8	3.1 - 1.7	9.1 - 5.1	15.1 - 8.4
32	8°23.0	8°24.4	8°00.1	3.2 - 1.8	9.2 - 5.1	15.2 - 8.5
33	8°23.2	8°24.6	8°00.3	3.3 - 1.8	9.3 - 5.2	15.3 - 8.5
34	8°23.5	8°24.9	8°00.6	3.4 - 1.9	9.4 - 5.2	15.4 - 8.6
35	8°23.8	8°25.1	8°00.8	3.5 - 2.0	9.5 - 5.3	15.5 - 8.7
36	8°24.0	8°25.4	8°01.0	3.6 - 2.0	9.6 - 5.4	15.6 - 8.7
37	8°24.3	8°25.6	8°01.3	3.7 - 2.1	9.7 - 5.4	15.7 - 8.8
38	8°24.5	8°25.9	8°01.5	3.8 - 2.1	9.8 - 5.5	15.8 - 8.8
39	8°24.7	8°26.1	8°01.8	3.9 - 2.2	9.9 - 5.5	15.9 - 8.9
40	8°25.0	8°26.4	8°02.0	4.0 - 2.2	10.0 - 5.6	16.0 - 8.9
41	8°25.2	8°26.6	8°02.2	4.1 - 2.3	10.1 - 5.6	16.1 - 9.0
42	8°25.5	8°26.9	8°02.5	4.2 - 2.3	10.2 - 5.7	16.2 - 9.0
43	8°25.8	8°27.1	8°02.7	4.3 - 2.4	10.3 - 5.8	16.3 - 9.1
44	8°26.0	8°27.4	8°02.9	4.4 - 2.5	10.4 - 5.8	16.4 - 9.2
45	8°26.3	8°27.6	8°03.2	4.5 - 2.5	10.5 - 5.9	16.5 - 9.2
46	8°26.5	8°27.9	8°03.4	4.6 - 2.6	10.6 - 5.9	16.6 - 9.3
47	8°26.7	8°28.1	8°03.7	4.7 - 2.6	10.7 - 6.0	16.7 - 9.3
48	8°27.0	8°28.4	8°03.9	4.8 - 2.7	10.8 - 6.0	16.8 - 9.4
49	8°27.3	8°28.6	8°04.1	4.9 - 2.7	10.9 - 6.1	16.9 - 9.4
50	8°27.5	8°28.9	8°04.4	5.0 - 2.8	11.0 - 6.1	17.0 - 9.5
51	8°27.8	8°29.1	8°04.6	5.1 - 2.8	11.1 - 6.2	17.1 - 9.5
52	8°28.0	8°29.4	8°04.9	5.2 - 2.9	11.2 - 6.3	17.2 - 9.6
53	8°28.2	8°29.6	8°05.1	5.3 - 3.0	11.3 - 6.3	17.3 - 9.7
54	8°28.5	8°29.9	8°05.3	5.4 - 3.0	11.4 - 6.4	17.4 - 9.7
55	8°28.7	8°30.1	8°05.6	5.5 - 3.1	11.5 - 6.4	17.5 - 9.8
56	8°29.0	8°30.4	8°05.8	5.6 - 3.1	11.6 - 6.5	17.6 - 9.8
57	8°29.3	8°30.6	8°06.1	5.7 - 3.2	11.7 - 6.5	17.7 - 9.9
58	8°29.5	8°30.9	8°06.3	5.8 - 3.2	11.8 - 6.6	17.8 - 9.9
59	8°29.8	8°31.1	8°06.5	5.9 - 3.3	11.9 - 6.6	17.9 - 10.0

m 34	Sun Plan.	Aries	Moon	v and d corr		
0	8°30.0	8°31.4	8°06.8	0.0 - 0.0	6.0 - 3.4	12.0 - 6.9
1	8°30.2	8°31.6	8°07.0	0.1 - 0.1	6.1 - 3.5	12.1 - 7.0
2	8°30.5	8°31.9	8°07.2	0.2 - 0.1	6.2 - 3.6	12.2 - 7.0
3	8°30.7	8°32.1	8°07.5	0.3 - 0.2	6.3 - 3.6	12.3 - 7.1
4	8°31.0	8°32.4	8°07.7	0.4 - 0.2	6.4 - 3.7	12.4 - 7.1
5	8°31.3	8°32.6	8°08.0	0.5 - 0.3	6.5 - 3.7	12.5 - 7.2
6	8°31.5	8°32.9	8°08.2	0.6 - 0.3	6.6 - 3.8	12.6 - 7.2
7	8°31.8	8°33.1	8°08.4	0.7 - 0.4	6.7 - 3.9	12.7 - 7.3
8	8°32.0	8°33.4	8°08.7	0.8 - 0.5	6.8 - 3.9	12.8 - 7.4
9	8°32.2	8°33.7	8°08.9	0.9 - 0.5	6.9 - 4.0	12.9 - 7.4
10	8°32.5	8°33.9	8°09.2	1.0 - 0.6	7.0 - 4.0	13.0 - 7.5
11	8°32.7	8°34.2	8°09.4	1.1 - 0.6	7.1 - 4.1	13.1 - 7.5
12	8°33.0	8°34.4	8°09.6	1.2 - 0.7	7.2 - 4.1	13.2 - 7.6
13	8°33.3	8°34.7	8°09.9	1.3 - 0.7	7.3 - 4.2	13.3 - 7.6
14	8°33.5	8°34.9	8°10.1	1.4 - 0.8	7.4 - 4.3	13.4 - 7.7
15	8°33.8	8°35.2	8°10.3	1.5 - 0.9	7.5 - 4.3	13.5 - 7.8
16	8°34.0	8°35.4	8°10.6	1.6 - 0.9	7.6 - 4.4	13.6 - 7.8
17	8°34.2	8°35.7	8°10.8	1.7 - 1.0	7.7 - 4.4	13.7 - 7.9
18	8°34.5	8°35.9	8°11.1	1.8 - 1.0	7.8 - 4.5	13.8 - 7.9
19	8°34.8	8°36.2	8°11.3	1.9 - 1.1	7.9 - 4.5	13.9 - 8.0
20	8°35.0	8°36.4	8°11.5	2.0 - 1.1	8.0 - 4.6	14.0 - 8.0
21	8°35.3	8°36.7	8°11.8	2.1 - 1.2	8.1 - 4.7	14.1 - 8.1
22	8°35.5	8°36.9	8°12.0	2.2 - 1.3	8.2 - 4.7	14.2 - 8.2
23	8°35.7	8°37.2	8°12.3	2.3 - 1.3	8.3 - 4.8	14.3 - 8.2
24	8°36.0	8°37.4	8°12.5	2.4 - 1.4	8.4 - 4.8	14.4 - 8.3
25	8°36.2	8°37.7	8°12.7	2.5 - 1.4	8.5 - 4.9	14.5 - 8.3
26	8°36.5	8°37.9	8°13.0	2.6 - 1.5	8.6 - 4.9	14.6 - 8.4
27	8°36.8	8°38.2	8°13.2	2.7 - 1.6	8.7 - 5.0	14.7 - 8.5
28	8°37.0	8°38.4	8°13.4	2.8 - 1.6	8.8 - 5.1	14.8 - 8.5
29	8°37.3	8°38.7	8°13.7	2.9 - 1.7	8.9 - 5.1	14.9 - 8.6
30	8°37.5	8°38.9	8°13.9	3.0 - 1.7	9.0 - 5.2	15.0 - 8.6
31	8°37.7	8°39.2	8°14.2	3.1 - 1.8	9.1 - 5.2	15.1 - 8.7
32	8°38.0	8°39.4	8°14.4	3.2 - 1.8	9.2 - 5.3	15.2 - 8.7
33	8°38.2	8°39.7	8°14.6	3.3 - 1.9	9.3 - 5.3	15.3 - 8.8
34	8°38.5	8°39.9	8°14.9	3.4 - 2.0	9.4 - 5.4	15.4 - 8.9
35	8°38.8	8°40.2	8°15.1	3.5 - 2.0	9.5 - 5.5	15.5 - 8.9
36	8°39.0	8°40.4	8°15.4	3.6 - 2.1	9.6 - 5.5	15.6 - 9.0
37	8°39.3	8°40.7	8°15.6	3.7 - 2.1	9.7 - 5.6	15.7 - 9.0
38	8°39.5	8°40.9	8°15.8	3.8 - 2.2	9.8 - 5.6	15.8 - 9.1
39	8°39.7	8°41.2	8°16.1	3.9 - 2.2	9.9 - 5.7	15.9 - 9.1
40	8°40.0	8°41.4	8°16.3	4.0 - 2.3	10.0 - 5.8	16.0 - 9.2
41	8°40.2	8°41.7	8°16.5	4.1 - 2.4	10.1 - 5.8	16.1 - 9.3
42	8°40.5	8°41.9	8°16.8	4.2 - 2.4	10.2 - 5.9	16.2 - 9.3
43	8°40.8	8°42.2	8°17.0	4.3 - 2.5	10.3 - 5.9	16.3 - 9.4
44	8°41.0	8°42.4	8°17.3	4.4 - 2.5	10.4 - 6.0	16.4 - 9.4
45	8°41.3	8°42.7	8°17.5	4.5 - 2.6	10.5 - 6.0	16.5 - 9.5
46	8°41.5	8°42.9	8°17.7	4.6 - 2.6	10.6 - 6.1	16.6 - 9.5
47	8°41.7	8°43.2	8°18.0	4.7 - 2.7	10.7 - 6.2	16.7 - 9.6
48	8°42.0	8°43.4	8°18.2	4.8 - 2.8	10.8 - 6.2	16.8 - 9.7
49	8°42.3	8°43.7	8°18.5	4.9 - 2.8	10.9 - 6.3	16.9 - 9.7
50	8°42.5	8°43.9	8°18.7	5.0 - 2.9	11.0 - 6.3	17.0 - 9.8
51	8°42.8	8°44.2	8°18.9	5.1 - 2.9	11.1 - 6.4	17.1 - 9.8
52	8°43.0	8°44.4	8°19.2	5.2 - 3.0	11.2 - 6.4	17.2 - 9.9
53	8°43.2	8°44.7	8°19.4	5.3 - 3.0	11.3 - 6.5	17.3 - 9.9
54	8°43.5	8°44.9	8°19.7	5.4 - 3.1	11.4 - 6.6	17.4 - 10.0
55	8°43.7	8°45.2	8°19.9	5.5 - 3.2	11.5 - 6.6	17.5 - 10.1
56	8°44.0	8°45.4	8°20.1	5.6 - 3.2	11.6 - 6.7	17.6 - 10.1
57	8°44.3	8°45.7	8°20.4	5.7 - 3.3	11.7 - 6.7	17.7 - 10.2
58	8°44.5	8°45.9	8°20.6	5.8 - 3.3	11.8 - 6.8	17.8 - 10.2
59	8°44.8	8°46.2	8°20.8	5.9 - 3.4	11.9 - 6.8	17.9 - 10.3

m 35	Sun Plan.	Aries	Moon	v and d corr		
0	8°45.0	8°46.4	8°21.1	0.0 - 0.0	6.0 - 3.5	12.0 - 7.1
1	8°45.2	8°46.7	8°21.3	0.1 - 0.1	6.1 - 3.6	12.1 - 7.2
2	8°45.5	8°46.9	8°21.6	0.2 - 0.1	6.2 - 3.7	12.2 - 7.2
3	8°45.7	8°47.2	8°21.8	0.3 - 0.2	6.3 - 3.7	12.3 - 7.3
4	8°46.0	8°47.4	8°22.0	0.4 - 0.2	6.4 - 3.8	12.4 - 7.3
5	8°46.3	8°47.7	8°22.3	0.5 - 0.3	6.5 - 3.8	12.5 - 7.4
6	8°46.5	8°47.9	8°22.5	0.6 - 0.4	6.6 - 3.9	12.6 - 7.5
7	8°46.8	8°48.2	8°22.8	0.7 - 0.4	6.7 - 4.0	12.7 - 7.5
8	8°47.0	8°48.4	8°23.0	0.8 - 0.5	6.8 - 4.0	12.8 - 7.6
9	8°47.2	8°48.7	8°23.2	0.9 - 0.5	6.9 - 4.1	12.9 - 7.6
10	8°47.5	8°48.9	8°23.5	1.0 - 0.6	7.0 - 4.1	13.0 - 7.7
11	8°47.7	8°49.2	8°23.7	1.1 - 0.7	7.1 - 4.2	13.1 - 7.8
12	8°48.0	8°49.4	8°23.9	1.2 - 0.7	7.2 - 4.3	13.2 - 7.8
13	8°48.3	8°49.7	8°24.2	1.3 - 0.8	7.3 - 4.3	13.3 - 7.9
14	8°48.5	8°49.9	8°24.4	1.4 - 0.8	7.4 - 4.4	13.4 - 7.9
15	8°48.8	8°50.2	8°24.7	1.5 - 0.9	7.5 - 4.4	13.5 - 8.0
16	8°49.0	8°50.4	8°24.9	1.6 - 0.9	7.6 - 4.5	13.6 - 8.0
17	8°49.2	8°50.7	8°25.1	1.7 - 1.0	7.7 - 4.6	13.7 - 8.1
18	8°49.5	8°50.9	8°25.4	1.8 - 1.1	7.8 - 4.6	13.8 - 8.2
19	8°49.8	8°51.2	8°25.6	1.9 - 1.1	7.9 - 4.7	13.9 - 8.2
20	8°50.0	8°51.4	8°25.9	2.0 - 1.2	8.0 - 4.7	14.0 - 8.3
21	8°50.3	8°51.7	8°26.1	2.1 - 1.2	8.1 - 4.8	14.1 - 8.3
22	8°50.5	8°52.0	8°26.3	2.2 - 1.3	8.2 - 4.9	14.2 - 8.4
23	8°50.7	8°52.2	8°26.6	2.3 - 1.4	8.3 - 4.9	14.3 - 8.5
24	8°51.0	8°52.5	8°26.8	2.4 - 1.4	8.4 - 5.0	14.4 - 8.5
25	8°51.2	8°52.7	8°27.0	2.5 - 1.5	8.5 - 5.0	14.5 - 8.6
26	8°51.5	8°53.0	8°27.3	2.6 - 1.5	8.6 - 5.1	14.6 - 8.6
27	8°51.8	8°53.2	8°27.5	2.7 - 1.6	8.7 - 5.1	14.7 - 8.7
28	8°52.0	8°53.5	8°27.8	2.8 - 1.7	8.8 - 5.2	14.8 - 8.8
29	8°52.3	8°53.7	8°28.0	2.9 - 1.7	8.9 - 5.3	14.9 - 8.8
30	8°52.5	8°54.0	8°28.2	3.0 - 1.8	9.0 - 5.3	15.0 - 8.9
31	8°52.7	8°54.2	8°28.5	3.1 - 1.8	9.1 - 5.4	15.1 - 8.9
32	8°53.0	8°54.5	8°28.7	3.2 - 1.9	9.2 - 5.4	15.2 - 9.0
33	8°53.2	8°54.7	8°29.0	3.3 - 2.0	9.3 - 5.5	15.3 - 9.1
34	8°53.5	8°55.0	8°29.2	3.4 - 2.0	9.4 - 5.6	15.4 - 9.1
35	8°53.8	8°55.2	8°29.4	3.5 - 2.1	9.5 - 5.6	15.5 - 9.2
36	8°54.0	8°55.5	8°29.7	3.6 - 2.1	9.6 - 5.7	15.6 - 9.2
37	8°54.3	8°55.7	8°29.9	3.7 - 2.2	9.7 - 5.7	15.7 - 9.3
38	8°54.5	8°56.0	8°30.2	3.8 - 2.2	9.8 - 5.8	15.8 - 9.3
39	8°54.7	8°56.2	8°30.4	3.9 - 2.3	9.9 - 5.9	15.9 - 9.4
40	8°55.0	8°56.5	8°30.6	4.0 - 2.4	10.0 - 5.9	16.0 - 9.5
41	8°55.2	8°56.7	8°30.9	4.1 - 2.4	10.1 - 6.0	16.1 - 9.5
42	8°55.5	8°57.0	8°31.1	4.2 - 2.5	10.2 - 6.0	16.2 - 9.6
43	8°55.8	8°57.2	8°31.3	4.3 - 2.5	10.3 - 6.1	16.3 - 9.6
44	8°56.0	8°57.5	8°31.6	4.4 - 2.6	10.4 - 6.2	16.4 - 9.7
45	8°56.3	8°57.7	8°31.8	4.5 - 2.7	10.5 - 6.2	16.5 - 9.8
46	8°56.5	8°58.0	8°32.1	4.6 - 2.7	10.6 - 6.3	16.6 - 9.8
47	8°56.7	8°58.2	8°32.3	4.7 - 2.8	10.7 - 6.3	16.7 - 9.9
48	8°57.0	8°58.5	8°32.5	4.8 - 2.8	10.8 - 6.4	16.8 - 9.9
49	8°57.3	8°58.7	8°32.8	4.9 - 2.9	10.9 - 6.4	16.9 - 10.0
50	8°57.5	8°59.0	8°33.0	5.0 - 3.0	11.0 - 6.5	17.0 - 10.1
51	8°57.8	8°59.2	8°33.3	5.1 - 3.0	11.1 - 6.6	17.1 - 10.1
52	8°58.0	8°59.5	8°33.5	5.2 - 3.1	11.2 - 6.6	17.2 - 10.2
53	8°58.2	8°59.7	8°33.7	5.3 - 3.1	11.3 - 6.7	17.3 - 10.2
54	8°58.5	9°00.0	8°34.0	5.4 - 3.2	11.4 - 6.7	17.4 - 10.3
55	8°58.7	9°00.2	8°34.2	5.5 - 3.3	11.5 - 6.8	17.5 - 10.4
56	8°59.0	9°00.5	8°34.4	5.6 - 3.3	11.6 - 6.9	17.6 - 10.4
57	8°59.3	9°00.7	8°34.7	5.7 - 3.4	11.7 - 6.9	17.7 - 10.5
58	8°59.5	9°01.0	8°34.9	5.8 - 3.4	11.8 - 7.0	17.8 - 10.5
59	8°59.8	9°01.2	8°35.2	5.9 - 3.5	11.9 - 7.0	17.9 - 10.6

Increments and Corrections

m 36	Sun Plan.	Aries	Moon	v and d corr		
0	9°00.0	9°01.5	8°35.4	0.0 - 0.0	6.0 - 3.6	12.0 - 7.3
1	9°00.2	9°01.7	8°35.6	0.1 - 0.1	6.1 - 3.7	12.1 - 7.4
2	9°00.5	9°02.0	8°35.9	0.2 - 0.1	6.2 - 3.8	12.2 - 7.4
3	9°00.7	9°02.2	8°36.1	0.3 - 0.2	6.3 - 3.8	12.3 - 7.5
4	9°01.0	9°02.5	8°36.4	0.4 - 0.2	6.4 - 3.9	12.4 - 7.5
5	9°01.3	9°02.7	8°36.6	0.5 - 0.3	6.5 - 4.0	12.5 - 7.6
6	9°01.5	9°03.0	8°36.8	0.6 - 0.4	6.6 - 4.0	12.6 - 7.7
7	9°01.8	9°03.2	8°37.1	0.7 - 0.4	6.7 - 4.1	12.7 - 7.7
8	9°02.0	9°03.5	8°37.3	0.8 - 0.5	6.8 - 4.1	12.8 - 7.8
9	9°02.2	9°03.7	8°37.5	0.9 - 0.5	6.9 - 4.2	12.9 - 7.8
10	9°02.5	9°04.0	8°37.8	1.0 - 0.6	7.0 - 4.3	13.0 - 7.9
11	9°02.7	9°04.2	8°38.0	1.1 - 0.7	7.1 - 4.3	13.1 - 8.0
12	9°03.0	9°04.5	8°38.3	1.2 - 0.7	7.2 - 4.4	13.2 - 8.0
13	9°03.3	9°04.7	8°38.5	1.3 - 0.8	7.3 - 4.4	13.3 - 8.1
14	9°03.5	9°05.0	8°38.7	1.4 - 0.9	7.4 - 4.5	13.4 - 8.2
15	9°03.8	9°05.2	8°39.0	1.5 - 0.9	7.5 - 4.6	13.5 - 8.2
16	9°04.0	9°05.5	8°39.2	1.6 - 1.0	7.6 - 4.6	13.6 - 8.3
17	9°04.2	9°05.7	8°39.5	1.7 - 1.0	7.7 - 4.7	13.7 - 8.3
18	9°04.5	9°06.0	8°39.7	1.8 - 1.1	7.8 - 4.7	13.8 - 8.4
19	9°04.8	9°06.2	8°39.9	1.9 - 1.2	7.9 - 4.8	13.9 - 8.5
20	9°05.0	9°06.5	8°40.2	2.0 - 1.2	8.0 - 4.9	14.0 - 8.5
21	9°05.3	9°06.7	8°40.4	2.1 - 1.3	8.1 - 4.9	14.1 - 8.6
22	9°05.5	9°07.0	8°40.6	2.2 - 1.3	8.2 - 5.0	14.2 - 8.6
23	9°05.7	9°07.2	8°40.9	2.3 - 1.4	8.3 - 5.0	14.3 - 8.7
24	9°06.0	9°07.5	8°41.1	2.4 - 1.5	8.4 - 5.1	14.4 - 8.8
25	9°06.2	9°07.7	8°41.4	2.5 - 1.5	8.5 - 5.2	14.5 - 8.8
26	9°06.5	9°08.0	8°41.6	2.6 - 1.6	8.6 - 5.2	14.6 - 8.9
27	9°06.8	9°08.2	8°41.8	2.7 - 1.6	8.7 - 5.3	14.7 - 8.9
28	9°07.0	9°08.5	8°42.1	2.8 - 1.7	8.8 - 5.4	14.8 - 9.0
29	9°07.3	9°08.7	8°42.3	2.9 - 1.8	8.9 - 5.4	14.9 - 9.1
30	9°07.5	9°09.0	8°42.6	3.0 - 1.8	9.0 - 5.5	15.0 - 9.1
31	9°07.7	9°09.2	8°42.8	3.1 - 1.9	9.1 - 5.5	15.1 - 9.2
32	9°08.0	9°09.5	8°43.0	3.2 - 1.9	9.2 - 5.6	15.2 - 9.2
33	9°08.2	9°09.7	8°43.3	3.3 - 2.0	9.3 - 5.7	15.3 - 9.3
34	9°08.5	9°10.0	8°43.5	3.4 - 2.1	9.4 - 5.7	15.4 - 9.4
35	9°08.8	9°10.2	8°43.8	3.5 - 2.1	9.5 - 5.8	15.5 - 9.4
36	9°09.0	9°10.5	8°44.0	3.6 - 2.2	9.6 - 5.8	15.6 - 9.5
37	9°09.3	9°10.8	8°44.2	3.7 - 2.3	9.7 - 5.9	15.7 - 9.6
38	9°09.5	9°11.0	8°44.5	3.8 - 2.3	9.8 - 6.0	15.8 - 9.6
39	9°09.7	9°11.3	8°44.7	3.9 - 2.4	9.9 - 6.0	15.9 - 9.7
40	9°10.0	9°11.5	8°44.9	4.0 - 2.4	10.0 - 6.1	16.0 - 9.7
41	9°10.2	9°11.8	8°45.2	4.1 - 2.5	10.1 - 6.1	16.1 - 9.8
42	9°10.5	9°12.0	8°45.4	4.2 - 2.6	10.2 - 6.2	16.2 - 9.9
43	9°10.8	9°12.3	8°45.7	4.3 - 2.6	10.3 - 6.3	16.3 - 9.9
44	9°11.0	9°12.5	8°45.9	4.4 - 2.7	10.4 - 6.3	16.4 - 10.0
45	9°11.3	9°12.8	8°46.1	4.5 - 2.7	10.5 - 6.4	16.5 - 10.0
46	9°11.5	9°13.0	8°46.4	4.6 - 2.8	10.6 - 6.4	16.6 - 10.1
47	9°11.7	9°13.3	8°46.6	4.7 - 2.9	10.7 - 6.5	16.7 - 10.2
48	9°12.0	9°13.5	8°46.9	4.8 - 2.9	10.8 - 6.6	16.8 - 10.2
49	9°12.3	9°13.8	8°47.1	4.9 - 3.0	10.9 - 6.6	16.9 - 10.3
50	9°12.5	9°14.0	8°47.3	5.0 - 3.0	11.0 - 6.7	17.0 - 10.3
51	9°12.8	9°14.3	8°47.6	5.1 - 3.1	11.1 - 6.8	17.1 - 10.4
52	9°13.0	9°14.5	8°47.8	5.2 - 3.2	11.2 - 6.8	17.2 - 10.5
53	9°13.2	9°14.8	8°48.0	5.3 - 3.2	11.3 - 6.9	17.3 - 10.5
54	9°13.5	9°15.0	8°48.3	5.4 - 3.3	11.4 - 6.9	17.4 - 10.6
55	9°13.7	9°15.3	8°48.5	5.5 - 3.3	11.5 - 7.0	17.5 - 10.6
56	9°14.0	9°15.5	8°48.8	5.6 - 3.4	11.6 - 7.1	17.6 - 10.7
57	9°14.3	9°15.8	8°49.0	5.7 - 3.5	11.7 - 7.1	17.7 - 10.8
58	9°14.5	9°16.0	8°49.2	5.8 - 3.5	11.8 - 7.2	17.8 - 10.8
59	9°14.8	9°16.3	8°49.5	5.9 - 3.6	11.9 - 7.2	17.9 - 10.9

m 37	Sun Plan.	Aries	Moon	v and d corr		
0	9°15.0	9°16.5	8°49.7	0.0 - 0.0	6.0 - 3.8	12.0 - 7.5
1	9°15.2	9°16.8	8°50.0	0.1 - 0.1	6.1 - 3.8	12.1 - 7.6
2	9°15.5	9°17.0	8°50.2	0.2 - 0.1	6.2 - 3.9	12.2 - 7.6
3	9°15.7	9°17.3	8°50.4	0.3 - 0.2	6.3 - 3.9	12.3 - 7.7
4	9°16.0	9°17.5	8°50.7	0.4 - 0.3	6.4 - 4.0	12.4 - 7.8
5	9°16.3	9°17.8	8°50.9	0.5 - 0.3	6.5 - 4.1	12.5 - 7.8
6	9°16.5	9°18.0	8°51.1	0.6 - 0.4	6.6 - 4.1	12.6 - 7.9
7	9°16.8	9°18.3	8°51.4	0.7 - 0.4	6.7 - 4.2	12.7 - 7.9
8	9°17.0	9°18.5	8°51.6	0.8 - 0.5	6.8 - 4.3	12.8 - 8.0
9	9°17.2	9°18.8	8°51.9	0.9 - 0.6	6.9 - 4.3	12.9 - 8.1
10	9°17.5	9°19.0	8°52.1	1.0 - 0.6	7.0 - 4.4	13.0 - 8.1
11	9°17.7	9°19.3	8°52.3	1.1 - 0.7	7.1 - 4.4	13.1 - 8.2
12	9°18.0	9°19.5	8°52.6	1.2 - 0.8	7.2 - 4.5	13.2 - 8.3
13	9°18.3	9°19.8	8°52.8	1.3 - 0.8	7.3 - 4.6	13.3 - 8.3
14	9°18.5	9°20.0	8°53.1	1.4 - 0.9	7.4 - 4.6	13.4 - 8.4
15	9°18.8	9°20.3	8°53.3	1.5 - 0.9	7.5 - 4.7	13.5 - 8.4
16	9°19.0	9°20.5	8°53.5	1.6 - 1.0	7.6 - 4.8	13.6 - 8.5
17	9°19.2	9°20.8	8°53.8	1.7 - 1.1	7.7 - 4.8	13.7 - 8.6
18	9°19.5	9°21.0	8°54.0	1.8 - 1.1	7.8 - 4.9	13.8 - 8.6
19	9°19.8	9°21.3	8°54.3	1.9 - 1.2	7.9 - 4.9	13.9 - 8.7
20	9°20.0	9°21.5	8°54.5	2.0 - 1.3	8.0 - 5.0	14.0 - 8.8
21	9°20.3	9°21.8	8°54.7	2.1 - 1.3	8.1 - 5.1	14.1 - 8.8
22	9°20.5	9°22.0	8°55.0	2.2 - 1.4	8.2 - 5.1	14.2 - 8.9
23	9°20.7	9°22.3	8°55.2	2.3 - 1.4	8.3 - 5.2	14.3 - 8.9
24	9°21.0	9°22.5	8°55.4	2.4 - 1.5	8.4 - 5.3	14.4 - 9.0
25	9°21.2	9°22.8	8°55.7	2.5 - 1.6	8.5 - 5.3	14.5 - 9.1
26	9°21.5	9°23.0	8°55.9	2.6 - 1.6	8.6 - 5.4	14.6 - 9.1
27	9°21.8	9°23.3	8°56.2	2.7 - 1.7	8.7 - 5.4	14.7 - 9.2
28	9°22.0	9°23.5	8°56.4	2.8 - 1.8	8.8 - 5.5	14.8 - 9.3
29	9°22.3	9°23.8	8°56.6	2.9 - 1.8	8.9 - 5.6	14.9 - 9.3
30	9°22.5	9°24.0	8°56.9	3.0 - 1.9	9.0 - 5.6	15.0 - 9.4
31	9°22.7	9°24.3	8°57.1	3.1 - 1.9	9.1 - 5.7	15.1 - 9.4
32	9°23.0	9°24.5	8°57.4	3.2 - 2.0	9.2 - 5.8	15.2 - 9.5
33	9°23.2	9°24.8	8°57.6	3.3 - 2.1	9.3 - 5.8	15.3 - 9.6
34	9°23.5	9°25.0	8°57.8	3.4 - 2.1	9.4 - 5.9	15.4 - 9.6
35	9°23.8	9°25.3	8°58.1	3.5 - 2.2	9.5 - 5.9	15.5 - 9.7
36	9°24.0	9°25.5	8°58.3	3.6 - 2.3	9.6 - 6.0	15.6 - 9.8
37	9°24.3	9°25.8	8°58.5	3.7 - 2.3	9.7 - 6.1	15.7 - 9.8
38	9°24.5	9°26.0	8°58.8	3.8 - 2.4	9.8 - 6.1	15.8 - 9.9
39	9°24.7	9°26.3	8°59.0	3.9 - 2.4	9.9 - 6.2	15.9 - 9.9
40	9°25.0	9°26.5	8°59.3	4.0 - 2.5	10.0 - 6.3	16.0 - 10.0
41	9°25.2	9°26.8	8°59.5	4.1 - 2.6	10.1 - 6.3	16.1 - 10.1
42	9°25.5	9°27.0	8°59.7	4.2 - 2.6	10.2 - 6.4	16.2 - 10.1
43	9°25.8	9°27.3	9°00.0	4.3 - 2.7	10.3 - 6.4	16.3 - 10.2
44	9°26.0	9°27.5	9°00.2	4.4 - 2.8	10.4 - 6.5	16.4 - 10.3
45	9°26.3	9°27.8	9°00.5	4.5 - 2.8	10.5 - 6.6	16.5 - 10.3
46	9°26.5	9°28.0	9°00.7	4.6 - 2.9	10.6 - 6.6	16.6 - 10.4
47	9°26.7	9°28.3	9°00.9	4.7 - 2.9	10.7 - 6.7	16.7 - 10.4
48	9°27.0	9°28.5	9°01.2	4.8 - 3.0	10.8 - 6.8	16.8 - 10.5
49	9°27.3	9°28.8	9°01.4	4.9 - 3.1	10.9 - 6.8	16.9 - 10.6
50	9°27.5	9°29.1	9°01.6	5.0 - 3.1	11.0 - 6.9	17.0 - 10.6
51	9°27.8	9°29.3	9°01.9	5.1 - 3.2	11.1 - 6.9	17.1 - 10.7
52	9°28.0	9°29.6	9°02.1	5.2 - 3.3	11.2 - 7.0	17.2 - 10.8
53	9°28.2	9°29.8	9°02.4	5.3 - 3.3	11.3 - 7.1	17.3 - 10.8
54	9°28.5	9°30.1	9°02.6	5.4 - 3.4	11.4 - 7.1	17.4 - 10.9
55	9°28.7	9°30.3	9°02.8	5.5 - 3.4	11.5 - 7.2	17.5 - 10.9
56	9°29.0	9°30.6	9°03.1	5.6 - 3.5	11.6 - 7.3	17.6 - 11.0
57	9°29.3	9°30.8	9°03.3	5.7 - 3.6	11.7 - 7.3	17.7 - 11.1
58	9°29.5	9°31.1	9°03.6	5.8 - 3.6	11.8 - 7.4	17.8 - 11.1
59	9°29.8	9°31.3	9°03.8	5.9 - 3.7	11.9 - 7.4	17.9 - 11.2

m 38	Sun Plan.	Aries	Moon	v and d corr		
0	9°30.0	9°31.6	9°04.0	0.0 - 0.0	6.0 - 3.9	12.0 - 7.7
1	9°30.2	9°31.8	9°04.3	0.1 - 0.1	6.1 - 3.9	12.1 - 7.8
2	9°30.5	9°32.1	9°04.5	0.2 - 0.1	6.2 - 4.0	12.2 - 7.8
3	9°30.7	9°32.3	9°04.7	0.3 - 0.2	6.3 - 4.0	12.3 - 7.9
4	9°31.0	9°32.6	9°05.0	0.4 - 0.3	6.4 - 4.1	12.4 - 8.0
5	9°31.3	9°32.8	9°05.2	0.5 - 0.3	6.5 - 4.2	12.5 - 8.0
6	9°31.5	9°33.1	9°05.5	0.6 - 0.4	6.6 - 4.2	12.6 - 8.1
7	9°31.8	9°33.3	9°05.7	0.7 - 0.4	6.7 - 4.3	12.7 - 8.1
8	9°32.0	9°33.6	9°05.9	0.8 - 0.5	6.8 - 4.4	12.8 - 8.2
9	9°32.2	9°33.8	9°06.2	0.9 - 0.6	6.9 - 4.4	12.9 - 8.3
10	9°32.5	9°34.1	9°06.4	1.0 - 0.6	7.0 - 4.5	13.0 - 8.3
11	9°32.7	9°34.3	9°06.7	1.1 - 0.7	7.1 - 4.6	13.1 - 8.4
12	9°33.0	9°34.6	9°06.9	1.2 - 0.8	7.2 - 4.6	13.2 - 8.5
13	9°33.3	9°34.8	9°07.1	1.3 - 0.8	7.3 - 4.7	13.3 - 8.5
14	9°33.5	9°35.1	9°07.4	1.4 - 0.9	7.4 - 4.7	13.4 - 8.6
15	9°33.8	9°35.3	9°07.6	1.5 - 1.0	7.5 - 4.8	13.5 - 8.7
16	9°34.0	9°35.6	9°07.9	1.6 - 1.0	7.6 - 4.9	13.6 - 8.7
17	9°34.2	9°35.8	9°08.1	1.7 - 1.1	7.7 - 4.9	13.7 - 8.8
18	9°34.5	9°36.1	9°08.3	1.8 - 1.2	7.8 - 5.0	13.8 - 8.9
19	9°34.8	9°36.3	9°08.6	1.9 - 1.2	7.9 - 5.1	13.9 - 8.9
20	9°35.0	9°36.6	9°08.8	2.0 - 1.3	8.0 - 5.1	14.0 - 9.0
21	9°35.3	9°36.8	9°09.0	2.1 - 1.3	8.1 - 5.2	14.1 - 9.0
22	9°35.5	9°37.1	9°09.3	2.2 - 1.4	8.2 - 5.3	14.2 - 9.1
23	9°35.7	9°37.3	9°09.5	2.3 - 1.5	8.3 - 5.3	14.3 - 9.2
24	9°36.0	9°37.6	9°09.8	2.4 - 1.5	8.4 - 5.4	14.4 - 9.2
25	9°36.2	9°37.8	9°10.0	2.5 - 1.6	8.5 - 5.5	14.5 - 9.3
26	9°36.5	9°38.1	9°10.2	2.6 - 1.7	8.6 - 5.5	14.6 - 9.4
27	9°36.8	9°38.3	9°10.5	2.7 - 1.7	8.7 - 5.6	14.7 - 9.4
28	9°37.0	9°38.6	9°10.7	2.8 - 1.8	8.8 - 5.6	14.8 - 9.5
29	9°37.3	9°38.8	9°11.0	2.9 - 1.9	8.9 - 5.7	14.9 - 9.6
30	9°37.5	9°39.1	9°11.2	3.0 - 1.9	9.0 - 5.8	15.0 - 9.6
31	9°37.7	9°39.3	9°11.4	3.1 - 2.0	9.1 - 5.8	15.1 - 9.7
32	9°38.0	9°39.6	9°11.7	3.2 - 2.1	9.2 - 5.9	15.2 - 9.8
33	9°38.2	9°39.8	9°11.9	3.3 - 2.1	9.3 - 6.0	15.3 - 9.8
34	9°38.5	9°40.1	9°12.1	3.4 - 2.2	9.4 - 6.0	15.4 - 9.9
35	9°38.8	9°40.3	9°12.4	3.5 - 2.2	9.5 - 6.1	15.5 - 9.9
36	9°39.0	9°40.6	9°12.6	3.6 - 2.3	9.6 - 6.2	15.6 - 10.0
37	9°39.3	9°40.8	9°12.9	3.7 - 2.4	9.7 - 6.2	15.7 - 10.1
38	9°39.5	9°41.1	9°13.1	3.8 - 2.4	9.8 - 6.3	15.8 - 10.1
39	9°39.7	9°41.3	9°13.3	3.9 - 2.5	9.9 - 6.4	15.9 - 10.2
40	9°40.0	9°41.6	9°13.6	4.0 - 2.6	10.0 - 6.4	16.0 - 10.3
41	9°40.2	9°41.8	9°13.8	4.1 - 2.6	10.1 - 6.5	16.1 - 10.3
42	9°40.5	9°42.1	9°14.1	4.2 - 2.7	10.2 - 6.5	16.2 - 10.4
43	9°40.8	9°42.3	9°14.3	4.3 - 2.8	10.3 - 6.6	16.3 - 10.5
44	9°41.0	9°42.6	9°14.5	4.4 - 2.8	10.4 - 6.7	16.4 - 10.5
45	9°41.3	9°42.8	9°14.8	4.5 - 2.9	10.5 - 6.7	16.5 - 10.6
46	9°41.5	9°43.1	9°15.0	4.6 - 3.0	10.6 - 6.8	16.6 - 10.7
47	9°41.7	9°43.3	9°15.2	4.7 - 3.0	10.7 - 6.9	16.7 - 10.7
48	9°42.0	9°43.6	9°15.5	4.8 - 3.1	10.8 - 6.9	16.8 - 10.8
49	9°42.3	9°43.8	9°15.7	4.9 - 3.1	10.9 - 7.0	16.9 - 10.8
50	9°42.5	9°44.1	9°16.0	5.0 - 3.2	11.0 - 7.1	17.0 - 10.9
51	9°42.8	9°44.3	9°16.2	5.1 - 3.3	11.1 - 7.1	17.1 - 11.0
52	9°43.0	9°44.6	9°16.4	5.2 - 3.3	11.2 - 7.2	17.2 - 11.0
53	9°43.2	9°44.8	9°16.7	5.3 - 3.4	11.3 - 7.3	17.3 - 11.1
54	9°43.5	9°45.1	9°16.9	5.4 - 3.5	11.4 - 7.3	17.4 - 11.2
55	9°43.7	9°45.3	9°17.2	5.5 - 3.5	11.5 - 7.4	17.5 - 11.2
56	9°44.0	9°45.6	9°17.4	5.6 - 3.6	11.6 - 7.4	17.6 - 11.3
57	9°44.3	9°45.8	9°17.6	5.7 - 3.7	11.7 - 7.5	17.7 - 11.4
58	9°44.5	9°46.1	9°17.9	5.8 - 3.7	11.8 - 7.6	17.8 - 11.4
59	9°44.8	9°46.3	9°18.1	5.9 - 3.8	11.9 - 7.6	17.9 - 11.5

Increments and Corrections

m 39	Sun Plan.	Aries	Moon	v and d corr		
0	9°45.0	9°46.6	9°18.4	0.0 - 0.0	6.0 - 4.0	12.0 - 7.9
1	9°45.2	9°46.8	9°18.6	0.1 - 0.1	6.1 - 4.0	12.1 - 8.0
2	9°45.5	9°47.1	9°18.8	0.2 - 0.1	6.2 - 4.1	12.2 - 8.0
3	9°45.7	9°47.4	9°19.1	0.3 - 0.2	6.3 - 4.1	12.3 - 8.1
4	9°46.0	9°47.6	9°19.3	0.4 - 0.3	6.4 - 4.2	12.4 - 8.2
5	9°46.3	9°47.9	9°19.5	0.5 - 0.3	6.5 - 4.3	12.5 - 8.2
6	9°46.5	9°48.1	9°19.8	0.6 - 0.4	6.6 - 4.3	12.6 - 8.3
7	9°46.8	9°48.4	9°20.0	0.7 - 0.5	6.7 - 4.4	12.7 - 8.4
8	9°47.0	9°48.6	9°20.3	0.8 - 0.5	6.8 - 4.5	12.8 - 8.4
9	9°47.2	9°48.9	9°20.5	0.9 - 0.6	6.9 - 4.5	12.9 - 8.5
10	9°47.5	9°49.1	9°20.7	1.0 - 0.7	7.0 - 4.6	13.0 - 8.6
11	9°47.7	9°49.4	9°21.0	1.1 - 0.7	7.1 - 4.7	13.1 - 8.6
12	9°48.0	9°49.6	9°21.2	1.2 - 0.8	7.2 - 4.7	13.2 - 8.7
13	9°48.3	9°49.9	9°21.5	1.3 - 0.9	7.3 - 4.8	13.3 - 8.8
14	9°48.5	9°50.1	9°21.7	1.4 - 0.9	7.4 - 4.9	13.4 - 8.8
15	9°48.8	9°50.4	9°21.9	1.5 - 1.0	7.5 - 4.9	13.5 - 8.9
16	9°49.0	9°50.6	9°22.2	1.6 - 1.1	7.6 - 5.0	13.6 - 9.0
17	9°49.2	9°50.9	9°22.4	1.7 - 1.1	7.7 - 5.1	13.7 - 9.0
18	9°49.5	9°51.1	9°22.6	1.8 - 1.2	7.8 - 5.1	13.8 - 9.1
19	9°49.8	9°51.4	9°22.9	1.9 - 1.3	7.9 - 5.2	13.9 - 9.2
20	9°50.0	9°51.6	9°23.1	2.0 - 1.3	8.0 - 5.3	14.0 - 9.2
21	9°50.3	9°51.9	9°23.4	2.1 - 1.4	8.1 - 5.3	14.1 - 9.3
22	9°50.5	9°52.1	9°23.6	2.2 - 1.4	8.2 - 5.4	14.2 - 9.3
23	9°50.7	9°52.4	9°23.8	2.3 - 1.5	8.3 - 5.5	14.3 - 9.4
24	9°51.0	9°52.6	9°24.1	2.4 - 1.6	8.4 - 5.5	14.4 - 9.5
25	9°51.2	9°52.9	9°24.3	2.5 - 1.6	8.5 - 5.6	14.5 - 9.5
26	9°51.5	9°53.1	9°24.6	2.6 - 1.7	8.6 - 5.7	14.6 - 9.6
27	9°51.8	9°53.4	9°24.8	2.7 - 1.8	8.7 - 5.7	14.7 - 9.7
28	9°52.0	9°53.6	9°25.0	2.8 - 1.8	8.8 - 5.8	14.8 - 9.7
29	9°52.3	9°53.9	9°25.3	2.9 - 1.9	8.9 - 5.9	14.9 - 9.8
30	9°52.5	9°54.1	9°25.5	3.0 - 2.0	9.0 - 5.9	15.0 - 9.9
31	9°52.7	9°54.4	9°25.7	3.1 - 2.0	9.1 - 6.0	15.1 - 9.9
32	9°53.0	9°54.6	9°26.0	3.2 - 2.1	9.2 - 6.1	15.2 - 10.0
33	9°53.2	9°54.9	9°26.2	3.3 - 2.2	9.3 - 6.1	15.3 - 10.1
34	9°53.5	9°55.1	9°26.5	3.4 - 2.2	9.4 - 6.2	15.4 - 10.1
35	9°53.8	9°55.4	9°26.7	3.5 - 2.3	9.5 - 6.3	15.5 - 10.2
36	9°54.0	9°55.6	9°26.9	3.6 - 2.4	9.6 - 6.3	15.6 - 10.3
37	9°54.3	9°55.9	9°27.2	3.7 - 2.4	9.7 - 6.4	15.7 - 10.3
38	9°54.5	9°56.1	9°27.4	3.8 - 2.5	9.8 - 6.5	15.8 - 10.4
39	9°54.7	9°56.4	9°27.7	3.9 - 2.6	9.9 - 6.5	15.9 - 10.5
40	9°55.0	9°56.6	9°27.9	4.0 - 2.6	10.0 - 6.6	16.0 - 10.5
41	9°55.2	9°56.9	9°28.1	4.1 - 2.7	10.1 - 6.6	16.1 - 10.6
42	9°55.5	9°57.1	9°28.4	4.2 - 2.8	10.2 - 6.7	16.2 - 10.7
43	9°55.8	9°57.4	9°28.6	4.3 - 2.8	10.3 - 6.8	16.3 - 10.7
44	9°56.0	9°57.6	9°28.8	4.4 - 2.9	10.4 - 6.8	16.4 - 10.8
45	9°56.3	9°57.9	9°29.1	4.5 - 3.0	10.5 - 6.9	16.5 - 10.9
46	9°56.5	9°58.1	9°29.3	4.6 - 3.0	10.6 - 7.0	16.6 - 10.9
47	9°56.7	9°58.4	9°29.6	4.7 - 3.1	10.7 - 7.0	16.7 - 11.0
48	9°57.0	9°58.6	9°29.8	4.8 - 3.2	10.8 - 7.1	16.8 - 11.1
49	9°57.3	9°58.9	9°30.0	4.9 - 3.2	10.9 - 7.2	16.9 - 11.1
50	9°57.5	9°59.1	9°30.3	5.0 - 3.3	11.0 - 7.2	17.0 - 11.2
51	9°57.8	9°59.4	9°30.5	5.1 - 3.4	11.1 - 7.3	17.1 - 11.3
52	9°58.0	9°59.6	9°30.8	5.2 - 3.4	11.2 - 7.4	17.2 - 11.3
53	9°58.2	9°59.9	9°31.0	5.3 - 3.5	11.3 - 7.4	17.3 - 11.4
54	9°58.5	10°00.1	9°31.2	5.4 - 3.6	11.4 - 7.5	17.4 - 11.5
55	9°58.7	10°00.4	9°31.5	5.5 - 3.6	11.5 - 7.6	17.5 - 11.5
56	9°59.0	10°00.6	9°31.7	5.6 - 3.7	11.6 - 7.6	17.6 - 11.6
57	9°59.3	10°00.9	9°32.0	5.7 - 3.8	11.7 - 7.7	17.7 - 11.7
58	9°59.5	10°01.1	9°32.2	5.8 - 3.8	11.8 - 7.8	17.8 - 11.7
59	9°59.8	10°01.4	9°32.4	5.9 - 3.9	11.9 - 7.8	17.9 - 11.8

m 40	Sun Plan.	Aries	Moon	v and d corr		
0	10°00.0	10°01.6	9°32.7	0.0 - 0.0	6.0 - 4.1	12.0 - 8.1
1	10°00.2	10°01.9	9°32.9	0.1 - 0.1	6.1 - 4.1	12.1 - 8.2
2	10°00.5	10°02.1	9°33.1	0.2 - 0.1	6.2 - 4.2	12.2 - 8.2
3	10°00.7	10°02.4	9°33.4	0.3 - 0.2	6.3 - 4.3	12.3 - 8.3
4	10°01.0	10°02.6	9°33.6	0.4 - 0.3	6.4 - 4.3	12.4 - 8.4
5	10°01.3	10°02.9	9°33.9	0.5 - 0.3	6.5 - 4.4	12.5 - 8.4
6	10°01.5	10°03.1	9°34.1	0.6 - 0.4	6.6 - 4.5	12.6 - 8.5
7	10°01.8	10°03.4	9°34.3	0.7 - 0.5	6.7 - 4.5	12.7 - 8.6
8	10°02.0	10°03.6	9°34.6	0.8 - 0.5	6.8 - 4.6	12.8 - 8.6
9	10°02.2	10°03.9	9°34.8	0.9 - 0.6	6.9 - 4.7	12.9 - 8.7
10	10°02.5	10°04.1	9°35.1	1.0 - 0.7	7.0 - 4.7	13.0 - 8.8
11	10°02.7	10°04.4	9°35.3	1.1 - 0.7	7.1 - 4.8	13.1 - 8.8
12	10°03.0	10°04.6	9°35.5	1.2 - 0.8	7.2 - 4.9	13.2 - 8.9
13	10°03.3	10°04.9	9°35.8	1.3 - 0.9	7.3 - 4.9	13.3 - 9.0
14	10°03.5	10°05.1	9°36.0	1.4 - 0.9	7.4 - 5.0	13.4 - 9.0
15	10°03.8	10°05.4	9°36.2	1.5 - 1.0	7.5 - 5.1	13.5 - 9.1
16	10°04.0	10°05.7	9°36.5	1.6 - 1.1	7.6 - 5.1	13.6 - 9.2
17	10°04.2	10°05.9	9°36.7	1.7 - 1.1	7.7 - 5.2	13.7 - 9.2
18	10°04.5	10°06.2	9°37.0	1.8 - 1.2	7.8 - 5.3	13.8 - 9.3
19	10°04.8	10°06.4	9°37.2	1.9 - 1.3	7.9 - 5.3	13.9 - 9.4
20	10°05.0	10°06.7	9°37.4	2.0 - 1.4	8.0 - 5.4	14.0 - 9.5
21	10°05.3	10°06.9	9°37.7	2.1 - 1.4	8.1 - 5.5	14.1 - 9.5
22	10°05.5	10°07.2	9°37.9	2.2 - 1.5	8.2 - 5.5	14.2 - 9.6
23	10°05.7	10°07.4	9°38.2	2.3 - 1.6	8.3 - 5.6	14.3 - 9.7
24	10°06.0	10°07.7	9°38.4	2.4 - 1.6	8.4 - 5.7	14.4 - 9.7
25	10°06.2	10°07.9	9°38.6	2.5 - 1.7	8.5 - 5.7	14.5 - 9.8
26	10°06.5	10°08.2	9°38.9	2.6 - 1.8	8.6 - 5.8	14.6 - 9.9
27	10°06.8	10°08.4	9°39.1	2.7 - 1.8	8.7 - 5.9	14.7 - 9.9
28	10°07.0	10°08.7	9°39.3	2.8 - 1.9	8.8 - 5.9	14.8 - 10.0
29	10°07.3	10°08.9	9°39.6	2.9 - 2.0	8.9 - 6.0	14.9 - 10.1
30	10°07.5	10°09.2	9°39.8	3.0 - 2.0	9.0 - 6.1	15.0 - 10.1
31	10°07.7	10°09.4	9°40.1	3.1 - 2.1	9.1 - 6.1	15.1 - 10.2
32	10°08.0	10°09.7	9°40.3	3.2 - 2.2	9.2 - 6.2	15.2 - 10.3
33	10°08.2	10°09.9	9°40.5	3.3 - 2.2	9.3 - 6.3	15.3 - 10.3
34	10°08.5	10°10.2	9°40.8	3.4 - 2.3	9.4 - 6.3	15.4 - 10.4
35	10°08.8	10°10.4	9°41.0	3.5 - 2.4	9.5 - 6.4	15.5 - 10.5
36	10°09.0	10°10.7	9°41.3	3.6 - 2.4	9.6 - 6.5	15.6 - 10.5
37	10°09.3	10°10.9	9°41.5	3.7 - 2.5	9.7 - 6.5	15.7 - 10.6
38	10°09.5	10°11.2	9°41.7	3.8 - 2.6	9.8 - 6.6	15.8 - 10.7
39	10°09.7	10°11.4	9°42.0	3.9 - 2.6	9.9 - 6.7	15.9 - 10.7
40	10°10.0	10°11.7	9°42.2	4.0 - 2.7	10.0 - 6.8	16.0 - 10.8
41	10°10.2	10°11.9	9°42.4	4.1 - 2.8	10.1 - 6.8	16.1 - 10.9
42	10°10.5	10°12.2	9°42.7	4.2 - 2.8	10.2 - 6.9	16.2 - 10.9
43	10°10.8	10°12.4	9°42.9	4.3 - 2.9	10.3 - 7.0	16.3 - 11.0
44	10°11.0	10°12.7	9°43.2	4.4 - 3.0	10.4 - 7.0	16.4 - 11.1
45	10°11.3	10°12.9	9°43.4	4.5 - 3.0	10.5 - 7.1	16.5 - 11.1
46	10°11.5	10°13.2	9°43.6	4.6 - 3.1	10.6 - 7.2	16.6 - 11.2
47	10°11.7	10°13.4	9°43.9	4.7 - 3.2	10.7 - 7.2	16.7 - 11.3
48	10°12.0	10°13.7	9°44.1	4.8 - 3.2	10.8 - 7.3	16.8 - 11.3
49	10°12.3	10°13.9	9°44.4	4.9 - 3.3	10.9 - 7.4	16.9 - 11.4
50	10°12.5	10°14.2	9°44.6	5.0 - 3.4	11.0 - 7.4	17.0 - 11.5
51	10°12.8	10°14.4	9°44.8	5.1 - 3.4	11.1 - 7.5	17.1 - 11.5
52	10°13.0	10°14.7	9°45.1	5.2 - 3.5	11.2 - 7.6	17.2 - 11.6
53	10°13.2	10°14.9	9°45.3	5.3 - 3.6	11.3 - 7.6	17.3 - 11.7
54	10°13.5	10°15.2	9°45.6	5.4 - 3.6	11.4 - 7.7	17.4 - 11.7
55	10°13.7	10°15.4	9°45.8	5.5 - 3.7	11.5 - 7.8	17.5 - 11.8
56	10°14.0	10°15.7	9°46.0	5.6 - 3.8	11.6 - 7.8	17.6 - 11.9
57	10°14.3	10°15.9	9°46.3	5.7 - 3.8	11.7 - 7.9	17.7 - 11.9
58	10°14.5	10°16.2	9°46.5	5.8 - 3.9	11.8 - 8.0	17.8 - 12.0
59	10°14.8	10°16.4	9°46.7	5.9 - 4.0	11.9 - 8.0	17.9 - 12.1

m 41	Sun Plan.	Aries	Moon	v and d corr		
0	10°15.0	10°16.7	9°47.0	0.0 - 0.0	6.0 - 4.2	12.0 - 8.3
1	10°15.2	10°16.9	9°47.2	0.1 - 0.1	6.1 - 4.2	12.1 - 8.4
2	10°15.5	10°17.2	9°47.5	0.2 - 0.1	6.2 - 4.3	12.2 - 8.4
3	10°15.7	10°17.4	9°47.7	0.3 - 0.2	6.3 - 4.4	12.3 - 8.5
4	10°16.0	10°17.7	9°47.9	0.4 - 0.3	6.4 - 4.4	12.4 - 8.6
5	10°16.3	10°17.9	9°48.2	0.5 - 0.3	6.5 - 4.5	12.5 - 8.6
6	10°16.5	10°18.2	9°48.4	0.6 - 0.4	6.6 - 4.6	12.6 - 8.7
7	10°16.8	10°18.4	9°48.7	0.7 - 0.5	6.7 - 4.6	12.7 - 8.8
8	10°17.0	10°18.7	9°48.9	0.8 - 0.6	6.8 - 4.7	12.8 - 8.9
9	10°17.2	10°18.9	9°49.1	0.9 - 0.6	6.9 - 4.8	12.9 - 8.9
10	10°17.5	10°19.2	9°49.4	1.0 - 0.7	7.0 - 4.8	13.0 - 9.0
11	10°17.7	10°19.4	9°49.6	1.1 - 0.8	7.1 - 4.9	13.1 - 9.1
12	10°18.0	10°19.7	9°49.8	1.2 - 0.8	7.2 - 5.0	13.2 - 9.1
13	10°18.3	10°19.9	9°50.1	1.3 - 0.9	7.3 - 5.0	13.3 - 9.2
14	10°18.5	10°20.2	9°50.3	1.4 - 1.0	7.4 - 5.1	13.4 - 9.3
15	10°18.8	10°20.4	9°50.6	1.5 - 1.0	7.5 - 5.2	13.5 - 9.3
16	10°19.0	10°20.7	9°50.8	1.6 - 1.1	7.6 - 5.3	13.6 - 9.4
17	10°19.2	10°20.9	9°51.0	1.7 - 1.2	7.7 - 5.3	13.7 - 9.5
18	10°19.5	10°21.2	9°51.3	1.8 - 1.2	7.8 - 5.4	13.8 - 9.5
19	10°19.8	10°21.4	9°51.5	1.9 - 1.3	7.9 - 5.5	13.9 - 9.6
20	10°20.0	10°21.7	9°51.8	2.0 - 1.4	8.0 - 5.5	14.0 - 9.7
21	10°20.3	10°21.9	9°52.0	2.1 - 1.5	8.1 - 5.6	14.1 - 9.8
22	10°20.5	10°22.2	9°52.2	2.2 - 1.5	8.2 - 5.7	14.2 - 9.8
23	10°20.7	10°22.4	9°52.5	2.3 - 1.6	8.3 - 5.7	14.3 - 9.9
24	10°21.0	10°22.7	9°52.7	2.4 - 1.7	8.4 - 5.8	14.4 - 10.0
25	10°21.2	10°22.9	9°52.9	2.5 - 1.7	8.5 - 5.9	14.5 - 10.0
26	10°21.5	10°23.2	9°53.2	2.6 - 1.8	8.6 - 5.9	14.6 - 10.1
27	10°21.8	10°23.4	9°53.4	2.7 - 1.9	8.7 - 6.0	14.7 - 10.2
28	10°22.0	10°23.7	9°53.7	2.8 - 1.9	8.8 - 6.1	14.8 - 10.2
29	10°22.3	10°24.0	9°53.9	2.9 - 2.0	8.9 - 6.2	14.9 - 10.3
30	10°22.5	10°24.2	9°54.1	3.0 - 2.1	9.0 - 6.2	15.0 - 10.4
31	10°22.7	10°24.5	9°54.4	3.1 - 2.1	9.1 - 6.3	15.1 - 10.4
32	10°23.0	10°24.7	9°54.6	3.2 - 2.2	9.2 - 6.4	15.2 - 10.5
33	10°23.2	10°25.0	9°54.9	3.3 - 2.3	9.3 - 6.4	15.3 - 10.6
34	10°23.5	10°25.2	9°55.1	3.4 - 2.4	9.4 - 6.5	15.4 - 10.7
35	10°23.8	10°25.5	9°55.3	3.5 - 2.4	9.5 - 6.6	15.5 - 10.7
36	10°24.0	10°25.7	9°55.6	3.6 - 2.5	9.6 - 6.6	15.6 - 10.8
37	10°24.3	10°26.0	9°55.8	3.7 - 2.6	9.7 - 6.7	15.7 - 10.9
38	10°24.5	10°26.2	9°56.1	3.8 - 2.6	9.8 - 6.8	15.8 - 10.9
39	10°24.7	10°26.5	9°56.3	3.9 - 2.7	9.9 - 6.8	15.9 - 11.0
40	10°25.0	10°26.7	9°56.5	4.0 - 2.8	10.0 - 6.9	16.0 - 11.1
41	10°25.2	10°27.0	9°56.8	4.1 - 2.8	10.1 - 7.0	16.1 - 11.1
42	10°25.5	10°27.2	9°57.0	4.2 - 2.9	10.2 - 7.1	16.2 - 11.2
43	10°25.8	10°27.5	9°57.2	4.3 - 3.0	10.3 - 7.1	16.3 - 11.3
44	10°26.0	10°27.7	9°57.5	4.4 - 3.0	10.4 - 7.2	16.4 - 11.3
45	10°26.3	10°28.0	9°57.7	4.5 - 3.1	10.5 - 7.3	16.5 - 11.4
46	10°26.5	10°28.2	9°58.0	4.6 - 3.2	10.6 - 7.3	16.6 - 11.5
47	10°26.7	10°28.5	9°58.2	4.7 - 3.3	10.7 - 7.4	16.7 - 11.6
48	10°27.0	10°28.7	9°58.4	4.8 - 3.3	10.8 - 7.5	16.8 - 11.6
49	10°27.3	10°29.0	9°58.7	4.9 - 3.4	10.9 - 7.5	16.9 - 11.7
50	10°27.5	10°29.2	9°58.9	5.0 - 3.5	11.0 - 7.6	17.0 - 11.8
51	10°27.8	10°29.5	9°59.2	5.1 - 3.5	11.1 - 7.7	17.1 - 11.8
52	10°28.0	10°29.7	9°59.4	5.2 - 3.6	11.2 - 7.7	17.2 - 11.9
53	10°28.2	10°30.0	9°59.6	5.3 - 3.7	11.3 - 7.8	17.3 - 12.0
54	10°28.5	10°30.2	9°59.9	5.4 - 3.7	11.4 - 7.9	17.4 - 12.0
55	10°28.7	10°30.5	10°00.1	5.5 - 3.8	11.5 - 8.0	17.5 - 12.1
56	10°29.0	10°30.7	10°00.3	5.6 - 3.9	11.6 - 8.0	17.6 - 12.2
57	10°29.3	10°31.0	10°00.6	5.7 - 3.9	11.7 - 8.1	17.7 - 12.2
58	10°29.5	10°31.2	10°00.8	5.8 - 4.0	11.8 - 8.2	17.8 - 12.3
59	10°29.8	10°31.5	10°01.1	5.9 - 4.1	11.9 - 8.2	17.9 - 12.4

Increments and Corrections

m 42	Sun Plan.	Aries	Moon	v and d corr		
0	10°30.0	10°31.7	10°01.3	0.0 - 0.0	6.0 - 4.3	12.0 - 8.5
1	10°30.2	10°32.0	10°01.5	0.1 - 0.1	6.1 - 4.3	12.1 - 8.6
2	10°30.5	10°32.2	10°01.8	0.2 - 0.1	6.2 - 4.4	12.2 - 8.6
3	10°30.7	10°32.5	10°02.0	0.3 - 0.2	6.3 - 4.5	12.3 - 8.7
4	10°31.0	10°32.7	10°02.3	0.4 - 0.3	6.4 - 4.5	12.4 - 8.8
5	10°31.3	10°33.0	10°02.5	0.5 - 0.4	6.5 - 4.6	12.5 - 8.9
6	10°31.5	10°33.2	10°02.7	0.6 - 0.4	6.6 - 4.7	12.6 - 8.9
7	10°31.8	10°33.5	10°03.0	0.7 - 0.5	6.7 - 4.7	12.7 - 9.0
8	10°32.0	10°33.7	10°03.2	0.8 - 0.6	6.8 - 4.8	12.8 - 9.1
9	10°32.2	10°34.0	10°03.4	0.9 - 0.6	6.9 - 4.9	12.9 - 9.1
10	10°32.5	10°34.2	10°03.7	1.0 - 0.7	7.0 - 5.0	13.0 - 9.2
11	10°32.7	10°34.5	10°03.9	1.1 - 0.8	7.1 - 5.0	13.1 - 9.3
12	10°33.0	10°34.7	10°04.2	1.2 - 0.9	7.2 - 5.1	13.2 - 9.3
13	10°33.3	10°35.0	10°04.4	1.3 - 0.9	7.3 - 5.2	13.3 - 9.4
14	10°33.5	10°35.2	10°04.6	1.4 - 1.0	7.4 - 5.2	13.4 - 9.5
15	10°33.8	10°35.5	10°04.9	1.5 - 1.1	7.5 - 5.3	13.5 - 9.6
16	10°34.0	10°35.7	10°05.1	1.6 - 1.1	7.6 - 5.4	13.6 - 9.6
17	10°34.2	10°36.0	10°05.4	1.7 - 1.2	7.7 - 5.5	13.7 - 9.7
18	10°34.5	10°36.2	10°05.6	1.8 - 1.3	7.8 - 5.5	13.8 - 9.8
19	10°34.8	10°36.5	10°05.8	1.9 - 1.3	7.9 - 5.6	13.9 - 9.8
20	10°35.0	10°36.7	10°06.1	2.0 - 1.4	8.0 - 5.7	14.0 - 9.9
21	10°35.3	10°37.0	10°06.3	2.1 - 1.5	8.1 - 5.7	14.1 - 10.0
22	10°35.5	10°37.2	10°06.5	2.2 - 1.6	8.2 - 5.8	14.2 - 10.1
23	10°35.7	10°37.5	10°06.8	2.3 - 1.6	8.3 - 5.9	14.3 - 10.1
24	10°36.0	10°37.7	10°07.0	2.4 - 1.7	8.4 - 6.0	14.4 - 10.2
25	10°36.2	10°38.0	10°07.3	2.5 - 1.8	8.5 - 6.0	14.5 - 10.3
26	10°36.5	10°38.2	10°07.5	2.6 - 1.8	8.6 - 6.1	14.6 - 10.3
27	10°36.8	10°38.5	10°07.7	2.7 - 1.9	8.7 - 6.2	14.7 - 10.4
28	10°37.0	10°38.7	10°08.0	2.8 - 2.0	8.8 - 6.2	14.8 - 10.5
29	10°37.3	10°39.0	10°08.2	2.9 - 2.1	8.9 - 6.3	14.9 - 10.6
30	10°37.5	10°39.2	10°08.5	3.0 - 2.1	9.0 - 6.4	15.0 - 10.6
31	10°37.7	10°39.5	10°08.7	3.1 - 2.2	9.1 - 6.4	15.1 - 10.7
32	10°38.0	10°39.7	10°08.9	3.2 - 2.3	9.2 - 6.5	15.2 - 10.8
33	10°38.2	10°40.0	10°09.2	3.3 - 2.3	9.3 - 6.6	15.3 - 10.8
34	10°38.5	10°40.2	10°09.4	3.4 - 2.4	9.4 - 6.7	15.4 - 10.9
35	10°38.8	10°40.5	10°09.7	3.5 - 2.5	9.5 - 6.7	15.5 - 11.0
36	10°39.0	10°40.7	10°09.9	3.6 - 2.6	9.6 - 6.8	15.6 - 11.1
37	10°39.3	10°41.0	10°10.1	3.7 - 2.6	9.7 - 6.9	15.7 - 11.1
38	10°39.5	10°41.2	10°10.4	3.8 - 2.7	9.8 - 6.9	15.8 - 11.2
39	10°39.7	10°41.5	10°10.6	3.9 - 2.8	9.9 - 7.0	15.9 - 11.3
40	10°40.0	10°41.7	10°10.8	4.0 - 2.8	10.0 - 7.1	16.0 - 11.3
41	10°40.2	10°42.0	10°11.1	4.1 - 2.9	10.1 - 7.2	16.1 - 11.4
42	10°40.5	10°42.3	10°11.3	4.2 - 3.0	10.2 - 7.2	16.2 - 11.5
43	10°40.8	10°42.5	10°11.6	4.3 - 3.0	10.3 - 7.3	16.3 - 11.5
44	10°41.0	10°42.8	10°11.8	4.4 - 3.1	10.4 - 7.4	16.4 - 11.6
45	10°41.3	10°43.0	10°12.0	4.5 - 3.2	10.5 - 7.4	16.5 - 11.7
46	10°41.5	10°43.3	10°12.3	4.6 - 3.3	10.6 - 7.5	16.6 - 11.8
47	10°41.7	10°43.5	10°12.5	4.7 - 3.3	10.7 - 7.6	16.7 - 11.8
48	10°42.0	10°43.8	10°12.8	4.8 - 3.4	10.8 - 7.7	16.8 - 11.9
49	10°42.3	10°44.0	10°13.0	4.9 - 3.5	10.9 - 7.7	16.9 - 12.0
50	10°42.5	10°44.3	10°13.2	5.0 - 3.5	11.0 - 7.8	17.0 - 12.0
51	10°42.8	10°44.5	10°13.5	5.1 - 3.6	11.1 - 7.9	17.1 - 12.1
52	10°43.0	10°44.8	10°13.7	5.2 - 3.7	11.2 - 7.9	17.2 - 12.2
53	10°43.2	10°45.0	10°13.9	5.3 - 3.8	11.3 - 8.0	17.3 - 12.3
54	10°43.5	10°45.3	10°14.2	5.4 - 3.8	11.4 - 8.1	17.4 - 12.3
55	10°43.7	10°45.5	10°14.4	5.5 - 3.9	11.5 - 8.1	17.5 - 12.4
56	10°44.0	10°45.8	10°14.7	5.6 - 4.0	11.6 - 8.2	17.6 - 12.5
57	10°44.3	10°46.0	10°14.9	5.7 - 4.0	11.7 - 8.3	17.7 - 12.5
58	10°44.5	10°46.3	10°15.1	5.8 - 4.1	11.8 - 8.4	17.8 - 12.6
59	10°44.8	10°46.5	10°15.4	5.9 - 4.2	11.9 - 8.4	17.9 - 12.7

m 43	Sun Plan.	Aries	Moon	v and d corr		
0	10°45.0	10°46.8	10°15.6	0.0 - 0.0	6.0 - 4.3	12.0 - 8.7
1	10°45.2	10°47.0	10°15.9	0.1 - 0.1	6.1 - 4.4	12.1 - 8.8
2	10°45.5	10°47.3	10°16.1	0.2 - 0.1	6.2 - 4.5	12.2 - 8.8
3	10°45.7	10°47.5	10°16.3	0.3 - 0.2	6.3 - 4.6	12.3 - 8.9
4	10°46.0	10°47.8	10°16.6	0.4 - 0.3	6.4 - 4.6	12.4 - 9.0
5	10°46.3	10°48.0	10°16.8	0.5 - 0.4	6.5 - 4.7	12.5 - 9.1
6	10°46.5	10°48.3	10°17.0	0.6 - 0.4	6.6 - 4.8	12.6 - 9.1
7	10°46.8	10°48.5	10°17.3	0.7 - 0.5	6.7 - 4.9	12.7 - 9.2
8	10°47.0	10°48.8	10°17.5	0.8 - 0.6	6.8 - 4.9	12.8 - 9.3
9	10°47.2	10°49.0	10°17.8	0.9 - 0.7	6.9 - 5.0	12.9 - 9.4
10	10°47.5	10°49.3	10°18.0	1.0 - 0.7	7.0 - 5.1	13.0 - 9.4
11	10°47.7	10°49.5	10°18.2	1.1 - 0.8	7.1 - 5.1	13.1 - 9.5
12	10°48.0	10°49.8	10°18.5	1.2 - 0.9	7.2 - 5.2	13.2 - 9.6
13	10°48.3	10°50.0	10°18.7	1.3 - 0.9	7.3 - 5.3	13.3 - 9.6
14	10°48.5	10°50.3	10°19.0	1.4 - 1.0	7.4 - 5.4	13.4 - 9.7
15	10°48.8	10°50.5	10°19.2	1.5 - 1.1	7.5 - 5.4	13.5 - 9.8
16	10°49.0	10°50.8	10°19.4	1.6 - 1.2	7.6 - 5.5	13.6 - 9.9
17	10°49.2	10°51.0	10°19.7	1.7 - 1.2	7.7 - 5.6	13.7 - 9.9
18	10°49.5	10°51.3	10°19.9	1.8 - 1.3	7.8 - 5.7	13.8 - 10.0
19	10°49.8	10°51.5	10°20.2	1.9 - 1.4	7.9 - 5.7	13.9 - 10.1
20	10°50.0	10°51.8	10°20.4	2.0 - 1.4	8.0 - 5.8	14.0 - 10.2
21	10°50.3	10°52.0	10°20.6	2.1 - 1.5	8.1 - 5.9	14.1 - 10.2
22	10°50.5	10°52.3	10°20.9	2.2 - 1.6	8.2 - 5.9	14.2 - 10.3
23	10°50.7	10°52.5	10°21.1	2.3 - 1.7	8.3 - 6.0	14.3 - 10.4
24	10°51.0	10°52.8	10°21.3	2.4 - 1.7	8.4 - 6.1	14.4 - 10.4
25	10°51.2	10°53.0	10°21.6	2.5 - 1.8	8.5 - 6.2	14.5 - 10.5
26	10°51.5	10°53.3	10°21.8	2.6 - 1.9	8.6 - 6.2	14.6 - 10.6
27	10°51.8	10°53.5	10°22.1	2.7 - 2.0	8.7 - 6.3	14.7 - 10.7
28	10°52.0	10°53.8	10°22.3	2.8 - 2.0	8.8 - 6.4	14.8 - 10.7
29	10°52.3	10°54.0	10°22.5	2.9 - 2.1	8.9 - 6.5	14.9 - 10.8
30	10°52.5	10°54.3	10°22.8	3.0 - 2.2	9.0 - 6.5	15.0 - 10.9
31	10°52.7	10°54.5	10°23.0	3.1 - 2.2	9.1 - 6.6	15.1 - 10.9
32	10°53.0	10°54.8	10°23.3	3.2 - 2.3	9.2 - 6.7	15.2 - 11.0
33	10°53.2	10°55.0	10°23.5	3.3 - 2.4	9.3 - 6.7	15.3 - 11.1
34	10°53.5	10°55.3	10°23.7	3.4 - 2.5	9.4 - 6.8	15.4 - 11.2
35	10°53.8	10°55.5	10°24.0	3.5 - 2.5	9.5 - 6.9	15.5 - 11.2
36	10°54.0	10°55.8	10°24.2	3.6 - 2.6	9.6 - 7.0	15.6 - 11.3
37	10°54.3	10°56.0	10°24.4	3.7 - 2.7	9.7 - 7.0	15.7 - 11.4
38	10°54.5	10°56.3	10°24.7	3.8 - 2.8	9.8 - 7.1	15.8 - 11.5
39	10°54.7	10°56.5	10°24.9	3.9 - 2.8	9.9 - 7.2	15.9 - 11.5
40	10°55.0	10°56.8	10°25.2	4.0 - 2.9	10.0 - 7.3	16.0 - 11.6
41	10°55.2	10°57.0	10°25.4	4.1 - 3.0	10.1 - 7.3	16.1 - 11.7
42	10°55.5	10°57.3	10°25.6	4.2 - 3.0	10.2 - 7.4	16.2 - 11.7
43	10°55.8	10°57.5	10°25.9	4.3 - 3.1	10.3 - 7.5	16.3 - 11.8
44	10°56.0	10°57.8	10°26.1	4.4 - 3.2	10.4 - 7.5	16.4 - 11.9
45	10°56.3	10°58.0	10°26.4	4.5 - 3.3	10.5 - 7.6	16.5 - 12.0
46	10°56.5	10°58.3	10°26.6	4.6 - 3.3	10.6 - 7.7	16.6 - 12.0
47	10°56.7	10°58.5	10°26.8	4.7 - 3.4	10.7 - 7.8	16.7 - 12.1
48	10°57.0	10°58.8	10°27.1	4.8 - 3.5	10.8 - 7.8	16.8 - 12.2
49	10°57.3	10°59.0	10°27.3	4.9 - 3.6	10.9 - 7.9	16.9 - 12.3
50	10°57.5	10°59.3	10°27.5	5.0 - 3.6	11.0 - 8.0	17.0 - 12.3
51	10°57.8	10°59.5	10°27.8	5.1 - 3.7	11.1 - 8.0	17.1 - 12.4
52	10°58.0	10°59.8	10°28.0	5.2 - 3.8	11.2 - 8.1	17.2 - 12.5
53	10°58.2	11°00.0	10°28.3	5.3 - 3.8	11.3 - 8.2	17.3 - 12.5
54	10°58.5	11°00.3	10°28.5	5.4 - 3.9	11.4 - 8.3	17.4 - 12.6
55	10°58.7	11°00.6	10°28.7	5.5 - 4.0	11.5 - 8.3	17.5 - 12.7
56	10°59.0	11°00.8	10°29.0	5.6 - 4.1	11.6 - 8.4	17.6 - 12.8
57	10°59.3	11°01.1	10°29.2	5.7 - 4.1	11.7 - 8.5	17.7 - 12.8
58	10°59.5	11°01.3	10°29.5	5.8 - 4.2	11.8 - 8.6	17.8 - 12.9
59	10°59.8	11°01.6	10°29.7	5.9 - 4.3	11.9 - 8.6	17.9 - 13.0

m 44	Sun Plan.	Aries	Moon	v and d corr		
0	11°00.0	11°01.8	10°29.9	0.0 - 0.0	6.0 - 4.5	12.0 - 8.9
1	11°00.2	11°02.1	10°30.2	0.1 - 0.1	6.1 - 4.5	12.1 - 9.0
2	11°00.5	11°02.3	10°30.4	0.2 - 0.1	6.2 - 4.6	12.2 - 9.0
3	11°00.7	11°02.6	10°30.6	0.3 - 0.2	6.3 - 4.7	12.3 - 9.1
4	11°01.0	11°02.8	10°30.9	0.4 - 0.3	6.4 - 4.7	12.4 - 9.2
5	11°01.3	11°03.1	10°31.1	0.5 - 0.4	6.5 - 4.8	12.5 - 9.3
6	11°01.5	11°03.3	10°31.4	0.6 - 0.4	6.6 - 4.9	12.6 - 9.3
7	11°01.8	11°03.6	10°31.6	0.7 - 0.5	6.7 - 5.0	12.7 - 9.4
8	11°02.0	11°03.8	10°31.8	0.8 - 0.6	6.8 - 5.0	12.8 - 9.5
9	11°02.2	11°04.1	10°32.1	0.9 - 0.7	6.9 - 5.1	12.9 - 9.6
10	11°02.5	11°04.3	10°32.3	1.0 - 0.7	7.0 - 5.2	13.0 - 9.6
11	11°02.7	11°04.6	10°32.6	1.1 - 0.8	7.1 - 5.3	13.1 - 9.7
12	11°03.0	11°04.8	10°32.8	1.2 - 0.9	7.2 - 5.3	13.2 - 9.8
13	11°03.3	11°05.1	10°33.0	1.3 - 1.0	7.3 - 5.4	13.3 - 9.9
14	11°03.5	11°05.3	10°33.3	1.4 - 1.0	7.4 - 5.5	13.4 - 9.9
15	11°03.8	11°05.6	10°33.5	1.5 - 1.1	7.5 - 5.6	13.5 - 10.0
16	11°04.0	11°05.8	10°33.8	1.6 - 1.2	7.6 - 5.6	13.6 - 10.1
17	11°04.2	11°06.1	10°34.0	1.7 - 1.3	7.7 - 5.7	13.7 - 10.2
18	11°04.5	11°06.3	10°34.2	1.8 - 1.3	7.8 - 5.8	13.8 - 10.2
19	11°04.8	11°06.6	10°34.5	1.9 - 1.4	7.9 - 5.9	13.9 - 10.3
20	11°05.0	11°06.8	10°34.7	2.0 - 1.5	8.0 - 5.9	14.0 - 10.4
21	11°05.3	11°07.1	10°34.9	2.1 - 1.6	8.1 - 6.0	14.1 - 10.5
22	11°05.5	11°07.3	10°35.2	2.2 - 1.6	8.2 - 6.1	14.2 - 10.5
23	11°05.7	11°07.6	10°35.4	2.3 - 1.7	8.3 - 6.2	14.3 - 10.6
24	11°06.0	11°07.8	10°35.7	2.4 - 1.8	8.4 - 6.2	14.4 - 10.7
25	11°06.2	11°08.1	10°35.9	2.5 - 1.9	8.5 - 6.3	14.5 - 10.8
26	11°06.5	11°08.3	10°36.1	2.6 - 1.9	8.6 - 6.4	14.6 - 10.8
27	11°06.8	11°08.6	10°36.4	2.7 - 2.0	8.7 - 6.5	14.7 - 10.9
28	11°07.0	11°08.8	10°36.6	2.8 - 2.1	8.8 - 6.5	14.8 - 11.0
29	11°07.3	11°09.1	10°36.9	2.9 - 2.2	8.9 - 6.6	14.9 - 11.1
30	11°07.5	11°09.3	10°37.1	3.0 - 2.2	9.0 - 6.7	15.0 - 11.1
31	11°07.7	11°09.6	10°37.3	3.1 - 2.3	9.1 - 6.7	15.1 - 11.2
32	11°08.0	11°09.8	10°37.6	3.2 - 2.4	9.2 - 6.8	15.2 - 11.3
33	11°08.2	11°10.1	10°37.8	3.3 - 2.4	9.3 - 6.9	15.3 - 11.3
34	11°08.5	11°10.3	10°38.0	3.4 - 2.5	9.4 - 7.0	15.4 - 11.4
35	11°08.8	11°10.6	10°38.3	3.5 - 2.6	9.5 - 7.0	15.5 - 11.5
36	11°09.0	11°10.8	10°38.5	3.6 - 2.7	9.6 - 7.1	15.6 - 11.6
37	11°09.3	11°11.1	10°38.8	3.7 - 2.7	9.7 - 7.2	15.7 - 11.6
38	11°09.5	11°11.3	10°39.0	3.8 - 2.8	9.8 - 7.3	15.8 - 11.7
39	11°09.7	11°11.6	10°39.2	3.9 - 2.9	9.9 - 7.3	15.9 - 11.8
40	11°10.0	11°11.8	10°39.5	4.0 - 3.0	10.0 - 7.4	16.0 - 11.9
41	11°10.2	11°12.1	10°39.7	4.1 - 3.0	10.1 - 7.5	16.1 - 11.9
42	11°10.5	11°12.3	10°40.0	4.2 - 3.1	10.2 - 7.6	16.2 - 12.0
43	11°10.8	11°12.6	10°40.2	4.3 - 3.2	10.3 - 7.6	16.3 - 12.1
44	11°11.0	11°12.8	10°40.4	4.4 - 3.3	10.4 - 7.7	16.4 - 12.2
45	11°11.3	11°13.1	10°40.7	4.5 - 3.3	10.5 - 7.8	16.5 - 12.2
46	11°11.5	11°13.3	10°40.9	4.6 - 3.4	10.6 - 7.9	16.6 - 12.3
47	11°11.7	11°13.6	10°41.1	4.7 - 3.5	10.7 - 7.9	16.7 - 12.4
48	11°12.0	11°13.8	10°41.4	4.8 - 3.6	10.8 - 8.0	16.8 - 12.5
49	11°12.3	11°14.1	10°41.6	4.9 - 3.6	10.9 - 8.1	16.9 - 12.5
50	11°12.5	11°14.3	10°41.9	5.0 - 3.7	11.0 - 8.2	17.0 - 12.6
51	11°12.8	11°14.6	10°42.1	5.1 - 3.8	11.1 - 8.2	17.1 - 12.7
52	11°13.0	11°14.8	10°42.3	5.2 - 3.9	11.2 - 8.3	17.2 - 12.8
53	11°13.2	11°15.1	10°42.6	5.3 - 3.9	11.3 - 8.4	17.3 - 12.8
54	11°13.5	11°15.3	10°42.8	5.4 - 4.0	11.4 - 8.5	17.4 - 12.9
55	11°13.7	11°15.6	10°43.1	5.5 - 4.1	11.5 - 8.5	17.5 - 13.0
56	11°14.0	11°15.8	10°43.3	5.6 - 4.2	11.6 - 8.6	17.6 - 13.1
57	11°14.3	11°16.1	10°43.5	5.7 - 4.2	11.7 - 8.7	17.7 - 13.1
58	11°14.5	11°16.3	10°43.8	5.8 - 4.3	11.8 - 8.8	17.8 - 13.2
59	11°14.8	11°16.6	10°44.0	5.9 - 4.4	11.9 - 8.8	17.9 - 13.3

Increments and Corrections

m 45	Sun Plan.	Aries	Moon	v and d corr		
0	11°15.0	11°16.8	10°44.3	0.0 - 0.0	6.0 - 4.5	12.0 - 9.1
1	11°15.2	11°17.1	10°44.5	0.1 - 0.1	6.1 - 4.6	12.1 - 9.2
2	11°15.5	11°17.3	10°44.7	0.2 - 0.2	6.2 - 4.7	12.2 - 9.3
3	11°15.7	11°17.6	10°45.0	0.3 - 0.2	6.3 - 4.8	12.3 - 9.3
4	11°16.0	11°17.8	10°45.2	0.4 - 0.3	6.4 - 4.9	12.4 - 9.4
5	11°16.3	11°18.1	10°45.4	0.5 - 0.4	6.5 - 4.9	12.5 - 9.5
6	11°16.5	11°18.3	10°45.7	0.6 - 0.5	6.6 - 5.0	12.6 - 9.6
7	11°16.8	11°18.6	10°45.9	0.7 - 0.5	6.7 - 5.1	12.7 - 9.6
8	11°17.0	11°18.9	10°46.2	0.8 - 0.6	6.8 - 5.2	12.8 - 9.7
9	11°17.2	11°19.1	10°46.4	0.9 - 0.7	6.9 - 5.2	12.9 - 9.8
10	11°17.5	11°19.4	10°46.6	1.0 - 0.8	7.0 - 5.3	13.0 - 9.9
11	11°17.7	11°19.6	10°46.9	1.1 - 0.8	7.1 - 5.4	13.1 - 9.9
12	11°18.0	11°19.9	10°47.1	1.2 - 0.9	7.2 - 5.5	13.2 - 10.0
13	11°18.3	11°20.1	10°47.4	1.3 - 1.0	7.3 - 5.5	13.3 - 10.1
14	11°18.5	11°20.4	10°47.6	1.4 - 1.1	7.4 - 5.6	13.4 - 10.2
15	11°18.8	11°20.6	10°47.8	1.5 - 1.1	7.5 - 5.7	13.5 - 10.2
16	11°19.0	11°20.9	10°48.1	1.6 - 1.2	7.6 - 5.8	13.6 - 10.3
17	11°19.2	11°21.1	10°48.3	1.7 - 1.3	7.7 - 5.8	13.7 - 10.4
18	11°19.5	11°21.4	10°48.5	1.8 - 1.4	7.8 - 5.9	13.8 - 10.5
19	11°19.8	11°21.6	10°48.8	1.9 - 1.4	7.9 - 6.0	13.9 - 10.5
20	11°20.0	11°21.9	10°49.0	2.0 - 1.5	8.0 - 6.1	14.0 - 10.6
21	11°20.3	11°22.1	10°49.3	2.1 - 1.6	8.1 - 6.1	14.1 - 10.7
22	11°20.5	11°22.4	10°49.5	2.2 - 1.7	8.2 - 6.2	14.2 - 10.8
23	11°20.7	11°22.6	10°49.7	2.3 - 1.7	8.3 - 6.3	14.3 - 10.8
24	11°21.0	11°22.9	10°50.0	2.4 - 1.8	8.4 - 6.4	14.4 - 10.9
25	11°21.2	11°23.1	10°50.2	2.5 - 1.9	8.5 - 6.4	14.5 - 11.0
26	11°21.5	11°23.4	10°50.5	2.6 - 2.0	8.6 - 6.5	14.6 - 11.1
27	11°21.8	11°23.6	10°50.7	2.7 - 2.0	8.7 - 6.6	14.7 - 11.1
28	11°22.0	11°23.9	10°50.9	2.8 - 2.1	8.8 - 6.7	14.8 - 11.2
29	11°22.3	11°24.1	10°51.2	2.9 - 2.2	8.9 - 6.7	14.9 - 11.3
30	11°22.5	11°24.4	10°51.4	3.0 - 2.3	9.0 - 6.8	15.0 - 11.4
31	11°22.7	11°24.6	10°51.6	3.1 - 2.4	9.1 - 6.9	15.1 - 11.5
32	11°23.0	11°24.9	10°51.9	3.2 - 2.4	9.2 - 7.0	15.2 - 11.5
33	11°23.2	11°25.1	10°52.1	3.3 - 2.5	9.3 - 7.1	15.3 - 11.6
34	11°23.5	11°25.4	10°52.4	3.4 - 2.6	9.4 - 7.1	15.4 - 11.7
35	11°23.8	11°25.6	10°52.6	3.5 - 2.7	9.5 - 7.2	15.5 - 11.8
36	11°24.0	11°25.9	10°52.8	3.6 - 2.7	9.6 - 7.3	15.6 - 11.8
37	11°24.3	11°26.1	10°53.1	3.7 - 2.8	9.7 - 7.4	15.7 - 11.9
38	11°24.5	11°26.4	10°53.3	3.8 - 2.9	9.8 - 7.4	15.8 - 12.0
39	11°24.7	11°26.6	10°53.6	3.9 - 3.0	9.9 - 7.5	15.9 - 12.1
40	11°25.0	11°26.9	10°53.8	4.0 - 3.0	10.0 - 7.6	16.0 - 12.1
41	11°25.2	11°27.1	10°54.0	4.1 - 3.1	10.1 - 7.7	16.1 - 12.2
42	11°25.5	11°27.4	10°54.3	4.2 - 3.2	10.2 - 7.7	16.2 - 12.3
43	11°25.8	11°27.6	10°54.5	4.3 - 3.3	10.3 - 7.8	16.3 - 12.4
44	11°26.0	11°27.9	10°54.7	4.4 - 3.3	10.4 - 7.9	16.4 - 12.4
45	11°26.3	11°28.1	10°55.0	4.5 - 3.4	10.5 - 8.0	16.5 - 12.5
46	11°26.5	11°28.4	10°55.2	4.6 - 3.5	10.6 - 8.0	16.6 - 12.6
47	11°26.7	11°28.6	10°55.5	4.7 - 3.6	10.7 - 8.1	16.7 - 12.7
48	11°27.0	11°28.9	10°55.7	4.8 - 3.6	10.8 - 8.2	16.8 - 12.7
49	11°27.3	11°29.1	10°55.9	4.9 - 3.7	10.9 - 8.3	16.9 - 12.8
50	11°27.5	11°29.4	10°56.2	5.0 - 3.8	11.0 - 8.3	17.0 - 12.9
51	11°27.8	11°29.6	10°56.4	5.1 - 3.9	11.1 - 8.4	17.1 - 13.0
52	11°28.0	11°29.9	10°56.7	5.2 - 3.9	11.2 - 8.5	17.2 - 13.0
53	11°28.2	11°30.1	10°56.9	5.3 - 4.0	11.3 - 8.6	17.3 - 13.1
54	11°28.5	11°30.4	10°57.1	5.4 - 4.1	11.4 - 8.6	17.4 - 13.2
55	11°28.7	11°30.6	10°57.4	5.5 - 4.2	11.5 - 8.7	17.5 - 13.3
56	11°29.0	11°30.9	10°57.6	5.6 - 4.2	11.6 - 8.8	17.6 - 13.3
57	11°29.3	11°31.1	10°57.9	5.7 - 4.3	11.7 - 8.9	17.7 - 13.4
58	11°29.5	11°31.4	10°58.1	5.8 - 4.4	11.8 - 8.9	17.8 - 13.5
59	11°29.8	11°31.6	10°58.3	5.9 - 4.5	11.9 - 9.0	17.9 - 13.6

m 46	Sun Plan.	Aries	Moon	v and d corr		
0	11°30.0	11°31.9	10°58.6	0.0 - 0.0	6.0 - 4.7	12.0 - 9.3
1	11°30.2	11°32.1	10°58.8	0.1 - 0.1	6.1 - 4.7	12.1 - 9.4
2	11°30.5	11°32.4	10°59.0	0.2 - 0.2	6.2 - 4.8	12.2 - 9.5
3	11°30.7	11°32.6	10°59.3	0.3 - 0.2	6.3 - 4.9	12.3 - 9.5
4	11°31.0	11°32.9	10°59.5	0.4 - 0.3	6.4 - 5.0	12.4 - 9.6
5	11°31.3	11°33.1	10°59.8	0.5 - 0.4	6.5 - 5.0	12.5 - 9.7
6	11°31.5	11°33.4	11°00.0	0.6 - 0.5	6.6 - 5.1	12.6 - 9.8
7	11°31.8	11°33.6	11°00.2	0.7 - 0.5	6.7 - 5.2	12.7 - 9.8
8	11°32.0	11°33.9	11°00.5	0.8 - 0.6	6.8 - 5.3	12.8 - 9.9
9	11°32.2	11°34.1	11°00.7	0.9 - 0.7	6.9 - 5.3	12.9 - 10.0
10	11°32.5	11°34.4	11°01.0	1.0 - 0.8	7.0 - 5.4	13.0 - 10.1
11	11°32.7	11°34.6	11°01.2	1.1 - 0.9	7.1 - 5.5	13.1 - 10.2
12	11°33.0	11°34.9	11°01.4	1.2 - 0.9	7.2 - 5.6	13.2 - 10.2
13	11°33.3	11°35.1	11°01.7	1.3 - 1.0	7.3 - 5.7	13.3 - 10.3
14	11°33.5	11°35.4	11°01.9	1.4 - 1.1	7.4 - 5.7	13.4 - 10.4
15	11°33.8	11°35.6	11°02.1	1.5 - 1.2	7.5 - 5.8	13.5 - 10.5
16	11°34.0	11°35.9	11°02.4	1.6 - 1.2	7.6 - 5.9	13.6 - 10.5
17	11°34.2	11°36.1	11°02.6	1.7 - 1.3	7.7 - 6.0	13.7 - 10.6
18	11°34.5	11°36.4	11°02.9	1.8 - 1.4	7.8 - 6.0	13.8 - 10.7
19	11°34.8	11°36.6	11°03.1	1.9 - 1.5	7.9 - 6.1	13.9 - 10.8
20	11°35.0	11°36.9	11°03.3	2.0 - 1.6	8.0 - 6.2	14.0 - 10.8
21	11°35.3	11°37.2	11°03.6	2.1 - 1.6	8.1 - 6.3	14.1 - 10.9
22	11°35.5	11°37.4	11°03.8	2.2 - 1.7	8.2 - 6.4	14.2 - 11.0
23	11°35.7	11°37.7	11°04.1	2.3 - 1.8	8.3 - 6.4	14.3 - 11.1
24	11°36.0	11°37.9	11°04.3	2.4 - 1.9	8.4 - 6.5	14.4 - 11.2
25	11°36.2	11°38.2	11°04.5	2.5 - 1.9	8.5 - 6.6	14.5 - 11.2
26	11°36.5	11°38.4	11°04.8	2.6 - 2.0	8.6 - 6.7	14.6 - 11.3
27	11°36.8	11°38.7	11°05.0	2.7 - 2.1	8.7 - 6.7	14.7 - 11.4
28	11°37.0	11°38.9	11°05.2	2.8 - 2.2	8.8 - 6.8	14.8 - 11.5
29	11°37.3	11°39.2	11°05.5	2.9 - 2.2	8.9 - 6.9	14.9 - 11.5
30	11°37.5	11°39.4	11°05.7	3.0 - 2.3	9.0 - 7.0	15.0 - 11.6
31	11°37.7	11°39.7	11°06.0	3.1 - 2.4	9.1 - 7.1	15.1 - 11.7
32	11°38.0	11°39.9	11°06.2	3.2 - 2.5	9.2 - 7.1	15.2 - 11.8
33	11°38.2	11°40.2	11°06.4	3.3 - 2.6	9.3 - 7.2	15.3 - 11.9
34	11°38.5	11°40.4	11°06.7	3.4 - 2.6	9.4 - 7.3	15.4 - 11.9
35	11°38.8	11°40.7	11°06.9	3.5 - 2.7	9.5 - 7.4	15.5 - 12.0
36	11°39.0	11°40.9	11°07.2	3.6 - 2.8	9.6 - 7.4	15.6 - 12.1
37	11°39.3	11°41.2	11°07.4	3.7 - 2.9	9.7 - 7.5	15.7 - 12.2
38	11°39.5	11°41.4	11°07.6	3.8 - 2.9	9.8 - 7.6	15.8 - 12.2
39	11°39.7	11°41.7	11°07.9	3.9 - 3.0	9.9 - 7.7	15.9 - 12.3
40	11°40.0	11°41.9	11°08.1	4.0 - 3.1	10.0 - 7.8	16.0 - 12.4
41	11°40.2	11°42.2	11°08.3	4.1 - 3.2	10.1 - 7.8	16.1 - 12.5
42	11°40.5	11°42.4	11°08.6	4.2 - 3.3	10.2 - 7.9	16.2 - 12.6
43	11°40.8	11°42.7	11°08.8	4.3 - 3.3	10.3 - 8.0	16.3 - 12.6
44	11°41.0	11°42.9	11°09.1	4.4 - 3.4	10.4 - 8.1	16.4 - 12.7
45	11°41.3	11°43.2	11°09.3	4.5 - 3.5	10.5 - 8.1	16.5 - 12.8
46	11°41.5	11°43.4	11°09.5	4.6 - 3.6	10.6 - 8.2	16.6 - 12.9
47	11°41.7	11°43.7	11°09.8	4.7 - 3.6	10.7 - 8.3	16.7 - 12.9
48	11°42.0	11°43.9	11°10.0	4.8 - 3.7	10.8 - 8.4	16.8 - 13.0
49	11°42.3	11°44.2	11°10.3	4.9 - 3.8	10.9 - 8.4	16.9 - 13.1
50	11°42.5	11°44.4	11°10.5	5.0 - 3.9	11.0 - 8.5	17.0 - 13.2
51	11°42.8	11°44.7	11°10.7	5.1 - 4.0	11.1 - 8.6	17.1 - 13.3
52	11°43.0	11°44.9	11°11.0	5.2 - 4.0	11.2 - 8.7	17.2 - 13.3
53	11°43.2	11°45.2	11°11.2	5.3 - 4.1	11.3 - 8.8	17.3 - 13.4
54	11°43.5	11°45.4	11°11.5	5.4 - 4.2	11.4 - 8.8	17.4 - 13.5
55	11°43.7	11°45.7	11°11.7	5.5 - 4.3	11.5 - 8.9	17.5 - 13.6
56	11°44.0	11°45.9	11°11.9	5.6 - 4.3	11.6 - 9.0	17.6 - 13.6
57	11°44.3	11°46.2	11°12.2	5.7 - 4.4	11.7 - 9.1	17.7 - 13.7
58	11°44.5	11°46.4	11°12.4	5.8 - 4.5	11.8 - 9.1	17.8 - 13.8
59	11°44.8	11°46.7	11°12.6	5.9 - 4.6	11.9 - 9.2	17.9 - 13.9

m 47	Sun Plan.	Aries	Moon	v and d corr		
0	11°45.0	11°46.9	11°12.9	0.0 - 0.0	6.0 - 4.8	12.0 - 9.5
1	11°45.2	11°47.2	11°13.1	0.1 - 0.1	6.1 - 4.8	12.1 - 9.6
2	11°45.5	11°47.4	11°13.4	0.2 - 0.2	6.2 - 4.9	12.2 - 9.7
3	11°45.7	11°47.7	11°13.6	0.3 - 0.2	6.3 - 5.0	12.3 - 9.7
4	11°46.0	11°47.9	11°13.8	0.4 - 0.3	6.4 - 5.1	12.4 - 9.8
5	11°46.3	11°48.2	11°14.1	0.5 - 0.4	6.5 - 5.1	12.5 - 9.9
6	11°46.5	11°48.4	11°14.3	0.6 - 0.5	6.6 - 5.2	12.6 - 10.0
7	11°46.8	11°48.7	11°14.6	0.7 - 0.6	6.7 - 5.3	12.7 - 10.1
8	11°47.0	11°48.9	11°14.8	0.8 - 0.6	6.8 - 5.4	12.8 - 10.1
9	11°47.2	11°49.2	11°15.0	0.9 - 0.7	6.9 - 5.5	12.9 - 10.2
10	11°47.5	11°49.4	11°15.3	1.0 - 0.8	7.0 - 5.5	13.0 - 10.3
11	11°47.7	11°49.7	11°15.5	1.1 - 0.9	7.1 - 5.6	13.1 - 10.4
12	11°48.0	11°49.9	11°15.7	1.2 - 1.0	7.2 - 5.7	13.2 - 10.4
13	11°48.3	11°50.2	11°16.0	1.3 - 1.0	7.3 - 5.8	13.3 - 10.5
14	11°48.5	11°50.4	11°16.2	1.4 - 1.1	7.4 - 5.9	13.4 - 10.6
15	11°48.8	11°50.7	11°16.5	1.5 - 1.2	7.5 - 5.9	13.5 - 10.7
16	11°49.0	11°50.9	11°16.7	1.6 - 1.3	7.6 - 6.0	13.6 - 10.8
17	11°49.2	11°51.2	11°16.9	1.7 - 1.3	7.7 - 6.1	13.7 - 10.8
18	11°49.5	11°51.4	11°17.2	1.8 - 1.4	7.8 - 6.2	13.8 - 10.9
19	11°49.8	11°51.7	11°17.4	1.9 - 1.5	7.9 - 6.3	13.9 - 11.0
20	11°50.0	11°51.9	11°17.7	2.0 - 1.6	8.0 - 6.3	14.0 - 11.1
21	11°50.3	11°52.2	11°17.9	2.1 - 1.7	8.1 - 6.4	14.1 - 11.2
22	11°50.5	11°52.4	11°18.1	2.2 - 1.7	8.2 - 6.5	14.2 - 11.2
23	11°50.7	11°52.7	11°18.4	2.3 - 1.8	8.3 - 6.6	14.3 - 11.3
24	11°51.0	11°52.9	11°18.6	2.4 - 1.9	8.4 - 6.7	14.4 - 11.4
25	11°51.2	11°53.2	11°18.8	2.5 - 2.0	8.5 - 6.7	14.5 - 11.5
26	11°51.5	11°53.4	11°19.1	2.6 - 2.1	8.6 - 6.8	14.6 - 11.6
27	11°51.8	11°53.7	11°19.3	2.7 - 2.1	8.7 - 6.9	14.7 - 11.6
28	11°52.0	11°53.9	11°19.6	2.8 - 2.2	8.8 - 7.0	14.8 - 11.7
29	11°52.3	11°54.2	11°19.8	2.9 - 2.3	8.9 - 7.0	14.9 - 11.8
30	11°52.5	11°54.4	11°20.0	3.0 - 2.4	9.0 - 7.1	15.0 - 11.9
31	11°52.7	11°54.7	11°20.3	3.1 - 2.5	9.1 - 7.2	15.1 - 12.0
32	11°53.0	11°54.9	11°20.5	3.2 - 2.5	9.2 - 7.3	15.2 - 12.0
33	11°53.2	11°55.2	11°20.8	3.3 - 2.6	9.3 - 7.4	15.3 - 12.1
34	11°53.5	11°55.5	11°21.0	3.4 - 2.7	9.4 - 7.4	15.4 - 12.2
35	11°53.8	11°55.7	11°21.2	3.5 - 2.8	9.5 - 7.5	15.5 - 12.3
36	11°54.0	11°56.0	11°21.5	3.6 - 2.9	9.6 - 7.6	15.6 - 12.3
37	11°54.3	11°56.2	11°21.7	3.7 - 2.9	9.7 - 7.7	15.7 - 12.4
38	11°54.5	11°56.5	11°22.0	3.8 - 3.0	9.8 - 7.8	15.8 - 12.5
39	11°54.7	11°56.7	11°22.2	3.9 - 3.1	9.9 - 7.8	15.9 - 12.6
40	11°55.0	11°57.0	11°22.4	4.0 - 3.2	10.0 - 7.9	16.0 - 12.7
41	11°55.2	11°57.2	11°22.7	4.1 - 3.2	10.1 - 8.0	16.1 - 12.7
42	11°55.5	11°57.5	11°22.9	4.2 - 3.3	10.2 - 8.1	16.2 - 12.8
43	11°55.8	11°57.7	11°23.1	4.3 - 3.4	10.3 - 8.2	16.3 - 12.9
44	11°56.0	11°58.0	11°23.4	4.4 - 3.5	10.4 - 8.2	16.4 - 13.0
45	11°56.3	11°58.2	11°23.6	4.5 - 3.6	10.5 - 8.3	16.5 - 13.1
46	11°56.5	11°58.5	11°23.9	4.6 - 3.6	10.6 - 8.4	16.6 - 13.1
47	11°56.7	11°58.7	11°24.1	4.7 - 3.7	10.7 - 8.5	16.7 - 13.2
48	11°57.0	11°59.0	11°24.3	4.8 - 3.8	10.8 - 8.6	16.8 - 13.3
49	11°57.3	11°59.2	11°24.6	4.9 - 3.9	10.9 - 8.6	16.9 - 13.4
50	11°57.5	11°59.5	11°24.8	5.0 - 4.0	11.0 - 8.7	17.0 - 13.5
51	11°57.8	11°59.7	11°25.1	5.1 - 4.0	11.1 - 8.8	17.1 - 13.5
52	11°58.0	12°00.0	11°25.3	5.2 - 4.1	11.2 - 8.9	17.2 - 13.6
53	11°58.2	12°00.2	11°25.5	5.3 - 4.2	11.3 - 8.9	17.3 - 13.7
54	11°58.5	12°00.5	11°25.8	5.4 - 4.3	11.4 - 9.0	17.4 - 13.8
55	11°58.7	12°00.7	11°26.0	5.5 - 4.4	11.5 - 9.1	17.5 - 13.9
56	11°59.0	12°01.0	11°26.2	5.6 - 4.4	11.6 - 9.2	17.6 - 13.9
57	11°59.3	12°01.2	11°26.5	5.7 - 4.5	11.7 - 9.3	17.7 - 14.0
58	11°59.5	12°01.5	11°26.7	5.8 - 4.6	11.8 - 9.3	17.8 - 14.1
59	11°59.8	12°01.7	11°27.0	5.9 - 4.7	11.9 - 9.4	17.9 - 14.2

Increments and Corrections

m 48	Sun Plan.	Aries	Moon	v and d corr		
0	12°00.0	12°02.0	11°27.2	0.0 - 0.0	6.0 - 4.8	12.0 - 9.7
1	12°00.2	12°02.2	11°27.4	0.1 - 0.1	6.1 - 4.9	12.1 - 9.8
2	12°00.5	12°02.5	11°27.7	0.2 - 0.2	6.2 - 5.0	12.2 - 9.9
3	12°00.7	12°02.7	11°27.9	0.3 - 0.2	6.3 - 5.1	12.3 - 9.9
4	12°01.0	12°03.0	11°28.2	0.4 - 0.3	6.4 - 5.2	12.4 - 10.0
5	12°01.3	12°03.2	11°28.4	0.5 - 0.4	6.5 - 5.3	12.5 - 10.1
6	12°01.5	12°03.5	11°28.6	0.6 - 0.5	6.6 - 5.3	12.6 - 10.2
7	12°01.8	12°03.7	11°28.9	0.7 - 0.6	6.7 - 5.4	12.7 - 10.3
8	12°02.0	12°04.0	11°29.1	0.8 - 0.6	6.8 - 5.5	12.8 - 10.3
9	12°02.2	12°04.2	11°29.3	0.9 - 0.7	6.9 - 5.6	12.9 - 10.4
10	12°02.5	12°04.5	11°29.6	1.0 - 0.8	7.0 - 5.7	13.0 - 10.5
11	12°02.7	12°04.7	11°29.8	1.1 - 0.9	7.1 - 5.7	13.1 - 10.6
12	12°03.0	12°05.0	11°30.1	1.2 - 1.0	7.2 - 5.8	13.2 - 10.7
13	12°03.3	12°05.2	11°30.3	1.3 - 1.1	7.3 - 5.9	13.3 - 10.8
14	12°03.5	12°05.5	11°30.5	1.4 - 1.1	7.4 - 6.0	13.4 - 10.8
15	12°03.8	12°05.7	11°30.8	1.5 - 1.2	7.5 - 6.1	13.5 - 10.9
16	12°04.0	12°06.0	11°31.0	1.6 - 1.3	7.6 - 6.1	13.6 - 11.0
17	12°04.2	12°06.2	11°31.3	1.7 - 1.4	7.7 - 6.2	13.7 - 11.1
18	12°04.5	12°06.5	11°31.5	1.8 - 1.5	7.8 - 6.3	13.8 - 11.2
19	12°04.8	12°06.7	11°31.7	1.9 - 1.5	7.9 - 6.4	13.9 - 11.2
20	12°05.0	12°07.0	11°32.0	2.0 - 1.6	8.0 - 6.5	14.0 - 11.3
21	12°05.3	12°07.2	11°32.2	2.1 - 1.7	8.1 - 6.5	14.1 - 11.4
22	12°05.5	12°07.5	11°32.4	2.2 - 1.8	8.2 - 6.6	14.2 - 11.5
23	12°05.7	12°07.7	11°32.7	2.3 - 1.9	8.3 - 6.7	14.3 - 11.6
24	12°06.0	12°08.0	11°32.9	2.4 - 1.9	8.4 - 6.8	14.4 - 11.6
25	12°06.2	12°08.2	11°33.2	2.5 - 2.0	8.5 - 6.9	14.5 - 11.7
26	12°06.5	12°08.5	11°33.4	2.6 - 2.1	8.6 - 7.0	14.6 - 11.8
27	12°06.8	12°08.7	11°33.6	2.7 - 2.2	8.7 - 7.0	14.7 - 11.9
28	12°07.0	12°09.0	11°33.9	2.8 - 2.3	8.8 - 7.1	14.8 - 12.0
29	12°07.3	12°09.2	11°34.1	2.9 - 2.3	8.9 - 7.2	14.9 - 12.0
30	12°07.5	12°09.5	11°34.4	3.0 - 2.4	9.0 - 7.3	15.0 - 12.1
31	12°07.7	12°09.7	11°34.6	3.1 - 2.5	9.1 - 7.4	15.1 - 12.2
32	12°08.0	12°10.0	11°34.8	3.2 - 2.6	9.2 - 7.4	15.2 - 12.3
33	12°08.2	12°10.2	11°35.1	3.3 - 2.7	9.3 - 7.5	15.3 - 12.4
34	12°08.5	12°10.5	11°35.3	3.4 - 2.7	9.4 - 7.6	15.4 - 12.4
35	12°08.8	12°10.7	11°35.6	3.5 - 2.8	9.5 - 7.7	15.5 - 12.5
36	12°09.0	12°11.0	11°35.8	3.6 - 2.9	9.6 - 7.8	15.6 - 12.6
37	12°09.3	12°11.2	11°36.0	3.7 - 3.0	9.7 - 7.8	15.7 - 12.7
38	12°09.5	12°11.5	11°36.3	3.8 - 3.1	9.8 - 7.9	15.8 - 12.8
39	12°09.7	12°11.7	11°36.5	3.9 - 3.2	9.9 - 8.0	15.9 - 12.9
40	12°10.0	12°12.0	11°36.7	4.0 - 3.2	10.0 - 8.1	16.0 - 12.9
41	12°10.2	12°12.2	11°37.0	4.1 - 3.3	10.1 - 8.2	16.1 - 13.0
42	12°10.5	12°12.5	11°37.2	4.2 - 3.4	10.2 - 8.2	16.2 - 13.1
43	12°10.8	12°12.7	11°37.5	4.3 - 3.5	10.3 - 8.3	16.3 - 13.2
44	12°11.0	12°13.0	11°37.7	4.4 - 3.6	10.4 - 8.4	16.4 - 13.3
45	12°11.3	12°13.2	11°37.9	4.5 - 3.6	10.5 - 8.5	16.5 - 13.3
46	12°11.5	12°13.5	11°38.2	4.6 - 3.7	10.6 - 8.6	16.6 - 13.4
47	12°11.7	12°13.8	11°38.4	4.7 - 3.8	10.7 - 8.6	16.7 - 13.5
48	12°12.0	12°14.0	11°38.7	4.8 - 3.9	10.8 - 8.7	16.8 - 13.6
49	12°12.3	12°14.3	11°38.9	4.9 - 4.0	10.9 - 8.8	16.9 - 13.7
50	12°12.5	12°14.5	11°39.1	5.0 - 4.0	11.0 - 8.9	17.0 - 13.7
51	12°12.8	12°14.8	11°39.4	5.1 - 4.1	11.1 - 9.0	17.1 - 13.8
52	12°13.0	12°15.0	11°39.6	5.2 - 4.2	11.2 - 9.1	17.2 - 13.9
53	12°13.2	12°15.3	11°39.8	5.3 - 4.3	11.3 - 9.1	17.3 - 14.0
54	12°13.5	12°15.5	11°40.1	5.4 - 4.4	11.4 - 9.2	17.4 - 14.1
55	12°13.7	12°15.8	11°40.3	5.5 - 4.4	11.5 - 9.3	17.5 - 14.1
56	12°14.0	12°16.0	11°40.6	5.6 - 4.5	11.6 - 9.4	17.6 - 14.2
57	12°14.3	12°16.3	11°40.8	5.7 - 4.6	11.7 - 9.5	17.7 - 14.3
58	12°14.5	12°16.5	11°41.0	5.8 - 4.7	11.8 - 9.5	17.8 - 14.4
59	12°14.8	12°16.8	11°41.3	5.9 - 4.8	11.9 - 9.6	17.9 - 14.5

m 49	Sun Plan.	Aries	Moon	v and d corr		
0	12°15.0	12°17.0	11°41.5	0.0 - 0.0	6.0 - 4.9	12.0 - 9.9
1	12°15.2	12°17.3	11°41.8	0.1 - 0.1	6.1 - 5.0	12.1 - 10.0
2	12°15.5	12°17.5	11°42.0	0.2 - 0.2	6.2 - 5.1	12.2 - 10.1
3	12°15.7	12°17.8	11°42.2	0.3 - 0.2	6.3 - 5.2	12.3 - 10.1
4	12°16.0	12°18.0	11°42.5	0.4 - 0.3	6.4 - 5.3	12.4 - 10.2
5	12°16.3	12°18.3	11°42.7	0.5 - 0.4	6.5 - 5.4	12.5 - 10.3
6	12°16.5	12°18.5	11°42.9	0.6 - 0.5	6.6 - 5.4	12.6 - 10.4
7	12°16.8	12°18.8	11°43.2	0.7 - 0.6	6.7 - 5.5	12.7 - 10.5
8	12°17.0	12°19.0	11°43.4	0.8 - 0.7	6.8 - 5.6	12.8 - 10.6
9	12°17.2	12°19.3	11°43.7	0.9 - 0.7	6.9 - 5.7	12.9 - 10.6
10	12°17.5	12°19.5	11°43.9	1.0 - 0.8	7.0 - 5.8	13.0 - 10.7
11	12°17.7	12°19.8	11°44.1	1.1 - 0.9	7.1 - 5.9	13.1 - 10.8
12	12°18.0	12°20.0	11°44.4	1.2 - 1.0	7.2 - 5.9	13.2 - 10.9
13	12°18.3	12°20.3	11°44.6	1.3 - 1.1	7.3 - 6.0	13.3 - 11.0
14	12°18.5	12°20.5	11°44.9	1.4 - 1.2	7.4 - 6.1	13.4 - 11.1
15	12°18.8	12°20.8	11°45.1	1.5 - 1.2	7.5 - 6.2	13.5 - 11.1
16	12°19.0	12°21.0	11°45.3	1.6 - 1.3	7.6 - 6.3	13.6 - 11.2
17	12°19.2	12°21.3	11°45.6	1.7 - 1.4	7.7 - 6.4	13.7 - 11.3
18	12°19.5	12°21.5	11°45.8	1.8 - 1.5	7.8 - 6.4	13.8 - 11.4
19	12°19.8	12°21.8	11°46.1	1.9 - 1.6	7.9 - 6.5	13.9 - 11.5
20	12°20.0	12°22.0	11°46.3	2.0 - 1.6	8.0 - 6.6	14.0 - 11.5
21	12°20.3	12°22.3	11°46.5	2.1 - 1.7	8.1 - 6.7	14.1 - 11.6
22	12°20.5	12°22.5	11°46.8	2.2 - 1.8	8.2 - 6.8	14.2 - 11.7
23	12°20.7	12°22.8	11°47.0	2.3 - 1.9	8.3 - 6.8	14.3 - 11.8
24	12°21.0	12°23.0	11°47.2	2.4 - 2.0	8.4 - 6.9	14.4 - 11.9
25	12°21.2	12°23.3	11°47.5	2.5 - 2.1	8.5 - 7.0	14.5 - 12.0
26	12°21.5	12°23.5	11°47.7	2.6 - 2.1	8.6 - 7.1	14.6 - 12.0
27	12°21.8	12°23.8	11°48.0	2.7 - 2.2	8.7 - 7.2	14.7 - 12.1
28	12°22.0	12°24.0	11°48.2	2.8 - 2.3	8.8 - 7.3	14.8 - 12.2
29	12°22.3	12°24.3	11°48.4	2.9 - 2.4	8.9 - 7.3	14.9 - 12.3
30	12°22.5	12°24.5	11°48.7	3.0 - 2.5	9.0 - 7.4	15.0 - 12.4
31	12°22.7	12°24.8	11°48.9	3.1 - 2.6	9.1 - 7.5	15.1 - 12.5
32	12°23.0	12°25.0	11°49.2	3.2 - 2.6	9.2 - 7.6	15.2 - 12.5
33	12°23.2	12°25.3	11°49.4	3.3 - 2.7	9.3 - 7.7	15.3 - 12.6
34	12°23.5	12°25.5	11°49.6	3.4 - 2.8	9.4 - 7.8	15.4 - 12.7
35	12°23.8	12°25.8	11°49.9	3.5 - 2.9	9.5 - 7.8	15.5 - 12.8
36	12°24.0	12°26.0	11°50.1	3.6 - 3.0	9.6 - 7.9	15.6 - 12.9
37	12°24.3	12°26.3	11°50.3	3.7 - 3.1	9.7 - 8.0	15.7 - 13.0
38	12°24.5	12°26.5	11°50.6	3.8 - 3.1	9.8 - 8.1	15.8 - 13.0
39	12°24.7	12°26.8	11°50.8	3.9 - 3.2	9.9 - 8.2	15.9 - 13.1
40	12°25.0	12°27.0	11°51.1	4.0 - 3.3	10.0 - 8.3	16.0 - 13.2
41	12°25.2	12°27.3	11°51.3	4.1 - 3.4	10.1 - 8.3	16.1 - 13.3
42	12°25.5	12°27.5	11°51.5	4.2 - 3.5	10.2 - 8.4	16.2 - 13.4
43	12°25.8	12°27.8	11°51.8	4.3 - 3.5	10.3 - 8.5	16.3 - 13.4
44	12°26.0	12°28.0	11°52.0	4.4 - 3.6	10.4 - 8.6	16.4 - 13.5
45	12°26.3	12°28.3	11°52.3	4.5 - 3.7	10.5 - 8.7	16.5 - 13.6
46	12°26.5	12°28.5	11°52.5	4.6 - 3.8	10.6 - 8.7	16.6 - 13.7
47	12°26.7	12°28.8	11°52.7	4.7 - 3.9	10.7 - 8.8	16.7 - 13.8
48	12°27.0	12°29.0	11°53.0	4.8 - 4.0	10.8 - 8.9	16.8 - 13.9
49	12°27.3	12°29.3	11°53.2	4.9 - 4.0	10.9 - 9.0	16.9 - 13.9
50	12°27.5	12°29.5	11°53.4	5.0 - 4.1	11.0 - 9.1	17.0 - 14.0
51	12°27.8	12°29.8	11°53.7	5.1 - 4.2	11.1 - 9.2	17.1 - 14.1
52	12°28.0	12°30.0	11°53.9	5.2 - 4.3	11.2 - 9.2	17.2 - 14.2
53	12°28.2	12°30.3	11°54.2	5.3 - 4.4	11.3 - 9.3	17.3 - 14.3
54	12°28.5	12°30.5	11°54.4	5.4 - 4.5	11.4 - 9.4	17.4 - 14.4
55	12°28.7	12°30.8	11°54.6	5.5 - 4.5	11.5 - 9.5	17.5 - 14.4
56	12°29.0	12°31.0	11°54.9	5.6 - 4.6	11.6 - 9.6	17.6 - 14.5
57	12°29.3	12°31.3	11°55.1	5.7 - 4.7	11.7 - 9.7	17.7 - 14.6
58	12°29.5	12°31.5	11°55.4	5.8 - 4.8	11.8 - 9.7	17.8 - 14.7
59	12°29.8	12°31.8	11°55.6	5.9 - 4.9	11.9 - 9.8	17.9 - 14.8

m 50	Sun Plan.	Aries	Moon	v and d corr		
0	12°30.0	12°32.1	11°55.8	0.0 - 0.0	6.0 - 5.0	12.0 - 10.1
1	12°30.2	12°32.3	11°56.1	0.1 - 0.1	6.1 - 5.1	12.1 - 10.2
2	12°30.5	12°32.6	11°56.3	0.2 - 0.2	6.2 - 5.2	12.2 - 10.3
3	12°30.7	12°32.8	11°56.5	0.3 - 0.3	6.3 - 5.3	12.3 - 10.4
4	12°31.0	12°33.1	11°56.8	0.4 - 0.3	6.4 - 5.4	12.4 - 10.4
5	12°31.3	12°33.3	11°57.0	0.5 - 0.4	6.5 - 5.5	12.5 - 10.5
6	12°31.5	12°33.6	11°57.3	0.6 - 0.5	6.6 - 5.6	12.6 - 10.6
7	12°31.8	12°33.8	11°57.5	0.7 - 0.6	6.7 - 5.6	12.7 - 10.7
8	12°32.0	12°34.1	11°57.7	0.8 - 0.7	6.8 - 5.7	12.8 - 10.8
9	12°32.2	12°34.3	11°58.0	0.9 - 0.8	6.9 - 5.8	12.9 - 10.9
10	12°32.5	12°34.6	11°58.2	1.0 - 0.8	7.0 - 5.9	13.0 - 10.9
11	12°32.7	12°34.8	11°58.5	1.1 - 0.9	7.1 - 6.0	13.1 - 11.0
12	12°33.0	12°35.1	11°58.7	1.2 - 1.0	7.2 - 6.1	13.2 - 11.1
13	12°33.3	12°35.3	11°58.9	1.3 - 1.1	7.3 - 6.1	13.3 - 11.2
14	12°33.5	12°35.6	11°59.2	1.4 - 1.2	7.4 - 6.2	13.4 - 11.3
15	12°33.8	12°35.8	11°59.4	1.5 - 1.3	7.5 - 6.3	13.5 - 11.4
16	12°34.0	12°36.1	11°59.7	1.6 - 1.3	7.6 - 6.4	13.6 - 11.4
17	12°34.2	12°36.3	11°59.9	1.7 - 1.4	7.7 - 6.5	13.7 - 11.5
18	12°34.5	12°36.6	12°00.1	1.8 - 1.5	7.8 - 6.6	13.8 - 11.6
19	12°34.8	12°36.8	12°00.4	1.9 - 1.6	7.9 - 6.6	13.9 - 11.7
20	12°35.0	12°37.1	12°00.6	2.0 - 1.7	8.0 - 6.7	14.0 - 11.8
21	12°35.3	12°37.3	12°00.8	2.1 - 1.8	8.1 - 6.8	14.1 - 11.9
22	12°35.5	12°37.6	12°01.1	2.2 - 1.9	8.2 - 6.9	14.2 - 12.0
23	12°35.7	12°37.8	12°01.3	2.3 - 1.9	8.3 - 7.0	14.3 - 12.0
24	12°36.0	12°38.1	12°01.6	2.4 - 2.0	8.4 - 7.1	14.4 - 12.1
25	12°36.2	12°38.3	12°01.8	2.5 - 2.1	8.5 - 7.2	14.5 - 12.2
26	12°36.5	12°38.6	12°02.0	2.6 - 2.2	8.6 - 7.2	14.6 - 12.3
27	12°36.8	12°38.8	12°02.3	2.7 - 2.3	8.7 - 7.3	14.7 - 12.4
28	12°37.0	12°39.1	12°02.5	2.8 - 2.4	8.8 - 7.4	14.8 - 12.5
29	12°37.3	12°39.3	12°02.8	2.9 - 2.4	8.9 - 7.5	14.9 - 12.5
30	12°37.5	12°39.6	12°03.0	3.0 - 2.5	9.0 - 7.6	15.0 - 12.6
31	12°37.7	12°39.8	12°03.2	3.1 - 2.6	9.1 - 7.7	15.1 - 12.7
32	12°38.0	12°40.1	12°03.5	3.2 - 2.7	9.2 - 7.7	15.2 - 12.8
33	12°38.2	12°40.3	12°03.7	3.3 - 2.8	9.3 - 7.8	15.3 - 12.9
34	12°38.5	12°40.6	12°03.9	3.4 - 2.9	9.4 - 7.9	15.4 - 13.0
35	12°38.8	12°40.8	12°04.2	3.5 - 2.9	9.5 - 8.0	15.5 - 13.0
36	12°39.0	12°41.1	12°04.4	3.6 - 3.0	9.6 - 8.1	15.6 - 13.1
37	12°39.3	12°41.3	12°04.7	3.7 - 3.1	9.7 - 8.2	15.7 - 13.2
38	12°39.5	12°41.6	12°04.9	3.8 - 3.2	9.8 - 8.2	15.8 - 13.3
39	12°39.7	12°41.8	12°05.1	3.9 - 3.3	9.9 - 8.3	15.9 - 13.4
40	12°40.0	12°42.1	12°05.4	4.0 - 3.4	10.0 - 8.4	16.0 - 13.5
41	12°40.2	12°42.3	12°05.6	4.1 - 3.5	10.1 - 8.5	16.1 - 13.6
42	12°40.5	12°42.6	12°05.9	4.2 - 3.5	10.2 - 8.6	16.2 - 13.6
43	12°40.8	12°42.8	12°06.1	4.3 - 3.6	10.3 - 8.7	16.3 - 13.7
44	12°41.0	12°43.1	12°06.3	4.4 - 3.7	10.4 - 8.8	16.4 - 13.8
45	12°41.3	12°43.3	12°06.6	4.5 - 3.8	10.5 - 8.8	16.5 - 13.9
46	12°41.5	12°43.6	12°06.8	4.6 - 3.9	10.6 - 8.9	16.6 - 14.0
47	12°41.7	12°43.8	12°07.0	4.7 - 4.0	10.7 - 9.0	16.7 - 14.1
48	12°42.0	12°44.1	12°07.3	4.8 - 4.0	10.8 - 9.1	16.8 - 14.1
49	12°42.3	12°44.3	12°07.5	4.9 - 4.1	10.9 - 9.2	16.9 - 14.2
50	12°42.5	12°44.6	12°07.8	5.0 - 4.2	11.0 - 9.3	17.0 - 14.3
51	12°42.8	12°44.8	12°08.0	5.1 - 4.3	11.1 - 9.3	17.1 - 14.4
52	12°43.0	12°45.1	12°08.2	5.2 - 4.4	11.2 - 9.4	17.2 - 14.5
53	12°43.2	12°45.3	12°08.5	5.3 - 4.5	11.3 - 9.5	17.3 - 14.6
54	12°43.5	12°45.6	12°08.7	5.4 - 4.5	11.4 - 9.6	17.4 - 14.6
55	12°43.7	12°45.8	12°09.0	5.5 - 4.6	11.5 - 9.7	17.5 - 14.7
56	12°44.0	12°46.1	12°09.2	5.6 - 4.7	11.6 - 9.8	17.6 - 14.8
57	12°44.3	12°46.3	12°09.4	5.7 - 4.8	11.7 - 9.8	17.7 - 14.9
58	12°44.5	12°46.6	12°09.7	5.8 - 4.9	11.8 - 9.9	17.8 - 15.0
59	12°44.8	12°46.8	12°09.9	5.9 - 5.0	11.9 - 10.0	17.9 - 15.1

Increments and Corrections

m 51	Sun Plan.	Aries	Moon	v and d corr		
0	12°45.0	12°47.1	12°10.1	0.0 - 0.0	6.0 - 5.1	12.0 - 10.3
1	12°45.2	12°47.3	12°10.4	0.1 - 0.1	6.1 - 5.2	12.1 - 10.4
2	12°45.5	12°47.6	12°10.6	0.2 - 0.2	6.2 - 5.3	12.2 - 10.5
3	12°45.7	12°47.8	12°10.9	0.3 - 0.3	6.3 - 5.4	12.3 - 10.6
4	12°46.0	12°48.1	12°11.1	0.4 - 0.3	6.4 - 5.5	12.4 - 10.6
5	12°46.3	12°48.3	12°11.3	0.5 - 0.4	6.5 - 5.6	12.5 - 10.7
6	12°46.5	12°48.6	12°11.6	0.6 - 0.5	6.6 - 5.7	12.6 - 10.8
7	12°46.8	12°48.8	12°11.8	0.7 - 0.6	6.7 - 5.8	12.7 - 10.9
8	12°47.0	12°49.1	12°12.1	0.8 - 0.7	6.8 - 5.8	12.8 - 11.0
9	12°47.2	12°49.3	12°12.3	0.9 - 0.8	6.9 - 5.9	12.9 - 11.1
10	12°47.5	12°49.6	12°12.5	1.0 - 0.9	7.0 - 6.0	13.0 - 11.2
11	12°47.7	12°49.8	12°12.8	1.1 - 0.9	7.1 - 6.1	13.1 - 11.2
12	12°48.0	12°50.1	12°13.0	1.2 - 1.0	7.2 - 6.2	13.2 - 11.3
13	12°48.3	12°50.3	12°13.3	1.3 - 1.1	7.3 - 6.3	13.3 - 11.4
14	12°48.5	12°50.6	12°13.5	1.4 - 1.2	7.4 - 6.4	13.4 - 11.5
15	12°48.8	12°50.9	12°13.7	1.5 - 1.3	7.5 - 6.4	13.5 - 11.6
16	12°49.0	12°51.1	12°14.0	1.6 - 1.4	7.6 - 6.5	13.6 - 11.7
17	12°49.2	12°51.4	12°14.2	1.7 - 1.5	7.7 - 6.6	13.7 - 11.8
18	12°49.5	12°51.6	12°14.4	1.8 - 1.5	7.8 - 6.7	13.8 - 11.8
19	12°49.8	12°51.9	12°14.7	1.9 - 1.6	7.9 - 6.8	13.9 - 11.9
20	12°50.0	12°52.1	12°14.9	2.0 - 1.7	8.0 - 6.9	14.0 - 12.0
21	12°50.3	12°52.4	12°15.2	2.1 - 1.8	8.1 - 7.0	14.1 - 12.1
22	12°50.5	12°52.6	12°15.4	2.2 - 1.9	8.2 - 7.0	14.2 - 12.2
23	12°50.7	12°52.9	12°15.6	2.3 - 2.0	8.3 - 7.1	14.3 - 12.3
24	12°51.0	12°53.1	12°15.9	2.4 - 2.1	8.4 - 7.2	14.4 - 12.4
25	12°51.2	12°53.4	12°16.1	2.5 - 2.1	8.5 - 7.3	14.5 - 12.4
26	12°51.5	12°53.6	12°16.4	2.6 - 2.2	8.6 - 7.4	14.6 - 12.5
27	12°51.8	12°53.9	12°16.6	2.7 - 2.3	8.7 - 7.5	14.7 - 12.6
28	12°52.0	12°54.1	12°16.8	2.8 - 2.4	8.8 - 7.6	14.8 - 12.7
29	12°52.3	12°54.4	12°17.1	2.9 - 2.5	8.9 - 7.6	14.9 - 12.8
30	12°52.5	12°54.6	12°17.3	3.0 - 2.6	9.0 - 7.7	15.0 - 12.9
31	12°52.7	12°54.9	12°17.5	3.1 - 2.7	9.1 - 7.8	15.1 - 13.0
32	12°53.0	12°55.1	12°17.8	3.2 - 2.7	9.2 - 7.9	15.2 - 13.0
33	12°53.2	12°55.4	12°18.0	3.3 - 2.8	9.3 - 8.0	15.3 - 13.1
34	12°53.5	12°55.6	12°18.3	3.4 - 2.9	9.4 - 8.1	15.4 - 13.2
35	12°53.8	12°55.9	12°18.5	3.5 - 3.0	9.5 - 8.2	15.5 - 13.3
36	12°54.0	12°56.1	12°18.7	3.6 - 3.1	9.6 - 8.2	15.6 - 13.4
37	12°54.3	12°56.4	12°19.0	3.7 - 3.2	9.7 - 8.3	15.7 - 13.5
38	12°54.5	12°56.6	12°19.2	3.8 - 3.3	9.8 - 8.4	15.8 - 13.6
39	12°54.7	12°56.9	12°19.5	3.9 - 3.3	9.9 - 8.5	15.9 - 13.6
40	12°55.0	12°57.1	12°19.7	4.0 - 3.4	10.0 - 8.6	16.0 - 13.7
41	12°55.2	12°57.4	12°19.9	4.1 - 3.5	10.1 - 8.7	16.1 - 13.8
42	12°55.5	12°57.6	12°20.2	4.2 - 3.6	10.2 - 8.8	16.2 - 13.9
43	12°55.8	12°57.9	12°20.4	4.3 - 3.7	10.3 - 8.8	16.3 - 14.0
44	12°56.0	12°58.1	12°20.6	4.4 - 3.8	10.4 - 8.9	16.4 - 14.1
45	12°56.3	12°58.4	12°20.9	4.5 - 3.9	10.5 - 9.0	16.5 - 14.2
46	12°56.5	12°58.6	12°21.1	4.6 - 3.9	10.6 - 9.1	16.6 - 14.2
47	12°56.7	12°58.9	12°21.4	4.7 - 4.0	10.7 - 9.2	16.7 - 14.3
48	12°57.0	12°59.1	12°21.6	4.8 - 4.1	10.8 - 9.3	16.8 - 14.4
49	12°57.3	12°59.4	12°21.8	4.9 - 4.2	10.9 - 9.4	16.9 - 14.5
50	12°57.5	12°59.6	12°22.1	5.0 - 4.3	11.0 - 9.4	17.0 - 14.6
51	12°57.8	12°59.9	12°22.3	5.1 - 4.4	11.1 - 9.5	17.1 - 14.7
52	12°58.0	13°00.1	12°22.6	5.2 - 4.5	11.2 - 9.6	17.2 - 14.8
53	12°58.2	13°00.4	12°22.8	5.3 - 4.5	11.3 - 9.7	17.3 - 14.8
54	12°58.5	13°00.6	12°23.0	5.4 - 4.6	11.4 - 9.8	17.4 - 14.9
55	12°58.7	13°00.9	12°23.3	5.5 - 4.7	11.5 - 9.9	17.5 - 15.0
56	12°59.0	13°01.1	12°23.5	5.6 - 4.8	11.6 - 10.0	17.6 - 15.1
57	12°59.3	13°01.4	12°23.8	5.7 - 4.9	11.7 - 10.0	17.7 - 15.2
58	12°59.5	13°01.6	12°24.0	5.8 - 5.0	11.8 - 10.1	17.8 - 15.3
59	12°59.8	13°01.9	12°24.2	5.9 - 5.1	11.9 - 10.2	17.9 - 15.4

m 52	Sun Plan.	Aries	Moon	v and d corr		
0	13°00.0	13°02.1	12°24.5	0.0 - 0.0	6.0 - 5.3	12.0 - 10.5
1	13°00.2	13°02.4	12°24.7	0.1 - 0.1	6.1 - 5.3	12.1 - 10.6
2	13°00.5	13°02.6	12°24.9	0.2 - 0.2	6.2 - 5.4	12.2 - 10.7
3	13°00.7	13°02.9	12°25.2	0.3 - 0.3	6.3 - 5.5	12.3 - 10.8
4	13°01.0	13°03.1	12°25.4	0.4 - 0.4	6.4 - 5.6	12.4 - 10.8
5	13°01.3	13°03.4	12°25.7	0.5 - 0.4	6.5 - 5.7	12.5 - 10.9
6	13°01.5	13°03.6	12°25.9	0.6 - 0.5	6.6 - 5.8	12.6 - 11.0
7	13°01.8	13°03.9	12°26.1	0.7 - 0.6	6.7 - 5.9	12.7 - 11.1
8	13°02.0	13°04.1	12°26.4	0.8 - 0.7	6.8 - 6.0	12.8 - 11.2
9	13°02.2	13°04.4	12°26.6	0.9 - 0.8	6.9 - 6.0	12.9 - 11.3
10	13°02.5	13°04.6	12°26.9	1.0 - 0.9	7.0 - 6.1	13.0 - 11.4
11	13°02.7	13°04.9	12°27.1	1.1 - 1.0	7.1 - 6.2	13.1 - 11.5
12	13°03.0	13°05.1	12°27.3	1.2 - 1.1	7.2 - 6.3	13.2 - 11.5
13	13°03.3	13°05.4	12°27.6	1.3 - 1.1	7.3 - 6.4	13.3 - 11.6
14	13°03.5	13°05.6	12°27.8	1.4 - 1.2	7.4 - 6.5	13.4 - 11.7
15	13°03.8	13°05.9	12°28.0	1.5 - 1.3	7.5 - 6.6	13.5 - 11.8
16	13°04.0	13°06.1	12°28.3	1.6 - 1.4	7.6 - 6.6	13.6 - 11.9
17	13°04.2	13°06.4	12°28.5	1.7 - 1.5	7.7 - 6.7	13.7 - 12.0
18	13°04.5	13°06.6	12°28.8	1.8 - 1.6	7.8 - 6.8	13.8 - 12.1
19	13°04.8	13°06.9	12°29.0	1.9 - 1.7	7.9 - 6.9	13.9 - 12.2
20	13°05.0	13°07.1	12°29.2	2.0 - 1.8	8.0 - 7.0	14.0 - 12.3
21	13°05.3	13°07.4	12°29.5	2.1 - 1.8	8.1 - 7.1	14.1 - 12.3
22	13°05.5	13°07.6	12°29.7	2.2 - 1.9	8.2 - 7.2	14.2 - 12.4
23	13°05.7	13°07.9	12°30.0	2.3 - 2.0	8.3 - 7.3	14.3 - 12.5
24	13°06.0	13°08.1	12°30.2	2.4 - 2.1	8.4 - 7.4	14.4 - 12.6
25	13°06.2	13°08.4	12°30.4	2.5 - 2.2	8.5 - 7.4	14.5 - 12.7
26	13°06.5	13°08.6	12°30.7	2.6 - 2.3	8.6 - 7.5	14.6 - 12.8
27	13°06.8	13°08.9	12°30.9	2.7 - 2.4	8.7 - 7.6	14.7 - 12.9
28	13°07.0	13°09.2	12°31.1	2.8 - 2.5	8.8 - 7.7	14.8 - 13.0
29	13°07.3	13°09.4	12°31.4	2.9 - 2.5	8.9 - 7.8	14.9 - 13.0
30	13°07.5	13°09.7	12°31.6	3.0 - 2.6	9.0 - 7.9	15.0 - 13.1
31	13°07.7	13°09.9	12°31.9	3.1 - 2.7	9.1 - 8.0	15.1 - 13.2
32	13°08.0	13°10.2	12°32.1	3.2 - 2.8	9.2 - 8.0	15.2 - 13.3
33	13°08.2	13°10.4	12°32.3	3.3 - 2.9	9.3 - 8.1	15.3 - 13.4
34	13°08.5	13°10.7	12°32.6	3.4 - 3.0	9.4 - 8.2	15.4 - 13.5
35	13°08.8	13°10.9	12°32.8	3.5 - 3.1	9.5 - 8.3	15.5 - 13.6
36	13°09.0	13°11.2	12°33.1	3.6 - 3.1	9.6 - 8.4	15.6 - 13.7
37	13°09.3	13°11.4	12°33.3	3.7 - 3.2	9.7 - 8.5	15.7 - 13.7
38	13°09.5	13°11.7	12°33.5	3.8 - 3.3	9.8 - 8.6	15.8 - 13.8
39	13°09.7	13°11.9	12°33.8	3.9 - 3.4	9.9 - 8.7	15.9 - 13.9
40	13°10.0	13°12.2	12°34.0	4.0 - 3.5	10.0 - 8.8	16.0 - 14.0
41	13°10.2	13°12.4	12°34.2	4.1 - 3.6	10.1 - 8.8	16.1 - 14.1
42	13°10.5	13°12.7	12°34.5	4.2 - 3.7	10.2 - 8.9	16.2 - 14.2
43	13°10.8	13°12.9	12°34.7	4.3 - 3.8	10.3 - 9.0	16.3 - 14.3
44	13°11.0	13°13.2	12°35.0	4.4 - 3.9	10.4 - 9.1	16.4 - 14.3
45	13°11.3	13°13.4	12°35.2	4.5 - 3.9	10.5 - 9.2	16.5 - 14.4
46	13°11.5	13°13.7	12°35.4	4.6 - 4.0	10.6 - 9.3	16.6 - 14.5
47	13°11.7	13°13.9	12°35.7	4.7 - 4.1	10.7 - 9.4	16.7 - 14.6
48	13°12.0	13°14.2	12°35.9	4.8 - 4.2	10.8 - 9.5	16.8 - 14.7
49	13°12.3	13°14.4	12°36.2	4.9 - 4.3	10.9 - 9.5	16.9 - 14.8
50	13°12.5	13°14.7	12°36.4	5.0 - 4.4	11.0 - 9.6	17.0 - 14.9
51	13°12.8	13°14.9	12°36.6	5.1 - 4.5	11.1 - 9.7	17.1 - 15.0
52	13°13.0	13°15.2	12°36.9	5.2 - 4.5	11.2 - 9.8	17.2 - 15.0
53	13°13.2	13°15.4	12°37.1	5.3 - 4.6	11.3 - 9.9	17.3 - 15.1
54	13°13.5	13°15.7	12°37.4	5.4 - 4.7	11.4 - 10.0	17.4 - 15.2
55	13°13.7	13°15.9	12°37.6	5.5 - 4.8	11.5 - 10.1	17.5 - 15.3
56	13°14.0	13°16.2	12°37.8	5.6 - 4.9	11.6 - 10.2	17.6 - 15.4
57	13°14.3	13°16.4	12°38.1	5.7 - 5.0	11.7 - 10.2	17.7 - 15.5
58	13°14.5	13°16.7	12°38.3	5.8 - 5.1	11.8 - 10.3	17.8 - 15.6
59	13°14.8	13°16.9	12°38.5	5.9 - 5.2	11.9 - 10.4	17.9 - 15.7

m 53	Sun Plan.	Aries	Moon	v and d corr		
0	13°15.0	13°17.2	12°38.8	0.0 - 0.0	6.0 - 5.4	12.0 - 10.7
1	13°15.2	13°17.4	12°39.0	0.1 - 0.1	6.1 - 5.4	12.1 - 10.8
2	13°15.5	13°17.7	12°39.3	0.2 - 0.2	6.2 - 5.5	12.2 - 10.9
3	13°15.7	13°17.9	12°39.5	0.3 - 0.3	6.3 - 5.6	12.3 - 11.0
4	13°16.0	13°18.2	12°39.7	0.4 - 0.4	6.4 - 5.7	12.4 - 11.1
5	13°16.3	13°18.4	12°40.0	0.5 - 0.4	6.5 - 5.8	12.5 - 11.1
6	13°16.5	13°18.7	12°40.2	0.6 - 0.5	6.6 - 5.9	12.6 - 11.2
7	13°16.8	13°18.9	12°40.5	0.7 - 0.6	6.7 - 6.0	12.7 - 11.3
8	13°17.0	13°19.2	12°40.7	0.8 - 0.7	6.8 - 6.1	12.8 - 11.4
9	13°17.2	13°19.4	12°40.9	0.9 - 0.8	6.9 - 6.2	12.9 - 11.5
10	13°17.5	13°19.7	12°41.2	1.0 - 0.9	7.0 - 6.2	13.0 - 11.6
11	13°17.7	13°19.9	12°41.4	1.1 - 1.0	7.1 - 6.3	13.1 - 11.7
12	13°18.0	13°20.2	12°41.6	1.2 - 1.1	7.2 - 6.4	13.2 - 11.8
13	13°18.3	13°20.4	12°41.9	1.3 - 1.2	7.3 - 6.5	13.3 - 11.9
14	13°18.5	13°20.7	12°42.1	1.4 - 1.2	7.4 - 6.6	13.4 - 11.9
15	13°18.8	13°20.9	12°42.4	1.5 - 1.3	7.5 - 6.7	13.5 - 12.0
16	13°19.0	13°21.2	12°42.6	1.6 - 1.4	7.6 - 6.8	13.6 - 12.1
17	13°19.2	13°21.4	12°42.8	1.7 - 1.5	7.7 - 6.9	13.7 - 12.2
18	13°19.5	13°21.7	12°43.1	1.8 - 1.6	7.8 - 7.0	13.8 - 12.3
19	13°19.8	13°21.9	12°43.3	1.9 - 1.7	7.9 - 7.0	13.9 - 12.4
20	13°20.0	13°22.2	12°43.6	2.0 - 1.8	8.0 - 7.1	14.0 - 12.5
21	13°20.3	13°22.4	12°43.8	2.1 - 1.9	8.1 - 7.2	14.1 - 12.6
22	13°20.5	13°22.7	12°44.0	2.2 - 2.0	8.2 - 7.3	14.2 - 12.7
23	13°20.7	13°22.9	12°44.3	2.3 - 2.1	8.3 - 7.4	14.3 - 12.8
24	13°21.0	13°23.2	12°44.5	2.4 - 2.1	8.4 - 7.5	14.4 - 12.8
25	13°21.2	13°23.4	12°44.7	2.5 - 2.2	8.5 - 7.6	14.5 - 12.9
26	13°21.5	13°23.7	12°45.0	2.6 - 2.3	8.6 - 7.7	14.6 - 13.0
27	13°21.8	13°23.9	12°45.2	2.7 - 2.4	8.7 - 7.8	14.7 - 13.1
28	13°22.0	13°24.2	12°45.5	2.8 - 2.5	8.8 - 7.8	14.8 - 13.2
29	13°22.3	13°24.4	12°45.7	2.9 - 2.6	8.9 - 7.9	14.9 - 13.3
30	13°22.5	13°24.7	12°45.9	3.0 - 2.7	9.0 - 8.0	15.0 - 13.4
31	13°22.7	13°24.9	12°46.2	3.1 - 2.8	9.1 - 8.1	15.1 - 13.5
32	13°23.0	13°25.2	12°46.4	3.2 - 2.9	9.2 - 8.2	15.2 - 13.6
33	13°23.2	13°25.4	12°46.7	3.3 - 2.9	9.3 - 8.3	15.3 - 13.6
34	13°23.5	13°25.7	12°46.9	3.4 - 3.0	9.4 - 8.4	15.4 - 13.7
35	13°23.8	13°25.9	12°47.1	3.5 - 3.1	9.5 - 8.5	15.5 - 13.8
36	13°24.0	13°26.2	12°47.4	3.6 - 3.2	9.6 - 8.6	15.6 - 13.9
37	13°24.3	13°26.4	12°47.6	3.7 - 3.3	9.7 - 8.6	15.7 - 14.0
38	13°24.5	13°26.7	12°47.9	3.8 - 3.4	9.8 - 8.7	15.8 - 14.1
39	13°24.7	13°26.9	12°48.1	3.9 - 3.5	9.9 - 8.8	15.9 - 14.2
40	13°25.0	13°27.2	12°48.3	4.0 - 3.6	10.0 - 8.9	16.0 - 14.3
41	13°25.2	13°27.5	12°48.6	4.1 - 3.7	10.1 - 9.0	16.1 - 14.4
42	13°25.5	13°27.7	12°48.8	4.2 - 3.7	10.2 - 9.1	16.2 - 14.4
43	13°25.8	13°28.0	12°49.0	4.3 - 3.8	10.3 - 9.2	16.3 - 14.5
44	13°26.0	13°28.2	12°49.3	4.4 - 3.9	10.4 - 9.3	16.4 - 14.6
45	13°26.3	13°28.5	12°49.5	4.5 - 4.0	10.5 - 9.4	16.5 - 14.7
46	13°26.5	13°28.7	12°49.8	4.6 - 4.1	10.6 - 9.5	16.6 - 14.8
47	13°26.7	13°29.0	12°50.0	4.7 - 4.2	10.7 - 9.5	16.7 - 14.9
48	13°27.0	13°29.2	12°50.2	4.8 - 4.3	10.8 - 9.6	16.8 - 15.0
49	13°27.3	13°29.5	12°50.5	4.9 - 4.4	10.9 - 9.7	16.9 - 15.1
50	13°27.5	13°29.7	12°50.7	5.0 - 4.5	11.0 - 9.8	17.0 - 15.2
51	13°27.8	13°30.0	12°51.0	5.1 - 4.5	11.1 - 9.9	17.1 - 15.2
52	13°28.0	13°30.2	12°51.2	5.2 - 4.6	11.2 - 10.0	17.2 - 15.3
53	13°28.2	13°30.5	12°51.4	5.3 - 4.7	11.3 - 10.1	17.3 - 15.4
54	13°28.5	13°30.7	12°51.7	5.4 - 4.8	11.4 - 10.2	17.4 - 15.5
55	13°28.7	13°31.0	12°51.9	5.5 - 4.9	11.5 - 10.3	17.5 - 15.6
56	13°29.0	13°31.2	12°52.1	5.6 - 5.0	11.6 - 10.3	17.6 - 15.7
57	13°29.3	13°31.5	12°52.4	5.7 - 5.1	11.7 - 10.4	17.7 - 15.8
58	13°29.5	13°31.7	12°52.6	5.8 - 5.2	11.8 - 10.5	17.8 - 15.9
59	13°29.8	13°32.0	12°52.9	5.9 - 5.3	11.9 - 10.6	17.9 - 16.0

Increments and Corrections

m 54	Sun Plan.	Aries	Moon	v and d corr		
0	13°30.0	13°32.2	12°53.1	0.0 - 0.0	6.0 - 5.5	12.0 - 10.9
1	13°30.2	13°32.5	12°53.3	0.1 - 0.1	6.1 - 5.5	12.1 - 11.0
2	13°30.5	13°32.7	12°53.6	0.2 - 0.2	6.2 - 5.6	12.2 - 11.1
3	13°30.7	13°33.0	12°53.8	0.3 - 0.3	6.3 - 5.7	12.3 - 11.2
4	13°31.0	13°33.2	12°54.1	0.4 - 0.4	6.4 - 5.8	12.4 - 11.3
5	13°31.3	13°33.5	12°54.3	0.5 - 0.5	6.5 - 5.9	12.5 - 11.4
6	13°31.5	13°33.7	12°54.5	0.6 - 0.5	6.6 - 6.0	12.6 - 11.4
7	13°31.8	13°34.0	12°54.8	0.7 - 0.6	6.7 - 6.1	12.7 - 11.5
8	13°32.0	13°34.2	12°55.0	0.8 - 0.7	6.8 - 6.2	12.8 - 11.6
9	13°32.2	13°34.5	12°55.2	0.9 - 0.8	6.9 - 6.3	12.9 - 11.7
10	13°32.5	13°34.7	12°55.5	1.0 - 0.9	7.0 - 6.4	13.0 - 11.8
11	13°32.7	13°35.0	12°55.7	1.1 - 1.0	7.1 - 6.4	13.1 - 11.9
12	13°33.0	13°35.2	12°56.0	1.2 - 1.1	7.2 - 6.5	13.2 - 12.0
13	13°33.3	13°35.5	12°56.2	1.3 - 1.2	7.3 - 6.6	13.3 - 12.1
14	13°33.5	13°35.7	12°56.4	1.4 - 1.3	7.4 - 6.7	13.4 - 12.2
15	13°33.8	13°36.0	12°56.7	1.5 - 1.4	7.5 - 6.8	13.5 - 12.3
16	13°34.0	13°36.2	12°56.9	1.6 - 1.5	7.6 - 6.9	13.6 - 12.4
17	13°34.2	13°36.5	12°57.2	1.7 - 1.5	7.7 - 7.0	13.7 - 12.4
18	13°34.5	13°36.7	12°57.4	1.8 - 1.6	7.8 - 7.1	13.8 - 12.5
19	13°34.8	13°37.0	12°57.6	1.9 - 1.7	7.9 - 7.2	13.9 - 12.6
20	13°35.0	13°37.2	12°57.9	2.0 - 1.8	8.0 - 7.3	14.0 - 12.7
21	13°35.3	13°37.5	12°58.1	2.1 - 1.9	8.1 - 7.4	14.1 - 12.8
22	13°35.5	13°37.7	12°58.3	2.2 - 2.0	8.2 - 7.4	14.2 - 12.9
23	13°35.7	13°38.0	12°58.6	2.3 - 2.1	8.3 - 7.5	14.3 - 13.0
24	13°36.0	13°38.2	12°58.8	2.4 - 2.2	8.4 - 7.6	14.4 - 13.1
25	13°36.2	13°38.5	12°59.1	2.5 - 2.3	8.5 - 7.7	14.5 - 13.2
26	13°36.5	13°38.7	12°59.3	2.6 - 2.4	8.6 - 7.8	14.6 - 13.3
27	13°36.8	13°39.0	12°59.5	2.7 - 2.5	8.7 - 7.9	14.7 - 13.4
28	13°37.0	13°39.2	12°59.8	2.8 - 2.5	8.8 - 8.0	14.8 - 13.4
29	13°37.3	13°39.5	13°00.0	2.9 - 2.6	8.9 - 8.1	14.9 - 13.5
30	13°37.5	13°39.7	13°00.3	3.0 - 2.7	9.0 - 8.2	15.0 - 13.6
31	13°37.7	13°40.0	13°00.5	3.1 - 2.8	9.1 - 8.3	15.1 - 13.7
32	13°38.0	13°40.2	13°00.7	3.2 - 2.9	9.2 - 8.4	15.2 - 13.8
33	13°38.2	13°40.5	13°01.0	3.3 - 3.0	9.3 - 8.4	15.3 - 13.9
34	13°38.5	13°40.7	13°01.2	3.4 - 3.1	9.4 - 8.5	15.4 - 14.0
35	13°38.8	13°41.0	13°01.5	3.5 - 3.2	9.5 - 8.6	15.5 - 14.1
36	13°39.0	13°41.2	13°01.7	3.6 - 3.3	9.6 - 8.7	15.6 - 14.2
37	13°39.3	13°41.5	13°01.9	3.7 - 3.4	9.7 - 8.8	15.7 - 14.3
38	13°39.5	13°41.7	13°02.2	3.8 - 3.5	9.8 - 8.9	15.8 - 14.4
39	13°39.7	13°42.0	13°02.4	3.9 - 3.5	9.9 - 9.0	15.9 - 14.4
40	13°40.0	13°42.2	13°02.6	4.0 - 3.6	10.0 - 9.1	16.0 - 14.5
41	13°40.2	13°42.5	13°02.9	4.1 - 3.7	10.1 - 9.2	16.1 - 14.6
42	13°40.5	13°42.7	13°03.1	4.2 - 3.8	10.2 - 9.3	16.2 - 14.7
43	13°40.8	13°43.0	13°03.4	4.3 - 3.9	10.3 - 9.4	16.3 - 14.8
44	13°41.0	13°43.2	13°03.6	4.4 - 4.0	10.4 - 9.4	16.4 - 14.9
45	13°41.3	13°43.5	13°03.8	4.5 - 4.1	10.5 - 9.5	16.5 - 15.0
46	13°41.5	13°43.7	13°04.1	4.6 - 4.2	10.6 - 9.6	16.6 - 15.1
47	13°41.7	13°44.0	13°04.3	4.7 - 4.3	10.7 - 9.7	16.7 - 15.2
48	13°42.0	13°44.2	13°04.6	4.8 - 4.4	10.8 - 9.8	16.8 - 15.3
49	13°42.3	13°44.5	13°04.8	4.9 - 4.5	10.9 - 9.9	16.9 - 15.4
50	13°42.5	13°44.7	13°05.0	5.0 - 4.5	11.0 - 10.0	17.0 - 15.4
51	13°42.8	13°45.0	13°05.3	5.1 - 4.6	11.1 - 10.1	17.1 - 15.5
52	13°43.0	13°45.2	13°05.5	5.2 - 4.7	11.2 - 10.2	17.2 - 15.6
53	13°43.2	13°45.5	13°05.7	5.3 - 4.8	11.3 - 10.3	17.3 - 15.7
54	13°43.5	13°45.8	13°06.0	5.4 - 4.9	11.4 - 10.4	17.4 - 15.8
55	13°43.7	13°46.0	13°06.2	5.5 - 5.0	11.5 - 10.4	17.5 - 15.9
56	13°44.0	13°46.3	13°06.5	5.6 - 5.1	11.6 - 10.5	17.6 - 16.0
57	13°44.3	13°46.5	13°06.7	5.7 - 5.2	11.7 - 10.6	17.7 - 16.1
58	13°44.5	13°46.8	13°06.9	5.8 - 5.3	11.8 - 10.7	17.8 - 16.2
59	13°44.8	13°47.0	13°07.2	5.9 - 5.4	11.9 - 10.8	17.9 - 16.3

m 55	Sun Plan.	Aries	Moon	v and d corr		
0	13°45.0	13°47.3	13°07.4	0.0 - 0.0	6.0 - 5.6	12.0 - 11.1
1	13°45.2	13°47.5	13°07.7	0.1 - 0.1	6.1 - 5.6	12.1 - 11.2
2	13°45.5	13°47.8	13°07.9	0.2 - 0.2	6.2 - 5.7	12.2 - 11.3
3	13°45.7	13°48.0	13°08.1	0.3 - 0.3	6.3 - 5.8	12.3 - 11.4
4	13°46.0	13°48.3	13°08.4	0.4 - 0.4	6.4 - 5.9	12.4 - 11.5
5	13°46.3	13°48.5	13°08.6	0.5 - 0.5	6.5 - 6.0	12.5 - 11.6
6	13°46.5	13°48.8	13°08.8	0.6 - 0.6	6.6 - 6.1	12.6 - 11.7
7	13°46.8	13°49.0	13°09.1	0.7 - 0.6	6.7 - 6.2	12.7 - 11.7
8	13°47.0	13°49.3	13°09.3	0.8 - 0.7	6.8 - 6.3	12.8 - 11.8
9	13°47.2	13°49.5	13°09.6	0.9 - 0.8	6.9 - 6.4	12.9 - 11.9
10	13°47.5	13°49.8	13°09.8	1.0 - 0.9	7.0 - 6.5	13.0 - 12.0
11	13°47.7	13°50.0	13°10.0	1.1 - 1.0	7.1 - 6.6	13.1 - 12.1
12	13°48.0	13°50.3	13°10.3	1.2 - 1.1	7.2 - 6.7	13.2 - 12.2
13	13°48.3	13°50.5	13°10.5	1.3 - 1.2	7.3 - 6.8	13.3 - 12.3
14	13°48.5	13°50.8	13°10.8	1.4 - 1.3	7.4 - 6.8	13.4 - 12.4
15	13°48.8	13°51.0	13°11.0	1.5 - 1.4	7.5 - 6.9	13.5 - 12.5
16	13°49.0	13°51.3	13°11.2	1.6 - 1.5	7.6 - 7.0	13.6 - 12.6
17	13°49.2	13°51.5	13°11.5	1.7 - 1.6	7.7 - 7.1	13.7 - 12.7
18	13°49.5	13°51.8	13°11.7	1.8 - 1.7	7.8 - 7.2	13.8 - 12.8
19	13°49.8	13°52.0	13°12.0	1.9 - 1.8	7.9 - 7.3	13.9 - 12.9
20	13°50.0	13°52.3	13°12.2	2.0 - 1.9	8.0 - 7.4	14.0 - 13.0
21	13°50.3	13°52.5	13°12.4	2.1 - 1.9	8.1 - 7.5	14.1 - 13.0
22	13°50.5	13°52.8	13°12.7	2.2 - 2.0	8.2 - 7.6	14.2 - 13.1
23	13°50.7	13°53.0	13°12.9	2.3 - 2.1	8.3 - 7.7	14.3 - 13.2
24	13°51.0	13°53.3	13°13.1	2.4 - 2.2	8.4 - 7.8	14.4 - 13.3
25	13°51.2	13°53.5	13°13.4	2.5 - 2.3	8.5 - 7.9	14.5 - 13.4
26	13°51.5	13°53.8	13°13.6	2.6 - 2.4	8.6 - 8.0	14.6 - 13.5
27	13°51.8	13°54.0	13°13.9	2.7 - 2.5	8.7 - 8.0	14.7 - 13.6
28	13°52.0	13°54.3	13°14.1	2.8 - 2.6	8.8 - 8.1	14.8 - 13.7
29	13°52.3	13°54.5	13°14.3	2.9 - 2.7	8.9 - 8.2	14.9 - 13.8
30	13°52.5	13°54.8	13°14.6	3.0 - 2.8	9.0 - 8.3	15.0 - 13.9
31	13°52.7	13°55.0	13°14.8	3.1 - 2.9	9.1 - 8.4	15.1 - 14.0
32	13°53.0	13°55.3	13°15.1	3.2 - 3.0	9.2 - 8.5	15.2 - 14.1
33	13°53.2	13°55.5	13°15.3	3.3 - 3.1	9.3 - 8.6	15.3 - 14.2
34	13°53.5	13°55.8	13°15.5	3.4 - 3.1	9.4 - 8.7	15.4 - 14.2
35	13°53.8	13°56.0	13°15.8	3.5 - 3.2	9.5 - 8.8	15.5 - 14.3
36	13°54.0	13°56.3	13°16.0	3.6 - 3.3	9.6 - 8.9	15.6 - 14.4
37	13°54.3	13°56.5	13°16.2	3.7 - 3.4	9.7 - 9.0	15.7 - 14.5
38	13°54.5	13°56.8	13°16.5	3.8 - 3.5	9.8 - 9.1	15.8 - 14.6
39	13°54.7	13°57.0	13°16.7	3.9 - 3.6	9.9 - 9.2	15.9 - 14.7
40	13°55.0	13°57.3	13°17.0	4.0 - 3.7	10.0 - 9.3	16.0 - 14.8
41	13°55.2	13°57.5	13°17.2	4.1 - 3.8	10.1 - 9.3	16.1 - 14.9
42	13°55.5	13°57.8	13°17.4	4.2 - 3.9	10.2 - 9.4	16.2 - 15.0
43	13°55.8	13°58.0	13°17.7	4.3 - 4.0	10.3 - 9.5	16.3 - 15.1
44	13°56.0	13°58.3	13°17.9	4.4 - 4.1	10.4 - 9.6	16.4 - 15.2
45	13°56.3	13°58.5	13°18.2	4.5 - 4.2	10.5 - 9.7	16.5 - 15.3
46	13°56.5	13°58.8	13°18.4	4.6 - 4.3	10.6 - 9.8	16.6 - 15.4
47	13°56.7	13°59.0	13°18.6	4.7 - 4.3	10.7 - 9.9	16.7 - 15.4
48	13°57.0	13°59.3	13°18.9	4.8 - 4.4	10.8 - 10.0	16.8 - 15.5
49	13°57.3	13°59.5	13°19.1	4.9 - 4.5	10.9 - 10.1	16.9 - 15.6
50	13°57.5	13°59.8	13°19.3	5.0 - 4.6	11.0 - 10.2	17.0 - 15.7
51	13°57.8	14°00.0	13°19.6	5.1 - 4.7	11.1 - 10.3	17.1 - 15.8
52	13°58.0	14°00.3	13°19.8	5.2 - 4.8	11.2 - 10.4	17.2 - 15.9
53	13°58.2	14°00.5	13°20.1	5.3 - 4.9	11.3 - 10.5	17.3 - 16.0
54	13°58.5	14°00.8	13°20.3	5.4 - 5.0	11.4 - 10.5	17.4 - 16.1
55	13°58.7	14°01.0	13°20.5	5.5 - 5.1	11.5 - 10.6	17.5 - 16.2
56	13°59.0	14°01.3	13°20.8	5.6 - 5.2	11.6 - 10.7	17.6 - 16.3
57	13°59.3	14°01.5	13°21.0	5.7 - 5.3	11.7 - 10.8	17.7 - 16.4
58	13°59.5	14°01.8	13°21.3	5.8 - 5.4	11.8 - 10.9	17.8 - 16.5
59	13°59.8	14°02.0	13°21.5	5.9 - 5.5	11.9 - 11.0	17.9 - 16.6

m 56	Sun Plan.	Aries	Moon	v and d corr		
0	14°00.0	14°02.3	13°21.7	0.0 - 0.0	6.0 - 5.7	12.0 - 11.3
1	14°00.2	14°02.5	13°22.0	0.1 - 0.1	6.1 - 5.7	12.1 - 11.4
2	14°00.5	14°02.8	13°22.2	0.2 - 0.2	6.2 - 5.8	12.2 - 11.5
3	14°00.7	14°03.0	13°22.4	0.3 - 0.3	6.3 - 5.9	12.3 - 11.6
4	14°01.0	14°03.3	13°22.7	0.4 - 0.4	6.4 - 6.0	12.4 - 11.7
5	14°01.3	14°03.5	13°22.9	0.5 - 0.5	6.5 - 6.1	12.5 - 11.8
6	14°01.5	14°03.8	13°23.2	0.6 - 0.6	6.6 - 6.2	12.6 - 11.9
7	14°01.8	14°04.1	13°23.4	0.7 - 0.7	6.7 - 6.3	12.7 - 12.0
8	14°02.0	14°04.3	13°23.6	0.8 - 0.8	6.8 - 6.4	12.8 - 12.1
9	14°02.2	14°04.6	13°23.9	0.9 - 0.8	6.9 - 6.5	12.9 - 12.1
10	14°02.5	14°04.8	13°24.1	1.0 - 0.9	7.0 - 6.6	13.0 - 12.2
11	14°02.7	14°05.1	13°24.4	1.1 - 1.0	7.1 - 6.7	13.1 - 12.3
12	14°03.0	14°05.3	13°24.6	1.2 - 1.1	7.2 - 6.8	13.2 - 12.4
13	14°03.3	14°05.6	13°24.8	1.3 - 1.2	7.3 - 6.9	13.3 - 12.5
14	14°03.5	14°05.8	13°25.1	1.4 - 1.3	7.4 - 7.0	13.4 - 12.6
15	14°03.8	14°06.1	13°25.3	1.5 - 1.4	7.5 - 7.1	13.5 - 12.7
16	14°04.0	14°06.3	13°25.6	1.6 - 1.5	7.6 - 7.2	13.6 - 12.8
17	14°04.2	14°06.6	13°25.8	1.7 - 1.6	7.7 - 7.3	13.7 - 12.9
18	14°04.5	14°06.8	13°26.0	1.8 - 1.7	7.8 - 7.3	13.8 - 13.0
19	14°04.8	14°07.1	13°26.3	1.9 - 1.8	7.9 - 7.4	13.9 - 13.1
20	14°05.0	14°07.3	13°26.5	2.0 - 1.9	8.0 - 7.5	14.0 - 13.2
21	14°05.3	14°07.6	13°26.7	2.1 - 2.0	8.1 - 7.6	14.1 - 13.3
22	14°05.5	14°07.8	13°27.0	2.2 - 2.1	8.2 - 7.7	14.2 - 13.4
23	14°05.7	14°08.1	13°27.2	2.3 - 2.2	8.3 - 7.8	14.3 - 13.5
24	14°06.0	14°08.3	13°27.5	2.4 - 2.3	8.4 - 7.9	14.4 - 13.6
25	14°06.2	14°08.6	13°27.7	2.5 - 2.4	8.5 - 8.0	14.5 - 13.7
26	14°06.5	14°08.8	13°27.9	2.6 - 2.4	8.6 - 8.1	14.6 - 13.7
27	14°06.8	14°09.1	13°28.2	2.7 - 2.5	8.7 - 8.2	14.7 - 13.8
28	14°07.0	14°09.3	13°28.4	2.8 - 2.6	8.8 - 8.3	14.8 - 13.9
29	14°07.3	14°09.6	13°28.7	2.9 - 2.7	8.9 - 8.4	14.9 - 14.0
30	14°07.5	14°09.8	13°28.9	3.0 - 2.8	9.0 - 8.5	15.0 - 14.1
31	14°07.7	14°10.1	13°29.1	3.1 - 2.9	9.1 - 8.6	15.1 - 14.2
32	14°08.0	14°10.3	13°29.4	3.2 - 3.0	9.2 - 8.7	15.2 - 14.3
33	14°08.2	14°10.6	13°29.6	3.3 - 3.1	9.3 - 8.8	15.3 - 14.4
34	14°08.5	14°10.8	13°29.8	3.4 - 3.2	9.4 - 8.9	15.4 - 14.5
35	14°08.8	14°11.1	13°30.1	3.5 - 3.3	9.5 - 8.9	15.5 - 14.6
36	14°09.0	14°11.3	13°30.3	3.6 - 3.4	9.6 - 9.0	15.6 - 14.7
37	14°09.3	14°11.6	13°30.6	3.7 - 3.5	9.7 - 9.1	15.7 - 14.8
38	14°09.5	14°11.8	13°30.8	3.8 - 3.6	9.8 - 9.2	15.8 - 14.9
39	14°09.7	14°12.1	13°31.0	3.9 - 3.7	9.9 - 9.3	15.9 - 15.0
40	14°10.0	14°12.3	13°31.3	4.0 - 3.8	10.0 - 9.4	16.0 - 15.1
41	14°10.2	14°12.6	13°31.5	4.1 - 3.9	10.1 - 9.5	16.1 - 15.2
42	14°10.5	14°12.8	13°31.8	4.2 - 4.0	10.2 - 9.6	16.2 - 15.3
43	14°10.8	14°13.1	13°32.0	4.3 - 4.0	10.3 - 9.7	16.3 - 15.3
44	14°11.0	14°13.3	13°32.2	4.4 - 4.1	10.4 - 9.8	16.4 - 15.4
45	14°11.3	14°13.6	13°32.5	4.5 - 4.2	10.5 - 9.9	16.5 - 15.5
46	14°11.5	14°13.8	13°32.7	4.6 - 4.3	10.6 - 10.0	16.6 - 15.6
47	14°11.7	14°14.1	13°32.9	4.7 - 4.4	10.7 - 10.1	16.7 - 15.7
48	14°12.0	14°14.3	13°33.2	4.8 - 4.5	10.8 - 10.2	16.8 - 15.8
49	14°12.3	14°14.6	13°33.4	4.9 - 4.6	10.9 - 10.3	16.9 - 15.9
50	14°12.5	14°14.8	13°33.7	5.0 - 4.7	11.0 - 10.4	17.0 - 16.0
51	14°12.8	14°15.1	13°33.9	5.1 - 4.8	11.1 - 10.5	17.1 - 16.1
52	14°13.0	14°15.3	13°34.1	5.2 - 4.9	11.2 - 10.5	17.2 - 16.2
53	14°13.2	14°15.6	13°34.4	5.3 - 5.0	11.3 - 10.6	17.3 - 16.3
54	14°13.5	14°15.8	13°34.6	5.4 - 5.1	11.4 - 10.7	17.4 - 16.4
55	14°13.7	14°16.1	13°34.9	5.5 - 5.2	11.5 - 10.8	17.5 - 16.5
56	14°14.0	14°16.3	13°35.1	5.6 - 5.3	11.6 - 10.9	17.6 - 16.6
57	14°14.3	14°16.6	13°35.3	5.7 - 5.4	11.7 - 11.0	17.7 - 16.7
58	14°14.5	14°16.8	13°35.6	5.8 - 5.5	11.8 - 11.1	17.8 - 16.8
59	14°14.8	14°17.1	13°35.8	5.9 - 5.6	11.9 - 11.2	17.9 - 16.9

Increments and Corrections

m 57	Sun Plan.	Aries	Moon	v and d corr		
0	14°15.0	14°17.3	13°36.0	0.0 - 0.0	6.0 - 5.8	12.0 - 11.5
1	14°15.2	14°17.6	13°36.3	0.1 - 0.1	6.1 - 5.8	12.1 - 11.6
2	14°15.5	14°17.8	13°36.5	0.2 - 0.2	6.2 - 5.9	12.2 - 11.7
3	14°15.7	14°18.1	13°36.8	0.3 - 0.3	6.3 - 6.0	12.3 - 11.8
4	14°16.0	14°18.3	13°37.0	0.4 - 0.4	6.4 - 6.1	12.4 - 11.9
5	14°16.3	14°18.6	13°37.2	0.5 - 0.5	6.5 - 6.2	12.5 - 12.0
6	14°16.5	14°18.8	13°37.5	0.6 - 0.6	6.6 - 6.3	12.6 - 12.1
7	14°16.8	14°19.1	13°37.7	0.7 - 0.7	6.7 - 6.4	12.7 - 12.2
8	14°17.0	14°19.3	13°38.0	0.8 - 0.8	6.8 - 6.5	12.8 - 12.3
9	14°17.2	14°19.6	13°38.2	0.9 - 0.9	6.9 - 6.6	12.9 - 12.4
10	14°17.5	14°19.8	13°38.4	1.0 - 1.0	7.0 - 6.7	13.0 - 12.5
11	14°17.7	14°20.1	13°38.7	1.1 - 1.1	7.1 - 6.8	13.1 - 12.6
12	14°18.0	14°20.3	13°38.9	1.2 - 1.2	7.2 - 6.9	13.2 - 12.7
13	14°18.3	14°20.6	13°39.2	1.3 - 1.2	7.3 - 7.0	13.3 - 12.7
14	14°18.5	14°20.8	13°39.4	1.4 - 1.3	7.4 - 7.1	13.4 - 12.8
15	14°18.8	14°21.1	13°39.6	1.5 - 1.4	7.5 - 7.2	13.5 - 12.9
16	14°19.0	14°21.3	13°39.9	1.6 - 1.5	7.6 - 7.3	13.6 - 13.0
17	14°19.2	14°21.6	13°40.1	1.7 - 1.6	7.7 - 7.4	13.7 - 13.1
18	14°19.5	14°21.8	13°40.3	1.8 - 1.7	7.8 - 7.5	13.8 - 13.2
19	14°19.8	14°22.1	13°40.6	1.9 - 1.8	7.9 - 7.6	13.9 - 13.3
20	14°20.0	14°22.4	13°40.8	2.0 - 1.9	8.0 - 7.7	14.0 - 13.4
21	14°20.3	14°22.6	13°41.1	2.1 - 2.0	8.1 - 7.8	14.1 - 13.5
22	14°20.5	14°22.9	13°41.3	2.2 - 2.1	8.2 - 7.9	14.2 - 13.6
23	14°20.7	14°23.1	13°41.5	2.3 - 2.2	8.3 - 8.0	14.3 - 13.7
24	14°21.0	14°23.4	13°41.8	2.4 - 2.3	8.4 - 8.1	14.4 - 13.8
25	14°21.2	14°23.6	13°42.0	2.5 - 2.4	8.5 - 8.1	14.5 - 13.9
26	14°21.5	14°23.9	13°42.3	2.6 - 2.5	8.6 - 8.2	14.6 - 14.0
27	14°21.8	14°24.1	13°42.5	2.7 - 2.6	8.7 - 8.3	14.7 - 14.1
28	14°22.0	14°24.4	13°42.7	2.8 - 2.7	8.8 - 8.4	14.8 - 14.2
29	14°22.3	14°24.6	13°43.0	2.9 - 2.8	8.9 - 8.5	14.9 - 14.3
30	14°22.5	14°24.9	13°43.2	3.0 - 2.9	9.0 - 8.6	15.0 - 14.4
31	14°22.7	14°25.1	13°43.4	3.1 - 3.0	9.1 - 8.7	15.1 - 14.5
32	14°23.0	14°25.4	13°43.7	3.2 - 3.1	9.2 - 8.8	15.2 - 14.6
33	14°23.2	14°25.6	13°43.9	3.3 - 3.2	9.3 - 8.9	15.3 - 14.7
34	14°23.5	14°25.9	13°44.2	3.4 - 3.3	9.4 - 9.0	15.4 - 14.8
35	14°23.8	14°26.1	13°44.4	3.5 - 3.4	9.5 - 9.1	15.5 - 14.9
36	14°24.0	14°26.4	13°44.6	3.6 - 3.5	9.6 - 9.2	15.6 - 15.0
37	14°24.3	14°26.6	13°44.9	3.7 - 3.5	9.7 - 9.3	15.7 - 15.0
38	14°24.5	14°26.9	13°45.1	3.8 - 3.6	9.8 - 9.4	15.8 - 15.1
39	14°24.7	14°27.1	13°45.4	3.9 - 3.7	9.9 - 9.5	15.9 - 15.2
40	14°25.0	14°27.4	13°45.6	4.0 - 3.8	10.0 - 9.6	16.0 - 15.3
41	14°25.2	14°27.6	13°45.8	4.1 - 3.9	10.1 - 9.7	16.1 - 15.4
42	14°25.5	14°27.9	13°46.1	4.2 - 4.0	10.2 - 9.8	16.2 - 15.5
43	14°25.8	14°28.1	13°46.3	4.3 - 4.1	10.3 - 9.9	16.3 - 15.6
44	14°26.0	14°28.4	13°46.5	4.4 - 4.2	10.4 - 10.0	16.4 - 15.7
45	14°26.3	14°28.6	13°46.8	4.5 - 4.3	10.5 - 10.1	16.5 - 15.8
46	14°26.5	14°28.9	13°47.0	4.6 - 4.4	10.6 - 10.2	16.6 - 15.9
47	14°26.7	14°29.1	13°47.3	4.7 - 4.5	10.7 - 10.3	16.7 - 16.0
48	14°27.0	14°29.4	13°47.5	4.8 - 4.6	10.8 - 10.4	16.8 - 16.1
49	14°27.3	14°29.6	13°47.7	4.9 - 4.7	10.9 - 10.4	16.9 - 16.2
50	14°27.5	14°29.9	13°48.0	5.0 - 4.8	11.0 - 10.5	17.0 - 16.3
51	14°27.8	14°30.1	13°48.2	5.1 - 4.9	11.1 - 10.6	17.1 - 16.4
52	14°28.0	14°30.4	13°48.5	5.2 - 5.0	11.2 - 10.7	17.2 - 16.5
53	14°28.2	14°30.6	13°48.7	5.3 - 5.1	11.3 - 10.8	17.3 - 16.6
54	14°28.5	14°30.9	13°48.9	5.4 - 5.2	11.4 - 10.9	17.4 - 16.7
55	14°28.7	14°31.1	13°49.2	5.5 - 5.3	11.5 - 11.0	17.5 - 16.8
56	14°29.0	14°31.4	13°49.4	5.6 - 5.4	11.6 - 11.1	17.6 - 16.9
57	14°29.3	14°31.6	13°49.7	5.7 - 5.5	11.7 - 11.2	17.7 - 17.0
58	14°29.5	14°31.9	13°49.9	5.8 - 5.6	11.8 - 11.3	17.8 - 17.1
59	14°29.8	14°32.1	13°50.1	5.9 - 5.7	11.9 - 11.4	17.9 - 17.2

m 58	Sun Plan.	Aries	Moon	v and d corr		
0	14°30.0	14°32.4	13°50.4	0.0 - 0.0	6.0 - 5.8	12.0 - 11.7
1	14°30.2	14°32.6	13°50.6	0.1 - 0.1	6.1 - 5.9	12.1 - 11.8
2	14°30.5	14°32.9	13°50.8	0.2 - 0.2	6.2 - 6.0	12.2 - 11.9
3	14°30.7	14°33.1	13°51.1	0.3 - 0.3	6.3 - 6.1	12.3 - 12.0
4	14°31.0	14°33.4	13°51.3	0.4 - 0.4	6.4 - 6.2	12.4 - 12.1
5	14°31.3	14°33.6	13°51.6	0.5 - 0.5	6.5 - 6.3	12.5 - 12.2
6	14°31.5	14°33.9	13°51.8	0.6 - 0.6	6.6 - 6.4	12.6 - 12.3
7	14°31.8	14°34.1	13°52.0	0.7 - 0.7	6.7 - 6.5	12.7 - 12.4
8	14°32.0	14°34.4	13°52.3	0.8 - 0.8	6.8 - 6.6	12.8 - 12.5
9	14°32.2	14°34.6	13°52.5	0.9 - 0.9	6.9 - 6.7	12.9 - 12.6
10	14°32.5	14°34.9	13°52.8	1.0 - 1.0	7.0 - 6.8	13.0 - 12.7
11	14°32.7	14°35.1	13°53.0	1.1 - 1.1	7.1 - 6.9	13.1 - 12.8
12	14°33.0	14°35.4	13°53.2	1.2 - 1.2	7.2 - 7.0	13.2 - 12.9
13	14°33.3	14°35.6	13°53.5	1.3 - 1.3	7.3 - 7.1	13.3 - 13.0
14	14°33.5	14°35.9	13°53.7	1.4 - 1.4	7.4 - 7.2	13.4 - 13.1
15	14°33.8	14°36.1	13°53.9	1.5 - 1.5	7.5 - 7.3	13.5 - 13.2
16	14°34.0	14°36.4	13°54.2	1.6 - 1.6	7.6 - 7.4	13.6 - 13.3
17	14°34.2	14°36.6	13°54.4	1.7 - 1.7	7.7 - 7.5	13.7 - 13.4
18	14°34.5	14°36.9	13°54.7	1.8 - 1.8	7.8 - 7.6	13.8 - 13.5
19	14°34.8	14°37.1	13°54.9	1.9 - 1.9	7.9 - 7.7	13.9 - 13.6
20	14°35.0	14°37.4	13°55.1	2.0 - 1.9	8.0 - 7.8	14.0 - 13.7
21	14°35.3	14°37.6	13°55.4	2.1 - 2.0	8.1 - 7.9	14.1 - 13.7
22	14°35.5	14°37.9	13°55.6	2.2 - 2.1	8.2 - 8.0	14.2 - 13.8
23	14°35.7	14°38.1	13°55.9	2.3 - 2.2	8.3 - 8.1	14.3 - 13.9
24	14°36.0	14°38.4	13°56.1	2.4 - 2.3	8.4 - 8.2	14.4 - 14.0
25	14°36.2	14°38.6	13°56.3	2.5 - 2.4	8.5 - 8.3	14.5 - 14.1
26	14°36.5	14°38.9	13°56.6	2.6 - 2.5	8.6 - 8.4	14.6 - 14.2
27	14°36.8	14°39.1	13°56.8	2.7 - 2.6	8.7 - 8.5	14.7 - 14.3
28	14°37.0	14°39.4	13°57.0	2.8 - 2.7	8.8 - 8.6	14.8 - 14.4
29	14°37.3	14°39.6	13°57.3	2.9 - 2.8	8.9 - 8.7	14.9 - 14.5
30	14°37.5	14°39.9	13°57.5	3.0 - 2.9	9.0 - 8.8	15.0 - 14.6
31	14°37.7	14°40.1	13°57.8	3.1 - 3.0	9.1 - 8.9	15.1 - 14.7
32	14°38.0	14°40.4	13°58.0	3.2 - 3.1	9.2 - 9.0	15.2 - 14.8
33	14°38.2	14°40.7	13°58.2	3.3 - 3.2	9.3 - 9.1	15.3 - 14.9
34	14°38.5	14°40.9	13°58.5	3.4 - 3.3	9.4 - 9.2	15.4 - 15.0
35	14°38.8	14°41.2	13°58.7	3.5 - 3.4	9.5 - 9.3	15.5 - 15.1
36	14°39.0	14°41.4	13°59.0	3.6 - 3.5	9.6 - 9.4	15.6 - 15.2
37	14°39.3	14°41.7	13°59.2	3.7 - 3.6	9.7 - 9.5	15.7 - 15.3
38	14°39.5	14°41.9	13°59.4	3.8 - 3.7	9.8 - 9.6	15.8 - 15.4
39	14°39.7	14°42.2	13°59.7	3.9 - 3.8	9.9 - 9.7	15.9 - 15.5
40	14°40.0	14°42.4	13°59.9	4.0 - 3.9	10.0 - 9.8	16.0 - 15.6
41	14°40.2	14°42.7	14°00.1	4.1 - 4.0	10.1 - 9.8	16.1 - 15.7
42	14°40.5	14°42.9	14°00.4	4.2 - 4.1	10.2 - 9.9	16.2 - 15.8
43	14°40.8	14°43.2	14°00.6	4.3 - 4.2	10.3 - 10.0	16.3 - 15.9
44	14°41.0	14°43.4	14°00.9	4.4 - 4.3	10.4 - 10.1	16.4 - 16.0
45	14°41.3	14°43.7	14°01.1	4.5 - 4.4	10.5 - 10.2	16.5 - 16.1
46	14°41.5	14°43.9	14°01.3	4.6 - 4.5	10.6 - 10.3	16.6 - 16.2
47	14°41.7	14°44.2	14°01.6	4.7 - 4.6	10.7 - 10.4	16.7 - 16.3
48	14°42.0	14°44.4	14°01.8	4.8 - 4.7	10.8 - 10.5	16.8 - 16.4
49	14°42.3	14°44.7	14°02.1	4.9 - 4.8	10.9 - 10.6	16.9 - 16.5
50	14°42.5	14°44.9	14°02.3	5.0 - 4.9	11.0 - 10.7	17.0 - 16.6
51	14°42.8	14°45.2	14°02.5	5.1 - 5.0	11.1 - 10.8	17.1 - 16.7
52	14°43.0	14°45.4	14°02.8	5.2 - 5.1	11.2 - 10.9	17.2 - 16.8
53	14°43.2	14°45.7	14°03.0	5.3 - 5.2	11.3 - 11.0	17.3 - 16.9
54	14°43.5	14°45.9	14°03.3	5.4 - 5.3	11.4 - 11.1	17.4 - 17.0
55	14°43.7	14°46.2	14°03.5	5.5 - 5.4	11.5 - 11.2	17.5 - 17.1
56	14°44.0	14°46.4	14°03.7	5.6 - 5.5	11.6 - 11.3	17.6 - 17.2
57	14°44.3	14°46.7	14°04.0	5.7 - 5.6	11.7 - 11.4	17.7 - 17.3
58	14°44.5	14°46.9	14°04.2	5.8 - 5.7	11.8 - 11.5	17.8 - 17.4
59	14°44.8	14°47.2	14°04.4	5.9 - 5.8	11.9 - 11.6	17.9 - 17.5

m 59	Sun Plan.	Aries	Moon	v and d corr		
0	14°45.0	14°47.4	14°04.7	0.0 - 0.0	6.0 - 6.0	12.0 - 11.9
1	14°45.2	14°47.7	14°04.9	0.1 - 0.1	6.1 - 6.0	12.1 - 12.0
2	14°45.5	14°47.9	14°05.2	0.2 - 0.2	6.2 - 6.1	12.2 - 12.1
3	14°45.7	14°48.2	14°05.4	0.3 - 0.3	6.3 - 6.2	12.3 - 12.2
4	14°46.0	14°48.4	14°05.6	0.4 - 0.4	6.4 - 6.3	12.4 - 12.3
5	14°46.3	14°48.7	14°05.9	0.5 - 0.5	6.5 - 6.4	12.5 - 12.4
6	14°46.5	14°48.9	14°06.1	0.6 - 0.6	6.6 - 6.5	12.6 - 12.5
7	14°46.8	14°49.2	14°06.4	0.7 - 0.7	6.7 - 6.6	12.7 - 12.6
8	14°47.0	14°49.4	14°06.6	0.8 - 0.8	6.8 - 6.7	12.8 - 12.7
9	14°47.2	14°49.7	14°06.8	0.9 - 0.9	6.9 - 6.8	12.9 - 12.8
10	14°47.5	14°49.9	14°07.1	1.0 - 1.0	7.0 - 6.9	13.0 - 12.9
11	14°47.7	14°50.2	14°07.3	1.1 - 1.1	7.1 - 7.0	13.1 - 13.0
12	14°48.0	14°50.4	14°07.5	1.2 - 1.2	7.2 - 7.1	13.2 - 13.1
13	14°48.3	14°50.7	14°07.8	1.3 - 1.3	7.3 - 7.2	13.3 - 13.2
14	14°48.5	14°50.9	14°08.0	1.4 - 1.4	7.4 - 7.3	13.4 - 13.3
15	14°48.8	14°51.2	14°08.3	1.5 - 1.5	7.5 - 7.4	13.5 - 13.4
16	14°49.0	14°51.4	14°08.5	1.6 - 1.6	7.6 - 7.5	13.6 - 13.5
17	14°49.2	14°51.7	14°08.7	1.7 - 1.7	7.7 - 7.6	13.7 - 13.6
18	14°49.5	14°51.9	14°09.0	1.8 - 1.8	7.8 - 7.7	13.8 - 13.7
19	14°49.8	14°52.2	14°09.2	1.9 - 1.9	7.9 - 7.8	13.9 - 13.8
20	14°50.0	14°52.4	14°09.5	2.0 - 2.0	8.0 - 7.9	14.0 - 13.9
21	14°50.3	14°52.7	14°09.7	2.1 - 2.1	8.1 - 8.0	14.1 - 14.0
22	14°50.5	14°52.9	14°09.9	2.2 - 2.2	8.2 - 8.1	14.2 - 14.1
23	14°50.7	14°53.2	14°10.2	2.3 - 2.3	8.3 - 8.2	14.3 - 14.2
24	14°51.0	14°53.4	14°10.4	2.4 - 2.4	8.4 - 8.3	14.4 - 14.3
25	14°51.2	14°53.7	14°10.6	2.5 - 2.5	8.5 - 8.4	14.5 - 14.4
26	14°51.5	14°53.9	14°10.9	2.6 - 2.6	8.6 - 8.5	14.6 - 14.5
27	14°51.8	14°54.2	14°11.1	2.7 - 2.7	8.7 - 8.6	14.7 - 14.6
28	14°52.0	14°54.4	14°11.4	2.8 - 2.8	8.8 - 8.7	14.8 - 14.7
29	14°52.3	14°54.7	14°11.6	2.9 - 2.9	8.9 - 8.8	14.9 - 14.8
30	14°52.5	14°54.9	14°11.8	3.0 - 3.0	9.0 - 8.9	15.0 - 14.9
31	14°52.7	14°55.2	14°12.1	3.1 - 3.1	9.1 - 9.0	15.1 - 15.0
32	14°53.0	14°55.4	14°12.3	3.2 - 3.2	9.2 - 9.1	15.2 - 15.1
33	14°53.2	14°55.7	14°12.6	3.3 - 3.3	9.3 - 9.2	15.3 - 15.2
34	14°53.5	14°55.9	14°12.8	3.4 - 3.4	9.4 - 9.3	15.4 - 15.3
35	14°53.8	14°56.2	14°13.0	3.5 - 3.5	9.5 - 9.4	15.5 - 15.4
36	14°54.0	14°56.4	14°13.3	3.6 - 3.6	9.6 - 9.5	15.6 - 15.5
37	14°54.3	14°56.7	14°13.5	3.7 - 3.7	9.7 - 9.6	15.7 - 15.6
38	14°54.5	14°56.9	14°13.8	3.8 - 3.8	9.8 - 9.7	15.8 - 15.7
39	14°54.7	14°57.2	14°14.0	3.9 - 3.9	9.9 - 9.8	15.9 - 15.8
40	14°55.0	14°57.4	14°14.2	4.0 - 4.0	10.0 - 9.9	16.0 - 15.9
41	14°55.2	14°57.7	14°14.5	4.1 - 4.1	10.1 - 10.0	16.1 - 16.0
42	14°55.5	14°57.9	14°14.7	4.2 - 4.2	10.2 - 10.1	16.2 - 16.1
43	14°55.8	14°58.2	14°14.9	4.3 - 4.3	10.3 - 10.2	16.3 - 16.2
44	14°56.0	14°58.4	14°15.2	4.4 - 4.4	10.4 - 10.3	16.4 - 16.3
45	14°56.3	14°58.7	14°15.4	4.5 - 4.5	10.5 - 10.4	16.5 - 16.4
46	14°56.5	14°59.0	14°15.7	4.6 - 4.6	10.6 - 10.5	16.6 - 16.5
47	14°56.7	14°59.2	14°15.9	4.7 - 4.7	10.7 - 10.6	16.7 - 16.6
48	14°57.0	14°59.5	14°16.1	4.8 - 4.8	10.8 - 10.7	16.8 - 16.7
49	14°57.3	14°59.7	14°16.4	4.9 - 4.9	10.9 - 10.8	16.9 - 16.8
50	14°57.5	15°00.0	14°16.6	5.0 - 5.0	11.0 - 10.9	17.0 - 16.9
51	14°57.8	15°00.2	14°16.9	5.1 - 5.1	11.1 - 11.0	17.1 - 17.0
52	14°58.0	15°00.5	14°17.1	5.2 - 5.2	11.2 - 11.1	17.2 - 17.1
53	14°58.2	15°00.7	14°17.3	5.3 - 5.3	11.3 - 11.2	17.3 - 17.2
54	14°58.5	15°01.0	14°17.6	5.4 - 5.4	11.4 - 11.3	17.4 - 17.3
55	14°58.7	15°01.2	14°17.8	5.5 - 5.5	11.5 - 11.4	17.5 - 17.4
56	14°59.0	15°01.5	14°18.0	5.6 - 5.6	11.6 - 11.5	17.6 - 17.5
57	14°59.3	15°01.7	14°18.3	5.7 - 5.7	11.7 - 11.6	17.7 - 17.6
58	14°59.5	15°02.0	14°18.5	5.8 - 5.8	11.8 - 11.7	17.8 - 17.7
59	14°59.8	15°02.2	14°18.8	5.9 - 5.9	11.9 - 11.8	17.9 - 17.8

Conversion of Arc to Time

0° - 59°			60° - 119°			120° - 179°			180° - 239°			240° - 299°			300° - 360°		
°	h	m	°	h	m	°	h	m	°	h	m	°	h	m	°	h	m
0	0	00	**60**	4	00	**120**	8	00	**180**	12	00	**240**	16	00	**300**	20	00
1	0	04	**61**	4	04	**121**	8	04	**181**	12	04	**241**	16	04	**301**	20	04
2	0	08	**62**	4	08	**122**	8	08	**182**	12	08	**242**	16	08	**302**	20	08
3	0	12	**63**	4	12	**123**	8	12	**183**	12	12	**243**	16	12	**303**	20	12
4	0	16	**64**	4	16	**124**	8	16	**184**	12	16	**244**	16	16	**304**	20	16
5	0	20	**65**	4	20	**125**	8	20	**185**	12	20	**245**	16	20	**305**	20	20
6	0	24	**66**	4	24	**126**	8	24	**186**	12	24	**246**	16	24	**306**	20	24
7	0	28	**67**	4	28	**127**	8	28	**187**	12	28	**247**	16	28	**307**	20	28
8	0	32	**68**	4	32	**128**	8	32	**188**	12	32	**248**	16	32	**308**	20	32
9	0	36	**69**	4	36	**129**	8	36	**189**	12	36	**249**	16	36	**309**	20	36
10	0	40	**70**	4	40	**130**	8	40	**190**	12	40	**250**	16	40	**310**	20	40
11	0	44	**71**	4	44	**131**	8	44	**191**	12	44	**251**	16	44	**311**	20	44
12	0	48	**72**	4	48	**132**	8	48	**192**	12	48	**252**	16	48	**312**	20	48
13	0	52	**73**	4	52	**133**	8	52	**193**	12	52	**253**	16	52	**313**	20	52
14	0	56	**74**	4	56	**134**	8	56	**194**	12	56	**254**	16	56	**314**	20	56
15	1	00	**75**	5	00	**135**	9	00	**195**	13	00	**255**	17	00	**315**	21	00
16	1	04	**76**	5	04	**136**	9	04	**196**	13	04	**256**	17	04	**316**	21	04
17	1	08	**77**	5	08	**137**	9	08	**197**	13	08	**257**	17	08	**317**	21	08
18	1	12	**78**	5	12	**138**	9	12	**198**	13	12	**258**	17	12	**318**	21	12
19	1	16	**79**	5	16	**139**	9	16	**199**	13	16	**259**	17	16	**319**	21	16
20	1	20	**80**	5	20	**140**	9	20	**200**	13	20	**260**	17	20	**320**	21	20
21	1	24	**81**	5	24	**141**	9	24	**201**	13	24	**261**	17	24	**321**	21	24
22	1	28	**82**	5	28	**142**	9	28	**202**	13	28	**262**	17	28	**322**	21	28
23	1	32	**83**	5	32	**143**	9	32	**203**	13	32	**263**	17	32	**323**	21	32
24	1	36	**84**	5	36	**144**	9	36	**204**	13	36	**264**	17	36	**324**	21	36
25	1	40	**85**	5	40	**145**	9	40	**205**	13	40	**265**	17	40	**325**	21	40
26	1	44	**86**	5	44	**146**	9	44	**206**	13	44	**266**	17	44	**326**	21	44
27	1	48	**87**	5	48	**147**	9	48	**207**	13	48	**267**	17	48	**327**	21	48
28	1	52	**88**	5	52	**148**	9	52	**208**	13	52	**268**	17	52	**328**	21	52
29	1	56	**89**	5	56	**149**	9	56	**209**	13	56	**269**	17	56	**329**	21	56
30	2	00	**90**	6	00	**150**	10	00	**210**	14	00	**270**	18	00	**330**	22	00
31	2	04	**91**	6	04	**151**	10	04	**211**	14	04	**271**	18	04	**331**	22	04
32	2	08	**92**	6	08	**152**	10	08	**212**	14	08	**272**	18	08	**332**	22	08
33	2	12	**93**	6	12	**153**	10	12	**213**	14	12	**273**	18	12	**333**	22	12
34	2	16	**94**	6	16	**154**	10	16	**214**	14	16	**274**	18	16	**334**	22	16
35	2	20	**95**	6	20	**155**	10	20	**215**	14	20	**275**	18	20	**335**	22	20
36	2	24	**96**	6	24	**156**	10	24	**216**	14	24	**276**	18	24	**336**	22	24
37	2	28	**97**	6	28	**157**	10	28	**217**	14	28	**277**	18	28	**337**	22	28
38	2	32	**98**	6	32	**158**	10	32	**218**	14	32	**278**	18	32	**338**	22	32
39	2	36	**99**	6	36	**159**	10	36	**219**	14	36	**279**	18	36	**339**	22	36
40	2	40	**100**	6	40	**160**	10	40	**220**	14	40	**280**	18	40	**340**	22	40
41	2	44	**101**	6	44	**161**	10	44	**221**	14	44	**281**	18	44	**341**	22	44
42	2	48	**102**	6	48	**162**	10	48	**222**	14	48	**282**	18	48	**342**	22	48
43	2	52	**103**	6	52	**163**	10	52	**223**	14	52	**283**	18	52	**343**	22	52
44	2	56	**104**	6	56	**164**	10	56	**224**	14	56	**284**	18	56	**344**	22	56
45	3	00	**105**	7	00	**165**	11	00	**225**	15	00	**285**	19	00	**345**	23	00
46	3	04	**106**	7	04	**166**	11	04	**226**	15	04	**286**	19	04	**346**	23	04
47	3	08	**107**	7	08	**167**	11	08	**227**	15	08	**287**	19	08	**347**	23	08
48	3	12	**108**	7	12	**168**	11	12	**228**	15	12	**288**	19	12	**348**	23	12
49	3	16	**109**	7	16	**169**	11	16	**229**	15	16	**289**	19	16	**349**	23	16
50	3	20	**110**	7	20	**170**	11	20	**230**	15	20	**290**	19	20	**350**	23	20
51	3	24	**111**	7	24	**171**	11	24	**231**	15	24	**291**	19	24	**351**	23	24
52	3	28	**112**	7	28	**172**	11	28	**232**	15	28	**292**	19	28	**352**	23	28
53	3	32	**113**	7	32	**173**	11	32	**233**	15	32	**293**	19	32	**353**	23	32
54	3	36	**114**	7	36	**174**	11	36	**234**	15	36	**294**	19	36	**354**	23	36
55	3	40	**115**	7	40	**175**	11	40	**235**	15	40	**295**	19	40	**355**	23	40
56	3	44	**116**	7	44	**176**	11	44	**236**	15	44	**296**	19	44	**356**	23	44
57	3	48	**117**	7	48	**177**	11	48	**237**	15	48	**297**	19	48	**357**	23	48
58	3	52	**118**	7	52	**178**	11	52	**238**	15	52	**298**	19	52	**358**	23	52
59	3	56	**119**	7	56	**179**	11	56	**239**	15	56	**299**	19	56	**359**	23	56
60	4	00	**120**	8	00	**180**	12	00	**240**	16	00	**300**	20	00	**360**	24	00

0′ - 59′			0″ - 59″	
′	m	s	″	s
0	0	00	**0**	0.00
1	0	04	**1**	0.07
2	0	08	**2**	0.13
3	0	12	**3**	0.20
4	0	16	**4**	0.27
5	0	20	**5**	0.33
6	0	24	**6**	0.40
7	0	28	**7**	0.47
8	0	32	**8**	0.53
9	0	36	**9**	0.60
10	0	40	**10**	0.67
11	0	44	**11**	0.73
12	0	48	**12**	0.80
13	0	52	**13**	0.87
14	0	56	**14**	0.93
15	1	00	**15**	1.00
16	1	04	**16**	1.07
17	1	08	**17**	1.13
18	1	12	**18**	1.20
19	1	16	**19**	1.27
20	1	20	**20**	1.33
21	1	24	**21**	1.40
22	1	28	**22**	1.47
23	1	32	**23**	1.53
24	1	36	**24**	1.60
25	1	40	**25**	1.67
26	1	44	**26**	1.73
27	1	48	**27**	1.80
28	1	52	**28**	1.87
29	1	56	**29**	1.93
30	2	00	**30**	2.00
31	2	04	**31**	2.07
32	2	08	**32**	2.13
33	2	12	**33**	2.20
34	2	16	**34**	2.27
35	2	20	**35**	2.33
36	2	24	**36**	2.40
37	2	28	**37**	2.47
38	2	32	**38**	2.53
39	2	36	**39**	2.60
40	2	40	**40**	2.67
41	2	44	**41**	2.73
42	2	48	**42**	2.80
43	2	52	**43**	2.87
44	2	56	**44**	2.93
45	3	00	**45**	3.00
46	3	04	**46**	3.07
47	3	08	**47**	3.13
48	3	12	**48**	3.20
49	3	16	**49**	3.27
50	3	20	**50**	3.33
51	3	24	**51**	3.40
52	3	28	**52**	3.47
53	3	32	**53**	3.53
54	3	36	**54**	3.60
55	3	40	**55**	3.67
56	3	44	**56**	3.73
57	3	48	**57**	3.80
58	3	52	**58**	3.87
59	3	56	**59**	3.93
60	4	00	**60**	4.00

h= hours of time **m**= minutes of time **s** = seconds of time **'** = minutes of arc **"** = seconds of arc

Altitude Correction Tables for 10° to 90° — Sun, Stars, Planets

SUN — October – March

App. Alt.	Lower Limb	Upper Limb
° '	'	'
9 33	+10.8	– 21.5
9 45	+10.9	– 21.4
9 56	+11.0	– 21.3
10 08	+11.1	– 21.2
10 20	+11.2	– 21.1
10 33	+11.3	– 21.0
10 46	+11.4	– 20.9
11 00	+11.5	– 20.8
11 15	+11.6	– 20.7
11 30	+11.7	– 20.6
11 45	+11.8	– 20.5
12 01	+11.9	– 20.4
12 18	+12.0	– 20.3
12 36	+12.1	– 20.2
12 54	+12.2	– 20.1
13 14	+12.3	– 20.0
13 34	+12.4	– 19.9
13 55	+12.5	– 19.8
14 17	+12.6	– 19.7
14 41	+12.7	– 19.6
15 05	+12.8	– 19.5
15 31	+12.9	– 19.4
15 59	+13.0	– 19.3
16 27	+13.1	– 19.2
16 58	+13.2	– 19.1
17 30	+13.3	– 19.0
18 05	+13.4	– 18.9
18 41	+13.5	– 18.8
19 20	+13.6	– 18.7
20 02	+13.7	– 18.6
20 46	+13.8	– 18.5
21 34	+13.9	– 18.4
22 25	+14.0	– 18.3
23 20	+14.1	– 18.2
24 20	+14.2	– 18.1
25 24	+14.3	– 18.0
26 34	+14.4	– 17.9
27 50	+14.5	– 17.8
29 13	+14.6	– 17.7
30 44	+14.7	– 17.6
32 24	+14.8	– 17.5
34 15	+14.9	– 17.4
36 17	+15.0	– 17.3
38 34	+15.1	– 17.2
41 06	+15.2	– 17.1
43 56	+15.3	– 17.0
47 07	+15.4	– 16.9
50 43	+15.5	– 16.8
54 46	+15.6	– 16.7
59 21	+15.7	– 16.6
64 28	+15.8	– 16.5
70 10	+15.9	– 16.4
76 24	+16.0	– 16.3
83 05	+16.1	– 16.2
90 00		

SUN — April – September

App. Alt.	Lower Limb	Upper Limb
° '	'	'
9 39	+10.6	– 21.2
9 50	+10.7	– 21.1
10 02	+10.8	– 21.0
10 14	+10.9	– 20.9
10 27	+11.0	– 20.8
10 40	+11.1	– 20.7
10 53	+11.2	– 20.6
11 07	+11.3	– 20.5
11 22	+11.4	– 20.4
11 37	+11.5	– 20.3
11 53	+11.6	– 20.2
12 10	+11.7	– 20.1
12 27	+11.8	– 20.0
14 45	+11.9	– 19.9
13 04	+12.0	– 19.8
13 24	+12.1	– 19.7
13 44	+12.2	– 19.6
14 06	+12.3	– 19.5
14 29	+12.4	– 19.4
14 53	+12.5	– 19.3
15 18	+12.6	– 19.2
15 45	+12.7	– 19.1
16 13	+12.8	– 19.0
16 43	+12.9	– 18.9
17 14	+13.0	– 18.8
17 47	+13.1	– 18.7
18 23	+13.2	– 18.6
19 00	+13.3	– 18.5
19 41	+13.4	– 18.4
20 24	+13.5	– 18.3
21 10	+13.6	– 18.2
21 59	+13.7	– 18.1
22 52	+13.8	– 18.0
23 49	+13.9	– 17.9
24 51	+14.0	– 17.8
25 58	+14.1	– 17.7
27 11	+14.2	– 17.6
28 31	+14.3	– 17.5
29 58	+14.4	– 17.4
31 33	+14.5	– 17.3
33 18	+14.6	– 17.2
35 15	+14.7	– 17.1
37 24	+14.8	– 17.0
39 48	+14.9	– 16.9
42 28	+15.0	– 16.8
45 29	+15.1	– 16.7
48 52	+15.2	– 16.6
51 41	+15.3	– 16.5
56 59	+15.4	– 16.4
61 50	+15.5	– 16.3
67 15	+15.6	– 16.2
73 14	+15.7	– 16.1
79 42	+15.8	– 16.0
86 21	+15.9	– 15.9
90 00		

Stars & Planets

App. Alt.	Corr
° '	'
9 55	– 5.3
10 07	– 5.2
10 20	– 5.1
10 32	– 5.0
10 46	– 4.9
10 59	– 4.8
11 14	– 4.7
11 29	– 4.6
11 44	– 4.5
12 00	– 4.4
12 17	– 4.3
12 35	– 4.2
12 53	– 4.1
13 12	– 4.0
13 32	– 3.9
13 53	– 3.8
14 16	– 3.7
14 39	– 3.6
15 03	– 3.5
15 29	– 3.4
15 56	– 3.3
16 25	– 3.2
16 55	– 3.1
17 27	– 3.0
18 01	– 2.9
18 37	– 2.8
19 16	– 2.7
19 56	– 2.6
20 40	– 2.5
21 27	– 2.4
22 17	– 2.3
23 11	– 2.2
24 09	– 2.1
25 12	– 2.0
26 20	– 1.9
27 34	– 1.8
28 54	– 1.7
30 22	– 1.6
31 58	– 1.5
33 43	– 1.4
35 38	– 1.3
37 45	– 1.2
40 06	– 1.1
42 42	– 1.0
45 34	– 0.9
48 45	– 0.8
52 16	– 0.7
56 09	– 0.6
60 26	– 0.5
65 06	– 0.4
70 09	– 0.3
75 32	– 0.2
81 12	– 0.1
87 03	0.0
90 00	

Additional Altitude Correction for Mars & Venus

A small additional altitude correction for Mars & Venus can be obtained in the Daily Pages of The Nautical Almanac for the day of the observation.

Find the correction in the block labeled **Horizontal parallax**.

The figure will cover the range of 3 days found on that Daily Page.

The correction is to be added to Apparent Altitude.

Refraction

App. Alt.	Corr
°	'
5.5	– 9.1
6.0	– 8.5
6.5	– 7.9
7.0	– 7.5
7.5	– 7.0
8.0	– 6.6
8.5	– 6.3
9.0	– 5.9
9.5	– 5.7
10.0	– 5.4
10.5	– 5.1
11.0	– 4.9
11.5	– 4.7
12.0	– 4.5
12.5	– 4.4
13.0	– 4.2
13.5	– 4.0
14.0	– 3.9
14.5	– 3.8
15.0	– 3.6
15.5	– 3.5
16.0	– 3.4
16.5	– 3.3
17.0	– 3.2
17.5	– 3.1
18.0	– 3.0
18.5	– 2.9
19.0	– 2.9
19.5	– 2.8
20.0	– 2.7
21.0	– 2.6
22.0	– 2.4
23.0	– 2.3
24.0	– 2.2
25.0	– 2.1
26.0	– 2.0
27.0	– 1.9
28.0	– 1.9
29.0	– 1.8
30.0	– 1.7
31.0	– 1.7
32.0	– 1.6
33.0	– 1.5
34.0	– 1.5
35.0	– 1.4
36.0	– 1.4
37.0	– 1.3
38.0	– 1.3
39.0	– 1.2
40.0	– 1.2
45.0	– 1.0
50.0	– 0.8
55.0	– 0.7
60.0	– 0.6
65.0	– 0.5
70.0	– 0.4
75.0	– 0.3
80.0	– 0.2
85.0	– 0.1

DIP

always subtracted from Hs

Ht. of Eye	Corr	Ht. of Eye	Ht. of Eye	Corr
meters	'	**feet**	**meters**	'
2.4	**– 2.8**	8.0	1.0	**– 1.8**
2.6	**– 2.9**	8.6	1.5	**– 2.2**
2.8	**– 3.0**	9.2	2.0	**– 2.5**
3.0	**– 3.1**	9.8	2.5	**– 2.8**
3.2	**– 3.2**	10.5	3.0	**– 3.0**
3.4	**– 3.3**	11.2	See table ←	
3.6	**– 3.4**	11.9		
3.8	**– 3.5**	12.6	**meters**	
4.0	**– 3.6**	13.3	20	**– 7.9**
4.3	**– 3.7**	14.1	22	**– 8.3**
4.5	**– 3.8**	14.9	24	**– 8.6**
4.7	**– 3.9**	15.7	26	**– 9.0**
5.0	**– 4.0**	16.5	28	**– 9.3**
5.2	**– 4.1**	17.4		
5.5	**– 4.2**	18.3	30	**– 9.6**
5.8	**– 4.3**	19.1	32	**– 10.0**
6.1	**– 4.4**	20.1	34	**– 10.3**
6.3	**– 4.5**	21.0	36	**– 10.6**
6.6	**– 4.6**	22.0	38	**– 10.8**
6.9	**– 4.7**	22.9		
7.2	**– 4.8**	23.9	40	**– 11.1**
7.5	**– 4.9**	24.9	42	**– 11.4**
7.9	**– 5.0**	26.0	44	**– 11.7**
8.2	**– 5.1**	27.1	46	**– 11.9**
8.5	**– 5.2**	28.1	48	**– 12.2**
8.8	**– 5.3**	29.2	**feet**	'
9.2	**– 5.4**	30.4	2	**– 1.4**
9.5	**– 5.5**	31.5	4	**– 1.9**
9.9	**– 5.6**	32.7	6	**– 2.4**
10.3	**– 5.7**	33.9	8	**– 2.7**
10.6	**– 5.8**	35.1	10	**– 3.1**
11.0	**– 5.9**	36.3	See table ←	
11.4	**– 6.0**	37.6		
11.8	**– 6.1**	38.9	**feet**	'
12.2	**– 6.2**	40.1	70	**– 8.1**
12.6	**– 6.3**	41.5	75	**– 8.4**
13.0	**– 6.4**	42.8	80	**– 8.7**
13.4	**– 6.5**	44.2	85	**– 8.9**
13.8	**– 6.6**	45.5	90	**– 9.2**
14.2	**– 6.7**	46.9	95	**9.5**
14.7	**– 6.8**	48.4		
15.1	**– 6.9**	49.8	100	**– 9.7**
15.5	**– 7.0**	51.3	105	**– 9.9**
16.0	**– 7.1**	52.8	110	**– 10.2**
16.5	**– 7.2**	54.3	115	**– 10.4**
16.9	**– 7.3**	55.8	120	**– 10.6**
17.4	**– 7.4**	57.4	125	**– 10.8**
17.9	**– 7.5**	58.9		
18.4	**– 7.6**	60.5	130	**– 11.1**
18.8	**– 7.7**	62.1	135	**– 11.3**
19.3	**– 7.8**	63.8	140	**– 11.5**
19.8	**– 7.9**	65.4	145	**– 11.7**
20.4	**– 8.0**	67.1	150	**– 11.9**
20.9	**– 8.1**	68.8	155	**– 12.1**
21.4		70.5		

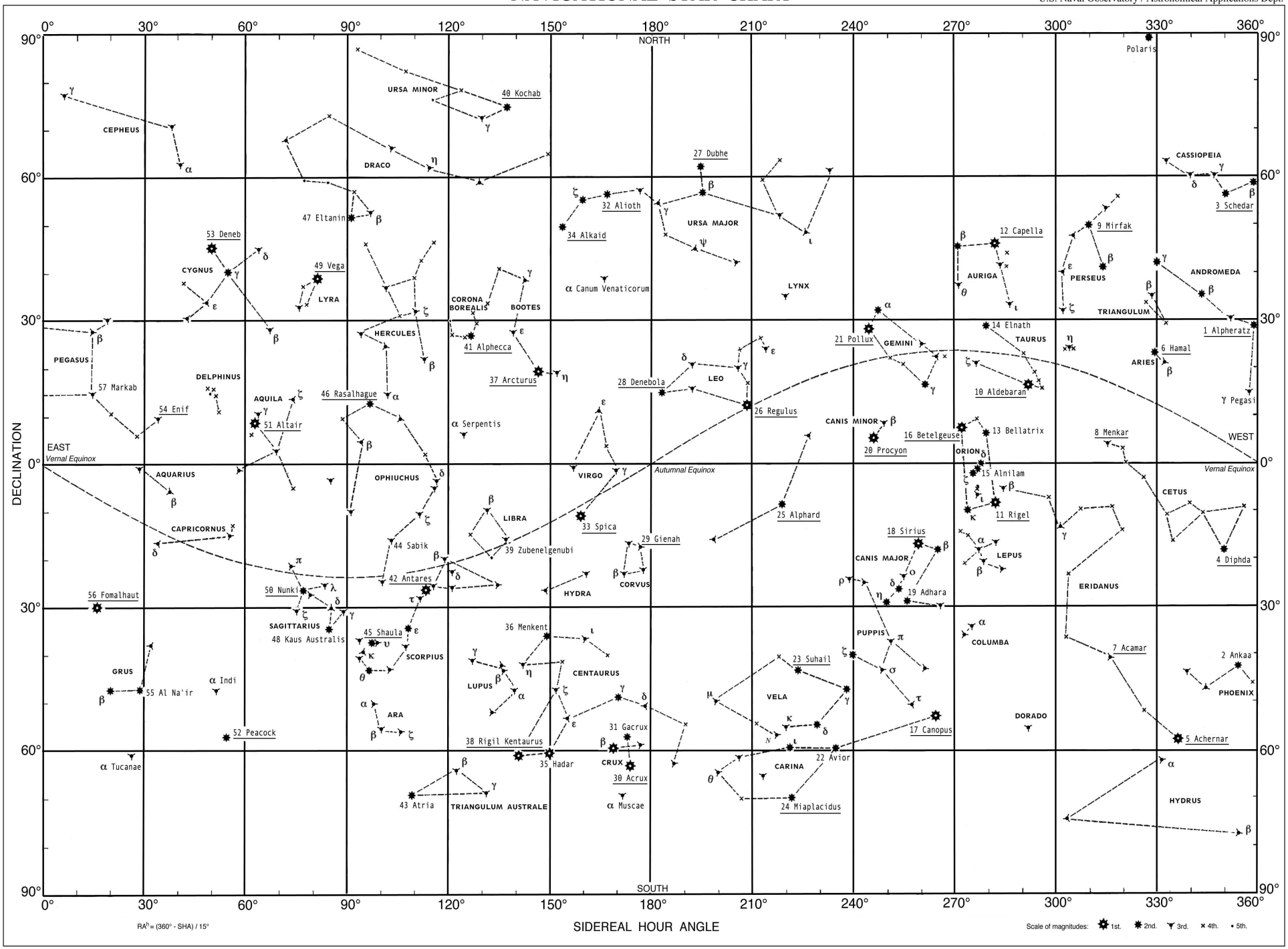
App. Alt. = Apparent altitude = Sextant altitude corrected for index error and dip.

Altitude Correction Tables for 0° to 10° — Sun, Stars, Planets

App. Alt.	Sun October – March Lower Limb	Sun October – March Upper Limb	Sun April – September Lower Limb	Sun April – September Upper Limb	Stars & Planets
° '	'	'	'	'	'
0 00	– 17.5	– 49.8	– 17.8	– 49.6	– 33.8
0 03	16.9	49.2	17.2	49.0	33.2
0 06	16.3	48.6	16.6	48.4	32.6
0 09	15.7	48.0	16.0	47.8	32.0
0 12	15.2	47.5	15.4	47.2	31.5
0 15	14.6	46.9	14.8	46.6	30.9
0 18	– 14.1	– 46.4	– 14.3	– 46.1	– 30.4
0 21	13.5	45.8	13.8	33.8	29.8
0 24	13.0	45.3	13.3	45.1	29.3
0 27	12.5	44.8	12.8	44.6	28.8
0 30	12.0	44.3	12.3	44.1	28.3
0 33	11.6	43.9	11.8	43.6	27.9
0 36	– 11.1	– 10.0	– 11.3	– 43.1	– 27.4
0 39	10.6	42.9	10.9	42.7	26.9
0 42	10.2	42.5	10.5	42.3	26.5
0 45	9.8	42.1	10.0	41.8	26.1
0 48	9.4	41.7	9.6	41.4	25.7
0 51	9.0	41.3	9.2	41.0	25.3
0 54	– 8.6	– 40.9	– 8.8	– 40.6	– 24.9
0 57	8.2	40.5	8.4	40.2	24.5
1 00	7.8	40.1	8.0	39.8	24.1
1 03	7.4	39.7	7.7	39.5	23.7
1 06	7.1	39.4	7.3	39.1	23.4
1 09	6.7	39.0	7.0	38.8	23.0
1 12	– 6.4	– 38.7	– 6.6	– 38.4	– 22.7
1 15	6.0	38.3	6.3	38.1	22.3
1 18	5.7	38.0	6.0	37.8	22.0
1 21	5.4	37.7	5.7	37.5	21.7
1 24	5.1	37.4	5.3	37.1	21.4
1 27	4.8	37.1	5.0	33.8	21.1
1 30	– 4.5	– 36.8	– 4.7	– 36.5	– 20.8
1 35	4.0	36.3	4.3	36.1	20.3
1 40	3.6	35.9	3.8	35.6	19.9
1 45	3.1	35.4	3.4	35.2	19.4
1 50	2.7	35.0	2.9	34.7	19.0
1 55	2.3	34.6	2.5	34.3	18.6
2 00	– 1.9	– 34.2	– 2.1	– 33.9	– 18.2
2 05	1.5	33.8	1.7	33.5	17.8
2 10	1.1	33.4	1.4	33.2	17.4
2 15	0.8	33.1	1.0	32.8	17.1
2 20	0.4	32.7	0.7	32.5	16.7
2 25	– 0.1	32.4	– 0.3	32.1	16.4
2 30	+ 0.2	– 32.1	0.0	– 31.8	– 16.1
2 35	0.5	31.8	+ 0.3	31.5	15.8
2 40	0.8	31.5	0.6	31.2	15.4
2 45	1.1	31.2	0.9	30.9	15.2
2 50	1.4	30.9	1.2	30.6	14.9
2 55	1.7	30.6	1.4	30.4	14.9
3 00	+ 2.0	– 30.3	+ 1.7	– 30.1	– 14.3
3 05	2.2	30.1	2.0	29.8	14.1
3 10	2.5	29.8	2.2	29.6	13.8
3 15	2.7	29.6	2.5	29.3	13.6
3 20	2.9	29.4	2.7	29.1	13.4
3 25	3.2	29.1	2.9	28.9	13.4
3 30	3.4	– 28.9	+ 3.1	– 28.7	– 12.9

App. Alt.	Sun October – March Lower Limb	Sun October – March Upper Limb	Sun April – September Lower Limb	Sun April – September Upper Limb	Stars & Planets
° '	'	'	'	'	'
3 30	+ 3.4	– 28.9	+ 3.1	– 28.7	– 12.9
3 35	3.6	28.7	3.3	28.5	12.7
3 40	3.8	28.5	3.6	28.2	12.5
3 45	4.0	28.3	3.8	28.0	12.3
3 50	4.2	28.1	4.0	27.8	12.1
3 55	4.4	27.9	4.1	27.7	11.9
4 00	+ 4.6	– 27.7	+ 4.3	– 27.5	– 11.7
4 05	4.8	27.5	4.5	27.3	11.5
4 10	4.9	27.4	4.7	27.1	11.4
4 15	5.1	27.2	4.9	26.9	11.2
4 20	5.3	27.0	5.0	26.8	11.0
4 25	5.4	26.9	5.2	26.6	10.9
4 30	+ 5.6	– 26.7	+ 5.3	– 26.5	– 10.7
4 35	5.7	26.6	5.5	26.3	10.6
4 40	5.9	26.4	5.6	26.2	10.4
4 45	6.0	26.3	5.8	26.0	10.3
4 50	6.2	26.1	5.9	25.9	10.1
4 55	6.3	26.0	6.1	25.7	10.0
5 00	+ 6.4	– 25.9	+ 6.2	– 25.6	– 9.9
5 05	6.6	25.7	6.3	25.5	9.7
5 10	6.7	25.6	6.5	25.3	9.6
5 15	6.8	25.5	6.6	25.2	9.5
5 20	7.0	25.3	6.7	25.1	9.3
5 25	7.1	25.2	6.8	25.0	9.2
5 30	+ 7.2	– 25.1	+ 6.9	– 24.9	– 9.1
5 35	7.3	25.0	7.1	24.7	9.0
5 40	7.4	24.9	7.2	24.6	8.9
5 45	7.5	24.8	7.3	24.5	8.8
5 50	7.6	24.7	7.4	24.4	8.7
5 55	7.7	24.6	7.5	24.3	8.6
6 00	+ 7.8	– 24.5	+ 7.6	– 24.2	– 8.5
6 10	8.0	24.3	7.8	24.0	8.3
6 20	8.2	24.1	8.0	23.8	8.1
6 30	8.4	23.9	8.2	23.6	7.9
6 40	8.6	23.7	8.3	23.5	7.7
6 50	8.7	23.6	8.5	23.3	7.6
7 00	+ 8.9	– 23.4	+ 8.7	– 23.1	– 7.4
7 10	9.1	23.2	8.8	23.0	7.2
7 20	9.2	23.1	9.0	22.8	7.1
7 30	9.3	23.0	9.1	22.7	6.9
7 40	9.5	22.8	9.2	22.6	6.8
7 50	9.6	22.7	9.4	22.4	6.7
8 00	+ 9.7	– 22.6	+ 9.5	– 22.3	– 6.6
8 10	9.9	22.4	9.6	22.2	6.4
8 20	10.0	22.3	9.7	22.1	6.3
8 30	10.1	22.2	9.9	21.9	6.2
8 40	10.2	22.1	10.0	21.8	6.1
8 50	10.3	22.0	10.1	21.7	6.0
9 00	+ 10.4	– 21.9	+ 10.2	– 21.6	– 5.9
9 10	10.5	21.8	10.3	21.5	5.8
9 20	10.6	21.7	10.4	21.4	5.7
9 30	10.7	21.6	10.5	21.3	5.6
9 40	10.8	21.5	10.6	21.2	5.5
9 50	10.9	21.4	10.6	21.2	5.4
10 00	+ 11.0	– 21.3	+ 10.7	– 21.1	– 5.3

For bubble sextant observations- ignore dip and use star corrections for the Sun, planets and stars.

NAVIGATIONAL STAR CHART

U.S. Naval Observatory / Astronomical Applications Dept.