The Nautical Almanac 2025
For the Sun

TheNauticalAlmanac.com

Contents

Credits, Acknowledgment and Disclaimer

Useful Links

Formulas

Equation of Time curve

The Daily Pages for the Sun

Increments & Corrections (*The Yellow Pages*)

Corrections for Dip, Refraction and Moon Parallax

Conversion of Arc to Time

USNO Navigational Star Chart

Acknowledgment and Credits

Dr. Enno Rodegerdts

The Nautical Almanac *Daily Pages* and Sun Almanacs found herein and on our site were created or derived from PyAlmanac written by the great Norwegian sailor Enno Rodegerdts. PyAlmanac uses PyEphem to generate the almanacs and LaTex provides 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 now found in the following Daily Pages. Attending foremost to the accuracy of data and then formatting Mr. Bauer modified PyAlmanac to provide a clear arrangement of figures needed 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.

Copyright 2019 TheNauticalAlmanac.com

You are free to copy and distribute this document in its entirety but never sell it.

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 *2017- The American Practical Navigator*

https://TheNauticalAlmanac.com/2017_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

https://TheNauticalAlmanac.com/Pub. No. 249.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 is the Latitude 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.

In Western Longitudes

LHA is the Local Hour Angle which is derived from subtracting your whole number value of Longitude (Assumed or otherwise) from the whole number value of ***GHA*** (Greenwich Hour Angle).

In Eastern Longitudes

LHA*, i*n ***Eastern Longitudes,*** is determined by rounding up the GHA figure to the next highest whole degree figure then adding the DR. Longitude to GHA to obtain LHA. Only add the whole degree DR. Longitude figure to the rounded up whole degree GHA figure. If the resulting LHA figure is greater than 360° then subtract 360° from the figure to obtain the 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;

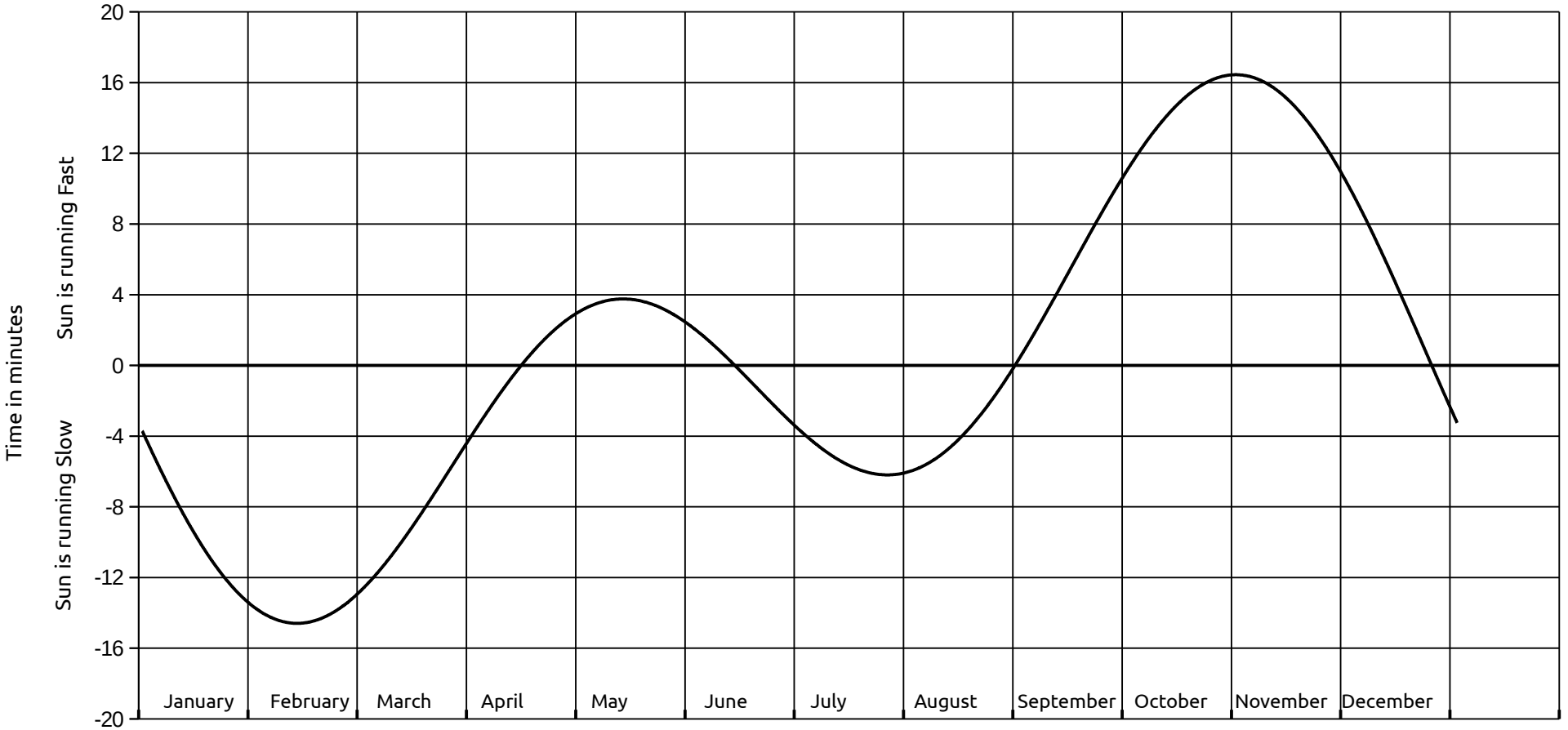
DR longitude + (0°60' *minus* GHA minutes of arc)

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

fair winds...clear skies and following seas
TheNauticalAlmanac.com

Formula Sheet added to NA.odt

Equation of Time
for the Sun



Equation_of_Time_Curve.odt

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	179°08.4	S22°59.9	0	178°47.5	S22°43.0	0	178°27.5	S22°22.0	0	178°08.7	S21°57.0	0	177°51.2	S21°28.2
1	194°08.1	59.7	1	193°47.2	42.7	1	193°27.2	21.6	1	193°08.5	56.6	1	192°51.0	27.8
2	209°07.8	59.5	2	208°46.9	42.4	2	208°27.0	21.3	2	208°08.2	56.3	2	207°50.8	27.4
3	224°07.5	·· 59.3	3	223°46.6	·· 42.2	3	223°26.7	·· 21.0	3	223°08.0	·· 55.9	3	222°50.5	·· 27.0
4	239°07.2	59.1	4	238°46.3	41.9	4	238°26.4	20.7	4	238°07.7	55.5	4	237°50.3	26.5
5	254°06.9	58.8	5	253°46.0	41.6	5	253°26.2	20.4	5	253°07.5	55.1	5	252°50.1	26.1
6	269°06.6	S22°58.6	6	268°45.8	S22°41.4	6	268°25.9	S22°20.0	6	268°07.2	S21°54.8	6	267°49.8	S21°25.7
7	284°06.3	58.4	7	283°45.5	41.1	7	283°25.6	19.7	7	283°07.0	54.4	7	282°49.6	25.2
8	299°06.0	58.2	8	298°45.2	40.8	8	298°25.4	19.4	8	298°06.7	54.0	8	297°49.4	24.8
9	314°05.7	·· 58.0	9	313°44.9	·· 40.6	9	313°25.1	·· 19.1	9	313°06.5	·· 53.6	9	312°49.1	·· 24.4
10	329°05.4	57.8	10	328°44.6	40.3	10	328°24.8	18.7	10	328°06.2	53.2	10	327°48.9	23.9
11	344°05.1	57.6	11	343°44.3	40.0	11	343°24.6	18.4	11	343°06.0	52.9	11	342°48.7	23.5
12	359°04.8	S22°57.4	12	358°44.1	S22°39.7	12	358°24.3	S22°18.1	12	358°05.7	S21°52.5	12	357°48.5	S21°23.1
13	14°04.5	57.1	13	13°43.8	39.5	13	13°24.0	17.8	13	13°05.5	52.1	13	12°48.2	22.6
14	29°04.2	56.9	14	28°43.5	39.2	14	28°23.8	17.4	14	28°05.2	51.7	14	27°48.0	22.2
15	44°03.9	·· 56.7	15	43°43.2	·· 38.9	15	43°23.5	·· 17.1	15	43°05.0	·· 51.3	15	42°47.8	·· 21.8
16	59°03.6	56.5	16	58°42.9	38.6	16	58°23.2	16.8	16	58°04.7	51.0	16	57°47.5	21.3
17	74°03.3	56.3	17	73°42.7	38.4	17	73°23.0	16.4	17	73°04.5	50.6	17	72°47.3	20.9
18	89°03.1	S22°56.0	18	88°42.4	S22°38.1	18	88°22.7	S22°16.1	18	88°04.2	S21°50.2	18	87°47.1	S21°20.4
19	104°02.8	55.8	19	103°42.1	37.8	19	103°22.4	15.8	19	103°04.0	49.8	19	102°46.9	20.0
20	119°02.5	55.6	20	118°41.8	37.5	20	118°22.2	15.4	20	118°03.7	49.4	20	117°46.6	19.6
21	134°02.2	·· 55.4	21	133°41.5	·· 37.2	21	133°21.9	·· 15.1	21	133°03.5	·· 49.0	21	132°46.4	·· 19.1
22	149°01.9	55.2	22	148°41.3	37.0	22	148°21.6	14.8	22	148°03.2	48.6	22	147°46.2	18.7
23	164°01.6	54.9	23	163°41.0	36.7	23	163°21.4	14.4	23	163°03.0	48.2	23	162°45.9	18.2
	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

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	177°35.2	S20°55.7	0	177°20.7	S20°19.6	0	177°07.7	S19°40.1	0	176°56.5	S18°57.2	0	176°47.0	S18°11.3
1	192°35.0	55.2	1	192°20.5	19.1	1	192°07.6	39.5	1	191°56.4	56.6	1	191°46.9	10.6
2	207°34.8	54.8	2	207°20.3	18.6	2	207°07.4	38.9	2	206°56.2	56.0	2	206°46.8	09.9
3	222°34.5	·· 54.3	3	222°20.1	·· 18.0	3	222°07.2	·· 38.4	3	221°56.1	·· 55.4	3	221°46.7	·· 09.3
4	237°34.3	53.8	4	237°19.9	17.5	4	237°07.1	37.8	4	236°55.9	54.8	4	236°46.6	08.6
5	252°34.1	53.3	5	252°19.7	17.0	5	252°06.9	37.2	5	251°55.8	54.1	5	251°46.4	07.9
6	267°33.9	S20°52.9	6	267°19.5	S20°16.5	6	267°06.7	S19°36.6	6	266°55.7	S18°53.5	6	266°46.3	S18°07.3
7	282°33.7	52.4	7	282°19.3	15.9	7	282°06.6	36.1	7	281°55.5	52.9	7	281°46.2	06.6
8	297°33.5	51.9	8	297°19.1	15.4	8	297°06.4	35.5	8	296°55.4	52.3	8	296°46.1	06.0
9	312°33.3	·· 51.4	9	312°18.9	·· 14.9	9	312°06.2	·· 34.9	9	311°55.2	·· 51.7	9	311°46.0	·· 05.3
10	327°33.1	50.9	10	327°18.8	14.3	10	327°06.1	34.3	10	326°55.1	51.0	10	326°45.9	04.6
11	342°32.9	50.4	11	342°18.6	13.8	11	342°05.9	33.7	11	341°54.9	50.4	11	341°45.8	04.0
12	357°32.6	S20°50.0	12	357°18.4	S20°13.3	12	357°05.7	S19°33.2	12	356°54.8	S18°49.8	12	356°45.6	S18°03.3
13	12°32.4	49.5	13	12°18.2	12.7	13	12°05.6	32.6	13	11°54.7	49.2	13	11°45.5	02.6
14	27°32.2	49.0	14	27°18.0	12.2	14	27°05.4	32.0	14	26°54.5	48.5	14	26°45.4	02.0
15	42°32.0	·· 48.5	15	42°17.8	·· 11.7	15	42°05.3	·· 31.4	15	41°54.4	·· 47.9	15	41°45.3	·· 01.3
16	57°31.8	48.0	16	57°17.6	11.1	16	57°05.1	30.8	16	56°54.3	47.3	16	56°45.2	00.6
17	72°31.6	47.5	17	72°17.5	10.6	17	72°04.9	30.3	17	71°54.1	46.7	17	71°45.1	18°00.0
18	87°31.4	S20°47.0	18	87°17.3	S20°10.1	18	87°04.8	S19°29.7	18	86°54.0	S18°46.0	18	86°45.0	S17°59.3
19	102°31.2	46.5	19	102°17.1	09.5	19	102°04.6	29.1	19	101°53.8	45.4	19	101°44.8	58.6
20	117°31.0	46.1	20	117°16.9	09.0	20	117°04.4	28.5	20	116°53.7	44.8	20	116°44.7	57.9
21	132°30.8	·· 45.6	21	132°16.7	·· 08.4	21	132°04.3	·· 27.9	21	131°53.6	·· 44.1	21	131°44.6	·· 57.3
22	147°30.6	45.1	22	147°16.5	07.9	22	147°04.1	27.3	22	146°53.4	43.5	22	146°44.5	56.6
23	162°30.4	44.6	23	162°16.3	07.4	23	162°04.0	26.7	23	161°53.3	42.9	23	161°44.4	55.9
	SD.=16.3	d=0.5		SD.=16.3	d=0.5		SD.=16.3	d=0.6		SD.=16.2	d=0.6		SD.=16.2	d=0.7

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	179°01.3	S22°54.7	0	178°40.7	S22°36.4	0	178°21.1	S22°14.1	0	178°02.7	S21°47.8	0	177°45.7	S21°17.8
1	194°01.0	54.5	1	193°40.4	36.1	1	193°20.8	13.7	1	193°02.5	47.5	1	192°45.5	17.4
2	209°00.7	54.2	2	208°40.1	35.8	2	208°20.6	13.4	2	208°02.2	47.1	2	207°45.3	16.9
3	224°00.4	·· 54.0	3	223°39.9	·· 35.6	3	223°20.3	·· 13.1	3	223°02.0	·· 46.7	3	222°45.0	·· 16.5
4	239°00.1	53.8	4	238°39.6	35.3	4	238°20.1	12.7	4	238°01.8	46.3	4	237°44.8	16.0
5	253°59.8	53.6	5	253°39.3	35.0	5	253°19.8	12.4	5	253°01.5	45.9	5	252°44.6	15.6
6	268°59.5	S22°53.3	6	268°39.0	S22°34.7	6	268°19.5	S22°12.0	6	268°01.3	S21°45.5	6	267°44.4	S21°15.1
7	283°59.3	53.1	7	283°38.7	34.4	7	283°19.3	11.7	7	283°01.0	45.1	7	282°44.1	14.7
8	298°59.0	52.9	8	298°38.5	34.1	8	298°19.0	11.4	8	298°00.8	44.7	8	297°43.9	14.2
9	313°58.7	·· 52.6	9	313°38.2	·· 33.8	9	313°18.7	·· 11.0	9	313°00.5	·· 44.3	9	312°43.7	·· 13.8
10	328°58.4	52.4	10	328°37.9	33.5	10	328°18.5	10.7	10	328°00.3	43.9	10	327°43.5	13.3
11	343°58.1	52.2	11	343°37.6	33.3	11	343°18.2	10.3	11	343°00.0	43.5	11	342°43.2	12.9
12	358°57.8	S22°51.9	12	358°37.4	S22°33.0	12	358°18.0	S22°10.0	12	357°59.8	S21°43.1	12	357°43.0	S21°12.4
13	13°57.5	51.7	13	13°37.1	32.7	13	13°17.7	09.6	13	12°59.6	42.7	13	12°42.8	12.0
14	28°57.2	51.5	14	28°36.8	32.4	14	28°17.4	09.3	14	27°59.3	42.3	14	27°42.6	11.5
15	43°56.9	·· 51.2	15	43°36.5	·· 32.1	15	43°17.2	·· 08.9	15	42°59.1	·· 41.9	15	42°42.4	·· 11.1
16	58°56.6	51.0	16	58°36.2	31.8	16	58°16.9	08.6	16	57°58.8	41.5	16	57°42.1	10.6
17	73°56.4	50.7	17	73°36.0	31.5	17	73°16.7	08.2	17	72°58.6	41.1	17	72°41.9	10.2
18	88°56.1	S22°50.5	18	88°35.7	S22°31.2	18	88°16.4	S22°07.9	18	87°58.4	S21°40.7	18	87°41.7	S21°09.7
19	103°55.8	50.3	19	103°35.4	30.9	19	103°16.1	07.5	19	102°58.1	40.3	19	102°41.5	09.3
20	118°55.5	50.0	20	118°35.1	30.6	20	118°15.9	07.2	20	117°57.9	39.9	20	117°41.2	08.8
21	133°55.2	·· 49.8	21	133°34.9	·· 30.3	21	133°15.6	·· 06.8	21	132°57.6	·· 39.5	21	132°41.0	·· 08.3
22	148°54.9	49.5	22	148°34.6	30.0	22	148°15.4	06.5	22	147°57.4	39.1	22	147°40.8	07.9
23	163°54.6	49.3	23	163°34.3	29.7	23	163°15.1	06.1	23	162°57.2	38.7	23	162°40.6	07.4
	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

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	177°30.2	S20°44.1	0	177°16.2	S20°06.8	0	177°03.8	S19°26.2	0	176°53.2	S18°42.2	0	176°44.3	S17°55.3
1	192°30.0	43.6	1	192°16.0	06.3	1	192°03.6	25.6	1	191°53.0	41.6	1	191°44.2	54.6
2	207°29.8	43.1	2	207°15.8	05.7	2	207°03.5	25.0	2	206°52.9	41.0	2	206°44.1	53.9
3	222°29.5	·· 42.6	3	222°15.6	·· 05.2	3	222°03.3	·· 24.4	3	221°52.7	·· 40.3	3	221°44.0	·· 53.2
4	237°29.3	42.1	4	237°15.4	04.7	4	237°03.2	23.8	4	236°52.6	39.7	4	236°43.8	52.6
5	252°29.1	41.6	5	252°15.2	04.1	5	252°03.0	23.2	5	251°52.5	39.1	5	251°43.7	51.9
6	267°28.9	S20°41.1	6	267°15.1	S20°03.6	6	267°02.8	S19°22.6	6	266°52.3	S18°38.4	6	266°43.6	S17°51.2
7	282°28.7	40.6	7	282°14.9	03.0	7	282°02.7	22.0	7	281°52.2	37.8	7	281°43.5	50.5
8	297°28.5	40.1	8	297°14.7	02.5	8	297°02.5	21.4	8	296°52.1	37.2	8	296°43.4	49.9
9	312°28.3	·· 39.6	9	312°14.5	·· 01.9	9	312°02.4	·· 20.8	9	311°51.9	·· 36.5	9	311°43.3	·· 49.2
10	327°28.1	39.1	10	327°14.3	01.4	10	327°02.2	20.2	10	326°51.8	35.9	10	326°43.2	48.5
11	342°27.9	38.6	11	342°14.2	00.8	11	342°02.1	19.7	11	341°51.7	35.3	11	341°43.1	47.8
12	357°27.7	S20°38.1	12	357°14.0	S20°00.3	12	357°01.9	S19°19.1	12	356°51.6	S18°34.6	12	356°43.0	S17°47.1
13	12°27.5	37.6	13	12°13.8	19°59.7	13	12°01.8	18.5	13	11°51.4	34.0	13	11°42.9	46.5
14	27°27.3	37.1	14	27°13.6	59.2	14	27°01.6	17.9	14	26°51.3	33.3	14	26°42.8	45.8
15	42°27.1	·· 36.6	15	42°13.4	·· 58.6	15	42°01.4	·· 17.3	15	41°51.2	·· 32.7	15	41°42.7	·· 45.1
16	57°26.9	36.1	16	57°13.3	58.1	16	57°01.3	16.7	16	56°51.0	32.1	16	56°42.6	44.4
17	72°26.7	35.6	17	72°13.1	57.5	17	72°01.1	16.1	17	71°50.9	31.4	17	71°42.5	43.7
18	87°26.5	S20°35.1	18	87°12.9	S19°57.0	18	87°01.0	S19°15.5	18	86°50.8	S18°30.8	18	86°42.3	S17°43.1
19	102°26.3	34.6	19	102°12.7	56.4	19	102°00.8	14.9	19	101°50.6	30.1	19	101°42.2	42.4
20	117°26.1	34.1	20	117°12.6	55.9	20	117°00.7	14.3	20	116°50.5	29.5	20	116°42.1	41.7
21	132°25.9	·· 33.6	21	132°12.4	·· 55.3	21	132°00.5	·· 13.7	21	131°50.4	·· 28.9	21	131°42.0	·· 41.0
22	147°25.7	33.1	22	147°12.2	54.8	22	147°00.4	13.1	22	146°50.3	28.2	22	146°41.9	40.3
23	162°25.5	32.6	23	162°12.0	54.2	23	162°00.2	12.5	23	161°50.1	27.6	23	161°41.8	39.6
	SD.=16.3	d=0.5		SD.=16.3	d=0.5		SD.=16.2	d=0.6		SD.=16.2	d=0.6		SD.=16.2	d=0.7

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	178°54.3	S22°49.1	0	178°34.0	S22°29.4	0	178°14.8	S22°05.8	0	177°56.9	S21°38.2	0	177°40.4	S21°07.0
1	193°54.0	48.8	1	193°33.8	29.1	1	193°14.6	05.4	1	192°56.7	37.8	1	192°40.1	06.5
2	208°53.8	48.6	2	208°33.5	28.8	2	208°14.3	05.1	2	207°56.4	37.4	2	207°39.9	06.0
3	223°53.5	·· 48.3	3	223°33.2	·· 28.5	3	223°14.1	·· 04.7	3	222°56.2	·· 37.0	3	222°39.7	·· 05.6
4	238°53.2	48.1	4	238°32.9	28.2	4	238°13.8	04.3	4	237°56.0	36.6	4	237°39.5	05.1
5	253°52.9	47.8	5	253°32.7	27.9	5	253°13.6	04.0	5	252°55.7	36.2	5	252°39.3	04.7
6	268°52.6	S22°47.6	6	268°32.4	S22°27.6	6	268°13.3	S22°03.6	6	267°55.5	S21°35.8	6	267°39.1	S21°04.2
7	283°52.3	47.3	7	283°32.1	27.3	7	283°13.0	03.3	7	282°55.2	35.4	7	282°38.8	03.7
8	298°52.0	47.1	8	298°31.9	27.0	8	298°12.8	02.9	8	297°55.0	35.0	8	297°38.6	03.3
9	313°51.7	·· 46.8	9	313°31.6	·· 26.7	9	313°12.5	·· 02.5	9	312°54.8	·· 34.5	9	312°38.4	·· 02.8
10	328°51.5	46.6	10	328°31.3	26.4	10	328°12.3	02.2	10	327°54.5	34.1	10	327°38.2	02.3
11	343°51.2	46.3	11	343°31.0	26.1	11	343°12.0	01.8	11	342°54.3	33.7	11	342°38.0	01.9
12	358°50.9	S22°46.1	12	358°30.8	S22°25.7	12	358°11.8	S22°01.4	12	357°54.1	S21°33.3	12	357°37.8	S21°01.4
13	13°50.6	45.8	13	13°30.5	25.4	13	13°11.5	01.1	13	12°53.8	32.9	13	12°37.5	00.9
14	28°50.3	45.6	14	28°30.2	25.1	14	28°11.3	00.7	14	27°53.6	32.5	14	27°37.3	00.5
15	43°50.0	·· 45.3	15	43°29.9	·· 24.8	15	43°11.0	·· 00.4	15	42°53.3	·· 32.0	15	42°37.1	21°00.0
16	58°49.7	45.0	16	58°29.7	24.5	16	58°10.7	22°00.0	16	57°53.1	31.6	16	57°36.9	20°59.5
17	73°49.5	44.8	17	73°29.4	24.2	17	73°10.5	21°59.6	17	72°52.9	31.2	17	72°36.7	59.0
18	88°49.2	S22°44.5	18	88°29.1	S22°23.9	18	88°10.2	S21°59.2	18	87°52.6	S21°30.8	18	87°36.5	S20°58.6
19	103°48.9	44.3	19	103°28.9	23.6	19	103°10.0	58.9	19	102°52.4	30.4	19	102°36.2	58.1
20	118°48.6	44.0	20	118°28.6	23.2	20	118°09.7	58.5	20	117°52.2	29.9	20	117°36.0	57.6
21	133°48.3	·· 43.7	21	133°28.3	·· 22.9	21	133°09.5	·· 58.1	21	132°51.9	·· 29.5	21	132°35.8	·· 57.2
22	148°48.0	43.5	22	148°28.1	22.6	22	148°09.2	57.8	22	147°51.7	29.1	22	147°35.6	56.7
23	163°47.7	43.2	23	163°27.8	22.3	23	163°09.0	57.4	23	162°51.5	28.7	23	162°35.4	56.2
	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

18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	177°25.3	S20°32.1	0	177°11.9	S19°53.6	0	177°00.1	S19°11.9	0	176°50.0	S18°26.9	0	176°41.7	S17°38.9
1	192°25.1	31.5	1	192°11.7	53.1	1	191°59.9	11.3	1	191°49.9	26.3	1	191°41.6	38.3
2	207°24.9	31.0	2	207°11.5	52.5	2	206°59.8	10.7	2	206°49.7	25.6	2	206°41.5	37.6
3	222°24.7	·· 30.5	3	222°11.3	·· 52.0	3	221°59.6	·· 10.1	3	221°49.6	·· 25.0	3	221°41.4	·· 36.9
4	237°24.5	30.0	4	237°11.2	51.4	4	236°59.5	09.5	4	236°49.5	24.3	4	236°41.3	36.2
5	252°24.3	29.5	5	252°11.0	50.8	5	251°59.3	08.9	5	251°49.4	23.7	5	251°41.2	35.5
6	267°24.1	S20°29.0	6	267°10.8	S19°50.3	6	266°59.2	S19°08.2	6	266°49.2	S18°23.0	6	266°41.1	S17°34.8
7	282°23.9	28.5	7	282°10.6	49.7	7	281°59.0	07.6	7	281°49.1	22.4	7	281°41.0	34.1
8	297°23.7	28.0	8	297°10.5	49.2	8	296°58.9	07.0	8	296°49.0	21.7	8	296°40.9	33.4
9	312°23.5	·· 27.4	9	312°10.3	·· 48.6	9	311°58.7	·· 06.4	9	311°48.9	·· 21.1	9	311°40.8	·· 32.7
10	327°23.4	26.9	10	327°10.1	48.0	10	326°58.6	05.8	10	326°48.7	20.4	10	326°40.7	32.1
11	342°23.2	26.4	11	342°09.9	47.5	11	341°58.4	05.2	11	341°48.6	19.8	11	341°40.6	31.4
12	357°23.0	S20°25.9	12	357°09.8	S19°46.9	12	356°58.3	S19°04.6	12	356°48.5	S18°19.1	12	356°40.5	S17°30.7
13	12°22.8	25.4	13	12°09.6	46.3	13	11°58.1	04.0	13	11°48.4	18.5	13	11°40.4	30.0
14	27°22.6	24.9	14	27°09.4	45.8	14	26°58.0	03.4	14	26°48.2	17.8	14	26°40.3	29.3
15	42°22.4	·· 24.3	15	42°09.3	·· 45.2	15	41°57.8	·· 02.8	15	41°48.1	·· 17.2	15	41°40.2	·· 28.6
16	57°22.2	23.8	16	57°09.1	44.6	16	56°57.7	02.2	16	56°48.0	16.5	16	56°40.1	27.9
17	72°22.0	23.3	17	72°08.9	44.1	17	71°57.5	01.5	17	71°47.9	15.9	17	71°40.0	27.2
18	87°21.8	S20°22.8	18	87°08.7	S19°43.5	18	86°57.4	S19°00.9	18	86°47.8	S18°15.2	18	86°39.9	S17°26.5
19	102°21.6	22.2	19	102°08.6	42.9	19	101°57.2	19°00.3	19	101°47.6	14.5	19	101°39.9	25.8
20	117°21.4	21.7	20	117°08.4	42.4	20	116°57.1	18°59.7	20	116°47.5	13.9	20	116°39.8	25.1
21	132°21.2	·· 21.2	21	132°08.2	·· 41.8	21	131°56.9	·· 59.1	21	131°47.4	·· 13.2	21	131°39.7	·· 24.4
22	147°21.0	20.7	22	147°08.1	41.2	22	146°56.8	58.5	22	146°47.3	12.6	22	146°39.6	23.7
23	162°20.8	20.2	23	162°07.9	40.7	23	161°56.7	57.8	23	161°47.2	11.9	23	161°39.5	23.0
	SD.=16.3	d=0.5		SD.=16.3	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	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	176°39.4	S17°22.3	0	176°33.6	S16°30.6	0	176°29.6	S15°36.3	0	176°27.5	S14°39.7	0	176°27.2	S13°40.8	0	176°28.6	S12°40.0	0	176°31.7	S11°37.2	0	176°36.2	S10°32.9	0	176°42.1	S09°27.0	0	176°49.3	S08°19.8
1	191°39.3	21.6	1	191°33.5	29.9	1	191°29.6	35.6	1	191°27.5	38.9	1	191°27.3	40.0	1	191°28.7	39.1	1	191°31.7	36.4	1	191°36.2	32.0	1	191°42.2	26.1	1	191°49.4	18.9
2	206°39.2	20.9	2	206°33.4	29.1	2	206°29.6	34.8	2	206°27.5	38.1	2	206°27.3	39.2	2	206°28.7	38.2	2	206°31.8	35.5	2	206°36.3	31.1	2	206°42.3	25.2	2	206°49.5	18.0
3	221°39.1	·· 20.2	3	221°33.4	·· 28.4	3	221°29.5	·· 34.0	3	221°27.5	·· 37.3	3	221°27.3	·· 38.3	3	221°28.7	·· 37.4	3	221°31.8	·· 34.6	3	221°36.4	·· 30.2	3	221°42.4	·· 24.2	3	221°49.6	·· 17.0
4	236°39.0	19.5	4	236°33.3	27.7	4	236°29.5	33.3	4	236°27.5	36.5	4	236°27.3	37.5	4	236°28.8	36.5	4	236°31.9	33.7	4	236°36.5	29.2	4	236°42.5	23.3	4	236°49.7	16.1
5	251°38.9	18.8	5	251°33.2	26.9	5	251°29.4	32.5	5	251°27.5	35.7	5	251°27.3	36.7	5	251°28.8	35.7	5	251°31.9	32.8	5	251°36.5	28.3	5	251°42.5	22.4	5	251°49.9	15.1
6	266°38.8	S17°18.1	6	266°33.2	S16°26.2	6	266°29.4	S15°31.7	6	266°27.5	S14°34.9	6	266°27.3	S13°35.8	6	266°28.8	S12°34.8	6	266°32.0	S11°31.9	6	266°36.6	S10°27.4	6	266°42.6	S09°21.5	6	266°50.0	S08°14.2
7	281°38.7	17.4	7	281°33.1	25.5	7	281°29.4	30.9	7	281°27.4	34.1	7	281°27.3	35.0	7	281°28.9	33.9	7	281°32.0	31.1	7	281°36.7	26.5	7	281°42.7	20.5	7	281°50.1	13.2
8	296°38.6	16.7	8	296°33.0	24.7	8	296°29.3	30.2	8	296°27.4	33.2	8	296°27.3	34.2	8	296°28.9	33.1	8	296°32.1	30.2	8	296°36.8	25.6	8	296°42.8	19.6	8	296°50.2	12.3
9	311°38.6	·· 16.0	9	311°33.0	·· 24.0	9	311°29.3	·· 29.4	9	311°27.4	·· 32.4	9	311°27.3	·· 33.3	9	311°28.9	·· 32.2	9	311°32.1	·· 29.3	9	311°36.8	·· 24.7	9	311°42.9	·· 18.7	9	311°50.3	·· 11.4
10	326°38.5	15.3	10	326°32.9	23.2	10	326°29.2	28.6	10	326°27.4	31.6	10	326°27.3	32.5	10	326°29.0	31.4	10	326°32.2	28.4	10	326°36.9	23.8	10	326°43.0	17.7	10	326°50.4	10.4
11	341°38.4	14.6	11	341°32.9	22.5	11	341°29.2	27.8	11	341°27.4	30.8	11	341°27.4	31.7	11	341°29.0	30.5	11	341°32.2	27.5	11	341°37.0	22.9	11	341°43.1	16.8	11	341°50.5	09.5
12	356°38.3	S17°13.9	12	356°32.8	S16°21.7	12	356°29.2	S15°27.1	12	356°27.4	S14°30.0	12	356°27.4	S13°30.8	12	356°29.0	S12°29.6	12	356°32.3	S11°26.6	12	356°37.1	S10°22.0	12	356°43.2	S09°15.9	12	356°50.6	S08°08.5
13	11°38.2	13.2	13	11°32.7	21.0	13	11°29.1	26.3	13	11°27.4	29.2	13	11°27.4	30.0	13	11°29.1	28.8	13	11°32.4	25.7	13	11°37.1	21.1	13	11°43.3	15.0	13	11°50.7	07.6
14	26°38.1	12.5	14	26°32.7	20.3	14	26°29.1	25.5	14	26°27.4	28.4	14	26°27.4	29.1	14	26°29.1	27.9	14	26°32.4	24.9	14	26°37.2	20.2	14	26°43.4	14.0	14	26°50.9	06.6
15	41°38.0	·· 11.8	15	41°32.6	·· 19.5	15	41°29.1	·· 24.7	15	41°27.3	·· 27.6	15	41°27.4	·· 28.3	15	41°29.1	·· 27.0	15	41°32.5	·· 24.0	15	41°37.3	·· 19.3	15	41°43.5	·· 13.1	15	41°51.0	·· 05.7
16	56°37.9	11.1	16	56°32.5	18.8	16	56°29.0	23.9	16	56°27.3	26.8	16	56°27.4	27.5	16	56°29.2	26.2	16	56°32.5	23.1	16	56°37.4	18.4	16	56°43.6	12.2	16	56°51.1	04.8
17	71°37.8	10.4	17	71°32.5	18.0	17	71°29.0	23.2	17	71°27.3	26.0	17	71°27.4	26.6	17	71°29.2	25.3	17	71°32.6	22.2	17	71°37.4	17.4	17	71°43.7	11.3	17	71°51.2	03.8
18	86°37.8	S17°09.6	18	86°32.4	S16°17.3	18	86°28.9	S15°22.4	18	86°27.3	S14°25.2	18	86°27.4	S13°25.8	18	86°29.2	S12°24.4	18	86°32.6	S11°21.3	18	86°37.5	S10°16.5	18	86°43.8	S09°10.3	18	86°51.3	S08°02.9
19	101°37.7	08.9	19	101°32.4	16.5	19	101°28.9	21.6	19	101°27.3	24.4	19	101°27.5	25.0	19	101°29.3	23.6	19	101°32.7	20.4	19	101°37.6	15.6	19	101°43.9	09.4	19	101°51.4	01.9
20	116°37.6	08.2	20	116°32.3	15.8	20	116°28.9	20.8	20	116°27.3	23.5	20	116°27.5	24.1	20	116°29.3	22.7	20	116°32.8	19.5	20	116°37.7	14.7	20	116°44.0	08.5	20	116°51.5	01.0
21	131°37.5	·· 07.5	21	131°32.2	·· 15.0	21	131°28.8	·· 20.1	21	131°27.3	·· 22.7	21	131°27.5	·· 23.3	21	131°29.4	·· 21.9	21	131°32.8	·· 18.6	21	131°37.8	·· 13.8	21	131°44.1	·· 07.5	21	131°51.6	08°00.0
22	146°37.4	06.8	22	146°32.2	14.3	22	146°28.8	19.3	22	146°27.3	21.9	22	146°27.5	22.4	22	146°29.4	21.0	22	146°32.9	17.7	22	146°37.8	12.9	22	146°44.2	06.6	22	146°51.8	07°59.1
23	161°37.3	06.1	23	161°32.1	13.6	23	161°28.8	18.5	23	161°27.3	21.1	23	161°27.5	21.6	23	161°29.4	20.1	23	161°32.9	16.9	23	161°37.9	12.0	23	161°44.3	05.7	23	161°51.9	58.1
	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		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

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	176°37.2	S17°05.4	0	176°32.1	S16°12.8	0	176°28.7	S15°17.7	0	176°27.3	S14°20.3	0	176°27.5	S13°20.8	0	176°29.5	S12°19.3	0	176°33.0	S11°16.0	0	176°38.0	S10°11.1	0	176°44.4	S09°04.8	0	176°52.0	S07°57.2
1	191°37.2	04.7	1	191°32.0	12.1	1	191°28.7	16.9	1	191°27.2	19.5	1	191°27.5	19.9	1	191°29.5	18.4	1	191°33.1	15.1	1	191°38.1	10.2	1	191°44.5	03.8	1	191°52.1	56.3
2	206°37.1	04.0	2	206°31.9	11.3	2	206°28.7	16.1	2	206°27.2	18.7	2	206°27.6	19.1	2	206°29.6	17.5	2	206°33.1	14.2	2	206°38.1	09.2	2	206°44.5	02.9	2	206°52.2	55.3
3	221°37.0	·· 03.2	3	221°31.9	·· 10.6	3	221°28.6	·· 15.4	3	221°27.2	·· 17.9	3	221°27.6	·· 18.2	3	221°29.6	·· 16.6	3	221°33.2	·· 13.3	3	221°38.2	·· 08.3	3	221°44.6	·· 02.0	3	221°52.3	·· 54.4
4	236°36.9	02.5	4	236°31.8	09.8	4	236°28.6	14.6	4	236°27.2	17.0	4	236°27.6	17.4	4	236°29.6	15.8	4	236°33.2	12.4	4	236°38.3	07.4	4	236°44.7	01.0	4	236°52.5	53.4
5	251°36.8	01.8	5	251°31.8	09.1	5	251°28.6	13.8	5	251°27.2	16.2	5	251°27.6	16.5	5	251°29.7	14.9	5	251°33.3	11.5	5	251°38.4	06.5	5	251°44.8	09°00.1	5	251°52.6	52.5
6	266°36.7	S17°01.1	6	266°31.7	S16°08.3	6	266°28.5	S15°13.0	6	266°27.2	S14°15.4	6	266°27.6	S13°15.7	6	266°29.7	S12°14.0	6	266°33.4	S11°10.6	6	266°38.5	S10°05.6	6	266°44.9	S08°59.2	6	266°52.7	S07°51.5
7	281°36.7	17°00.4	7	281°31.7	07.6	7	281°28.5	12.2	7	281°27.2	14.6	7	281°27.6	14.9	7	281°29.7	13.2	7	281°33.4	09.7	7	281°38.5	04.7	7	281°45.0	58.2	7	281°52.8	50.6
8	296°36.6	16°59.7	8	296°31.6	06.8	8	296°28.5	11.4	8	296°27.2	13.8	8	296°27.7	14.0	8	296°29.8	12.3	8	296°33.5	08.8	8	296°38.6	03.8	8	296°45.1	57.3	8	296°52.9	49.6
9	311°36.5	·· 59.0	9	311°31.5	·· 06.0	9	311°28.5	·· 10.7	9	311°27.2	·· 13.0	9	311°27.7	·· 13.2	9	311°29.8	·· 11.4	9	311°33.5	·· 07.9	9	311°38.7	·· 02.9	9	311°45.2	·· 56.4	9	311°53.0	·· 48.7
10	326°36.4	58.2	10	326°31.5	05.3	10	326°28.4	09.9	10	326°27.2	12.2	10	326°27.7	12.3	10	326°29.9	10.6	10	326°33.6	07.0	10	326°38.8	01.9	10	326°45.3	55.4	10	326°53.1	47.7
11	341°36.3	57.5	11	341°31.4	04.5	11	341°28.4	09.1	11	341°27.2	11.3	11	341°27.7	11.5	11	341°29.9	09.7	11	341°33.7	06.1	11	341°38.9	01.0	11	341°45.4	54.5	11	341°53.3	46.8
12	356°36.2	S16°56.8	12	356°31.4	S16°03.8	12	356°28.4	S15°08.3	12	356°27.2	S14°10.5	12	356°27.7	S13°10.6	12	356°30.0	S12°08.8	12	356°33.7	S11°05.3	12	356°39.0	S10°00.1	12	356°45.5	S08°53.6	12	356°53.4	S07°45.8
13	11°36.2	56.1	13	11°31.3	03.0	13	11°28.3	07.5	13	11°27.2	09.7	13	11°27.8	09.8	13	11°30.0	08.0	13	11°33.8	04.4	13	11°39.0	09°59.2	13	11°45.6	52.6	13	11°53.5	44.9
14	26°36.1	55.4	14	26°31.3	02.3	14	26°28.3	06.7	14	26°27.2	08.9	14	26°27.8	08.9	14	26°30.0	07.1	14	26°33.9	03.5	14	26°39.1	58.3	14	26°45.7	51.7	14	26°53.6	43.9
15	41°36.0	·· 54.6	15	41°31.2	·· 01.5	15	41°28.3	·· 05.9	15	41°27.2	·· 08.1	15	41°27.8	·· 08.1	15	41°30.1	·· 06.2	15	41°33.9	·· 02.6	15	41°39.2	·· 57.4	15	41°45.8	·· 50.8	15	41°53.7	·· 43.0
16	56°35.9	53.9	16	56°31.2	00.8	16	56°28.3	05.1	16	56°27.2	07.2	16	56°27.8	07.3	16	56°30.1	05.3	16	56°34.0	01.7	16	56°39.3	56.4	16	56°45.9	49.8	16	56°53.9	42.0
17	71°35.8	53.2	17	71°31.1	16°00.0	17	71°28.2	04.4	17	71°27.2	06.4	17	71°27.8	06.4	17	71°30.2	04.5	17	71°34.0	11°00.8	17	71°39.4	55.5	17	71°46.0	48.9	17	71°54.0	41.1
18	86°35.8	S16°52.5	18	86°31.1	S15°59.3	18	86°28.2	S15°03.6	18	86°27.2	S14°05.6	18	86°27.9	S13°05.6	18	86°30.2	S12°03.6	18	86°34.1	S10°59.9	18	86°39.5	S09°54.6	18	86°46.1	S08°48.0	18	86°54.1	S07°40.1
19	101°35.7	51.8	19	101°31.0	58.5	19	101°28.2	02.8	19	101°27.2	04.8	19	101°27.9	04.7	19	101°30.3	02.7	19	101°34.2	59.0	19	101°39.5	53.7	19	101°46.2	47.0	19	101°54.2	39.2
20	116°35.6	51.0	20	116°30.9	57.7	20	116°28.1	02.0	20	116°27.2	04.0	20	116°27.9	03.9	20	116°30.3	01.8	20	116°34.2	58.1	20	116°39.6	52.8	20	116°46.4	46.1	20	116°54.3	38.2
21	131°35.5	·· 50.3	21	131°30.9	·· 57.0	21	131°28.1	·· 01.2	21	131°27.2	·· 03.1	21	131°27.9	·· 03.0	21	131°30.3	·· 01.0	21	131°34.3	·· 57.2	21	131°39.7	·· 51.9	21	131°46.5	·· 45.2	21	131°54.4	·· 37.3
22	146°35.5	49.6	22	146°30.8	56.2	22	146°28.1	15°00.4	22	146°27.2	02.3	22	146°27.9	02.2	22	146°30.4	12°00.1	22	146°34.4	56.3	22	146°39.8	50.9	22	146°46.6	44.2	22	146°54.6	36.3
23	161°35.4	48.9	23	161°30.8	55.5	23	161°28.1	14°59.6	23	161°27.2	01.5	23	161°28.0	01.3	23	161°30.4	11°59.2	23	161°34.4	55.4	23	161°39.9	50.0	23	161°46.7	43.3	23	161°54.7	35.4
	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		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

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	01	GHA	Dec
0	176°35.3	S16°48.1	0	176°30.7	S15°54.7	0	176°28.0	S14°58.8	0	176°27.2	S14°00.7	0	176°28.0	S13°00.5	0	176°30.5	S11°58.3	0	176°34.5	S10°54.5	0	176°40.0	S09°49.1	0	176°46.8	S08°42.4	0	176°54.8	S07°34.4
1	191°35.2	47.4	1	191°30.7	53.9	1	191°28.0	58.0	1	191°27.2	13°59.9	1	191°28.0	12°59.6	1	191°30.5	57.5	1	191°34.6	53.6	1	191°40.0	48.2	1	191°46.9	41.4	1	191°54.9	33.5
2	206°35.1	46.7	2	206°30.6	53.2	2	206°28.0	57.2	2	206°27.2	59.0	2	206°28.0	58.8	2	206°30.6	56.6	2	206°34.6	52.7	2	206°40.1	47.3	2	206°47.0	40.5	2	206°55.0	32.5
3	221°35.1	·· 46.0	3	221°30.6	·· 52.4	3	221°28.0	·· 56.4	3	221°27.2	·· 58.2	3	221°28.1	·· 57.9	3	221°30.6	·· 55.7	3	221°34.7	·· 51.8	3	221°40.2	·· 46.4	3	221°47.1	·· 39.6	3	221°55.2	·· 31.6
4	236°35.0	45.2	4	236°30.5	51.7	4	236°27.9	55.6	4	236°27.2	57.4	4	236°28.1	57.1	4	236°30.7	54.8	4	236°34.8	50.9	4	236°40.3	45.4	4	236°47.2	38.6	4	236°55.3	30.6
5	251°34.9	44.5	5	251°30.5	50.9	5	251°27.9	54.9	5	251°27.2	56.6	5	251°28.1	56.2	5	251°30.7	54.0	5	251°34.8	50.0	5	251°40.4	44.5	5	251°47.3	37.7	5	251°55.4	29.7
6	266°34.9	S16°43.8	6	266°30.4	S15°50.1	6	266°27.9	S14°54.1	6	266°27.2	S13°55.7	6	266°28.1	S12°55.4	6	266°30.8	S11°53.1	6	266°34.9	S10°49.1	6	266°40.5	S09°43.6	6	266°47.4	S08°36.7	6	266°55.5	S07°28.7
7	281°34.8	43.1	7	281°30.4	49.4	7	281°27.9	53.3	7	281°27.2	54.9	7	281°28.2	54.5	7	281°30.8	52.2	7	281°35.0	48.2	7	281°40.6	42.7	7	281°47.5	35.8	7	281°55.7	27.8
8	296°34.7	42.3	8	296°30.4	48.6	8	296°27.9	52.5	8	296°27.2	54.1	8	296°28.2	53.7	8	296°30.8	51.3	8	296°35.0	47.3	8	296°40.7	41.8	8	296°47.6	34.9	8	296°55.8	26.8
9	311°34.6	·· 41.6	9	311°30.3	·· 47.9	9	311°27.8	·· 51.7	9	311°27.2	·· 53.3	9	311°28.2	·· 52.8	9	311°30.9	·· 50.5	9	311°35.1	·· 46.4	9	311°40.7	·· 40.8	9	311°47.7	·· 33.9	9	311°55.9	·· 25.9
10	326°34.6	40.9	10	326°30.3	47.1	10	326°27.8	50.9	10	326°27.2	52.4	10	326°28.2	51.9	10	326°30.9	49.6	10	326°35.2	45.5	10	326°40.8	39.9	10	326°47.8	33.0	10	326°56.0	24.9
11	341°34.5	40.1	11	341°30.2	46.3	11	341°27.8	50.1	11	341°27.2	51.6	11	341°28.3	51.1	11	341°31.0	48.7	11	341°35.2	44.6	11	341°40.9	39.0	11	341°47.9	32.1	11	341°56.1	24.0
12	356°34.4	S16°39.4	12	356°30.2	S15°45.6	12	356°27.8	S14°49.3	12	356°27.2	S13°50.8	12	356°28.3	S12°50.2	12	356°31.0	S11°47.8	12	356°35.3	S10°43.7	12	356°41.0	S09°38.1	12	356°48.0	S08°31.1	12	356°56.3	S07°23.0
13	11°34.3	38.7	13	11°30.1	44.8	13	11°27.8	48.5	13	11°27.2	50.0	13	11°28.3	49.4	13	11°31.1	46.9	13	11°35.4	42.8	13	11°41.1	37.2	13	11°48.1	30.2	13	11°56.4	22.1
14	26°34.3	38.0	14	26°30.1	44.0	14	26°27.7	47.7	14	26°27.2	49.1	14	26°28.4	48.5	14	26°31.1	46.1	14	26°35.5	41.9	14	26°41.2	36.2	14	26°48.2	29.2	14	26°56.5	21.1
15	41°34.2	·· 37.2	15	41°30.0	·· 43.3	15	41°27.7	·· 46.9	15	41°27.2	·· 48.3	15	41°28.4	·· 47.7	15	41°31.2	·· 45.2	15	41°35.5	·· 41.0	15	41°41.3	·· 35.3	15	41°48.3	·· 28.3	15	41°56.6	·· 20.2
16	56°34.1	36.5	16	56°30.0	42.5	16	56°27.7	46.1	16	56°27.2	47.5	16	56°28.4	46.8	16	56°31.2	44.3	16	56°35.6	40.1	16	56°41.4	34.4	16	56°48.4	27.4	16	56°56.8	19.2
17	71°34.1	35.8	17	71°29.9	41.7	17	71°27.7	45.3	17	71°27.2	46.6	17	71°28.4	46.0	17	71°31.3	43.4	17	71°35.7	39.2	17	71°41.5	33.5	17	71°48.6	26.4	17	71°56.9	18.3
18	86°34.0	S16°35.0	18	86°29.9	S15°41.0	18	86°27.7	S14°44.5	18	86°27.2	S13°45.8	18	86°28.5	S12°45.1	18	86°31.3	S11°42.5	18	86°35.7	S10°38.3	18	86°41.5	S09°32.5	18	86°48.7	S08°25.5	18	86°57.0	S07°17.3
19	101°33.9	34.3	19	101°29.9	40.2	19	101°27.6	43.7	19	101°27.2	45.0	19	101°28.5	44.2	19	101°31.4	41.7	19	101°35.8	37.4	19	101°41.6	31.6	19	101°48.8	24.5	19	101°57.1	16.3
20	116°33.8	33.6	20	116°29.8	39.4	20	116°27.6	42.9	20	116°27.2	44.2	20	116°28.5	43.4	20	116°31.4	40.8	20	116°35.9	36.5	20	116°41.7	30.7	20	116°48.9	23.6	20	116°57.2	15.4
21	131°33.8	·· 32.8	21	131°29.8	·· 38.7	21	131°27.6	·· 42.1	21	131°27.2	·· 43.3	21	131°28.6	·· 42.5	21	131°31.5	·· 39.9	21	131°35.9	·· 35.6	21	131°41.8	·· 29.8	21	131°49.0	·· 22.7	21	131°57.4	·· 14.4
22	146°33.7	32.1	22	146°29.7	37.9	22	146°27.6	41.3	22	146°27.2	42.5	22	146°28.6	41.7	22	146°31.5	39.0	22	146°36.0	34.7	22	146°41.9	28.9	22	146°49.1	21.7	22	146°57.5	13.5
23	161°33.6	31.4	23	161°29.7	37.1	23	161°27.6	40.5	23	161°27.2	41.7	23	161°28.6	40.8	23	161°31.6	38.1	23	161°36.1	33.8	23	161°42.0	27.9	23	161°49.2	20.8	23	161°57.6	12.5
	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=0.9		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=1.0

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	176°57.7	S07°11.6	0	177°07.3	S06°02.4	0	177°17.9	S04°52.5	0	177°29.3	S03°42.0	0	177°41.5	S02°31.2	0	177°54.2	S01°20.1	0	178°07.4	S00°08.9	0	178°20.8	N01°02.2	0	178°34.3	N02°13.0	0	178°47.9	N03°23.4
1	191°57.9	10.6	1	192°07.4	01.4	1	192°18.0	51.5	1	192°29.5	41.0	1	192°41.7	30.2	1	192°54.4	19.1	1	193°07.6	07.9	1	193°21.0	03.1	1	193°34.5	14.0	1	193°48.0	24.4
2	206°58.0	09.7	2	207°07.6	06°00.5	2	207°18.2	50.5	2	207°29.6	40.0	2	207°41.8	29.2	2	207°54.6	18.1	2	208°07.7	06.9	2	208°21.2	04.1	2	208°34.7	14.9	2	208°48.2	25.4
3	221°58.1	·· 08.7	3	222°07.7	05°59.5	3	222°18.3	·· 49.5	3	222°29.8	·· 39.1	3	222°42.0	·· 28.2	3	222°54.8	·· 17.1	3	223°07.9	·· 06.0	3	223°21.4	·· 05.1	3	223°34.9	·· 15.9	3	223°48.4	·· 26.3
4	236°58.2	07.8	4	237°07.9	58.5	4	237°18.5	48.6	4	237°30.0	38.1	4	237°42.2	27.2	4	237°54.9	16.1	4	238°08.1	05.0	4	238°21.5	06.1	4	238°35.1	16.9	4	238°48.6	27.3
5	251°58.4	06.8	5	252°08.0	57.6	5	252°18.6	47.6	5	252°30.1	37.1	5	252°42.3	26.2	5	252°55.1	15.1	5	253°08.3	04.0	5	253°21.7	07.1	5	253°35.3	17.9	5	253°48.8	28.3
6	266°58.5	S07°05.8	6	267°08.1	S05°56.6	6	267°18.8	S04°46.6	6	267°30.3	S03°36.1	6	267°42.5	S02°25.2	6	267°55.3	S01°14.2	6	268°08.5	S00°03.0	6	268°21.9	N01°08.1	6	268°35.5	N02°18.9	6	268°49.0	N03°29.3
7	281°58.6	04.9	7	282°08.3	55.6	7	282°18.9	45.6	7	282°30.5	35.1	7	282°42.7	24.3	7	282°55.5	13.2	7	283°08.7	02.0	7	283°22.1	09.1	7	283°35.6	19.9	7	283°49.2	30.2
8	296°58.8	03.9	8	297°08.4	54.7	8	297°19.1	44.7	8	297°30.6	34.2	8	297°42.9	23.3	8	297°55.7	12.2	8	298°08.9	01.0	8	298°22.3	10.0	8	298°35.8	20.8	8	298°49.3	31.2
9	311°58.9	·· 03.0	9	312°08.6	·· 53.7	9	312°19.3	·· 43.7	9	312°30.8	·· 33.2	9	312°43.0	·· 22.3	9	312°55.8	·· 11.2	9	313°09.0	S00°00.0	9	313°22.5	·· 11.0	9	313°36.0	·· 21.8	9	313°49.5	·· 32.2
10	326°59.0	02.0	10	327°08.7	52.7	10	327°19.4	42.7	10	327°31.0	32.2	10	327°43.2	21.3	10	327°56.0	10.2	10	328°09.2	N00°01.0	10	328°22.7	12.0	10	328°36.2	22.8	10	328°49.7	33.1
11	341°59.1	01.1	11	342°08.9	51.7	11	342°19.6	41.7	11	342°31.1	31.2	11	342°43.4	20.3	11	342°56.2	09.2	11	343°09.4	01.9	11	343°22.9	13.0	11	343°36.4	23.8	11	343°49.9	34.1
12	356°59.3	S07°00.1	12	357°09.0	S05°50.8	12	357°19.7	S04°40.8	12	357°31.3	S03°30.2	12	357°43.6	S02°19.3	12	357°56.4	S01°08.2	12	358°09.6	N00°02.9	12	358°23.0	N01°14.0	12	358°36.6	N02°24.8	12	358°50.1	N03°35.1
13	11°59.4	06°59.1	13	12°09.1	49.8	13	12°19.9	39.8	13	12°31.5	29.2	13	12°43.7	18.3	13	12°56.6	07.2	13	13°09.8	03.9	13	13°23.2	15.0	13	13°36.8	25.7	13	13°50.3	36.1
14	26°59.5	58.2	14	27°09.3	48.8	14	27°20.0	38.8	14	27°31.6	28.3	14	27°43.9	17.4	14	27°56.7	06.2	14	28°10.0	04.9	14	28°23.4	15.9	14	28°37.0	26.7	14	28°50.5	37.0
15	41°59.6	·· 57.2	15	42°09.4	·· 47.9	15	42°20.2	·· 37.8	15	42°31.8	·· 27.3	15	42°44.1	·· 16.4	15	42°56.9	·· 05.3	15	43°10.1	·· 05.9	15	43°23.6	·· 16.9	15	43°37.1	·· 27.7	15	43°50.7	·· 38.0
16	56°59.8	56.3	16	57°09.6	46.9	16	57°20.3	36.9	16	57°32.0	26.3	16	57°44.3	15.4	16	57°57.1	04.3	16	58°10.3	06.9	16	58°23.8	17.9	16	58°37.3	28.7	16	58°50.8	39.0
17	71°59.9	55.3	17	72°09.7	45.9	17	72°20.5	35.9	17	72°32.1	25.3	17	72°44.4	14.4	17	72°57.3	03.3	17	73°10.5	07.9	17	73°24.0	18.9	17	73°37.5	29.7	17	73°51.0	40.0
18	87°00.0	S06°54.4	18	87°09.9	S05°45.0	18	87°20.7	S04°34.9	18	87°32.3	S03°24.3	18	87°44.6	S02°13.4	18	87°57.5	S01°02.3	18	88°10.7	N00°08.9	18	88°24.2	N01°19.9	18	88°37.7	N02°30.6	18	88°51.2	N03°40.9
19	102°00.2	53.4	19	102°10.0	44.0	19	102°20.8	33.9	19	102°32.5	23.3	19	102°44.8	12.4	19	102°57.7	01.3	19	103°10.9	09.8	19	103°24.4	20.9	19	103°37.9	31.6	19	103°51.4	41.9
20	117°00.3	52.4	20	117°10.1	43.0	20	117°21.0	32.9	20	117°32.6	22.4	20	117°45.0	11.4	20	117°57.8	01°00.3	20	118°11.1	10.8	20	118°24.5	21.9	20	118°38.1	32.6	20	118°51.6	42.9
21	132°00.4	·· 51.5	21	132°10.3	·· 42.1	21	132°21.1	·· 32.0	21	132°32.8	·· 21.4	21	132°45.1	·· 10.4	21	132°58.0	00°59.3	21	133°11.3	·· 11.8	21	133°24.7	·· 22.8	21	133°38.3	·· 33.6	21	133°51.8	·· 43.8
22	147°00.6	50.5	22	147°10.4	41.1	22	147°21.3	31.0	22	147°33.0	20.4	22	147°45.3	09.5	22	147°58.2	58.3	22	148°11.5	12.8	22	148°24.9	23.8	22	148°38.5	34.6	22	148°52.0	44.8
23	162°00.7	49.6	23	162°10.6	40.1	23	162°21.4	30.0	23	162°33.1	19.4	23	162°45.5	08.5	23	162°58.4	57.4	23	163°11.6	13.8	23	163°25.1	24.8	23	163°38.7	35.5	23	163°52.2	45.8
	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		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

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	177°00.8	S06°48.6	0	177°10.7	S05°39.2	0	177°21.6	S04°29.0	0	177°33.3	S03°18.4	0	177°45.7	S02°07.5	0	177°58.6	S00°56.4	0	178°11.8	N00°14.8	0	178°25.3	N01°25.8	0	178°38.8	N02°36.5	0	178°52.3	N03°46.8
1	192°00.9	47.6	1	192°10.9	38.2	1	192°21.7	28.1	1	192°33.5	17.4	1	192°45.8	06.5	1	192°58.7	55.4	1	193°12.0	15.8	1	193°25.5	26.8	1	193°39.0	37.5	1	193°52.5	47.7
2	207°01.1	46.7	2	207°11.0	37.2	2	207°21.9	27.1	2	207°33.6	16.5	2	207°46.0	05.5	2	207°58.9	54.4	2	208°12.2	16.8	2	208°25.7	27.8	2	208°39.2	38.5	2	208°52.7	48.7
3	222°01.2	·· 45.7	3	222°11.2	·· 36.2	3	222°22.1	·· 26.1	3	222°33.8	·· 15.5	3	222°46.2	·· 04.5	3	222°59.1	·· 53.4	3	223°12.4	·· 17.7	3	223°25.9	·· 28.8	3	223°39.4	·· 39.5	3	223°52.9	·· 49.7
4	237°01.3	44.8	4	237°11.3	35.3	4	237°22.2	25.1	4	237°34.0	14.5	4	237°46.4	03.5	4	237°59.3	52.4	4	238°12.6	18.7	4	238°26.0	29.7	4	238°39.6	40.4	4	238°53.1	50.7
5	252°01.5	43.8	5	252°11.4	34.3	5	252°22.4	24.1	5	252°34.1	13.5	5	252°46.5	02.6	5	252°59.5	51.4	5	253°12.8	19.7	5	253°26.2	30.7	5	253°39.8	41.4	5	253°53.3	51.6
6	267°01.6	S06°42.8	6	267°11.6	S05°33.3	6	267°22.5	S04°23.2	6	267°34.3	S03°12.5	6	267°46.7	S02°01.6	6	267°59.7	S00°50.4	6	268°12.9	N00°20.7	6	268°26.4	N01°31.7	6	268°40.0	N02°42.4	6	268°53.5	N03°52.6
7	282°01.7	41.9	7	282°11.7	32.4	7	282°22.7	22.2	7	282°34.5	11.5	7	282°46.9	02°00.6	7	282°59.8	49.4	7	283°13.1	21.7	7	283°26.6	32.7	7	283°40.2	43.4	7	283°53.6	53.6
8	297°01.9	40.9	8	297°11.9	31.4	8	297°22.9	21.2	8	297°34.6	10.6	8	297°47.1	01°59.6	8	298°00.0	48.5	8	298°13.3	22.7	8	298°26.8	33.7	8	298°40.3	44.3	8	298°53.8	54.5
9	312°02.0	·· 40.0	9	312°12.0	·· 30.4	9	312°23.0	·· 20.2	9	312°34.8	·· 09.6	9	312°47.3	·· 58.6	9	313°00.2	·· 47.5	9	313°13.5	·· 23.7	9	313°27.0	·· 34.7	9	313°40.5	·· 45.3	9	313°54.0	·· 55.5
10	327°02.1	39.0	10	327°12.2	29.5	10	327°23.2	19.3	10	327°35.0	08.6	10	327°47.4	57.6	10	328°00.4	46.5	10	328°13.7	24.7	10	328°27.2	35.6	10	328°40.7	46.3	10	328°54.2	56.5
11	342°02.3	38.0	11	342°12.3	28.5	11	342°23.3	18.3	11	342°35.1	07.6	11	342°47.6	56.6	11	343°00.6	45.5	11	343°13.9	25.6	11	343°27.4	36.6	11	343°40.9	47.3	11	343°54.4	57.4
12	357°02.4	S06°37.1	12	357°12.5	S05°27.5	12	357°23.5	S04°17.3	12	357°35.3	S03°06.6	12	357°47.8	S01°55.6	12	358°00.8	S00°44.5	12	358°14.1	N00°26.6	12	358°27.6	N01°37.6	12	358°41.1	N02°48.3	12	358°54.6	N03°58.4
13	12°02.5	36.1	13	12°12.6	26.5	13	12°23.6	16.3	13	12°35.5	05.6	13	12°48.0	54.7	13	13°00.9	43.5	13	13°14.2	27.6	13	13°27.7	38.6	13	13°41.3	49.2	13	13°54.8	03°59.4
14	27°02.7	35.2	14	27°12.8	25.6	14	27°23.8	15.3	14	27°35.7	04.7	14	27°48.1	53.7	14	28°01.1	42.5	14	28°14.4	28.6	14	28°27.9	39.6	14	28°41.5	50.2	14	28°54.9	04°00.4
15	42°02.8	·· 34.2	15	42°12.9	·· 24.6	15	42°24.0	·· 14.4	15	42°35.8	·· 03.7	15	42°48.3	·· 52.7	15	43°01.3	·· 41.5	15	43°14.6	·· 29.6	15	43°28.1	·· 40.6	15	43°41.7	·· 51.2	15	43°55.1	·· 01.3
16	57°02.9	33.2	16	57°13.1	23.6	16	57°24.1	13.4	16	57°36.0	02.7	16	57°48.5	51.7	16	58°01.5	40.5	16	58°14.8	30.6	16	58°28.3	41.5	16	58°41.8	52.2	16	58°55.3	02.3
17	72°03.1	32.3	17	72°13.2	22.7	17	72°24.3	12.4	17	72°36.2	01.7	17	72°48.7	50.7	17	73°01.7	39.6	17	73°15.0	31.6	17	73°28.5	42.5	17	73°42.0	53.1	17	73°55.5	03.3
18	87°03.2	S06°31.3	18	87°13.4	S05°21.7	18	87°24.4	S04°11.4	18	87°36.3	S03°00.7	18	87°48.8	S01°49.7	18	88°01.8	S00°38.6	18	88°15.2	N00°32.6	18	88°28.7	N01°43.5	18	88°42.2	N02°54.1	18	88°55.7	N04°04.2
19	102°03.3	30.4	19	102°13.5	20.7	19	102°24.6	10.4	19	102°36.5	02°59.7	19	102°49.0	48.7	19	103°02.0	37.6	19	103°15.4	33.5	19	103°28.9	44.5	19	103°42.4	55.1	19	103°55.9	05.2
20	117°03.5	29.4	20	117°13.6	19.7	20	117°24.8	09.5	20	117°36.7	58.7	20	117°49.2	47.7	20	118°02.2	36.6	20	118°15.5	34.5	20	118°29.1	45.5	20	118°42.6	56.1	20	118°56.1	06.2
21	132°03.6	·· 28.4	21	132°13.8	·· 18.8	21	132°24.9	·· 08.5	21	132°36.8	·· 57.8	21	132°49.4	·· 46.8	21	133°02.4	·· 35.6	21	133°15.7	·· 35.5	21	133°29.2	·· 46.5	21	133°42.8	·· 57.1	21	133°56.3	·· 07.1
22	147°03.7	27.5	22	147°13.9	17.8	22	147°25.1	07.5	22	147°37.0	56.8	22	147°49.6	45.8	22	148°02.6	34.6	22	148°15.9	36.5	22	148°29.4	47.4	22	148°43.0	58.0	22	148°56.4	08.1
23	162°03.9	26.5	23	162°14.1	16.8	23	162°25.2	06.5	23	162°37.2	55.8	23	162°49.7	44.8	23	163°02.8	33.6	23	163°16.1	37.5	23	163°29.6	48.4	23	163°43.2	59.0	23	163°56.6	09.1
	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		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

04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec	31	GHA	Dec
0	177°04.0	S06°25.5	0	177°14.2	S05°15.8	0	177°25.4	S04°05.5	0	177°37.4	S02°54.8	0	177°49.9	S01°43.8	0	178°03.0	S00°32.6	0	178°16.3	N00°38.5	0	178°29.8	N01°49.4	0	178°43.4	N03°00.0	0	178°56.8	N04°10.0
1	192°04.1	24.6	1	192°14.4	14.9	1	192°25.6	04.6	1	192°37.5	53.8	1	192°50.1	42.8	1	193°03.1	31.7	1	193°16.5	39.5	1	193°30.0	50.4	1	193°43.5	01.0	1	193°57.0	11.0
2	207°04.3	23.6	2	207°14.5	13.9	2	207°25.7	03.6	2	207°37.7	52.8	2	207°50.3	41.8	2	208°03.3	30.7	2	208°16.7	40.5	2	208°30.2	51.4	2	208°43.7	01.9	2	208°57.2	12.0
3	222°04.4	·· 22.6	3	222°14.7	·· 12.9	3	222°25.9	·· 02.6	3	222°37.9	·· 51.9	3	222°50.5	·· 40.8	3	223°03.5	·· 29.7	3	223°16.9	·· 41.4	3	223°30.4	·· 52.4	3	223°43.9	·· 02.9	3	223°57.4	·· 13.0
4	237°04.5	21.7	4	237°14.8	12.0	4	237°26.1	01.6	4	237°38.0	50.9	4	237°50.6	39.8	4	238°03.7	28.7	4	238°17.0	42.4	4	238°30.6	53.3	4	238°44.1	03.9	4	238°57.6	13.9
5	252°04.7	20.7	5	252°15.0	11.0	5	252°26.2	04°00.6	5	252°38.2	49.9	5	252°50.8	38.9	5	253°03.9	27.7	5	253°17.2	43.4	5	253°30.7	54.3	5	253°44.3	04.9	5	253°57.7	14.9
6	267°04.8	S06°19.8	6	267°15.1	S05°10.0	6	267°26.4	S03°59.7	6	267°38.4	S02°48.9	6	267°51.0	S01°37.9	6	268°04.1	S00°26.7	6	268°17.4	N00°44.4	6	268°30.9	N01°55.3	6	268°44.5	N03°05.9	6	268°57.9	N04°15.9
7	282°05.0	18.8	7	282°15.3	09.0	7	282°26.5	58.7	7	282°38.5	47.9	7	282°51.2	36.9	7	283°04.2	25.7	7	283°17.6	45.4	7	283°31.1	56.3	7	283°44.7	06.8	7	283°58.1	16.8
8	297°05.1	17.8	8	297°15.4	08.1	8	297°26.7	57.7	8	297°38.7	46.9	8	297°51.3	35.9	8	298°04.4	24.7	8	298°17.8	46.4	8	298°31.3	57.3	8	298°44.9	07.8	8	298°58.3	17.8
9	312°05.2	·· 16.9	9	312°15.6	·· 07.1	9	312°26.9	·· 56.7	9	312°38.9	·· 45.9	9	312°51.5	·· 34.9	9	313°04.6	·· 23.7	9	313°18.0	·· 47.4	9	313°31.5	·· 58.3	9	313°45.0	·· 08.8	9	313°58.5	·· 18.8
10	327°05.4	15.9	10	327°15.7	06.1	10	327°27.0	55.7	10	327°39.1	45.0	10	327°51.7	33.9	10	328°04.8	22.8	10	328°18.2	48.3	10	328°31.7	01°59.2	10	328°45.2	09.8	10	328°58.7	19.7
11	342°05.5	14.9	11	342°15.9	05.1	11	342°27.2	54.8	11	342°39.2	44.0	11	342°51.9	32.9	11	343°05.0	21.8	11	343°18.4	49.3	11	343°31.9	02°00.2	11	343°45.4	10.7	11	343°58.9	20.7
12	357°05.6	S06°14.0	12	357°16.0	S05°04.2	12	357°27.3	S03°53.8	12	357°39.4	S02°43.0	12	357°52.1	S01°31.9	12	358°05.2	S00°20.8	12	358°18.5	N00°50.3	12	358°32.1	N02°01.2	12	358°45.6	N03°11.7	12	358°59.0	N04°21.7
13	12°05.8	13.0	13	12°16.2	03.2	13	12°27.5	52.8	13	12°39.6	42.0	13	12°52.2	30.9	13	13°05.3	19.8	13	13°18.7	51.3	13	13°32.3	02.2	13	13°45.8	12.7	13	13°59.2	22.6
14	27°05.9	12.0	14	27°16.3	02.2	14	27°27.7	51.8	14	27°39.8	41.0	14	27°52.4	30.0	14	28°05.5	18.8	14	28°18.9	52.3	14	28°32.4	03.2	14	28°46.0	13.7	14	28°59.4	23.6
15	42°06.1	·· 11.1	15	42°16.5	·· 01.2	15	42°27.8	·· 50.8	15	42°39.9	·· 40.0	15	42°52.6	·· 29.0	15	43°05.7	·· 17.8	15	43°19.1	·· 53.3	15	43°32.6	·· 04.2	15	43°46.2	·· 14.6	15	43°59.6	·· 24.6
16	57°06.2	10.1	16	57°16.6	05°00.3	16	57°28.0	49.9	16	57°40.1	39.0	16	57°52.8	28.0	16	58°05.9	16.8	16	58°19.3	54.3	16	58°32.8	05.1	16	58°46.4	15.6	16	58°59.8	25.5
17	72°06.3	09.1	17	72°16.8	04°59.3	17	72°28.2	48.9	17	72°40.3	38.1	17	72°53.0	27.0	17	73°06.1	15.8	17	73°19.5	55.2	17	73°33.0	06.1	17	73°46.5	16.6	17	74°00.0	26.5
18	87°06.5	S06°08.2	18	87°17.0	S04°58.3	18	87°28.3	S03°47.9	18	87°40.4	S02°37.1	18	87°53.1	S01°26.0	18	88°06.3	S00°14.9	18	88°19.7	N00°56.2	18	88°33.2	N02°07.1	18	88°46.7	N03°17.6	18	89°00.1	N04°27.5
19	102°06.6	07.2	19	102°17.1	57.3	19	102°28.5	46.9	19	102°40.6	36.1	19	102°53.3	25.0	19	103°06.4	13.9	19	103°19.9	57.2	19	103°33.4	08.1	19	103°46.9	18.5	19	104°00.3	28.4
20	117°06.7	06.3	20	117°17.3	56.4	20	117°28.7	45.9	20	117°40.8	35.1	20	117°53.5	24.0	20	118°06.6	12.9	20	118°20.0	58.2	20	118°33.6	09.1	20	118°47.1	19.5	20	119°00.5	29.4
21	132°06.9	·· 05.3	21	132°17.4	·· 55.4	21	132°28.8	·· 45.0	21	132°41.0	·· 34.1	21	132°53.7	·· 23.0	21	133°06.8	·· 11.9	21	133°20.2	00°59.2	21	133°33.8	·· 10.0	21	133°47.3	·· 20.5	21	134°00.7	·· 30.4
22	147°07.0	04.3	22	147°17.6	54.4	22	147°29.0	44.0	22	147°41.1	33.1	22	147°53.9	22.1	22	148°07.0	10.9	22	148°20.4	01°00.2	22	148°33.9	11.0	22	148°47.5	21.5	22	149°00.9	31.3
23	162°07.2	03.4	23	162°17.7	53.4	23	162°29.1	43.0	23	162°41.3	32.1	23	162°54.0	21.1	23	163°07.2	09.9	23	163°20.6	01.2	23	163°34.1	12.0	23	163°47.7	22.4	23	164°01.1	32.3
	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		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

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	179°01.3	N04°33.3	0	179°14.4	N05°42.3	0	179°27.3	N06°50.5	0	179°39.7	N07°57.6	0	179°51.5	N09°03.5	0	180°02.6	N10°08.1	0	180°12.8	N11°11.1	0	180°22.0	N12°12.5	0	180°30.3	N13°12.1	0	180°37.4	N14°09.8
1	194°01.4	34.2	1	194°14.6	43.3	1	194°27.5	51.5	1	194°39.9	58.6	1	194°51.6	04.4	1	195°02.7	09.0	1	195°12.9	12.0	1	195°22.2	13.4	1	195°30.4	12.9	1	195°37.5	10.6
2	209°01.6	35.2	2	209°14.8	44.3	2	209°27.6	52.4	2	209°40.0	07°59.5	2	209°51.8	05.3	2	210°02.8	09.8	2	210°13.0	12.8	2	210°22.3	14.2	2	210°30.5	13.8	2	210°37.5	11.4
3	224°01.8	·· 36.2	3	224°15.0	·· 45.2	3	224°27.8	·· 53.3	3	224°40.2	08°00.4	3	224°52.0	·· 06.2	3	225°03.0	·· 10.7	3	225°13.2	·· 13.7	3	225°22.4	·· 15.0	3	225°30.6	·· 14.6	3	225°37.6	·· 12.2
4	239°02.0	37.1	4	239°15.2	46.2	4	239°28.0	54.3	4	239°40.4	01.3	4	239°52.1	07.2	4	240°03.1	11.6	4	240°13.3	14.6	4	240°22.5	15.9	4	240°30.7	15.4	4	240°37.7	12.9
5	254°02.2	38.1	5	254°15.3	47.1	5	254°28.2	55.2	5	254°40.5	02.3	5	254°52.3	08.1	5	255°03.3	12.5	5	255°13.5	15.4	5	255°22.7	16.7	5	255°30.8	16.2	5	255°37.8	13.7
6	269°02.4	N04°39.0	6	269°15.5	N05°48.1	6	269°28.3	N06°56.2	6	269°40.7	N08°03.2	6	269°52.4	N09°09.0	6	270°03.4	N10°13.4	6	270°13.6	N11°16.3	6	270°22.8	N12°17.6	6	270°30.9	N13°17.0	6	270°37.9	N14°14.5
7	284°02.6	40.0	7	284°15.7	49.0	7	284°28.5	57.1	7	284°40.9	04.1	7	284°52.6	09.9	7	285°03.6	14.3	7	285°13.7	17.2	7	285°22.9	18.4	7	285°31.0	17.8	7	285°38.0	15.3
8	299°02.7	41.0	8	299°15.9	50.0	8	299°28.7	58.0	8	299°41.0	05.0	8	299°52.7	10.8	8	300°03.7	15.2	8	300°13.9	18.0	8	300°23.0	19.2	8	300°31.1	18.6	8	300°38.1	16.1
9	314°02.9	·· 41.9	9	314°16.1	·· 50.9	9	314°28.9	·· 59.0	9	314°41.2	·· 05.9	9	314°52.9	·· 11.7	9	315°03.9	·· 16.0	9	315°14.0	·· 18.9	9	315°23.1	·· 20.1	9	315°31.2	·· 19.5	9	315°38.2	·· 16.9
10	329°03.1	42.9	10	329°16.3	51.9	10	329°29.0	06°59.9	10	329°41.4	06.9	10	329°53.1	12.6	10	330°04.0	16.9	10	330°14.1	19.7	10	330°23.3	20.9	10	330°31.3	20.3	10	330°38.3	17.6
11	344°03.3	43.9	11	344°16.4	52.8	11	344°29.2	07°00.9	11	344°41.5	07.8	11	344°53.2	13.5	11	345°04.2	17.8	11	345°14.3	20.6	11	345°23.4	21.7	11	345°31.4	21.1	11	345°38.4	18.4
12	359°03.5	N04°44.8	12	359°16.6	N05°53.8	12	359°29.4	N07°01.8	12	359°41.7	N08°08.7	12	359°53.4	N09°14.4	12	0°04.3	N10°18.7	12	0°14.4	N11°21.5	12	0°23.5	N12°22.6	12	0°31.5	N13°21.9	12	0°38.4	N14°19.2
13	14°03.7	45.8	13	14°16.8	54.7	13	14°29.6	02.7	13	14°41.9	09.6	13	14°53.5	15.3	13	15°04.5	19.6	13	15°14.5	22.3	13	15°23.6	23.4	13	15°31.6	22.7	13	15°38.5	20.0
14	29°03.8	46.8	14	29°17.0	55.7	14	29°29.7	03.7	14	29°42.0	10.5	14	29°53.7	16.2	14	30°04.6	20.5	14	30°14.7	23.2	14	30°23.7	24.3	14	30°31.7	23.5	14	30°38.6	20.8
15	44°04.0	·· 47.7	15	44°17.2	·· 56.6	15	44°29.9	·· 04.6	15	44°42.2	·· 11.5	15	44°53.8	·· 17.1	15	45°04.8	·· 21.3	15	45°14.8	·· 24.0	15	45°23.8	·· 25.1	15	45°31.8	·· 24.3	15	45°38.7	·· 21.6
16	59°04.2	48.7	16	59°17.3	57.6	16	59°30.1	05.5	16	59°42.4	12.4	16	59°54.0	18.0	16	60°04.9	22.2	16	60°14.9	24.9	16	60°24.0	25.9	16	60°31.9	25.1	16	60°38.8	22.3
17	74°04.4	49.6	17	74°17.5	58.5	17	74°30.3	06.5	17	74°42.5	13.3	17	74°54.2	18.9	17	75°05.0	23.1	17	75°15.1	25.8	17	75°24.1	26.8	17	75°32.0	25.9	17	75°38.9	23.1
18	89°04.6	N04°50.6	18	89°17.7	N05°59.5	18	89°30.4	N07°07.4	18	89°42.7	N08°14.2	18	89°54.3	N09°19.8	18	90°05.2	N10°24.0	18	90°15.2	N11°26.6	18	90°24.2	N12°27.6	18	90°32.1	N13°26.7	18	90°39.0	N14°23.9
19	104°04.8	51.6	19	104°17.9	06°00.4	19	104°30.6	08.3	19	104°42.9	15.1	19	104°54.5	20.7	19	105°05.3	24.9	19	105°15.3	27.5	19	105°24.3	28.4	19	105°32.3	27.5	19	105°39.0	24.7
20	119°04.9	52.5	20	119°18.1	01.4	20	119°30.8	09.3	20	119°43.0	16.1	20	119°54.6	21.6	20	120°05.5	25.7	20	120°15.5	28.3	20	120°24.4	29.3	20	120°32.4	28.4	20	120°39.1	25.4
21	134°05.1	·· 53.5	21	134°18.2	·· 02.3	21	134°31.0	·· 10.2	21	134°43.2	·· 17.0	21	134°54.8	·· 22.5	21	135°05.6	·· 26.6	21	135°15.6	·· 29.2	21	135°24.6	·· 30.1	21	135°32.5	·· 29.2	21	135°39.2	·· 26.2
22	149°05.3	54.5	22	149°18.4	03.3	22	149°31.1	11.2	22	149°43.4	17.9	22	149°54.9	23.4	22	150°05.8	27.5	22	150°15.7	30.1	22	150°24.7	30.9	22	150°32.6	30.0	22	150°39.3	27.0
23	164°05.5	55.4	23	164°18.6	04.2	23	164°31.3	12.1	23	164°43.5	18.8	23	164°55.1	24.3	23	165°05.9	28.4	23	165°15.8	30.9	23	165°24.8	31.8	23	165°32.7	30.8	23	165°39.4	27.8
	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.=16.0	d=0.9		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

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	179°05.7	N04°56.4	0	179°18.8	N06°05.2	0	179°31.5	N07°13.0	0	179°43.7	N08°19.7	0	179°55.3	N09°25.2	0	180°06.1	N10°29.3	0	180°16.0	N11°31.8	0	180°24.9	N12°32.6	0	180°32.8	N13°31.6	0	180°39.5	N14°28.6
1	194°05.9	57.3	1	194°18.9	06.1	1	194°31.7	14.0	1	194°43.9	20.7	1	194°55.4	26.1	1	195°06.2	30.1	1	195°16.1	32.6	1	195°25.0	33.4	1	195°32.9	32.4	1	195°39.6	29.3
2	209°06.1	58.3	2	209°19.1	07.1	2	209°31.8	14.9	2	209°44.0	21.6	2	209°55.6	27.0	2	210°06.3	31.0	2	210°16.2	33.5	2	210°25.1	34.3	2	210°33.0	33.2	2	210°39.6	30.1
3	224°06.2	04°59.3	3	224°19.3	·· 08.0	3	224°32.0	·· 15.8	3	224°44.2	·· 22.5	3	224°55.7	·· 27.9	3	225°06.5	·· 31.9	3	225°16.4	·· 34.3	3	225°25.3	·· 35.1	3	225°33.1	·· 34.0	3	225°39.7	·· 30.9
4	239°06.4	05°00.2	4	239°19.5	09.0	4	239°32.2	16.8	4	239°44.3	23.4	4	239°55.9	28.8	4	240°06.6	32.8	4	240°16.5	35.2	4	240°25.4	35.9	4	240°33.2	34.8	4	240°39.8	31.7
5	254°06.6	01.2	5	254°19.7	09.9	5	254°32.3	17.7	5	254°44.5	24.3	5	254°56.0	29.7	5	255°06.8	33.7	5	255°16.6	36.1	5	255°25.5	36.8	5	255°33.3	35.6	5	255°39.9	32.4
6	269°06.8	N05°02.1	6	269°19.8	N06°10.9	6	269°32.5	N07°18.6	6	269°44.7	N08°25.2	6	269°56.2	N09°30.6	6	270°06.9	N10°34.5	6	270°16.8	N11°36.9	6	270°25.6	N12°37.6	6	270°33.4	N13°36.4	6	270°40.0	N14°33.2
7	284°07.0	03.1	7	284°20.0	11.8	7	284°32.7	19.6	7	284°44.8	26.2	7	284°56.3	31.5	7	285°07.1	35.4	7	285°16.9	37.8	7	285°25.7	38.4	7	285°33.5	37.2	7	285°40.1	34.0
8	299°07.2	04.1	8	299°20.2	12.8	8	299°32.9	20.5	8	299°45.0	27.1	8	299°56.5	32.4	8	300°07.2	36.3	8	300°17.0	38.6	8	300°25.8	39.2	8	300°33.6	38.0	8	300°40.2	34.8
9	314°07.3	·· 05.0	9	314°20.4	·· 13.7	9	314°33.0	·· 21.4	9	314°45.2	·· 28.0	9	314°56.7	·· 33.3	9	315°07.4	·· 37.2	9	315°17.2	·· 39.5	9	315°25.9	·· 40.1	9	315°33.7	·· 38.8	9	315°40.2	·· 35.5
10	329°07.5	06.0	10	329°20.6	14.7	10	329°33.2	22.4	10	329°45.3	28.9	10	329°56.8	34.2	10	330°07.5	38.0	10	330°17.3	40.3	10	330°26.1	40.9	10	330°33.8	39.6	10	330°40.3	36.3
11	344°07.7	06.9	11	344°20.7	15.6	11	344°33.4	23.3	11	344°45.5	29.8	11	344°57.0	35.1	11	345°07.6	38.9	11	345°17.4	41.2	11	345°26.2	41.7	11	345°33.9	40.4	11	345°40.4	37.1
12	359°07.9	N05°07.9	12	359°20.9	N06°16.6	12	359°33.6	N07°24.2	12	359°45.7	N08°30.7	12	359°57.1	N09°36.0	12	0°07.8	N10°39.8	12	0°17.5	N11°42.0	12	0°26.3	N12°42.6	12	0°34.0	N13°41.2	12	0°40.5	N14°37.9
13	14°08.1	08.9	13	14°21.1	17.5	13	14°33.7	25.2	13	14°45.8	31.7	13	14°57.3	36.9	13	15°07.9	40.7	13	15°17.7	42.9	13	15°26.4	43.4	13	15°34.1	42.0	13	15°40.6	38.6
14	29°08.3	09.8	14	29°21.3	18.5	14	29°33.9	26.1	14	29°46.0	32.6	14	29°57.4	37.8	14	30°08.1	41.5	14	30°17.8	43.7	14	30°26.5	44.2	14	30°34.2	42.8	14	30°40.6	39.4
15	44°08.4	·· 10.8	15	44°21.5	·· 19.4	15	44°34.1	·· 27.0	15	44°46.2	·· 33.5	15	44°57.6	·· 38.7	15	45°08.2	·· 42.4	15	45°17.9	·· 44.6	15	45°26.6	·· 45.0	15	45°34.3	·· 43.6	15	45°40.7	·· 40.2
16	59°08.6	11.7	16	59°21.6	20.3	16	59°34.2	28.0	16	59°46.3	34.4	16	59°57.7	39.6	16	60°08.3	43.3	16	60°18.1	45.4	16	60°26.7	45.9	16	60°34.4	44.4	16	60°40.8	40.9
17	74°08.8	12.7	17	74°21.8	21.3	17	74°34.4	28.9	17	74°46.5	35.3	17	74°57.9	40.5	17	75°08.5	44.2	17	75°18.2	46.3	17	75°26.9	46.7	17	75°34.4	45.2	17	75°40.9	41.7
18	89°09.0	N05°13.7	18	89°22.0	N06°22.2	18	89°34.6	N07°29.8	18	89°46.6	N08°36.2	18	89°58.0	N09°41.4	18	90°08.6	N10°45.0	18	90°18.3	N11°47.1	18	90°27.0	N12°47.5	18	90°34.5	N13°46.0	18	90°41.0	N14°42.5
19	104°09.2	14.6	19	104°22.2	23.2	19	104°34.8	30.7	19	104°46.8	37.1	19	104°58.2	42.2	19	105°08.8	45.9	19	105°18.4	48.0	19	105°27.1	48.3	19	105°34.6	46.8	19	105°41.1	43.2
20	119°09.3	15.6	20	119°22.3	24.1	20	119°34.9	31.7	20	119°47.0	38.1	20	119°58.3	43.1	20	120°08.9	46.8	20	120°18.6	48.8	20	120°27.2	49.2	20	120°34.7	47.6	20	120°41.1	44.0
21	134°09.5	·· 16.5	21	134°22.5	·· 25.1	21	134°35.1	·· 32.6	21	134°47.1	·· 39.0	21	134°58.5	·· 44.0	21	135°09.0	·· 47.7	21	135°18.7	·· 49.7	21	135°27.3	·· 50.0	21	135°34.8	·· 48.4	21	135°41.2	·· 44.8
22	149°09.7	17.5	22	149°22.7	26.0	22	149°35.3	33.5	22	149°47.3	39.9	22	149°58.6	44.9	22	150°09.2	48.5	22	150°18.8	50.5	22	150°27.4	50.8	22	150°34.9	49.2	22	150°41.3	45.5
23	164°09.9	18.5	23	164°22.9	27.0	23	164°35.4	34.5	23	164°47.5	40.8	23	164°58.8	45.8	23	165°09.3	49.4	23	165°18.9	51.4	23	165°27.5	51.6	23	165°35.0	50.0	23	165°41.4	46.3
	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		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

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	179°10.1	N05°19.4	0	179°23.1	N06°27.9	0	179°35.6	N07°35.4	0	179°47.6	N08°41.7	0	179°58.9	N09°46.7	0	180°09.5	N10°50.3	0	180°19.1	N11°52.2	0	180°27.6	N12°52.5	0	180°35.1	N13°50.8	0	180°41.5	N14°47.1
1	194°10.3	20.4	1	194°23.2	28.9	1	194°35.8	36.3	1	194°47.8	42.6	1	194°59.1	47.6	1	195°09.6	51.1	1	195°19.2	53.1	1	195°27.8	53.3	1	195°35.2	51.6	1	195°41.5	47.8
2	209°10.4	21.3	2	209°23.4	29.8	2	209°36.0	37.3	2	209°47.9	43.5	2	209°59.3	48.5	2	210°09.7	52.0	2	210°19.3	53.9	2	210°27.9	54.1	2	210°35.3	52.4	2	210°41.6	48.6
3	224°10.6	·· 22.3	3	224°23.6	·· 30.7	3	224°36.1	·· 38.2	3	224°48.1	·· 44.4	3	224°59.4	·· 49.4	3	225°09.9	·· 52.9	3	225°19.4	·· 54.8	3	225°28.0	·· 54.9	3	225°35.4	·· 53.2	3	225°41.7	·· 49.4
4	239°10.8	23.2	4	239°23.8	31.7	4	239°36.3	39.1	4	239°48.3	45.4	4	239°59.6	50.3	4	240°10.0	53.8	4	240°19.6	55.6	4	240°28.1	55.8	4	240°35.5	54.0	4	240°41.8	50.1
5	254°11.0	24.2	5	254°23.9	32.6	5	254°36.5	40.0	5	254°48.4	46.3	5	254°59.7	51.2	5	255°10.2	54.6	5	255°19.7	56.5	5	255°28.2	56.6	5	255°35.6	54.8	5	255°41.9	50.9
6	269°11.2	N05°25.2	6	269°24.1	N06°33.6	6	269°36.6	N07°41.0	6	269°48.6	N08°47.2	6	269°59.9	N09°52.1	6	270°10.3	N10°55.5	6	270°19.8	N11°57.3	6	270°28.3	N12°57.4	6	270°35.7	N13°55.6	6	270°41.9	N14°51.7
7	284°11.4	26.1	7	284°24.3	34.5	7	284°36.8	41.9	7	284°48.8	48.1	7	285°00.0	53.0	7	285°10.4	56.4	7	285°20.0	58.2	7	285°28.4	58.2	7	285°35.8	56.4	7	285°42.0	52.4
8	299°11.5	27.1	8	299°24.5	35.5	8	299°37.0	42.8	8	299°48.9	49.0	8	300°00.2	53.9	8	300°10.6	57.2	8	300°20.1	59.0	8	300°28.5	59.1	8	300°35.9	57.2	8	300°42.1	53.2
9	314°11.7	·· 28.0	9	314°24.6	·· 36.4	9	314°37.1	·· 43.7	9	314°49.1	·· 49.9	9	315°00.3	·· 54.7	9	315°10.7	·· 58.1	9	315°20.2	11°59.9	9	315°28.6	12°59.9	9	315°36.0	·· 58.0	9	315°42.2	·· 54.0
10	329°11.9	29.0	10	329°24.8	37.4	10	329°37.3	44.7	10	329°49.2	50.8	10	330°00.5	55.6	10	330°10.9	59.0	10	330°20.3	12°00.7	10	330°28.8	13°00.7	10	330°36.1	58.7	10	330°42.2	54.7
11	344°12.1	29.9	11	344°25.0	38.3	11	344°37.5	45.6	11	344°49.4	51.7	11	345°00.6	56.5	11	345°11.0	10°59.8	11	345°20.4	01.6	11	345°28.9	01.5	11	345°36.2	13°59.5	11	345°42.3	55.5
12	359°12.3	N05°30.9	12	359°25.2	N06°39.2	12	359°37.7	N07°46.5	12	359°49.6	N08°52.6	12	0°00.8	N09°57.4	12	0°11.1	N11°00.7	12	0°20.6	N12°02.4	12	0°29.0	N13°02.3	12	0°36.3	N14°00.3	12	0°42.4	N14°56.3
13	14°12.4	31.8	13	14°25.4	40.2	13	14°37.8	47.5	13	14°49.7	53.5	13	15°00.9	58.3	13	15°11.3	01.6	13	15°20.7	03.3	13	15°29.1	03.1	13	15°36.4	01.1	13	15°42.5	57.0
14	29°12.6	32.8	14	29°25.5	41.1	14	29°38.0	48.4	14	29°49.9	54.5	14	30°01.1	09°59.2	14	30°11.4	02.5	14	30°20.8	04.1	14	30°29.2	04.0	14	30°36.4	01.9	14	30°42.6	57.8
15	44°12.8	·· 33.8	15	44°25.7	·· 42.1	15	44°38.2	·· 49.3	15	44°50.0	·· 55.4	15	45°01.2	10°00.1	15	45°11.6	·· 03.3	15	45°20.9	·· 04.9	15	45°29.3	·· 04.8	15	45°36.5	·· 02.7	15	45°42.6	·· 58.5
16	59°13.0	34.7	16	59°25.9	43.0	16	59°38.3	50.2	16	59°50.2	56.3	16	60°01.4	01.0	16	60°11.7	04.2	16	60°21.1	05.8	16	60°29.4	05.6	16	60°36.6	03.5	16	60°42.7	14°59.3
17	74°13.2	35.7	17	74°26.1	43.9	17	74°38.5	51.2	17	74°50.4	57.2	17	75°01.5	01.9	17	75°11.8	05.1	17	75°21.2	06.6	17	75°29.5	06.4	17	75°36.7	04.3	17	75°42.8	15°00.1
18	89°13.4	N05°36.6	18	89°26.2	N06°44.9	18	89°38.7	N07°52.1	18	89°50.5	N08°58.1	18	90°01.7	N10°02.7	18	90°12.0	N11°05.9	18	90°21.3	N12°07.5	18	90°29.6	N13°07.2	18	90°36.8	N14°05.1	18	90°42.9	N15°00.8
19	104°13.5	37.6	19	104°26.4	45.8	19	104°38.8	53.0	19	104°50.7	59.0	19	105°01.8	03.6	19	105°12.1	06.8	19	105°21.4	08.3	19	105°29.7	08.1	19	105°36.9	05.9	19	105°42.9	01.6
20	119°13.7	38.5	20	119°26.6	46.8	20	119°39.0	53.9	20	119°50.8	08°59.9	20	120°02.0	04.5	20	120°12.2	07.7	20	120°21.6	09.2	20	120°29.8	08.9	20	120°37.0	06.6	20	120°43.0	02.3
21	134°13.9	·· 39.5	21	134°26.8	·· 47.7	21	134°39.2	·· 54.9	21	134°51.0	09°00.8	21	135°02.1	·· 05.4	21	135°12.4	·· 08.5	21	135°21.7	·· 10.0	21	135°29.9	·· 09.7	21	135°37.1	·· 07.4	21	135°43.1	·· 03.1
22	149°14.1	40.4	22	149°26.9	48.6	22	149°39.3	55.8	22	149°51.2	01.7	22	150°02.3	06.3	22	150°12.5	09.4	22	150°21.8	10.8	22	150°30.1	10.5	22	150°37.2	08.2	22	150°43.2	03.8
23	164°14.3	41.4	23	164°27.1	49.6	23	164°39.5	56.7	23	164°51.3	02.6	23	165°02.4	07.2	23	165°12.6	10.3	23	165°21.9	11.7	23	165°30.2	11.3	23	165°37.3	09.0	23	165°43.2	04.6
	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		SD.=15.9	d=0.9		SD.=15.9	d=0.8		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	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	180°43.3	N15°05.4	0	180°48.1	N15°58.7	0	180°51.6	N16°49.6	0	180°54.0	N17°37.9	0	180°55.0	N18°23.6	0	180°54.8	N19°06.5	0	180°53.3	N19°46.6	0	180°50.5	N20°23.5	0	180°46.5	N20°57.4	0	180°41.3	N21°28.0
1	195°43.4	06.1	1	195°48.1	15°59.4	1	195°51.7	50.2	1	195°54.0	38.6	1	195°55.0	24.2	1	195°54.8	07.1	1	195°53.2	47.1	1	195°50.4	24.0	1	195°46.4	57.8	1	195°41.2	28.4
2	210°43.5	06.9	2	210°48.2	16°00.1	2	210°51.7	50.9	2	210°54.0	39.2	2	210°55.0	24.8	2	210°54.8	07.7	2	210°53.2	47.6	2	210°50.4	24.5	2	210°46.3	58.3	2	210°41.1	28.8
3	225°43.5	·· 07.6	3	225°48.3	·· 00.8	3	225°51.8	·· 51.6	3	225°54.0	·· 39.9	3	225°55.0	·· 25.5	3	225°54.7	·· 08.3	3	225°53.2	·· 48.2	3	225°50.3	·· 25.0	3	225°46.3	·· 58.7	3	225°41.1	·· 29.2
4	240°43.6	08.4	4	240°48.3	01.6	4	240°51.8	52.3	4	240°54.1	40.5	4	240°55.0	26.1	4	240°54.7	08.8	4	240°53.1	48.7	4	240°50.3	25.5	4	240°46.2	59.2	4	240°41.0	29.6
5	255°43.7	09.1	5	255°48.4	02.3	5	255°51.8	53.0	5	255°54.1	41.2	5	255°55.0	26.7	5	255°54.7	09.4	5	255°53.1	49.2	5	255°50.2	26.0	5	255°46.1	20°59.6	5	255°40.9	30.0
6	270°43.8	N15°09.9	6	270°48.4	N16°03.0	6	270°51.9	N16°53.7	6	270°54.1	N17°41.8	6	270°55.0	N18°27.3	6	270°54.7	N19°10.0	6	270°53.1	N19°49.8	6	270°50.2	N20°26.5	6	270°46.1	N21°00.1	6	270°40.8	N21°30.4
7	285°43.8	10.6	7	285°48.5	03.7	7	285°51.9	54.4	7	285°54.1	42.5	7	285°55.0	27.9	7	285°54.7	10.6	7	285°53.0	50.3	7	285°50.1	27.0	7	285°46.0	00.5	7	285°40.7	30.8
8	300°43.9	11.4	8	300°48.5	04.4	8	300°52.0	55.1	8	300°54.1	43.1	8	300°55.1	28.5	8	300°54.7	11.1	8	300°53.0	50.8	8	300°50.1	27.5	8	300°45.9	01.0	8	300°40.7	31.2
9	315°44.0	·· 12.1	9	315°48.6	·· 05.2	9	315°52.0	·· 55.7	9	315°54.2	·· 43.8	9	315°55.1	·· 29.1	9	315°54.7	·· 11.7	9	315°53.0	·· 51.3	9	315°50.0	·· 28.0	9	315°45.9	·· 01.4	9	315°40.6	·· 31.6
10	330°44.0	12.9	10	330°48.6	05.9	10	330°52.0	56.4	10	330°54.2	44.4	10	330°55.1	29.7	10	330°54.6	12.3	10	330°52.9	51.9	10	330°50.0	28.4	10	330°45.8	01.8	10	330°40.5	32.0
11	345°44.1	13.7	11	345°48.7	06.6	11	345°52.1	57.1	11	345°54.2	45.1	11	345°55.1	30.4	11	345°54.6	12.8	11	345°52.9	52.4	11	345°49.9	28.9	11	345°45.7	02.3	11	345°40.4	32.4
12	0°44.2	N15°14.4	12	0°48.8	N16°07.3	12	0°52.1	N16°57.8	12	0°54.2	N17°45.7	12	0°55.1	N18°31.0	12	0°54.6	N19°13.4	12	0°52.9	N19°52.9	12	0°49.9	N20°29.4	12	0°45.7	N21°02.7	12	0°40.3	N21°32.8
13	15°44.3	15.2	13	15°48.8	08.0	13	15°52.2	58.5	13	15°54.2	46.4	13	15°55.1	31.6	13	15°54.6	14.0	13	15°52.8	53.5	13	15°49.8	29.9	13	15°45.6	03.2	13	15°40.3	33.2
14	30°44.3	15.9	14	30°48.9	08.7	14	30°52.2	59.2	14	30°54.3	47.0	14	30°55.1	32.2	14	30°54.6	14.5	14	30°52.8	54.0	14	30°49.8	30.4	14	30°45.5	03.6	14	30°40.2	33.6
15	45°44.4	·· 16.7	15	45°48.9	·· 09.5	15	45°52.2	16°59.8	15	45°54.3	·· 47.7	15	45°55.1	·· 32.8	15	45°54.6	·· 15.1	15	45°52.8	·· 54.5	15	45°49.7	·· 30.9	15	45°45.5	·· 04.0	15	45°40.1	·· 34.0
16	60°44.5	17.4	16	60°49.0	10.2	16	60°52.3	17°00.5	16	60°54.3	48.3	16	60°55.1	33.4	16	60°54.6	15.7	16	60°52.7	55.0	16	60°49.7	31.3	16	60°45.4	04.5	16	60°40.0	34.4
17	75°44.5	18.2	17	75°49.0	10.9	17	75°52.3	01.2	17	75°54.3	49.0	17	75°55.1	34.0	17	75°54.5	16.2	17	75°52.7	55.6	17	75°49.6	31.8	17	75°45.3	04.9	17	75°39.9	34.7
18	90°44.6	N15°18.9	18	90°49.1	N16°11.6	18	90°52.3	N17°01.9	18	90°54.3	N17°49.6	18	90°55.1	N18°34.6	18	90°54.5	N19°16.8	18	90°52.7	N19°56.1	18	90°49.6	N20°32.3	18	90°45.3	N21°05.4	18	90°39.9	N21°35.1
19	105°44.7	19.7	19	105°49.1	12.3	19	105°52.4	02.6	19	105°54.4	50.2	19	105°55.1	35.2	19	105°54.5	17.4	19	105°52.6	56.6	19	105°49.5	32.8	19	105°45.2	05.8	19	105°39.8	35.5
20	120°44.8	20.4	20	120°49.2	13.0	20	120°52.4	03.3	20	120°54.4	50.9	20	120°55.1	35.8	20	120°54.5	17.9	20	120°52.6	57.1	20	120°49.5	33.3	20	120°45.1	06.2	20	120°39.7	35.9
21	135°44.8	·· 21.1	21	135°49.2	·· 13.8	21	135°52.4	·· 03.9	21	135°54.4	·· 51.5	21	135°55.1	·· 36.4	21	135°54.5	·· 18.5	21	135°52.6	·· 57.7	21	135°49.4	·· 33.8	21	135°45.1	·· 06.7	21	135°39.6	·· 36.3
22	150°44.9	21.9	22	150°49.3	14.5	22	150°52.5	04.6	22	150°54.4	52.2	22	150°55.1	37.0	22	150°54.5	19.1	22	150°52.5	58.2	22	150°49.4	34.2	22	150°45.0	07.1	22	150°39.5	36.7
23	165°45.0	22.6	23	165°49.3	15.2	23	165°52.5	05.3	23	165°54.4	52.8	23	165°55.1	37.6	23	165°54.4	19.6	23	165°52.5	58.7	23	165°49.3	34.7	23	165°44.9	07.5	23	165°39.4	37.1
	SD.=15.9	d=0.8		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		SD.=15.8	d=0.5		SD.=15.8	d=0.5		SD.=15.8	d=0.4		SD.=15.8	d=0.4

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	180°45.0	N15°23.4	0	180°49.4	N16°15.9	0	180°52.6	N17°06.0	0	180°54.5	N17°53.5	0	180°55.1	N18°38.2	0	180°54.4	N19°20.2	0	180°52.5	N19°59.2	0	180°49.3	N20°35.2	0	180°44.9	N21°08.0	0	180°39.4	N21°37.5
1	195°45.1	24.1	1	195°49.5	16.6	1	195°52.6	06.6	1	195°54.5	54.1	1	195°55.1	38.8	1	195°54.4	20.8	1	195°52.4	19°59.7	1	195°49.2	35.7	1	195°44.8	08.4	1	195°39.3	37.9
2	210°45.2	24.9	2	210°49.5	17.3	2	210°52.6	07.3	2	210°54.5	54.7	2	210°55.1	39.4	2	210°54.4	21.3	2	210°52.4	20°00.3	2	210°49.2	36.1	2	210°44.7	08.8	2	210°39.2	38.2
3	225°45.2	·· 25.6	3	225°49.6	·· 18.0	3	225°52.7	·· 08.0	3	225°54.5	·· 55.4	3	225°55.1	·· 40.0	3	225°54.4	·· 21.9	3	225°52.4	·· 00.8	3	225°49.1	·· 36.6	3	225°44.7	·· 09.3	3	225°39.1	·· 38.6
4	240°45.3	26.4	4	240°49.6	18.7	4	240°52.7	08.7	4	240°54.5	56.0	4	240°55.1	40.6	4	240°54.3	22.4	4	240°52.3	01.3	4	240°49.0	37.1	4	240°44.6	09.7	4	240°39.0	39.0
5	255°45.4	27.1	5	255°49.7	19.5	5	255°52.7	09.3	5	255°54.5	56.7	5	255°55.1	41.2	5	255°54.3	23.0	5	255°52.3	01.8	5	255°49.0	37.6	5	255°44.5	10.1	5	255°38.9	39.4
6	270°45.4	N15°27.9	6	270°49.7	N16°20.2	6	270°52.8	N17°10.0	6	270°54.6	N17°57.3	6	270°55.1	N18°41.8	6	270°54.3	N19°23.6	6	270°52.2	N20°02.3	6	270°48.9	N20°38.0	6	270°44.4	N21°10.6	6	270°38.8	N21°39.8
7	285°45.5	28.6	7	285°49.8	20.9	7	285°52.8	10.7	7	285°54.6	57.9	7	285°55.1	42.4	7	285°54.3	24.1	7	285°52.2	02.9	7	285°48.9	38.5	7	285°44.4	11.0	7	285°38.8	40.2
8	300°45.6	29.3	8	300°49.8	21.6	8	300°52.8	11.4	8	300°54.6	58.6	8	300°55.1	43.0	8	300°54.3	24.7	8	300°52.2	03.4	8	300°48.8	39.0	8	300°44.3	11.4	8	300°38.7	40.5
9	315°45.6	·· 30.1	9	315°49.9	·· 22.3	9	315°52.9	·· 12.0	9	315°54.6	·· 59.2	9	315°55.1	·· 43.6	9	315°54.2	·· 25.2	9	315°52.1	·· 03.9	9	315°48.8	·· 39.5	9	315°44.2	·· 11.8	9	315°38.6	·· 40.9
10	330°45.7	30.8	10	330°49.9	23.0	10	330°52.9	12.7	10	330°54.6	17°59.8	10	330°55.1	44.2	10	330°54.2	25.8	10	330°52.1	04.4	10	330°48.7	39.9	10	330°44.2	12.3	10	330°38.5	41.3
11	345°45.8	31.6	11	345°50.0	23.7	11	345°52.9	13.4	11	345°54.6	18°00.5	11	345°55.1	44.8	11	345°54.2	26.4	11	345°52.1	04.9	11	345°48.7	40.4	11	345°44.1	12.7	11	345°38.4	41.7
12	0°45.8	N15°32.3	12	0°50.0	N16°24.4	12	0°53.0	N17°14.1	12	0°54.6	N18°01.1	12	0°55.1	N18°45.4	12	0°54.2	N19°26.9	12	0°52.0	N20°05.4	12	0°48.6	N20°40.9	12	0°44.0	N21°13.1	12	0°38.3	N21°42.1
13	15°45.9	33.0	13	15°50.1	25.1	13	15°53.0	14.7	13	15°54.7	01.7	13	15°55.1	46.0	13	15°54.2	27.5	13	15°52.0	05.9	13	15°48.6	41.3	13	15°43.9	13.5	13	15°38.3	42.4
14	30°46.0	33.8	14	30°50.1	25.8	14	30°53.0	15.4	14	30°54.7	02.4	14	30°55.1	46.6	14	30°54.1	28.0	14	30°51.9	06.5	14	30°48.5	41.8	14	30°43.9	14.0	14	30°38.2	42.8
15	45°46.0	·· 34.5	15	45°50.2	·· 26.5	15	45°53.1	·· 16.1	15	45°54.7	·· 03.0	15	45°55.0	·· 47.2	15	45°54.1	·· 28.6	15	45°51.9	·· 07.0	15	45°48.4	·· 42.3	15	45°43.8	·· 14.4	15	45°38.1	·· 43.2
16	60°46.1	35.3	16	60°50.2	27.2	16	60°53.1	16.7	16	60°54.7	03.6	16	60°55.0	47.8	16	60°54.1	29.1	16	60°51.9	07.5	16	60°48.4	42.7	16	60°43.7	14.8	16	60°38.0	43.6
17	75°46.2	36.0	17	75°50.3	27.9	17	75°53.1	17.4	17	75°54.7	04.3	17	75°55.0	48.4	17	75°54.1	29.7	17	75°51.8	08.0	17	75°48.3	43.2	17	75°43.7	15.2	17	75°37.9	43.9
18	90°46.2	N15°36.7	18	90°50.3	N16°28.7	18	90°53.1	N17°18.1	18	90°54.7	N18°04.9	18	90°55.0	N18°49.0	18	90°54.0	N19°30.2	18	90°51.8	N20°08.5	18	90°48.3	N20°43.7	18	90°43.6	N21°15.7	18	90°37.8	N21°44.3
19	105°46.3	37.5	19	105°50.4	29.4	19	105°53.2	18.8	19	105°54.7	05.5	19	105°55.0	49.6	19	105°54.0	30.8	19	105°51.7	09.0	19	105°48.2	44.2	19	105°43.5	16.1	19	105°37.7	44.7
20	120°46.4	38.2	20	120°50.4	30.1	20	120°53.2	19.4	20	120°54.8	06.2	20	120°55.0	50.2	20	120°54.0	31.3	20	120°51.7	09.5	20	120°48.2	44.6	20	120°43.4	16.5	20	120°37.6	45.1
21	135°46.4	·· 38.9	21	135°50.4	·· 30.8	21	135°53.2	·· 20.1	21	135°54.8	·· 06.8	21	135°55.0	·· 50.8	21	135°54.0	·· 31.9	21	135°51.7	·· 10.0	21	135°48.1	·· 45.1	21	135°43.4	·· 16.9	21	135°37.6	·· 45.4
22	150°46.5	39.7	22	150°50.5	31.5	22	150°53.3	20.8	22	150°54.8	07.4	22	150°55.0	51.4	22	150°54.0	32.4	22	150°51.6	10.5	22	150°48.0	45.5	22	150°43.3	17.3	22	150°37.5	45.8
23	165°46.6	40.4	23	165°50.5	32.2	23	165°53.3	21.4	23	165°54.8	08.1	23	165°55.0	52.0	23	165°53.9	33.0	23	165°51.6	11.1	23	165°48.0	46.0	23	165°43.2	17.8	23	165°37.4	46.2
	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		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

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	180°46.6	N15°41.2	0	180°50.6	N16°32.9	0	180°53.3	N17°22.1	0	180°54.8	N18°08.7	0	180°55.0	N18°52.5	0	180°53.9	N19°33.5	0	180°51.5	N20°11.6	0	180°47.9	N20°46.5	0	180°43.1	N21°18.2	0	180°37.3	N21°46.6
1	195°46.7	41.9	1	195°50.6	33.6	1	195°53.4	22.8	1	195°54.8	09.3	1	195°55.0	53.1	1	195°53.9	34.1	1	195°51.5	12.1	1	195°47.9	46.9	1	195°43.1	18.6	1	195°37.2	46.9
2	210°46.7	42.6	2	210°50.7	34.3	2	210°53.4	23.4	2	210°54.8	09.9	2	210°55.0	53.7	2	210°53.9	34.6	2	210°51.5	12.6	2	210°47.8	47.4	2	210°43.0	19.0	2	210°37.1	47.3
3	225°46.8	·· 43.4	3	225°50.7	·· 35.0	3	225°53.4	·· 24.1	3	225°54.8	·· 10.6	3	225°55.0	·· 54.3	3	225°53.8	·· 35.2	3	225°51.4	·· 13.1	3	225°47.7	·· 47.9	3	225°42.9	·· 19.4	3	225°37.0	·· 47.7
4	240°46.9	44.1	4	240°50.8	35.7	4	240°53.4	24.7	4	240°54.8	11.2	4	240°55.0	54.9	4	240°53.8	35.7	4	240°51.4	13.6	4	240°47.7	48.3	4	240°42.8	19.8	4	240°36.9	48.0
5	255°46.9	44.8	5	255°50.8	36.4	5	255°53.5	25.4	5	255°54.9	11.8	5	255°55.0	55.5	5	255°53.8	36.3	5	255°51.3	14.1	5	255°47.6	48.8	5	255°42.8	20.3	5	255°36.9	48.4
6	270°47.0	N15°45.6	6	270°50.9	N16°37.1	6	270°53.5	N17°26.1	6	270°54.9	N18°12.4	6	270°55.0	N18°56.1	6	270°53.8	N19°36.8	6	270°51.3	N20°14.6	6	270°47.6	N20°49.2	6	270°42.7	N21°20.7	6	270°36.8	N21°48.8
7	285°47.1	46.3	7	285°50.9	37.8	7	285°53.5	26.7	7	285°54.9	13.1	7	285°55.0	56.7	7	285°53.7	37.4	7	285°51.2	15.1	7	285°47.5	49.7	7	285°42.6	21.1	7	285°36.7	49.1
8	300°47.1	47.0	8	300°51.0	38.5	8	300°53.6	27.4	8	300°54.9	13.7	8	300°54.9	57.2	8	300°53.7	37.9	8	300°51.2	15.6	8	300°47.4	50.2	8	300°42.5	21.5	8	300°36.6	49.5
9	315°47.2	·· 47.7	9	315°51.0	·· 39.2	9	315°53.6	·· 28.1	9	315°54.9	·· 14.3	9	315°54.9	·· 57.8	9	315°53.7	·· 38.5	9	315°51.2	·· 16.1	9	315°47.4	·· 50.6	9	315°42.5	·· 21.9	9	315°36.5	·· 49.9
10	330°47.2	48.5	10	330°51.0	39.9	10	330°53.6	28.7	10	330°54.9	14.9	10	330°54.9	58.4	10	330°53.7	39.0	10	330°51.1	16.6	10	330°47.3	51.1	10	330°42.4	22.3	10	330°36.4	50.2
11	345°47.3	49.2	11	345°51.1	40.6	11	345°53.6	29.4	11	345°54.9	15.6	11	345°54.9	59.0	11	345°53.6	39.5	11	345°51.1	17.1	11	345°47.3	51.5	11	345°42.3	22.7	11	345°36.3	50.6
12	0°47.4	N15°49.9	12	0°51.1	N16°41.2	12	0°53.7	N17°30.0	12	0°54.9	N18°16.2	12	0°54.9	N18°59.6	12	0°53.6	N19°40.1	12	0°51.0	N20°17.6	12	0°47.2	N20°52.0	12	0°42.2	N21°23.1	12	0°36.2	N21°51.0
13	15°47.4	50.7	13	15°51.2	41.9	13	15°53.7	30.7	13	15°54.9	16.8	13	15°54.9	19°00.2	13	15°53.6	40.6	13	15°51.0	18.1	13	15°47.1	52.4	13	15°42.2	23.5	13	15°36.1	51.3
14	30°47.5	51.4	14	30°51.2	42.6	14	30°53.7	31.4	14	30°54.9	17.4	14	30°54.9	00.7	14	30°53.5	41.2	14	30°50.9	18.6	14	30°47.1	52.9	14	30°42.1	24.0	14	30°36.0	51.7
15	45°47.5	·· 52.1	15	45°51.3	·· 43.3	15	45°53.7	·· 32.0	15	45°55.0	·· 18.1	15	45°54.9	·· 01.3	15	45°53.5	·· 41.7	15	45°50.9	·· 19.1	15	45°47.0	·· 53.3	15	45°42.0	·· 24.4	15	45°36.0	·· 52.0
16	60°47.6	52.9	16	60°51.3	44.0	16	60°53.8	32.7	16	60°55.0	18.7	16	60°54.9	01.9	16	60°53.5	42.3	16	60°50.8	19.6	16	60°47.0	53.8	16	60°41.9	24.8	16	60°35.9	52.4
17	75°47.7	53.6	17	75°51.3	44.7	17	75°53.8	33.3	17	75°55.0	19.3	17	75°54.9	02.5	17	75°53.5	42.8	17	75°50.8	20.1	17	75°46.9	54.3	17	75°41.9	25.2	17	75°35.8	52.8
18	90°47.7	N15°54.3	18	90°51.4	N16°45.4	18	90°53.8	N17°34.0	18	90°55.0	N18°19.9	18	90°54.8	N19°03.1	18	90°53.4	N19°43.3	18	90°50.7	N20°20.6	18	90°46.8	N20°54.7	18	90°41.8	N21°25.6	18	90°35.7	N21°53.1
19	105°47.8	55.0	19	105°51.4	46.1	19	105°53.8	34.6	19	105°55.0	20.5	19	105°54.8	03.6	19	105°53.4	43.9	19	105°50.7	21.1	19	105°46.8	55.2	19	105°41.7	26.0	19	105°35.6	53.5
20	120°47.8	55.8	20	120°51.5	46.8	20	120°53.9	35.3	20	120°55.0	21.1	20	120°54.8	04.2	20	120°53.4	44.4	20	120°50.7	21.6	20	120°46.7	55.6	20	120°41.6	26.4	20	120°35.5	53.8
21	135°47.9	·· 56.5	21	135°51.5	·· 47.5	21	135°53.9	·· 36.0	21	135°55.0	·· 21.8	21	135°54.8	·· 04.8	21	135°53.3	·· 44.9	21	135°50.6	·· 22.1	21	135°46.6	·· 56.1	21	135°41.5	·· 26.8	21	135°35.4	·· 54.2
22	150°48.0	57.2	22	150°51.6	48.2	22	150°53.9	36.6	22	150°55.0	22.4	22	150°54.8	05.4	22	150°53.3	45.5	22	150°50.6	22.6	22	150°46.6	56.5	22	150°41.5	27.2	22	150°35.3	54.5
23	165°48.0	57.9	23	165°51.6	48.9	23	165°53.9	37.3	23	165°55.0	23.0	23	165°54.8	06.0	23	165°53.3	46.0	23	165°50.5	23.1	23	165°46.5	57.0	23	165°41.4	27.6	23	165°35.2	54.9
	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		SD.=15.8	d=0.5		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	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	180°35.1	N21°55.3	0	180°28.1	N22°19.1	0	180°20.2	N22°39.4	0	180°11.8	N22°56.1	0	180°02.7	N23°09.1	0	179°53.3	N23°18.6	0	179°43.6	N23°24.3	0	179°33.8	N23°26.3	0	179°24.0	N23°24.6	0	179°14.3	N23°19.1
1	195°35.0	55.6	1	195°28.0	19.4	1	195°20.1	39.6	1	195°11.6	56.3	1	195°02.6	09.3	1	194°53.2	18.7	1	194°43.5	24.3	1	194°33.6	26.3	1	194°23.8	24.5	1	194°14.2	19.0
2	210°34.9	56.0	2	210°27.9	19.7	2	210°20.0	39.9	2	210°11.5	56.5	2	210°02.5	09.5	2	209°53.1	18.8	2	209°43.4	24.4	2	209°33.5	26.3	2	209°23.7	24.5	2	209°14.1	18.9
3	225°34.9	·· 56.3	3	225°27.8	·· 20.0	3	225°19.9	·· 40.1	3	225°11.4	·· 56.7	3	225°02.4	·· 09.6	3	224°52.9	·· 18.9	3	224°43.2	·· 24.4	3	224°33.4	·· 26.3	3	224°23.6	·· 24.4	3	224°14.0	·· 18.8
4	240°34.8	56.7	4	240°27.7	20.3	4	240°19.8	40.4	4	240°11.3	56.9	4	240°02.2	09.8	4	239°52.8	19.0	4	239°43.1	24.5	4	239°33.2	26.3	4	239°23.4	24.4	4	239°13.8	18.7
5	255°34.7	57.0	5	255°27.6	20.6	5	255°19.7	40.6	5	255°11.2	57.1	5	255°02.1	09.9	5	254°52.7	19.1	5	254°42.9	24.6	5	254°33.1	26.3	5	254°23.3	24.3	5	254°13.7	18.6
6	270°34.6	N21°57.4	6	270°27.4	N22°20.9	6	270°19.6	N22°40.9	6	270°11.0	N22°57.3	6	270°02.0	N23°10.1	6	269°52.5	N23°19.2	6	269°42.8	N23°24.6	6	269°33.0	N23°26.3	6	269°23.1	N23°24.3	6	269°13.6	N23°18.5
7	285°34.5	57.7	7	285°27.3	21.2	7	285°19.4	41.1	7	285°10.9	57.5	7	285°01.8	10.2	7	284°52.4	19.3	7	284°42.7	24.6	7	284°32.8	26.3	7	284°23.0	24.2	7	284°13.4	18.4
8	300°34.4	58.1	8	300°27.2	21.5	8	300°19.3	41.4	8	300°10.8	57.7	8	300°01.7	10.4	8	299°52.3	19.4	8	299°42.5	24.7	8	299°32.7	26.3	8	299°22.9	24.2	8	299°13.3	18.3
9	315°34.3	·· 58.4	9	315°27.1	·· 21.8	9	315°19.2	·· 41.6	9	315°10.7	·· 57.9	9	315°01.6	·· 10.5	9	314°52.1	·· 19.5	9	314°42.4	·· 24.7	9	314°32.5	·· 26.3	9	314°22.7	·· 24.1	9	314°13.2	·· 18.2
10	330°34.2	58.8	10	330°27.0	22.1	10	330°19.1	41.9	10	330°10.5	58.1	10	330°01.5	10.7	10	329°52.0	19.6	10	329°42.3	24.8	10	329°32.4	26.3	10	329°22.6	24.0	10	329°13.0	18.1
11	345°34.1	59.1	11	345°26.9	22.4	11	345°19.0	42.1	11	345°10.4	58.3	11	345°01.3	10.8	11	344°51.9	19.7	11	344°42.1	24.8	11	344°32.3	26.3	11	344°22.5	24.0	11	344°12.9	18.0
12	0°34.0	N21°59.5	12	0°26.8	N22°22.7	12	0°18.9	N22°42.4	12	0°10.3	N22°58.5	12	0°01.2	N23°11.0	12	359°51.7	N23°19.8	12	359°42.0	N23°24.9	12	359°32.1	N23°26.3	12	359°22.3	N23°23.9	12	359°12.8	N23°17.9
13	15°33.9	21°59.8	13	15°26.7	23.0	13	15°18.8	42.6	13	15°10.2	58.7	13	15°01.1	11.1	13	14°51.6	19.9	13	14°41.9	24.9	13	14°32.0	26.3	13	14°22.2	23.9	13	14°12.6	17.8
14	30°33.8	22°00.2	14	30°26.6	23.3	14	30°18.6	42.9	14	30°10.0	58.9	14	30°00.9	11.3	14	29°51.5	20.0	14	29°41.7	25.0	14	29°31.9	26.3	14	29°22.1	23.8	14	29°12.5	17.7
15	45°33.7	·· 00.5	15	45°26.5	·· 23.6	15	45°18.5	·· 43.1	15	45°09.9	·· 59.1	15	45°00.8	·· 11.4	15	44°51.3	·· 20.1	15	44°41.6	·· 25.0	15	44°31.7	·· 26.2	15	44°21.9	·· 23.8	15	44°12.4	·· 17.5
16	60°33.6	00.8	16	60°26.4	23.9	16	60°18.4	43.4	16	60°09.8	59.3	16	60°00.7	11.6	16	59°51.2	20.2	16	59°41.4	25.1	16	59°31.6	26.2	16	59°21.8	23.7	16	59°12.3	17.4
17	75°33.5	01.2	17	75°26.3	24.2	17	75°18.3	43.6	17	75°09.7	59.5	17	75°00.6	11.7	17	74°51.1	20.3	17	74°41.3	25.1	17	74°31.5	26.2	17	74°21.7	23.6	17	74°12.1	17.3
18	90°33.4	N22°01.5	18	90°26.2	N22°24.5	18	90°18.2	N22°43.9	18	90°09.6	N22°59.7	18	90°00.4	N23°11.8	18	89°50.9	N23°20.3	18	89°41.2	N23°25.1	18	89°31.3	N23°26.2	18	89°21.5	N23°23.6	18	89°12.0	N23°17.2
19	105°33.4	01.9	19	105°26.1	24.8	19	105°18.1	44.1	19	105°09.4	22°59.9	19	105°00.3	12.0	19	104°50.8	20.4	19	104°41.0	25.2	19	104°31.2	26.2	19	104°21.4	23.5	19	104°11.9	17.1
20	120°33.3	02.2	20	120°26.0	25.1	20	120°17.9	44.4	20	120°09.3	23°00.1	20	120°00.2	12.1	20	119°50.7	20.5	20	119°40.9	25.2	20	119°31.0	26.2	20	119°21.3	23.4	20	119°11.7	17.0
21	135°33.2	·· 02.6	21	135°25.9	·· 25.3	21	135°17.8	·· 44.6	21	135°09.2	·· 00.3	21	135°00.0	·· 12.3	21	134°50.5	·· 20.6	21	134°40.8	·· 25.3	21	134°30.9	·· 26.2	21	134°21.1	·· 23.4	21	134°11.6	·· 16.9
22	150°33.1	02.9	22	150°25.8	25.6	22	150°17.7	44.8	22	150°09.1	00.4	22	149°59.9	12.4	22	149°50.4	20.7	22	149°40.6	25.3	22	149°30.8	26.2	22	149°21.0	23.3	22	149°11.5	16.7
23	165°33.0	03.2	23	165°25.7	25.9	23	165°17.6	45.1	23	165°08.9	00.6	23	164°59.8	12.6	23	164°50.3	20.8	23	164°40.5	25.3	23	164°30.6	26.2	23	164°20.9	23.2	23	164°11.4	16.6
	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.=15.8	d=0.2		SD.=15.7	d=0.1		SD.=15.7	d=0.1		SD.=15.7	d=0.0		SD.=15.7	d=-0.1		SD.=15.7	d=-0.1

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	180°32.9	N22°03.6	0	180°25.5	N22°26.2	0	180°17.5	N22°45.3	0	180°08.8	N23°00.8	0	179°59.6	N23°12.7	0	179°50.1	N23°20.9	0	179°40.4	N23°25.4	0	179°30.5	N23°26.1	0	179°20.7	N23°23.2	0	179°11.2	N23°16.5
1	195°32.8	03.9	1	195°25.4	26.5	1	195°17.4	45.6	1	195°08.7	01.0	1	194°59.5	12.8	1	194°50.0	21.0	1	194°40.2	25.4	1	194°30.4	26.1	1	194°20.6	23.1	1	194°11.1	16.4
2	210°32.7	04.3	2	210°25.3	26.8	2	210°17.3	45.8	2	210°08.6	01.2	2	209°59.4	13.0	2	209°49.8	21.1	2	209°40.1	25.4	2	209°30.2	26.1	2	209°20.5	23.0	2	209°11.0	16.3
3	225°32.6	·· 04.6	3	225°25.2	·· 27.1	3	225°17.1	·· 46.0	3	225°08.4	·· 01.4	3	224°59.3	·· 13.1	3	224°49.7	·· 21.1	3	224°39.9	·· 25.5	3	224°30.1	·· 26.1	3	224°20.3	·· 23.0	3	224°10.8	·· 16.2
4	240°32.5	04.9	4	240°25.1	27.4	4	240°17.0	46.3	4	240°08.3	01.6	4	239°59.1	13.2	4	239°49.6	21.2	4	239°39.8	25.5	4	239°29.9	26.1	4	239°20.2	22.9	4	239°10.7	16.0
5	255°32.4	05.3	5	255°25.0	27.7	5	255°16.9	46.5	5	255°08.2	01.8	5	254°59.0	13.4	5	254°49.4	21.3	5	254°39.7	25.5	5	254°29.8	26.1	5	254°20.1	22.8	5	254°10.6	15.9
6	270°32.3	N22°05.6	6	270°24.9	N22°27.9	6	270°16.8	N22°46.8	6	270°08.1	N23°02.0	6	269°58.9	N23°13.5	6	269°49.3	N23°21.4	6	269°39.5	N23°25.6	6	269°29.7	N23°26.0	6	269°19.9	N23°22.8	6	269°10.4	N23°15.8
7	285°32.2	05.9	7	285°24.8	28.2	7	285°16.7	47.0	7	285°07.9	02.1	7	284°58.7	13.7	7	284°49.2	21.5	7	284°39.4	25.6	7	284°29.5	26.0	7	284°19.8	22.7	7	284°10.3	15.7
8	300°32.1	06.3	8	300°24.7	28.5	8	300°16.5	47.2	8	300°07.8	02.3	8	299°58.6	13.8	8	299°49.0	21.6	8	299°39.3	25.6	8	299°29.4	26.0	8	299°19.6	22.6	8	299°10.2	15.5
9	315°32.0	·· 06.6	9	315°24.6	·· 28.8	9	315°16.4	·· 47.5	9	315°07.7	·· 02.5	9	314°58.5	·· 13.9	9	314°48.9	·· 21.7	9	314°39.1	·· 25.7	9	314°29.3	·· 26.0	9	314°19.5	·· 22.5	9	314°10.1	·· 15.4
10	330°31.9	06.9	10	330°24.5	29.1	10	330°16.3	47.7	10	330°07.6	02.7	10	329°58.3	14.1	10	329°48.8	21.7	10	329°39.0	25.7	10	329°29.1	25.9	10	329°19.4	22.5	10	329°09.9	15.3
11	345°31.8	07.3	11	345°24.4	29.4	11	345°16.2	47.9	11	345°07.4	02.9	11	344°58.2	14.2	11	344°48.6	21.8	11	344°38.8	25.7	11	344°29.0	25.9	11	344°19.2	22.4	11	344°09.8	15.2
12	0°31.7	N22°07.6	12	0°24.2	N22°29.7	12	0°16.1	N22°48.2	12	0°07.3	N23°03.1	12	359°58.1	N23°14.3	12	359°48.5	N23°21.9	12	359°38.7	N23°25.8	12	359°28.9	N23°25.9	12	359°19.1	N23°22.3	12	359°09.7	N23°15.0
13	15°31.6	07.9	13	15°24.1	29.9	13	15°16.0	48.4	13	15°07.2	03.2	13	14°58.0	14.4	13	14°48.4	22.0	13	14°38.6	25.8	13	14°28.7	25.9	13	14°19.0	22.2	13	14°09.6	14.9
14	30°31.5	08.3	14	30°24.0	30.2	14	30°15.8	48.6	14	30°07.1	03.4	14	29°57.8	14.6	14	29°48.2	22.0	14	29°38.4	25.8	14	29°28.6	25.9	14	29°18.8	22.2	14	29°09.4	14.8
15	45°31.4	·· 08.6	15	45°23.9	·· 30.5	15	45°15.7	·· 48.9	15	45°06.9	·· 03.6	15	44°57.7	·· 14.7	15	44°48.1	·· 22.1	15	44°38.3	·· 25.8	15	44°28.4	·· 25.8	15	44°18.7	·· 22.1	15	44°09.3	·· 14.7
16	60°31.3	08.9	16	60°23.8	30.8	16	60°15.6	49.1	16	60°06.8	03.8	16	59°57.6	14.8	16	59°48.0	22.2	16	59°38.2	25.9	16	59°28.3	25.8	16	59°18.6	22.0	16	59°09.2	14.5
17	75°31.2	09.2	17	75°23.7	31.1	17	75°15.5	49.3	17	75°06.7	04.0	17	74°57.4	15.0	17	74°47.8	22.3	17	74°38.0	25.9	17	74°28.2	25.8	17	74°18.4	21.9	17	74°09.0	14.4
18	90°31.1	N22°09.6	18	90°23.6	N22°31.3	18	90°15.4	N22°49.5	18	90°06.6	N23°04.1	18	89°57.3	N23°15.1	18	89°47.7	N23°22.4	18	89°37.9	N23°25.9	18	89°28.0	N23°25.7	18	89°18.3	N23°21.9	18	89°08.9	N23°14.3
19	105°31.0	09.9	19	105°23.5	31.6	19	105°15.3	49.8	19	105°06.4	04.3	19	104°57.2	15.2	19	104°47.6	22.4	19	104°37.8	25.9	19	104°27.9	25.7	19	104°18.2	21.8	19	104°08.8	14.1
20	120°30.9	10.2	20	120°23.4	31.9	20	120°15.1	50.0	20	120°06.3	04.5	20	119°57.0	15.3	20	119°47.4	22.5	20	119°37.6	26.0	20	119°27.8	25.7	20	119°18.0	21.7	20	119°08.7	14.0
21	135°30.8	·· 10.5	21	135°23.3	·· 32.2	21	135°15.0	·· 50.2	21	135°06.2	·· 04.7	21	134°56.9	·· 15.5	21	134°47.3	·· 22.6	21	134°37.5	·· 26.0	21	134°27.6	·· 25.7	21	134°17.9	·· 21.6	21	134°08.5	·· 13.9
22	150°30.7	10.9	22	150°23.2	32.4	22	150°14.9	50.4	22	150°06.1	04.8	22	149°56.8	15.6	22	149°47.2	22.7	22	149°37.3	26.0	22	149°27.5	25.6	22	149°17.8	21.5	22	149°08.4	13.7
23	165°30.6	11.2	23	165°23.0	32.7	23	165°14.8	50.7	23	165°05.9	05.0	23	164°56.6	15.7	23	164°47.0	22.7	23	164°37.2	26.0	23	164°27.4	25.6	23	164°17.6	21.4	23	164°08.3	13.6
	SD.=15.8	d=0.3		SD.=15.8	d=0.3		SD.=15.8	d=0.2		SD.=15.8	d=0.2		SD.=15.8	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		SD.=15.7	d=-0.1

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	180°30.5	N22°11.5	0	180°22.9	N22°33.0	0	180°14.7	N22°50.9	0	180°05.8	N23°05.2	0	179°56.5	N23°15.8	0	179°46.9	N23°22.8	0	179°37.1	N23°26.0	0	179°27.2	N23°25.6	0	179°17.5	N23°21.4	0	179°08.2	N23°13.5
1	195°30.4	11.8	1	195°22.8	33.3	1	195°14.5	51.1	1	195°05.7	05.4	1	194°56.4	16.0	1	194°46.7	22.9	1	194°36.9	26.1	1	194°27.1	25.5	1	194°17.4	21.3	1	194°08.0	13.3
2	210°30.3	12.2	2	210°22.7	33.5	2	210°14.4	51.3	2	210°05.6	05.5	2	209°56.2	16.1	2	209°46.6	22.9	2	209°36.8	26.1	2	209°26.9	25.5	2	209°17.3	21.2	2	209°07.9	13.2
3	225°30.2	·· 12.5	3	225°22.6	·· 33.8	3	225°14.3	·· 51.6	3	225°05.4	·· 05.7	3	224°56.1	·· 16.2	3	224°46.5	·· 23.0	3	224°36.7	·· 26.1	3	224°26.8	·· 25.5	3	224°17.1	·· 21.1	3	224°07.8	·· 13.1
4	240°30.1	12.8	4	240°22.5	34.1	4	240°14.2	51.8	4	240°05.3	05.9	4	239°56.0	16.3	4	239°46.3	23.1	4	239°36.5	26.1	4	239°26.7	25.4	4	239°17.0	21.0	4	239°07.6	12.9
5	255°30.0	13.1	5	255°22.4	34.3	5	255°14.1	52.0	5	255°05.2	06.0	5	254°55.8	16.4	5	254°46.2	23.1	5	254°36.4	26.1	5	254°26.5	25.4	5	254°16.9	20.9	5	254°07.5	12.8
6	270°29.9	N22°13.4	6	270°22.3	N22°34.6	6	270°13.9	N22°52.2	6	270°05.0	N23°06.2	6	269°55.7	N23°16.6	6	269°46.1	N23°23.2	6	269°36.2	N23°26.1	6	269°26.4	N23°25.4	6	269°16.7	N23°20.8	6	269°07.4	N23°12.6
7	285°29.8	13.8	7	285°22.2	34.9	7	285°13.8	52.4	7	285°04.9	06.4	7	284°55.6	16.7	7	284°45.9	23.3	7	284°36.1	26.2	7	284°26.3	25.3	7	284°16.6	20.8	7	284°07.3	12.5
8	300°29.7	14.1	8	300°22.0	35.2	8	300°13.7	52.7	8	300°04.8	06.6	8	299°55.4	16.8	8	299°45.8	23.3	8	299°36.0	26.2	8	299°26.1	25.3	8	299°16.5	20.7	8	299°07.1	12.4
9	315°29.6	·· 14.4	9	315°21.9	·· 35.4	9	315°13.6	·· 52.9	9	315°04.7	·· 06.7	9	314°55.3	·· 16.9	9	314°45.7	·· 23.4	9	314°35.8	·· 26.2	9	314°26.0	·· 25.2	9	314°16.3	·· 20.6	9	314°07.0	·· 12.2
10	330°29.5	14.7	10	330°21.8	35.7	10	330°13.5	53.1	10	330°04.5	06.9	10	329°55.2	17.0	10	329°45.5	23.5	10	329°35.7	26.2	10	329°25.9	25.2	10	329°16.2	20.5	10	329°06.9	12.1
11	345°29.4	15.0	11	345°21.7	36.0	11	345°13.3	53.3	11	345°04.4	07.1	11	344°55.1	17.1	11	344°45.4	23.5	11	344°35.6	26.2	11	344°25.7	25.2	11	344°16.1	20.4	11	344°06.8	11.9
12	0°29.3	N22°15.3	12	0°21.6	N22°36.2	12	0°13.2	N22°53.5	12	0°04.3	N23°07.2	12	359°54.9	N23°17.3	12	359°45.3	N23°23.6	12	359°35.4	N23°26.2	12	359°25.6	N23°25.1	12	359°15.9	N23°20.3	12	359°06.6	N23°11.8
13	15°29.2	15.7	13	15°21.5	36.5	13	15°13.1	53.7	13	15°04.2	07.4	13	14°54.8	17.4	13	14°45.1	23.7	13	14°35.3	26.2	13	14°25.5	25.1	13	14°15.8	20.2	13	14°06.5	11.6
14	30°29.1	16.0	14	30°21.4	36.7	14	30°13.0	54.0	14	30°04.0	07.5	14	29°54.7	17.5	14	29°45.0	23.7	14	29°35.2	26.2	14	29°25.3	25.0	14	29°15.7	20.1	14	29°06.4	11.5
15	45°29.0	·· 16.3	15	45°21.3	·· 37.0	15	45°12.9	·· 54.2	15	45°03.9	·· 07.7	15	44°54.5	·· 17.6	15	44°44.8	·· 23.8	15	44°35.0	·· 26.3	15	44°25.2	·· 25.0	15	44°15.5	·· 20.0	15	44°06.3	·· 11.4
16	60°28.9	16.6	16	60°21.1	37.3	16	60°12.7	54.4	16	60°03.8	07.9	16	59°54.4	17.7	16	59°44.7	23.8	16	59°34.9	26.3	16	59°25.0	25.0	16	59°15.4	19.9	16	59°06.1	11.2
17	75°28.8	16.9	17	75°21.0	37.5	17	75°12.6	54.6	17	75°03.6	08.0	17	74°54.3	17.8	17	74°44.6	23.9	17	74°34.7	26.3	17	74°24.9	24.9	17	74°15.3	19.8	17	74°06.0	11.1
18	90°28.7	N22°17.2	18	90°20.9	N22°37.8	18	90°12.5	N22°54.8	18	90°03.5	N23°08.2	18	89°54.1	N23°17.9	18	89°44.4	N23°24.0	18	89°34.6	N23°26.3	18	89°24.8	N23°24.9	18	89°15.1	N23°19.7	18	89°05.9	N23°10.9
19	105°28.6	17.5	19	105°20.8	38.1	19	105°12.4	55.0	19	105°03.4	08.4	19	104°54.0	18.0	19	104°44.3	24.0	19	104°34.5	26.3	19	104°24.6	24.8	19	104°15.0	19.6	19	104°05.8	10.8
20	120°28.5	17.8	20	120°20.7	38.3	20	120°12.2	55.2	20	120°03.3	08.5	20	119°53.9	18.1	20	119°44.2	24.1	20	119°34.3	26.3	20	119°24.5	24.8	20	119°14.9	19.5	20	119°05.6	10.6
21	135°28.4	·· 18.1	21	135°20.6	·· 38.6	21	135°12.1	·· 55.4	21	135°03.1	·· 08.7	21	134°53.7	·· 18.2	21	134°44.0	·· 24.1	21	134°34.2	·· 26.3	21	134°24.4	·· 24.7	21	134°14.7	·· 19.4	21	134°05.5	·· 10.5
22	150°28.3	18.5	22	150°20.5	38.8	22	150°12.0	55.6	22	150°03.0	08.8	22	149°53.6	18.4	22	149°43.9	24.2	22	149°34.1	26.3	22	149°24.2	24.7	22	149°14.6	19.3	22	149°05.4	10.3
23	165°28.2	18.8	23	165°20.4	39.1	23	165°11.9	55.9	23	165°02.9	09.0	23	164°53.5	18.5	23	164°43.8	24.2	23	164°33.9	26.3	23	164°24.1	24.6	23	164°14.5	19.2	23	164°05.3	10.2
	SD.=15.8	d=0.3		SD.=15.8	d=0.3		SD.=15.8	d=0.2		SD.=15.8	d=0.2		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		SD.=15.7	d=-0.1

30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	179°05.1	N23°10.0	0	178°56.5	N22°57.2	0	178°48.6	N22°40.9	0	178°41.5	N22°21.0	0	178°35.4	N21°57.6	0	178°30.3	N21°30.8	0	178°26.3	N21°00.8	0	178°23.4	N20°27.5	0	178°21.9	N19°51.2	0	178°21.6	N19°11.8
1	194°05.0	09.9	1	193°56.4	57.0	1	193°48.5	40.6	1	193°41.4	20.7	1	193°35.3	57.2	1	193°30.2	30.4	1	193°26.2	21°00.3	1	193°23.4	27.0	1	193°21.8	50.6	1	193°21.6	11.3
2	209°04.9	09.7	2	208°56.3	56.8	2	208°48.4	40.4	2	208°41.3	20.4	2	208°35.2	56.9	2	208°30.2	30.0	2	208°26.2	20°59.9	2	208°23.4	26.6	2	208°21.8	50.1	2	208°21.6	10.7
3	224°04.8	·· 09.6	3	223°56.2	·· 56.6	3	223°48.3	·· 40.1	3	223°41.2	·· 20.0	3	223°35.1	·· 56.5	3	223°30.1	·· 29.7	3	223°26.1	·· 59.5	3	223°23.4	·· 26.1	3	223°21.8	·· 49.6	3	223°21.6	·· 10.1
4	239°04.6	09.4	4	238°56.0	56.4	4	238°48.2	39.8	4	238°41.1	19.7	4	238°35.1	56.2	4	238°30.0	29.3	4	238°26.1	59.0	4	238°23.3	25.6	4	238°21.8	49.1	4	238°21.6	09.6
5	254°04.5	09.2	5	253°55.9	56.2	5	253°48.1	39.6	5	253°41.0	19.4	5	253°35.0	55.8	5	253°30.0	28.9	5	253°26.0	58.6	5	253°23.3	25.1	5	253°21.8	48.5	5	253°21.6	09.0
6	269°04.4	N23°09.1	6	268°55.8	N22°56.0	6	268°48.0	N22°39.3	6	268°41.0	N22°19.1	6	268°34.9	N21°55.5	6	268°29.9	N21°28.5	6	268°26.0	N20°58.1	6	268°23.3	N20°24.6	6	268°21.8	N19°48.0	6	268°21.6	N19°08.4
7	284°04.3	08.9	7	283°55.7	55.8	7	283°47.9	39.1	7	283°40.9	18.8	7	283°34.8	55.1	7	283°29.8	28.1	7	283°26.0	57.7	7	283°23.2	24.1	7	283°21.8	47.5	7	283°21.6	07.9
8	299°04.1	08.8	8	298°55.6	55.6	8	298°47.8	38.8	8	298°40.8	18.5	8	298°34.8	54.8	8	298°29.8	27.7	8	298°25.9	57.3	8	298°23.2	23.6	8	298°21.8	46.9	8	298°21.6	07.3
9	314°04.0	·· 08.6	9	313°55.5	·· 55.4	9	313°47.6	·· 38.6	9	313°40.7	·· 18.2	9	313°34.7	·· 54.4	9	313°29.7	·· 27.3	9	313°25.9	·· 56.8	9	313°23.2	·· 23.2	9	313°21.7	·· 46.4	9	313°21.6	·· 06.7
10	329°03.9	08.5	10	328°55.4	55.2	10	328°47.5	38.3	10	328°40.6	17.9	10	328°34.6	54.1	10	328°29.7	26.9	10	328°25.8	56.4	10	328°23.1	22.7	10	328°21.7	45.9	10	328°21.6	06.1
11	344°03.8	08.3	11	343°55.2	55.0	11	343°47.4	38.0	11	343°40.5	17.6	11	343°34.5	53.7	11	343°29.6	26.5	11	343°25.8	55.9	11	343°23.1	22.2	11	343°21.7	45.4	11	343°21.7	05.6
12	359°03.7	N23°08.1	12	358°55.1	N22°54.8	12	358°47.3	N22°37.8	12	358°40.4	N22°17.3	12	358°34.5	N21°53.4	12	358°29.5	N21°26.1	12	358°25.7	N20°55.5	12	358°23.1	N20°21.7	12	358°21.7	N19°44.8	12	358°21.7	N19°05.0
13	14°03.5	08.0	13	13°55.0	54.5	13	13°47.2	37.5	13	13°40.3	17.0	13	13°34.4	53.0	13	13°29.5	25.7	13	13°25.7	55.0	13	13°23.1	21.2	13	13°21.7	44.3	13	13°21.7	04.4
14	29°03.4	07.8	14	28°54.9	54.3	14	28°47.1	37.3	14	28°40.2	16.7	14	28°34.3	52.6	14	28°29.4	25.3	14	28°25.6	54.6	14	28°23.0	20.7	14	28°21.7	43.8	14	28°21.7	03.9
15	44°03.3	·· 07.7	15	43°54.8	·· 54.1	15	43°47.0	·· 37.0	15	43°40.1	·· 16.4	15	43°34.2	·· 52.3	15	43°29.4	·· 24.8	15	43°25.6	·· 54.1	15	43°23.0	·· 20.2	15	43°21.7	·· 43.2	15	43°21.7	·· 03.3
16	59°03.2	07.5	16	58°54.7	53.9	16	58°46.9	36.7	16	58°40.1	16.1	16	58°34.2	51.9	16	58°29.3	24.4	16	58°25.5	53.7	16	58°23.0	19.7	16	58°21.7	42.7	16	58°21.7	02.7
17	74°03.0	07.3	17	73°54.6	53.7	17	73°46.8	36.5	17	73°40.0	15.7	17	73°34.1	51.6	17	73°29.2	24.0	17	73°25.5	53.2	17	73°23.0	19.2	17	73°21.7	42.1	17	73°21.7	02.1
18	89°02.9	N23°07.2	18	88°54.4	N22°53.5	18	88°46.7	N22°36.2	18	88°39.9	N22°15.4	18	88°34.0	N21°51.2	18	88°29.2	N21°23.6	18	88°25.5	N20°52.8	18	88°22.9	N20°18.7	18	88°21.7	N19°41.6	18	88°21.7	N19°01.6
19	104°02.8	07.0	19	103°54.3	53.3	19	103°46.6	35.9	19	103°39.8	15.1	19	103°33.9	50.9	19	103°29.1	23.2	19	103°25.4	52.3	19	103°22.9	18.2	19	103°21.6	41.1	19	103°21.7	01.0
20	119°02.7	06.8	20	118°54.2	53.0	20	118°46.5	35.7	20	118°39.7	14.8	20	118°33.9	50.5	20	118°29.1	22.8	20	118°25.4	51.9	20	118°22.9	17.7	20	118°21.6	40.5	20	118°21.7	19°00.4
21	134°02.6	·· 06.7	21	133°54.1	·· 52.8	21	133°46.4	·· 35.4	21	133°39.6	·· 14.5	21	133°33.8	·· 50.1	21	133°29.0	·· 22.4	21	133°25.3	·· 51.4	21	133°22.8	·· 17.2	21	133°21.6	·· 40.0	21	133°21.8	18°59.8
22	149°02.4	06.5	22	148°54.0	52.6	22	148°46.3	35.2	22	148°39.5	14.2	22	148°33.7	49.8	22	148°28.9	22.0	22	148°25.3	51.0	22	148°22.8	16.7	22	148°21.6	39.5	22	148°21.8	59.2
23	164°02.3	06.3	23	163°53.9	52.4	23	163°46.2	34.9	23	163°39.4	13.9	23	163°33.6	49.4	23	163°28.9	21.6	23	163°25.2	50.5	23	163°22.8	16.2	23	163°21.6	38.9	23	163°21.8	58.7
	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=-0.3		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

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	179°02.2	N23°06.2	0	178°53.8	N22°52.2	0	178°46.1	N22°34.6	0	178°39.4	N22°13.5	0	178°33.6	N21°49.0	0	178°28.8	N21°21.2	0	178°25.2	N20°50.1	0	178°22.8	N20°15.8	0	178°21.6	N19°38.4	0	178°21.8	N18°58.1
1	194°02.1	06.0	1	193°53.7	52.0	1	193°46.0	34.3	1	193°39.3	13.2	1	193°33.5	48.7	1	193°28.8	20.8	1	193°25.2	49.6	1	193°22.7	15.3	1	193°21.6	37.8	1	193°21.8	57.5
2	209°01.9	05.8	2	208°53.5	51.7	2	208°45.9	34.1	2	208°39.2	12.9	2	208°33.4	48.3	2	208°28.7	20.4	2	208°25.1	49.1	2	208°22.7	14.8	2	208°21.6	37.3	2	208°21.8	56.9
3	224°01.8	·· 05.7	3	223°53.4	·· 51.5	3	223°45.8	·· 33.8	3	223°39.1	·· 12.6	3	223°33.3	·· 47.9	3	223°28.6	·· 20.0	3	223°25.1	·· 48.7	3	223°22.7	·· 14.3	3	223°21.6	·· 36.8	3	223°21.8	·· 56.3
4	239°01.7	05.5	4	238°53.3	51.3	4	238°45.7	33.5	4	238°39.0	12.3	4	238°33.3	47.6	4	238°28.6	19.5	4	238°25.0	48.2	4	238°22.7	13.8	4	238°21.6	36.2	4	238°21.8	55.8
5	254°01.6	05.3	5	253°53.2	51.1	5	253°45.6	33.3	5	253°38.9	12.0	5	253°33.2	47.2	5	253°28.5	19.1	5	253°25.0	47.8	5	253°22.7	13.3	5	253°21.6	35.7	5	253°21.9	55.2
6	269°01.5	N23°05.1	6	268°53.1	N22°50.8	6	268°45.5	N22°33.0	6	268°38.8	N22°11.6	6	268°33.1	N21°46.8	6	268°28.5	N21°18.7	6	268°25.0	N20°47.3	6	268°22.6	N20°12.8	6	268°21.6	N19°35.1	6	268°21.9	N18°54.6
7	284°01.3	05.0	7	283°53.0	50.6	7	283°45.4	32.7	7	283°38.7	11.3	7	283°33.1	46.5	7	283°28.4	18.3	7	283°24.9	46.9	7	283°22.6	12.3	7	283°21.6	34.6	7	283°21.9	54.0
8	299°01.2	04.8	8	298°52.9	50.4	8	298°45.3	32.4	8	298°38.7	11.0	8	298°33.0	46.1	8	298°28.4	17.9	8	298°24.9	46.4	8	298°22.6	11.7	8	298°21.6	34.1	8	298°21.9	53.4
9	314°01.1	·· 04.6	9	313°52.8	·· 50.2	9	313°45.2	·· 32.2	9	313°38.6	·· 10.7	9	313°32.9	·· 45.7	9	313°28.3	·· 17.5	9	313°24.8	·· 45.9	9	313°22.6	·· 11.2	9	313°21.6	·· 33.5	9	313°21.9	·· 52.8
10	329°01.0	04.4	10	328°52.7	50.0	10	328°45.1	31.9	10	328°38.5	10.3	10	328°32.8	45.4	10	328°28.2	17.1	10	328°24.8	45.5	10	328°22.5	10.7	10	328°21.6	33.0	10	328°21.9	52.3
11	344°00.9	04.3	11	343°52.6	49.7	11	343°45.0	31.6	11	343°38.4	10.0	11	343°32.8	45.0	11	343°28.2	16.6	11	343°24.8	45.0	11	343°22.5	10.2	11	343°21.6	32.4	11	343°21.9	51.7
12	359°00.7	N23°04.1	12	358°52.4	N22°49.5	12	358°44.9	N22°31.3	12	358°38.3	N22°09.7	12	358°32.7	N21°44.6	12	358°28.1	N21°16.2	12	358°24.7	N20°44.6	12	358°22.5	N20°09.7	12	358°21.5	N19°31.9	12	358°22.0	N18°51.1
13	14°00.6	03.9	13	13°52.3	49.3	13	13°44.8	31.1	13	13°38.2	09.4	13	13°32.6	44.3	13	13°28.1	15.8	13	13°24.7	44.1	13	13°22.5	09.2	13	13°21.5	31.3	13	13°22.0	50.5
14	29°00.5	03.7	14	28°52.2	49.0	14	28°44.7	30.8	14	28°38.1	09.0	14	28°32.6	43.9	14	28°28.0	15.4	14	28°24.6	43.6	14	28°22.4	08.7	14	28°21.5	30.8	14	28°22.0	49.9
15	44°00.4	·· 03.5	15	43°52.1	·· 48.8	15	43°44.6	·· 30.5	15	43°38.1	·· 08.7	15	43°32.5	·· 43.5	15	43°28.0	·· 15.0	15	43°24.6	·· 43.2	15	43°22.4	·· 08.2	15	43°21.5	·· 30.2	15	43°22.0	·· 49.3
16	59°00.3	03.4	16	58°52.0	48.6	16	58°44.5	30.2	16	58°38.0	08.4	16	58°32.4	43.1	16	58°27.9	14.5	16	58°24.6	42.7	16	58°22.4	07.7	16	58°21.5	29.7	16	58°22.0	48.7
17	74°00.1	03.2	17	73°51.9	48.4	17	73°44.4	30.0	17	73°37.9	08.1	17	73°32.3	42.8	17	73°27.9	14.1	17	73°24.5	42.2	17	73°22.4	07.2	17	73°21.5	29.1	17	73°22.0	48.2
18	89°00.0	N23°03.0	18	88°51.8	N22°48.1	18	88°44.3	N22°29.7	18	88°37.8	N22°07.7	18	88°32.3	N21°42.4	18	88°27.8	N21°13.7	18	88°24.5	N20°41.8	18	88°22.4	N20°06.7	18	88°21.5	N19°28.6	18	88°22.0	N18°47.6
19	103°59.9	02.8	19	103°51.7	47.9	19	103°44.2	29.4	19	103°37.7	07.4	19	103°32.2	42.0	19	103°27.8	13.3	19	103°24.4	41.3	19	103°22.3	06.2	19	103°21.5	28.0	19	103°22.1	47.0
20	118°59.8	02.6	20	118°51.6	47.7	20	118°44.2	29.1	20	118°37.6	07.1	20	118°32.1	41.6	20	118°27.7	12.9	20	118°24.4	40.8	20	118°22.3	05.7	20	118°21.5	27.5	20	118°22.1	46.4
21	133°59.7	·· 02.5	21	133°51.5	·· 47.4	21	133°44.1	·· 28.8	21	133°37.6	·· 06.7	21	133°32.1	·· 41.3	21	133°27.6	·· 12.4	21	133°24.4	·· 40.4	21	133°22.3	·· 05.2	21	133°21.5	·· 26.9	21	133°22.1	·· 45.8
22	148°59.5	02.3	22	148°51.3	47.2	22	148°44.0	28.5	22	148°37.5	06.4	22	148°32.0	40.9	22	148°27.6	12.0	22	148°24.3	39.9	22	148°22.3	04.7	22	148°21.5	26.4	22	148°22.1	45.2
23	163°59.4	02.1	23	163°51.2	47.0	23	163°43.9	28.3	23	163°37.4	06.1	23	163°31.9	40.5	23	163°27.5	11.6	23	163°24.3	39.4	23	163°22.3	04.1	23	163°21.5	25.8	23	163°22.1	44.6
	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		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.=15.8	d=-0.6

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	178°59.3	N23°01.9	0	178°51.1	N22°46.7	0	178°43.8	N22°28.0	0	178°37.3	N22°05.8	0	178°31.9	N21°40.1	0	178°27.5	N21°11.2	0	178°24.3	N20°39.0	0	178°22.2	N20°03.6	0	178°21.5	N19°25.3	0	178°22.2	N18°44.0
1	193°59.2	01.7	1	193°51.0	46.5	1	193°43.7	27.7	1	193°37.2	05.4	1	193°31.8	39.7	1	193°27.4	10.7	1	193°24.2	38.5	1	193°22.2	03.1	1	193°21.5	24.7	1	193°22.2	43.4
2	208°59.1	01.5	2	208°50.9	46.2	2	208°43.6	27.4	2	208°37.1	05.1	2	208°31.7	39.4	2	208°27.4	10.3	2	208°24.2	38.0	2	208°22.2	02.6	2	208°21.5	24.2	2	208°22.2	42.8
3	223°58.9	·· 01.3	3	223°50.8	·· 46.0	3	223°43.5	·· 27.1	3	223°37.1	·· 04.8	3	223°31.7	·· 39.0	3	223°27.3	·· 09.9	3	223°24.1	·· 37.6	3	223°22.2	·· 02.1	3	223°21.5	·· 23.6	3	223°22.2	·· 42.2
4	238°58.8	01.2	4	238°50.7	45.8	4	238°43.4	26.8	4	238°37.0	04.4	4	238°31.6	38.6	4	238°27.3	09.5	4	238°24.1	37.1	4	238°22.2	01.6	4	238°21.5	23.1	4	238°22.2	41.6
5	253°58.7	01.0	5	253°50.6	45.5	5	253°43.3	26.5	5	253°36.9	04.1	5	253°31.5	38.2	5	253°27.2	09.0	5	253°24.1	36.6	5	253°22.1	01.1	5	253°21.5	22.5	5	253°22.3	41.1
6	268°58.6	N23°00.8	6	268°50.5	N22°45.3	6	268°43.2	N22°26.3	6	268°36.8	N22°03.7	6	268°31.5	N21°37.8	6	268°27.2	N21°08.6	6	268°24.0	N20°36.1	6	268°22.1	N20°00.5	6	268°21.5	N19°21.9	6	268°22.3	N18°40.5
7	283°58.5	00.6	7	283°50.4	45.1	7	283°43.1	26.0	7	283°36.7	03.4	7	283°31.4	37.5	7	283°27.1	08.2	7	283°24.0	35.7	7	283°22.1	20°00.0	7	283°21.5	21.4	7	283°22.3	39.9
8	298°58.4	00.4	8	298°50.3	44.8	8	298°43.0	25.7	8	298°36.7	03.1	8	298°31.3	37.1	8	298°27.1	07.7	8	298°24.0	35.2	8	298°22.1	19°59.5	8	298°21.5	20.8	8	298°22.3	39.3
9	313°58.2	·· 00.2	9	313°50.2	·· 44.6	9	313°42.9	·· 25.4	9	313°36.6	·· 02.7	9	313°31.3	·· 36.7	9	313°27.0	·· 07.3	9	313°23.9	·· 34.7	9	313°22.1	·· 59.0	9	313°21.5	·· 20.3	9	313°22.3	·· 38.7
10	328°58.1	23°00.0	10	328°50.1	44.3	10	328°42.8	25.1	10	328°36.5	02.4	10	328°31.2	36.3	10	328°27.0	06.9	10	328°23.9	34.2	10	328°22.1	58.5	10	328°21.5	19.7	10	328°22.4	38.1
11	343°58.0	22°59.8	11	343°50.0	44.1	11	343°42.7	24.8	11	343°36.4	02.1	11	343°31.1	35.9	11	343°26.9	06.5	11	343°23.9	33.8	11	343°22.0	58.0	11	343°21.5	19.2	11	343°22.4	37.5
12	358°57.9	N22°59.6	12	358°49.8	N22°43.8	12	358°42.6	N22°24.5	12	358°36.3	N22°01.7	12	358°31.1	N21°35.5	12	358°26.9	N21°06.0	12	358°23.8	N20°33.3	12	358°22.0	N19°57.4	12	358°21.5	N19°18.6	12	358°22.4	N18°36.9
13	13°57.8	59.4	13	13°49.7	43.6	13	13°42.5	24.2	13	13°36.2	01.4	13	13°31.0	35.1	13	13°26.8	05.6	13	13°23.8	32.8	13	13°22.0	56.9	13	13°21.5	18.0	13	13°22.4	36.3
14	28°57.7	59.2	14	28°49.6	43.3	14	28°42.4	23.9	14	28°36.2	01.0	14	28°30.9	34.8	14	28°26.8	05.2	14	28°23.8	32.3	14	28°22.0	56.4	14	28°21.5	17.5	14	28°22.4	35.7
15	43°57.5	·· 59.0	15	43°49.5	·· 43.1	15	43°42.3	·· 23.6	15	43°36.1	·· 00.7	15	43°30.9	·· 34.4	15	43°26.7	·· 04.7	15	43°23.7	·· 31.9	15	43°22.0	·· 55.9	15	43°21.5	·· 16.9	15	43°22.5	·· 35.1
16	58°57.4	58.8	16	58°49.4	42.9	16	58°42.2	23.3	16	58°36.0	00.4	16	58°30.8	34.0	16	58°26.7	04.3	16	58°23.7	31.4	16	58°22.0	55.4	16	58°21.5	16.4	16	58°22.5	34.5
17	73°57.3	58.6	17	73°49.3	42.6	17	73°42.2	23.0	17	73°35.9	22°00.0	17	73°30.7	33.6	17	73°26.6	03.9	17	73°23.7	30.9	17	73°22.0	54.8	17	73°21.5	15.8	17	73°22.5	33.9
18	88°57.2	N22°58.4	18	88°49.2	N22°42.4	18	88°42.1	N22°22.7	18	88°35.9	N21°59.7	18	88°30.7	N21°33.2	18	88°26.6	N21°03.4	18	88°23.6	N20°30.4	18	88°21.9	N19°54.3	18	88°21.5	N19°15.2	18	88°22.5	N18°33.3
19	103°57.1	58.2	19	103°49.1	42.1	19	103°42.0	22.4	19	103°35.8	59.3	19	103°30.6	32.8	19	103°26.5	03.0	19	103°23.6	29.9	19	103°21.9	53.8	19	103°21.6	14.7	19	103°22.6	32.7
20	118°57.0	58.0	20	118°49.0	41.9	20	118°41.9	22.2	20	118°35.7	59.0	20	118°30.5	32.4	20	118°26.5	02.5	20	118°23.6	29.5	20	118°21.9	53.3	20	118°21.6	14.1	20	118°22.6	32.1
21	133°56.8	·· 57.8	21	133°48.9	·· 41.6	21	133°41.8	·· 21.9	21	133°35.6	·· 58.6	21	133°30.5	·· 32.0	21	133°26.4	·· 02.1	21	133°23.5	·· 29.0	21	133°21.9	·· 52.7	21	133°21.6	·· 13.5	21	133°22.6	·· 31.5
22	148°56.7	57.6	22	148°48.8	41.4	22	148°41.7	21.6	22	148°35.5	58.3	22	148°30.4	31.6	22	148°26.4	01.7	22	148°23.5	28.5	22	148°21.9	52.2	22	148°21.6	13.0	22	148°22.6	30.9
23	163°56.6	57.4	23	163°48.7	41.1	23	163°41.6	21.3	23	163°35.5	57.9	23	163°30.3	31.2	23	163°26.3	01.2	23	163°23.5	28.0	23	163°21.9	51.7	23	163°21.6	12.4	23	163°22.7	30.3
	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		SD.=15.7	d=-0.4		SD.=15.7	d=-0.5		SD.=15.7	d=-0.5		SD.=15.7	d=-0.6		SD.=15.8	d=-0.6

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	178°22.7	N18°29.7	0	178°25.2	N17°44.7	0	178°29.1	N16°57.3	0	178°34.4	N16°07.3	0	178°41.0	N15°15.1	0	178°48.9	N14°20.6	0	178°57.9	N13°24.1	0	179°08.1	N12°25.6	0	179°19.3	N11°25.4	0	179°31.4	N10°23.5
1	193°22.7	29.0	1	193°25.2	44.1	1	193°29.1	56.6	1	193°34.5	06.6	1	193°41.1	14.3	1	193°49.0	19.8	1	193°58.0	23.3	1	194°08.2	24.8	1	194°19.4	24.5	1	194°31.6	22.7
2	208°22.7	28.4	2	208°25.3	43.5	2	208°29.2	55.9	2	208°34.5	05.9	2	208°41.2	13.6	2	208°49.1	19.1	2	208°58.2	22.5	2	209°08.4	24.0	2	209°19.6	23.7	2	209°31.8	21.8
3	223°22.8	·· 27.8	3	223°25.3	·· 42.8	3	223°29.3	·· 55.2	3	223°34.6	·· 05.2	3	223°41.3	·· 12.8	3	223°49.2	·· 18.3	3	223°58.3	·· 21.7	3	224°08.5	·· 23.1	3	224°19.8	·· 22.8	3	224°32.0	·· 20.9
4	238°22.8	27.2	4	238°25.4	42.2	4	238°29.3	54.5	4	238°34.7	04.5	4	238°41.4	12.1	4	238°49.3	17.5	4	238°58.4	20.9	4	239°08.7	22.3	4	239°19.9	22.0	4	239°32.2	20.0
5	253°22.8	26.6	5	253°25.4	41.5	5	253°29.4	53.9	5	253°34.8	03.8	5	253°41.5	11.3	5	253°49.4	16.7	5	253°58.6	20.1	5	254°08.8	21.5	5	254°20.1	21.1	5	254°32.3	19.2
6	268°22.8	N18°26.0	6	268°25.5	N17°40.9	6	268°29.5	N16°53.2	6	268°34.9	N16°03.0	6	268°41.6	N15°10.6	6	268°49.6	N14°16.0	6	268°58.7	N13°19.3	6	269°09.0	N12°20.7	6	269°20.2	N11°20.3	6	269°32.5	N10°18.3
7	283°22.9	25.4	7	283°25.5	40.2	7	283°29.5	52.5	7	283°35.0	02.3	7	283°41.7	09.9	7	283°49.7	15.2	7	283°58.8	18.5	7	284°09.1	19.8	7	284°20.4	19.4	7	284°32.7	17.4
8	298°22.9	24.8	8	298°25.5	39.6	8	298°29.6	51.8	8	298°35.0	01.6	8	298°41.8	09.1	8	298°49.8	14.4	8	298°59.0	17.7	8	299°09.3	19.0	8	299°20.6	18.6	8	299°32.9	16.6
9	313°22.9	·· 24.2	9	313°25.6	·· 38.9	9	313°29.7	·· 51.1	9	313°35.1	·· 00.9	9	313°41.9	·· 08.4	9	313°49.9	·· 13.6	9	313°59.1	·· 16.9	9	314°09.4	·· 18.2	9	314°20.7	·· 17.7	9	314°33.0	·· 15.7
10	328°22.9	23.6	10	328°25.6	38.3	10	328°29.7	50.5	10	328°35.2	16°00.2	10	328°42.0	07.6	10	328°50.0	12.9	10	328°59.2	16.1	10	329°09.6	17.4	10	329°20.9	16.9	10	329°33.2	14.8
11	343°23.0	23.0	11	343°25.7	37.7	11	343°29.8	49.8	11	343°35.3	15°59.5	11	343°42.1	06.9	11	343°50.2	12.1	11	343°59.4	15.3	11	344°09.7	16.5	11	344°21.1	16.0	11	344°33.4	13.9
12	358°23.0	N18°22.4	12	358°25.7	N17°37.0	12	358°29.9	N16°49.1	12	358°35.4	N15°58.8	12	358°42.2	N15°06.1	12	358°50.3	N14°11.3	12	358°59.5	N13°14.5	12	359°09.9	N12°15.7	12	359°21.2	N11°15.2	12	359°33.6	N10°13.1
13	13°23.0	21.7	13	13°25.8	36.4	13	13°29.9	48.4	13	13°35.5	58.0	13	13°42.3	05.4	13	13°50.4	10.5	13	13°59.7	13.7	13	14°10.0	14.9	13	14°21.4	14.3	13	14°33.7	12.2
14	28°23.1	21.1	14	28°25.8	35.7	14	28°30.0	47.7	14	28°35.6	57.3	14	28°42.4	04.6	14	28°50.5	09.8	14	28°59.8	12.9	14	29°10.2	14.0	14	29°21.6	13.5	14	29°33.9	11.3
15	43°23.1	·· 20.5	15	43°25.9	·· 35.1	15	43°30.1	·· 47.0	15	43°35.6	·· 56.6	15	43°42.5	·· 03.9	15	43°50.6	·· 09.0	15	43°59.9	·· 12.0	15	44°10.3	·· 13.2	15	44°21.7	·· 12.6	15	44°34.1	·· 10.4
16	58°23.1	19.9	16	58°25.9	34.4	16	58°30.1	46.4	16	58°35.7	55.9	16	58°42.6	03.1	16	58°50.8	08.2	16	59°00.1	11.2	16	59°10.5	12.4	16	59°21.9	11.8	16	59°34.3	09.6
17	73°23.1	19.3	17	73°26.0	33.8	17	73°30.2	45.7	17	73°35.8	55.2	17	73°42.7	02.4	17	73°50.9	07.4	17	74°00.2	10.4	17	74°10.6	11.6	17	74°22.1	10.9	17	74°34.5	08.7
18	88°23.2	N18°18.7	18	88°26.0	N17°33.1	18	88°30.3	N16°45.0	18	88°35.9	N15°54.5	18	88°42.8	N15°01.6	18	88°51.0	N14°06.7	18	89°00.3	N13°09.6	18	89°10.8	N12°10.7	18	89°22.2	N11°10.1	18	89°34.6	N10°07.8
19	103°23.2	18.1	19	103°26.1	32.5	19	103°30.3	44.3	19	103°36.0	53.7	19	103°42.9	00.9	19	103°51.1	05.9	19	104°00.5	08.8	19	104°10.9	09.9	19	104°22.4	09.2	19	104°34.8	06.9
20	118°23.2	17.4	20	118°26.1	31.8	20	118°30.4	43.6	20	118°36.1	53.0	20	118°43.0	15°00.1	20	118°51.2	05.1	20	119°00.6	08.0	20	119°11.1	09.1	20	119°22.6	08.4	20	119°35.0	06.1
21	133°23.3	·· 16.8	21	133°26.2	·· 31.2	21	133°30.5	·· 42.9	21	133°36.2	·· 52.3	21	133°43.1	14°59.4	21	133°51.4	·· 04.3	21	134°00.8	·· 07.2	21	134°11.2	·· 08.2	21	134°22.7	·· 07.5	21	134°35.2	·· 05.2
22	148°23.3	16.2	22	148°26.2	30.5	22	148°30.6	42.2	22	148°36.3	51.6	22	148°43.3	58.6	22	148°51.5	03.5	22	149°00.9	06.4	22	149°11.4	07.4	22	149°22.9	06.6	22	149°35.4	04.3
23	163°23.3	15.6	23	163°26.3	29.8	23	163°30.6	41.6	23	163°36.3	50.9	23	163°43.4	57.9	23	163°51.6	02.8	23	164°01.0	05.6	23	164°11.5	06.6	23	164°23.1	05.8	23	164°35.5	03.4
	SD.=15.8	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=-0.8		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

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	178°23.4	N18°15.0	0	178°26.3	N17°29.2	0	178°30.7	N16°40.9	0	178°36.4	N15°50.1	0	178°43.5	N14°57.1	0	178°51.7	N14°02.0	0	179°01.2	N13°04.8	0	179°11.7	N12°05.7	0	179°23.2	N11°04.9	0	179°35.7	N10°02.6
1	193°23.4	14.4	1	193°26.4	28.5	1	193°30.8	40.2	1	193°36.5	49.4	1	193°43.6	56.4	1	193°51.9	01.2	1	194°01.3	04.0	1	194°11.8	04.9	1	194°23.4	04.1	1	194°35.9	01.7
2	208°23.4	13.7	2	208°26.4	27.9	2	208°30.8	39.5	2	208°36.6	48.7	2	208°43.7	55.6	2	208°52.0	14°00.4	2	209°01.4	03.2	2	209°12.0	04.1	2	209°23.6	03.2	2	209°36.1	10°00.8
3	223°23.4	·· 13.1	3	223°26.5	·· 27.2	3	223°30.9	·· 38.8	3	223°36.7	·· 48.0	3	223°43.8	·· 54.9	3	223°52.1	13°59.6	3	224°01.6	·· 02.4	3	224°12.1	·· 03.2	3	224°23.7	·· 02.4	3	224°36.3	09°59.9
4	238°23.5	12.5	4	238°26.5	26.6	4	238°31.0	38.1	4	238°36.8	47.3	4	238°43.9	54.1	4	238°52.2	58.9	4	239°01.7	01.6	4	239°12.3	02.4	4	239°23.9	01.5	4	239°36.4	59.1
5	253°23.5	11.9	5	253°26.6	25.9	5	253°31.0	37.4	5	253°36.9	46.5	5	253°44.0	53.4	5	253°52.4	58.1	5	254°01.9	13°00.8	5	254°12.4	01.6	5	254°24.1	11°00.7	5	254°36.6	58.2
6	268°23.5	N18°11.3	6	268°26.6	N17°25.3	6	268°31.1	N16°36.7	6	268°37.0	N15°45.8	6	268°44.1	N14°52.6	6	268°52.5	N13°57.3	6	269°02.0	N12°59.9	6	269°12.6	N12°00.7	6	269°24.2	N10°59.8	6	269°36.8	N09°57.3
7	283°23.6	10.6	7	283°26.7	24.6	7	283°31.2	36.0	7	283°37.1	45.1	7	283°44.2	51.9	7	283°52.6	56.5	7	284°02.1	59.1	7	284°12.8	11°59.9	7	284°24.4	58.9	7	284°37.0	56.4
8	298°23.6	10.0	8	298°26.7	23.9	8	298°31.3	35.4	8	298°37.1	44.4	8	298°44.3	51.1	8	298°52.7	55.7	8	299°02.3	58.3	8	299°12.9	59.1	8	299°24.6	58.1	8	299°37.2	55.5
9	313°23.6	·· 09.4	9	313°26.8	·· 23.3	9	313°31.3	·· 34.7	9	313°37.2	·· 43.6	9	313°44.4	·· 50.4	9	313°52.9	·· 54.9	9	314°02.4	·· 57.5	9	314°13.1	·· 58.2	9	314°24.7	·· 57.2	9	314°37.3	·· 54.7
10	328°23.7	08.8	10	328°26.8	22.6	10	328°31.4	34.0	10	328°37.3	42.9	10	328°44.5	49.6	10	328°53.0	54.2	10	329°02.6	56.7	10	329°13.2	57.4	10	329°24.9	56.4	10	329°37.5	53.8
11	343°23.7	08.2	11	343°26.9	22.0	11	343°31.5	33.3	11	343°37.4	42.2	11	343°44.7	48.8	11	343°53.1	53.4	11	344°02.7	55.9	11	344°13.4	56.6	11	344°25.1	55.5	11	344°37.7	52.9
12	358°23.8	N18°07.5	12	358°27.0	N17°21.3	12	358°31.6	N16°32.6	12	358°37.5	N15°41.5	12	358°44.8	N14°48.1	12	358°53.2	N13°52.6	12	359°02.8	N12°55.1	12	359°13.5	N11°55.7	12	359°25.2	N10°54.6	12	359°37.9	N09°52.0
13	13°23.8	06.9	13	13°27.0	20.7	13	13°31.6	31.9	13	13°37.6	40.7	13	13°44.9	47.3	13	13°53.4	51.8	13	14°03.0	54.3	13	14°13.7	54.9	13	14°25.4	53.8	13	14°38.1	51.2
14	28°23.8	06.3	14	28°27.1	20.0	14	28°31.7	31.2	14	28°37.7	40.0	14	28°45.0	46.6	14	28°53.5	51.0	14	29°03.1	53.5	14	29°13.8	54.0	14	29°25.6	52.9	14	29°38.3	50.3
15	43°23.9	·· 05.7	15	43°27.1	·· 19.3	15	43°31.8	·· 30.5	15	43°37.8	·· 39.3	15	43°45.1	·· 45.8	15	43°53.6	·· 50.2	15	44°03.3	·· 52.6	15	44°14.0	·· 53.2	15	44°25.7	·· 52.1	15	44°38.4	·· 49.4
16	58°23.9	05.0	16	58°27.2	18.7	16	58°31.9	29.8	16	58°37.9	38.6	16	58°45.2	45.1	16	58°53.7	49.4	16	59°03.4	51.8	16	59°14.2	52.4	16	59°25.9	51.2	16	59°38.6	48.5
17	73°23.9	04.4	17	73°27.2	18.0	17	73°31.9	29.1	17	73°38.0	37.8	17	73°45.3	44.3	17	73°53.9	48.7	17	74°03.6	51.0	17	74°14.3	51.5	17	74°26.1	50.3	17	74°38.8	47.6
18	88°24.0	N18°03.8	18	88°27.3	N17°17.3	18	88°32.0	N16°28.4	18	88°38.1	N15°37.1	18	88°45.4	N14°43.5	18	88°54.0	N13°47.9	18	89°03.7	N12°50.2	18	89°14.5	N11°50.7	18	89°26.3	N10°49.5	18	89°39.0	N09°46.7
19	103°24.0	03.2	19	103°27.3	16.7	19	103°32.1	27.7	19	103°38.2	36.4	19	103°45.5	42.8	19	103°54.1	47.1	19	104°03.8	49.4	19	104°14.6	49.9	19	104°26.4	48.6	19	104°39.2	45.9
20	118°24.0	02.5	20	118°27.4	16.0	20	118°32.2	27.0	20	118°38.3	35.6	20	118°45.6	42.0	20	118°54.2	46.3	20	119°04.0	48.6	20	119°14.8	49.0	20	119°26.6	47.8	20	119°39.3	45.0
21	133°24.1	·· 01.9	21	133°27.5	·· 15.4	21	133°32.2	·· 26.3	21	133°38.3	·· 34.9	21	133°45.8	·· 41.3	21	133°54.4	·· 45.5	21	134°04.1	·· 47.8	21	134°14.9	·· 48.2	21	134°26.8	·· 46.9	21	134°39.5	·· 44.1
22	148°24.1	01.3	22	148°27.5	14.7	22	148°32.3	25.6	22	148°38.4	34.2	22	148°45.9	40.5	22	148°54.5	44.7	22	149°04.3	46.9	22	149°15.1	47.3	22	149°26.9	46.0	22	149°39.7	43.2
23	163°24.2	00.6	23	163°27.6	14.0	23	163°32.4	24.9	23	163°38.5	33.5	23	163°46.0	39.7	23	163°54.6	43.9	23	164°04.4	46.1	23	164°15.3	46.5	23	164°27.1	45.2	23	164°39.9	42.3
	SD.=15.8	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		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

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	178°24.2	N18°00.0	0	178°27.6	N17°13.4	0	178°32.5	N16°24.2	0	178°38.6	N15°32.7	0	178°46.1	N14°39.0	0	178°54.8	N13°43.1	0	179°04.6	N12°45.3	0	179°15.4	N11°45.7	0	179°27.3	N10°44.3	0	179°40.1	N09°41.5
1	193°24.2	17°59.4	1	193°27.7	12.7	1	193°32.5	23.5	1	193°38.7	32.0	1	193°46.2	38.2	1	193°54.9	42.3	1	194°04.7	44.5	1	194°15.6	44.8	1	194°27.5	43.5	1	194°40.3	40.6
2	208°24.3	58.7	2	208°27.7	12.0	2	208°32.6	22.8	2	208°38.8	31.3	2	208°46.3	37.5	2	208°55.0	41.6	2	209°04.8	43.7	2	209°15.7	44.0	2	209°27.6	42.6	2	209°40.5	39.7
3	223°24.3	·· 58.1	3	223°27.8	·· 11.4	3	223°32.7	·· 22.1	3	223°38.9	·· 30.5	3	223°46.4	·· 36.7	3	223°55.1	·· 40.8	3	224°05.0	·· 42.9	3	224°15.9	·· 43.1	3	224°27.8	·· 41.7	3	224°40.6	·· 38.8
4	238°24.3	57.5	4	238°27.9	10.7	4	238°32.8	21.4	4	238°39.0	29.8	4	238°46.5	35.9	4	238°55.3	40.0	4	239°05.1	42.0	4	239°16.0	42.3	4	239°28.0	40.9	4	239°40.8	37.9
5	253°24.4	56.9	5	253°27.9	10.0	5	253°32.8	20.7	5	253°39.1	29.1	5	253°46.7	35.2	5	253°55.4	39.2	5	254°05.3	41.2	5	254°16.2	41.4	5	254°28.1	40.0	5	254°41.0	37.0
6	268°24.4	N17°56.2	6	268°28.0	N17°09.4	6	268°32.9	N16°20.0	6	268°39.2	N15°28.3	6	268°46.8	N14°34.4	6	268°55.5	N13°38.4	6	269°05.4	N12°40.4	6	269°16.4	N11°40.6	6	269°28.3	N10°39.1	6	269°41.2	N09°36.2
7	283°24.5	55.6	7	283°28.0	08.7	7	283°33.0	19.3	7	283°39.3	27.6	7	283°46.9	33.6	7	283°55.7	37.6	7	284°05.6	39.6	7	284°16.5	39.8	7	284°28.5	38.3	7	284°41.4	35.3
8	298°24.5	55.0	8	298°28.1	08.0	8	298°33.1	18.6	8	298°39.4	26.9	8	298°47.0	32.9	8	298°55.8	36.8	8	299°05.7	38.8	8	299°16.7	38.9	8	299°28.7	37.4	8	299°41.6	34.4
9	313°24.5	·· 54.3	9	313°28.2	·· 07.4	9	313°33.2	·· 17.9	9	313°39.5	·· 26.1	9	313°47.1	·· 32.1	9	313°55.9	·· 36.0	9	314°05.9	·· 37.9	9	314°16.8	·· 38.1	9	314°28.8	·· 36.5	9	314°41.7	·· 33.5
10	328°24.6	53.7	10	328°28.2	06.7	10	328°33.2	17.2	10	328°39.6	25.4	10	328°47.2	31.4	10	328°56.1	35.2	10	329°06.0	37.1	10	329°17.0	37.2	10	329°29.0	35.7	10	329°41.9	32.6
11	343°24.6	53.0	11	343°28.3	06.0	11	343°33.3	16.5	11	343°39.7	24.7	11	343°47.3	30.6	11	343°56.2	34.4	11	344°06.1	36.3	11	344°17.2	36.4	11	344°29.2	34.8	11	344°42.1	31.7
12	358°24.7	N17°52.4	12	358°28.3	N17°05.3	12	358°33.4	N16°15.8	12	358°39.8	N15°23.9	12	358°47.5	N14°29.8	12	358°56.3	N13°33.6	12	359°06.3	N12°35.5	12	359°17.3	N11°35.5	12	359°29.4	N10°33.9	12	359°42.3	N09°30.8
13	13°24.7	51.8	13	13°28.4	04.7	13	13°33.5	15.1	13	13°39.9	23.2	13	13°47.6	29.1	13	13°56.4	32.8	13	14°06.4	34.7	13	14°17.5	34.7	13	14°29.5	33.1	13	14°42.5	30.0
14	28°24.7	51.1	14	28°28.5	04.0	14	28°33.6	14.4	14	28°40.0	22.4	14	28°47.7	28.3	14	28°56.6	32.0	14	29°06.6	33.8	14	29°17.6	33.9	14	29°29.7	32.2	14	29°42.7	29.1
15	43°24.8	·· 50.5	15	43°28.5	·· 03.3	15	43°33.6	·· 13.7	15	43°40.1	·· 21.7	15	43°47.8	·· 27.5	15	43°56.7	·· 31.2	15	44°06.7	·· 33.0	15	44°17.8	·· 33.0	15	44°29.9	·· 31.3	15	44°42.9	·· 28.2
16	58°24.8	49.9	16	58°28.6	02.7	16	58°33.7	13.0	16	58°40.2	21.0	16	58°47.9	26.8	16	58°56.8	30.5	16	59°06.9	32.2	16	59°18.0	32.2	16	59°30.0	30.5	16	59°43.0	27.3
17	73°24.9	49.2	17	73°28.6	02.0	17	73°33.8	12.3	17	73°40.3	20.2	17	73°48.0	26.0	17	73°57.0	29.7	17	74°07.0	31.4	17	74°18.1	31.3	17	74°30.2	29.6	17	74°43.2	26.4
18	88°24.9	N17°48.6	18	88°28.7	N17°01.3	18	88°33.9	N16°11.6	18	88°40.4	N15°19.5	18	88°48.1	N14°25.2	18	88°57.1	N13°28.9	18	89°07.2	N12°30.6	18	89°18.3	N11°30.5	18	89°30.4	N10°28.7	18	89°43.4	N09°25.5
19	103°25.0	47.9	19	103°28.8	00.6	19	103°34.0	10.9	19	103°40.5	18.8	19	103°48.3	24.4	19	103°57.2	28.1	19	104°07.3	29.7	19	104°18.5	29.6	19	104°30.6	27.9	19	104°43.6	24.6
20	118°25.0	47.3	20	118°28.8	17°00.0	20	118°34.0	10.1	20	118°40.6	18.0	20	118°48.4	23.7	20	118°57.4	27.3	20	119°07.5	28.9	20	119°18.6	28.8	20	119°30.7	27.0	20	119°43.8	23.7
21	133°25.0	·· 46.7	21	133°28.9	16°59.3	21	133°34.1	·· 09.4	21	133°40.7	·· 17.3	21	133°48.5	·· 22.9	21	133°57.5	·· 26.5	21	134°07.6	·· 28.1	21	134°18.8	·· 27.9	21	134°30.9	·· 26.1	21	134°44.0	·· 22.9
22	148°25.1	46.0	22	148°29.0	58.6	22	148°34.2	08.7	22	148°40.8	16.5	22	148°48.6	22.1	22	148°57.6	25.7	22	149°07.8	27.3	22	149°18.9	27.1	22	149°31.1	25.3	22	149°44.2	22.0
23	163°25.1	45.4	23	163°29.0	57.9	23	163°34.3	08.0	23	163°40.9	15.8	23	163°48.7	21.4	23	163°57.8	24.9	23	164°07.9	26.4	23	164°19.1	26.2	23	164°31.3	24.4	23	164°44.4	21.1
	SD.=15.8	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		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	13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	179°44.5	N09°20.2	0	179°58.4	N08°15.5	0	180°13.1	N07°09.7	0	180°28.2	N06°02.8	0	180°43.9	N04°55.1	0	180°59.8	N03°46.6	0	181°15.8	N02°37.4	0	181°31.9	N01°27.8	0	181°47.8	N00°17.8	0	182°03.5	S00°52.3
1	194°44.7	19.3	1	194°58.6	14.6	1	195°13.3	08.8	1	195°28.5	01.9	1	195°44.1	54.1	1	196°00.0	45.6	1	196°16.1	36.4	1	196°32.1	26.8	1	196°48.0	16.9	1	197°03.7	53.2
2	209°44.9	18.4	2	209°58.8	13.7	2	210°13.5	07.9	2	210°28.7	01.0	2	210°44.3	53.2	2	211°00.2	44.6	2	211°16.3	35.5	2	211°32.3	25.8	2	211°48.2	15.9	2	212°03.9	54.2
3	224°45.1	·· 17.5	3	224°59.0	·· 12.8	3	225°13.7	·· 06.9	3	225°28.9	06°00.0	3	225°44.5	·· 52.2	3	226°00.5	·· 43.7	3	226°16.5	·· 34.5	3	226°32.5	·· 24.9	3	226°48.5	·· 14.9	3	227°04.1	·· 55.2
4	239°45.3	16.6	4	239°59.2	11.9	4	240°13.9	06.0	4	240°29.1	05°59.1	4	240°44.8	51.3	4	241°00.7	42.7	4	241°16.7	33.5	4	241°32.8	23.9	4	241°48.7	13.9	4	242°04.4	56.2
5	254°45.5	15.7	5	254°59.4	11.0	5	255°13.4	05.1	5	255°29.3	58.2	5	255°45.0	50.3	5	256°00.9	41.8	5	256°16.9	32.6	5	256°33.0	22.9	5	256°48.9	13.0	5	257°04.6	57.1
6	269°45.7	N09°14.8	6	269°59.6	N08°10.1	6	270°14.3	N07°04.2	6	270°29.5	N05°57.2	6	270°45.2	N04°49.4	6	271°01.1	N03°40.8	6	271°17.2	N02°31.6	6	271°33.2	N01°22.0	6	271°49.1	N00°12.0	6	272°04.8	S00°58.1
7	284°45.9	14.0	7	284°59.8	09.2	7	285°14.5	03.2	7	285°29.8	56.3	7	285°45.4	48.4	7	286°01.3	39.9	7	286°17.4	30.6	7	286°33.4	21.0	7	286°49.3	11.0	7	287°05.0	00°59.1
8	299°46.0	13.1	8	300°00.0	08.3	8	300°14.7	02.3	8	300°30.0	55.3	8	300°45.6	47.5	8	301°01.6	38.9	8	301°17.6	29.7	8	301°33.7	20.0	8	301°49.6	10.0	8	302°05.2	01°00.1
9	314°46.2	·· 12.2	9	315°00.2	·· 07.4	9	315°14.9	·· 01.4	9	315°30.2	·· 54.4	9	315°45.9	·· 46.6	9	316°01.8	·· 37.9	9	316°17.8	·· 28.7	9	316°33.9	·· 19.0	9	316°49.8	·· 09.1	9	317°05.4	·· 01.0
10	329°46.4	11.3	10	330°00.4	06.5	10	330°15.1	07°00.5	10	330°30.4	53.5	10	330°46.1	45.6	10	331°02.0	37.0	10	331°18.1	27.8	10	331°34.1	18.1	10	331°50.0	08.1	10	332°05.7	02.0
11	344°46.6	10.4	11	345°00.6	05.5	11	345°15.3	06°59.5	11	345°30.6	52.5	11	345°46.3	44.7	11	346°02.2	36.0	11	346°18.3	26.8	11	346°34.3	17.1	11	346°50.2	07.1	11	347°05.9	03.0
12	359°46.8	N09°09.5	12	0°00.8	N08°04.6	12	0°15.6	N06°58.6	12	0°30.8	N05°51.6	12	0°46.5	N04°43.7	12	1°02.5	N03°35.1	12	1°18.5	N02°25.8	12	1°34.5	N01°16.1	12	1°50.4	N00°06.1	12	2°06.1	S01°04.0
13	14°47.0	08.6	13	15°01.0	03.7	13	15°15.8	57.7	13	15°31.0	50.7	13	15°46.7	42.8	13	16°02.7	34.1	13	16°18.7	24.9	13	16°34.8	15.2	13	16°50.7	05.2	13	17°06.3	04.9
14	29°47.2	07.7	14	30°01.2	02.8	14	30°16.0	56.8	14	30°31.3	49.7	14	30°47.0	41.8	14	31°02.9	33.2	14	31°19.0	23.9	14	31°35.0	14.2	14	31°50.9	04.2	14	32°06.5	05.9
15	44°47.4	·· 06.8	15	45°01.4	·· 01.9	15	45°16.2	·· 55.8	15	45°31.5	·· 48.8	15	45°47.2	·· 40.9	15	46°03.1	·· 32.2	15	46°19.2	·· 22.9	15	46°35.2	·· 13.2	15	46°51.1	·· 03.2	15	47°06.7	·· 06.9
16	59°47.6	05.9	16	60°01.6	01.0	16	60°16.4	54.9	16	60°31.7	47.9	16	60°47.4	39.9	16	61°03.3	31.2	16	61°19.4	22.0	16	61°35.4	12.2	16	61°51.3	02.3	16	62°06.9	07.9
17	74°47.8	05.0	17	75°01.8	08°00.1	17	75°16.6	54.0	17	75°31.9	46.9	17	75°47.6	39.0	17	76°03.6	30.3	17	76°19.6	21.0	17	76°35.7	11.3	17	76°51.5	01.3	17	77°07.2	08.8
18	89°47.9	N09°04.1	18	90°02.0	N07°59.2	18	90°16.8	N06°53.1	18	90°32.1	N05°46.0	18	90°47.8	N04°38.0	18	91°03.8	N03°29.3	18	91°19.8	N02°20.0	18	91°35.9	N01°10.3	18	91°51.8	N00°00.3	18	92°07.4	S01°09.8
19	104°48.1	03.2	19	105°02.2	58.3	19	105°17.0	52.1	19	105°32.3	45.0	19	105°48.1	37.1	19	106°04.0	28.4	19	106°20.1	19.1	19	106°36.1	09.3	19	106°52.0	S00°00.7	19	107°07.6	10.8
20	119°48.3	02.4	20	120°02.4	57.4	20	120°17.2	51.2	20	120°32.6	44.1	20	120°48.3	36.1	20	121°04.2	27.4	20	121°20.3	18.1	20	121°36.3	08.4	20	121°52.2	01.6	20	122°07.8	11.8
21	134°48.5	·· 01.5	21	135°02.6	·· 56.4	21	135°17.4	·· 50.3	21	135°32.8	·· 43.2	21	135°48.5	·· 35.2	21	136°04.5	·· 26.4	21	136°20.5	·· 17.1	21	136°36.5	·· 07.4	21	136°52.4	·· 02.6	21	137°08.0	·· 12.7
22	149°48.7	09°00.6	22	150°02.8	55.5	22	150°17.6	49.4	22	150°33.0	42.2	22	150°48.7	34.2	22	151°04.7	25.5	22	151°20.7	16.2	22	151°36.8	06.4	22	151°52.6	03.6	22	152°08.2	13.7
23	164°48.9	08°59.7	23	165°03.0	54.6	23	165°17.9	48.4	23	165°33.2	41.3	23	165°48.9	33.3	23	166°04.9	24.5	23	166°21.0	15.2	23	166°37.0	05.5	23	166°52.8	04.6	23	167°08.4	14.7
	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		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

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	179°49.1	N08°58.8	0	180°03.2	N07°53.7	0	180°18.1	N06°47.5	0	180°33.4	N05°40.3	0	180°49.2	N04°32.3	0	181°05.1	N03°23.6	0	181°21.2	N02°14.2	0	181°37.2	N01°04.5	0	181°53.1	S00°05.5	0	182°08.7	S01°15.6
1	194°49.3	57.9	1	195°03.4	52.8	1	195°18.3	46.6	1	195°33.6	39.4	1	195°49.4	31.4	1	196°05.3	22.6	1	196°21.4	13.3	1	196°37.4	03.5	1	196°53.3	06.5	1	197°08.9	16.6
2	209°49.5	57.0	2	210°03.6	51.9	2	210°18.5	45.7	2	210°33.8	38.5	2	210°49.6	30.4	2	211°05.6	21.6	2	211°21.6	12.3	2	211°37.6	02.5	2	211°53.5	07.5	2	212°09.1	17.6
3	224°49.7	·· 56.1	3	225°03.9	·· 51.0	3	225°18.7	·· 44.7	3	225°34.1	·· 37.5	3	225°49.8	·· 29.5	3	226°05.8	·· 20.7	3	226°21.9	·· 11.3	3	226°37.9	·· 01.6	3	226°53.7	·· 08.5	3	227°09.3	·· 18.6
4	239°49.9	55.2	4	240°04.1	50.1	4	240°18.9	43.8	4	240°34.3	36.6	4	240°50.0	28.5	4	241°06.0	19.7	4	241°22.1	10.4	4	241°38.1	01°00.6	4	241°53.9	09.4	4	242°09.5	19.5
5	254°50.1	54.3	5	255°04.3	49.1	5	255°19.1	42.9	5	255°34.5	35.6	5	255°50.3	27.6	5	256°06.2	18.8	5	256°22.3	09.4	5	256°38.3	00°59.6	5	256°54.2	10.4	5	257°09.7	20.5
6	269°50.2	N08°53.4	6	270°04.5	N07°48.2	6	270°19.3	N06°42.0	6	270°34.7	N05°34.7	6	270°50.5	N04°26.6	6	271°06.5	N03°17.8	6	271°22.5	N02°08.4	6	271°38.5	N00°58.7	6	271°54.4	S00°11.4	6	272°09.9	S01°21.5
7	284°50.4	52.5	7	285°04.7	47.3	7	285°19.5	41.0	7	285°34.9	33.8	7	285°50.7	25.7	7	286°06.7	16.8	7	286°22.7	07.5	7	286°38.8	57.7	7	286°54.6	12.3	7	287°10.2	22.5
8	299°50.6	51.6	8	300°04.9	46.4	8	300°19.7	40.1	8	300°35.1	32.8	8	300°50.9	24.7	8	301°06.9	15.9	8	301°23.0	06.5	8	301°39.0	56.7	8	301°54.8	13.3	8	302°10.4	23.4
9	314°50.8	·· 50.7	9	315°05.1	·· 45.5	9	315°20.0	·· 39.2	9	315°35.4	·· 31.9	9	315°51.1	·· 23.8	9	316°07.1	·· 14.9	9	316°23.2	·· 05.5	9	316°39.2	·· 55.7	9	316°55.0	·· 14.3	9	317°10.6	·· 24.4
10	329°51.0	49.8	10	330°05.3	44.6	10	330°20.2	38.2	10	330°35.6	30.9	10	330°51.4	22.8	10	331°07.4	14.0	10	331°23.4	04.6	10	331°39.4	54.8	10	331°55.3	15.3	10	332°10.8	25.4
11	344°51.2	48.9	11	345°05.5	43.7	11	345°20.4	37.3	11	345°35.8	30.0	11	345°51.6	21.9	11	346°07.6	13.0	11	346°23.6	03.6	11	346°39.6	53.8	11	346°55.5	16.2	11	347°11.0	26.4
12	359°51.4	N08°48.0	12	0°05.7	N07°42.8	12	0°20.6	N06°36.4	12	0°36.0	N05°29.1	12	0°51.8	N04°20.9	12	1°07.8	N03°12.0	12	1°23.9	N02°02.6	12	1°39.9	N00°52.8	12	1°55.7	S00°17.2	12	2°11.2	S01°27.3
13	14°51.6	47.1	13	15°05.9	41.8	13	15°20.8	35.5	13	15°36.2	28.1	13	15°52.0	20.0	13	16°08.0	11.1	13	16°24.1	01.7	13	16°40.1	51.9	13	16°55.9	18.2	13	17°11.4	28.3
14	29°51.8	46.2	14	30°06.1	40.9	14	30°21.0	34.5	14	30°36.5	27.2	14	30°52.2	19.0	14	31°08.2	10.1	14	31°24.3	02°00.7	14	31°40.3	50.9	14	31°56.1	19.2	14	32°11.7	29.3
15	44°52.0	·· 45.3	15	45°06.3	·· 40.0	15	45°21.2	·· 33.6	15	45°36.7	·· 26.2	15	45°52.5	·· 18.0	15	46°08.5	·· 09.2	15	46°24.5	01°59.7	15	46°40.5	·· 49.9	15	46°56.3	·· 20.1	15	47°11.9	·· 30.3
16	59°52.2	44.4	16	60°06.5	39.1	16	60°21.4	32.7	16	60°36.9	25.3	16	60°52.7	17.1	16	61°08.7	08.2	16	61°24.8	58.8	16	61°40.7	48.9	16	61°56.6	21.1	16	62°12.1	31.2
17	74°52.4	43.5	17	75°06.7	38.2	17	75°21.6	31.7	17	75°37.1	24.4	17	75°52.9	16.1	17	76°08.9	07.2	17	76°25.0	57.8	17	76°41.0	48.0	17	76°56.8	22.1	17	77°12.3	32.2
18	89°52.6	N08°42.6	18	90°06.9	N07°37.3	18	90°21.9	N06°30.8	18	90°37.3	N05°23.4	18	90°53.1	N04°15.2	18	91°09.1	N03°06.3	18	91°25.2	N01°56.8	18	91°41.2	N00°47.0	18	91°57.0	S00°23.1	18	92°12.5	S01°33.2
19	104°52.8	41.7	19	105°07.1	36.3	19	105°22.1	29.9	19	105°37.5	22.5	19	105°53.4	14.2	19	106°09.4	05.3	19	106°25.4	55.9	19	106°41.4	46.0	19	106°57.2	24.0	19	107°12.7	34.1
20	119°53.0	40.8	20	120°07.3	35.4	20	120°22.3	29.0	20	120°37.8	21.5	20	120°53.6	13.3	20	121°09.6	04.4	20	121°25.6	54.9	20	121°41.6	45.1	20	121°57.4	25.0	20	122°12.9	35.1
21	134°53.1	·· 39.9	21	135°07.5	·· 34.5	21	135°22.5	·· 28.0	21	135°38.0	·· 20.6	21	135°53.8	·· 12.3	21	136°09.8	·· 03.4	21	136°25.9	·· 53.9	21	136°41.9	·· 44.1	21	136°57.6	·· 26.0	21	137°13.1	·· 36.1
22	149°53.3	39.0	22	150°07.7	33.6	22	150°22.7	27.1	22	150°38.2	19.6	22	150°54.0	11.4	22	151°10.0	02.4	22	151°26.1	53.0	22	151°42.1	43.1	22	151°57.9	27.0	22	152°13.4	37.1
23	164°53.5	38.1	23	165°07.9	32.7	23	165°22.9	26.2	23	165°38.4	18.7	23	165°54.2	10.4	23	166°10.3	01.5	23	166°26.3	52.0	23	166°42.3	42.1	23	166°58.1	27.9	23	167°13.6	38.0
	SD.=15.8	d=-0.9		SD.=15.9	d=-0.9		SD.=15.9	d=-0.9		SD.=15.9	d=-0.9		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		SD.=16.0	d=-1.0

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	179°53.7	N08°37.2	0	180°08.1	N07°31.8	0	180°23.1	N06°25.2	0	180°38.6	N05°17.8	0	180°54.5	N04°09.5	0	181°10.5	N03°00.5	0	181°26.5	N01°51.0	0	181°42.5	N00°41.2	0	181°58.3	S00°28.9	0	182°13.8	S01°39.0
1	194°53.9	36.3	1	195°08.3	30.8	1	195°23.3	24.3	1	195°38.8	16.8	1	195°54.7	08.5	1	196°10.7	02°59.6	1	196°26.8	50.1	1	196°42.7	40.2	1	196°58.5	29.9	1	197°14.0	40.0
2	209°54.1	35.4	2	210°08.5	29.9	2	210°23.6	23.4	2	210°39.1	15.9	2	210°54.9	07.6	2	211°10.9	58.6	2	211°27.0	49.1	2	211°43.0	39.2	2	211°58.7	30.8	2	212°14.2	41.0
3	224°54.3	·· 34.5	3	225°08.7	·· 29.0	3	225°23.8	·· 22.4	3	225°39.3	·· 14.9	3	225°55.1	·· 06.6	3	226°11.1	·· 57.6	3	226°27.2	·· 48.1	3	226°43.2	·· 38.2	3	226°59.0	·· 31.8	3	227°14.4	·· 41.9
4	239°54.5	33.6	4	240°08.9	28.1	4	240°24.0	21.5	4	240°39.5	14.0	4	240°55.3	05.7	4	241°11.4	56.7	4	241°27.4	47.2	4	241°43.4	37.3	4	241°59.2	32.8	4	242°14.6	42.9
5	254°54.7	32.7	5	255°09.1	27.2	5	255°24.2	20.6	5	255°39.7	13.0	5	255°55.6	04.7	5	256°11.6	55.7	5	256°27.6	46.2	5	256°43.6	36.3	5	256°59.4	33.8	5	257°14.8	43.9
6	269°54.9	N08°31.8	6	270°09.3	N07°26.3	6	270°24.4	N06°19.6	6	270°39.9	N05°12.1	6	270°55.8	N04°03.8	6	271°11.8	N02°54.7	6	271°27.9	N01°45.2	6	271°43.8	N00°35.3	6	271°59.6	S00°34.7	6	272°15.0	S01°44.9
7	284°55.1	30.9	7	285°09.6	25.3	7	285°24.6	18.7	7	285°40.2	11.2	7	285°56.0	02.8	7	286°12.0	53.8	7	286°28.1	44.2	7	286°44.1	34.4	7	286°59.8	35.7	7	287°15.3	45.8
8	299°55.3	30.0	8	300°09.8	24.4	8	300°24.8	17.8	8	300°40.4	10.2	8	300°56.2	01.8	8	301°12.3	52.8	8	301°28.3	43.3	8	301°44.3	33.4	8	302°00.0	36.7	8	302°15.5	46.8
9	314°55.5	·· 29.1	9	315°10.0	·· 23.5	9	315°25.0	·· 16.8	9	315°40.6	·· 09.3	9	315°56.5	04°00.9	9	316°12.5	·· 51.9	9	316°28.5	·· 42.3	9	316°44.5	·· 32.4	9	317°00.3	·· 37.7	9	317°15.7	·· 47.8
10	329°55.7	28.2	10	330°10.2	22.6	10	330°25.3	15.9	10	330°40.8	08.3	10	330°56.7	03°59.9	10	331°12.7	50.9	10	331°28.8	41.3	10	331°44.7	31.4	10	332°00.5	38.6	10	332°15.9	48.7
11	344°55.9	27.3	11	345°10.4	21.7	11	345°25.5	15.0	11	345°41.0	07.4	11	345°56.9	59.0	11	346°12.9	49.9	11	346°29.0	40.4	11	346°44.9	30.5	11	347°00.7	39.6	11	347°16.1	49.7
12	359°56.1	N08°26.4	12	0°10.6	N07°20.7	12	0°25.7	N06°14.0	12	0°41.2	N05°06.4	12	0°57.1	N03°58.0	12	1°13.2	N02°49.0	12	1°29.2	N01°39.4	12	1°45.2	N00°29.5	12	2°00.9	S00°40.6	12	2°16.3	S01°50.7
13	14°56.3	25.5	13	15°10.8	19.8	13	15°25.9	13.1	13	15°41.5	05.5	13	15°57.3	57.1	13	16°13.4	48.0	13	16°29.4	38.4	13	16°45.4	28.5	13	17°01.1	41.6	13	17°16.5	51.7
14	29°56.5	24.6	14	30°11.0	18.9	14	30°26.1	12.2	14	30°41.7	04.5	14	30°57.6	56.1	14	31°13.6	47.0	14	31°29.7	37.5	14	31°45.6	27.6	14	32°01.3	42.5	14	32°16.7	52.6
15	44°56.7	·· 23.7	15	45°11.2	·· 18.0	15	45°26.3	·· 11.2	15	45°41.9	·· 03.6	15	45°57.8	·· 55.2	15	46°13.8	·· 46.1	15	46°29.9	·· 36.5	15	46°45.8	·· 26.6	15	47°01.6	·· 43.5	15	47°16.9	·· 53.6
16	59°56.9	22.8	16	60°11.4	17.1	16	60°26.5	10.3	16	60°42.1	02.6	16	60°58.0	54.2	16	61°14.0	45.1	16	61°30.1	35.5	16	61°46.0	25.6	16	62°01.8	44.5	16	62°17.2	54.6
17	74°57.1	21.9	17	75°11.6	16.1	17	75°26.8	09.4	17	75°42.3	01.7	17	75°58.2	53.2	17	76°14.3	44.1	17	76°30.3	34.6	17	76°46.3	24.6	17	77°02.0	45.5	17	77°17.4	55.6
18	89°57.3	N08°21.0	18	90°11.8	N07°15.2	18	90°27.0	N06°08.4	18	90°42.6	N05°00.8	18	90°58.5	N03°52.3	18	91°14.5	N02°43.2	18	91°30.5	N01°33.6	18	91°46.5	N00°23.7	18	92°02.2	S00°46.4	18	92°17.6	S01°56.5
19	104°57.5	20.1	19	105°12.0	14.3	19	105°27.2	07.5	19	105°42.8	04°59.8	19	105°58.7	51.3	19	106°14.7	42.2	19	106°30.8	32.6	19	106°46.7	22.7	19	107°02.4	47.4	19	107°17.8	57.5
20	119°57.7	19.2	20	120°12.2	13.4	20	120°27.4	06.6	20	120°43.0	58.9	20	120°58.9	50.4	20	121°14.9	41.3	20	121°31.0	31.6	20	121°46.9	21.7	20	122°02.6	48.4	20	122°18.0	58.5
21	134°57.9	·· 18.2	21	135°12.4	·· 12.5	21	135°27.6	·· 05.6	21	135°43.2	·· 57.9	21	135°59.1	·· 49.4	21	136°15.2	·· 40.3	21	136°31.2	·· 30.7	21	136°47.1	·· 20.7	21	137°02.9	·· 49.4	21	137°18.2	01°59.4
22	149°58.1	17.3	22	150°12.6	11.5	22	150°27.8	04.7	22	150°43.4	57.0	22	150°59.3	48.5	22	151°15.4	39.3	22	151°31.4	29.7	22	151°47.4	19.8	22	152°03.1	50.3	22	152°18.4	02°00.4
23	164°58.2	16.4	23	165°12.9	10.6	23	165°28.0	03.8	23	165°43.7	56.0	23	165°59.6	47.5	23	166°15.6	38.4	23	166°31.7	28.7	23	166°47.6	18.8	23	167°03.3	51.3	23	167°18.6	01.4
	SD.=15.8	d=-0.9		SD.=15.9	d=-0.9		SD.=15.9	d=-0.9		SD.=15.9	d=-0.9		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		SD.=16.0	d=-1.0

28	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	182°18.8	S02°02.4	0	182°33.7	S03°12.3	0	182°48.0	S04°21.9	0	183°01.5	S05°31.0	0	183°14.0	S06°39.5	0	183°25.5	S07°47.1	0	183°35.8	S08°53.9	0	183°44.8	S09°59.5	0	183°52.3	S11°03.8	0	183°58.3	S12°06.6
1	197°19.1	03.3	1	197°33.9	13.3	1	197°48.2	22.8	1	198°01.6	31.9	1	198°14.2	40.4	1	198°25.7	48.1	1	198°36.0	54.8	1	198°44.9	10°00.4	1	198°52.4	04.7	1	198°58.4	07.5
2	212°19.3	04.3	2	212°34.1	14.2	2	212°48.3	23.8	2	213°01.8	32.9	2	213°14.4	41.3	2	213°25.8	49.0	2	213°36.1	55.7	2	213°45.0	01.3	2	213°52.5	05.6	2	213°58.5	08.4
3	227°19.5	·· 05.3	3	227°34.3	·· 15.2	3	227°48.5	·· 24.8	3	228°02.0	·· 33.8	3	228°14.5	·· 42.3	3	228°26.0	·· 49.9	3	228°36.2	·· 56.6	3	228°45.1	·· 02.2	3	228°52.6	·· 06.5	3	228°58.5	·· 09.2
4	242°19.7	06.3	4	242°34.5	16.2	4	242°48.7	25.7	4	243°02.2	34.8	4	243°14.7	43.2	4	243°26.1	50.9	4	243°36.4	57.6	4	243°45.2	03.1	4	243°52.7	07.4	4	243°58.6	10.1
5	257°19.9	07.2	5	257°34.7	17.1	5	257°48.9	26.7	5	258°02.4	35.8	5	258°14.9	44.2	5	258°26.3	51.8	5	258°36.5	58.5	5	258°45.3	04.0	5	258°52.8	08.2	5	258°58.7	10.9
6	272°20.1	S02°08.2	6	272°34.9	S03°18.1	6	272°49.1	S04°27.7	6	273°02.5	S05°36.7	6	273°15.0	S06°45.1	6	273°26.4	S07°52.7	6	273°36.6	S08°59.4	6	273°45.5	S10°04.9	6	273°52.9	S11°09.1	6	273°58.7	S12°11.8
7	287°20.3	09.2	7	287°35.1	19.1	7	287°49.3	28.6	7	288°02.7	37.7	7	288°15.2	46.1	7	288°26.6	53.7	7	288°36.7	09°00.3	7	288°45.6	05.8	7	288°53.0	10.0	7	288°58.8	12.7
8	302°20.5	10.1	8	302°35.3	20.0	8	302°49.5	29.6	8	303°02.9	38.6	8	303°15.4	47.0	8	303°26.7	54.6	8	303°36.9	01.2	8	303°45.7	06.7	8	303°53.0	10.9	8	303°58.9	13.5
9	317°20.7	·· 11.1	9	317°35.5	·· 21.0	9	317°49.7	·· 30.5	9	318°03.1	·· 39.6	9	318°15.5	·· 48.0	9	318°26.9	·· 55.5	9	318°37.0	·· 02.2	9	318°45.8	·· 07.6	9	318°53.1	·· 11.8	9	318°59.0	·· 14.4
10	332°20.9	12.1	10	332°35.7	22.0	10	332°49.9	31.5	10	333°03.3	40.5	10	333°15.7	48.9	10	333°27.0	56.5	10	333°37.1	03.1	10	333°45.9	08.5	10	333°53.2	12.6	10	333°59.0	15.2
11	347°21.1	13.1	11	347°35.9	22.9	11	347°50.1	32.5	11	348°03.4	41.5	11	348°15.9	49.9	11	348°27.2	57.4	11	348°37.3	04.0	11	348°46.0	09.4	11	348°53.3	13.5	11	348°59.1	16.1
12	2°21.4	S02°14.0	12	2°36.1	S03°23.9	12	2°50.3	S04°33.4	12	3°03.6	S05°42.4	12	3°16.0	S06°50.8	12	3°27.3	S07°58.3	12	3°37.4	S09°04.9	12	3°46.1	S10°10.3	12	3°53.4	S11°14.4	12	3°59.2	S12°17.0
13	17°21.6	15.0	13	17°36.3	24.9	13	17°50.5	34.4	13	18°03.8	43.4	13	18°16.2	51.7	13	18°27.5	07°59.3	13	18°37.5	05.8	13	18°46.2	11.2	13	18°53.5	15.3	13	18°59.2	17.8
14	32°21.8	16.0	14	32°36.5	25.9	14	32°50.6	35.4	14	33°04.0	44.4	14	33°16.4	52.7	14	33°27.6	08°00.2	14	33°37.7	06.7	14	33°46.4	12.1	14	33°53.6	16.2	14	33°59.3	18.7
15	47°22.0	·· 17.0	15	47°36.7	·· 26.8	15	47°50.8	·· 36.3	15	48°04.2	·· 45.3	15	48°16.5	·· 53.6	15	48°27.8	·· 01.1	15	48°37.8	·· 07.7	15	48°46.5	·· 13.0	15	48°53.7	·· 17.0	15	48°59.4	·· 19.5
16	62°22.2	17.9	16	62°36.9	27.8	16	62°51.0	37.3	16	63°04.3	46.3	16	63°16.7	54.6	16	63°27.9	02.1	16	63°37.9	08.6	16	63°46.6	13.9	16	63°53.8	17.9	16	63°59.4	20.4
17	77°22.4	18.9	17	77°37.1	28.8	17	77°51.2	38.2	17	78°04.5	47.2	17	78°16.8	55.5	17	78°28.1	03.0	17	78°38.1	09.5	17	78°46.7	14.8	17	78°53.9	18.8	17	78°59.5	21.2
18	92°22.6	S02°19.9	18	92°37.3	S03°29.7	18	92°51.4	S04°39.2	18	93°04.7	S05°48.2	18	93°17.0	S06°56.5	18	93°28.2	S08°03.9	18	93°38.2	S09°10.4	18	93°46.8	S10°15.7	18	93°53.9	S11°19.7	18	93°59.6	S12°22.1
19	107°22.8	20.8	19	107°37.5	30.7	19	107°51.6	40.2	19	108°04.9	49.1	19	108°17.2	57.4	19	108°28.4	04.9	19	108°38.3	11.3	19	108°46.9	16.6	19	108°54.0	20.5	19	108°59.6	22.9
20	122°23.0	21.8	20	122°37.7	31.7	20	122°51.8	41.1	20	123°05.0	50.1	20	123°17.3	58.3	20	123°28.5	05.8	20	123°38.4	12.2	20	123°47.0	17.5	20	123°54.1	21.4	20	123°59.7	23.8
21	137°23.2	·· 22.8	21	137°37.9	·· 32.6	21	137°52.0	·· 42.1	21	138°05.2	·· 51.0	21	138°17.5	06°59.3	21	138°28.7	·· 06.7	21	138°38.6	·· 13.2	21	138°47.1	·· 18.4	21	138°54.2	·· 22.3	21	138°59.8	·· 24.7
22	152°23.4	23.8	22	152°38.1	33.6	22	152°52.2	43.1	22	153°05.4	52.0	22	153°17.7	07°00.2	22	153°28.8	07.6	22	153°38.7	14.1	22	153°47.2	19.3	22	153°54.3	23.2	22	153°59.8	25.5
23	167°23.7	24.7	23	167°38.3	34.6	23	167°52.4	44.0	23	168°05.6	52.9	23	168°17.8	01.2	23	168°29.0	08.6	23	168°38.8	15.0	23	168°47.3	20.2	23	168°54.4	24.1	23	168°59.9	26.4
	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		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

29	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	182°23.9	S02°25.7	0	182°38.5	S03°35.5	0	182°52.5	S04°45.0	0	183°05.8	S05°53.9	0	183°18.0	S07°02.1	0	183°29.1	S08°09.5	0	183°39.0	S09°15.9	0	183°47.4	S10°21.1	0	183°54.5	S11°24.9	0	184°00.0	S12°27.2
1	197°24.1	26.7	1	197°38.7	36.5	1	197°52.7	45.9	1	198°05.9	54.8	1	198°18.2	03.1	1	198°29.2	10.4	1	198°39.1	16.8	1	198°47.6	22.0	1	198°54.6	25.8	1	199°00.0	28.1
2	212°24.3	27.6	2	212°38.9	37.5	2	212°52.9	46.9	2	213°06.1	55.8	2	213°18.3	04.0	2	213°29.4	11.4	2	213°39.2	17.7	2	213°47.7	22.9	2	213°54.6	26.7	2	214°00.1	28.9
3	227°24.5	·· 28.6	3	227°39.1	·· 38.4	3	227°53.1	·· 47.9	3	228°06.3	·· 56.7	3	228°18.5	·· 04.9	3	228°29.5	·· 12.3	3	228°39.3	·· 18.6	3	228°47.8	·· 23.8	3	228°54.7	·· 27.6	3	229°00.2	·· 29.8
4	242°24.7	29.6	4	242°39.3	39.4	4	242°53.3	48.8	4	243°06.5	57.7	4	243°18.6	05.9	4	243°29.7	13.2	4	243°39.5	19.6	4	243°47.9	24.7	4	243°54.8	28.4	4	244°00.2	30.6
5	257°24.9	30.6	5	257°39.5	40.4	5	257°53.5	49.8	5	258°06.6	58.6	5	258°18.8	06.8	5	258°29.8	14.2	5	258°39.6	20.5	5	258°48.0	25.6	5	258°54.9	29.3	5	259°00.3	31.5
6	272°25.1	S02°31.5	6	272°39.7	S03°41.3	6	272°53.7	S04°50.7	6	273°06.8	S05°59.6	6	273°19.0	S07°07.8	6	273°30.0	S08°15.1	6	273°39.7	S09°21.4	6	273°48.1	S10°26.5	6	273°55.0	S11°30.2	6	274°00.3	S12°32.3
7	287°25.3	32.5	7	287°39.9	42.3	7	287°53.9	51.7	7	288°07.0	06°00.5	7	288°19.1	08.7	7	288°30.1	16.0	7	288°39.8	22.3	7	288°48.2	27.4	7	288°55.1	31.1	7	289°00.4	33.2
8	302°25.5	33.5	8	302°40.1	43.3	8	302°54.1	52.7	8	303°07.2	01.5	8	303°19.3	09.6	8	303°30.3	16.9	8	303°40.0	23.2	8	303°48.3	28.3	8	303°55.2	31.9	8	304°00.5	34.0
9	317°25.7	·· 34.4	9	317°40.3	·· 44.2	9	317°54.2	·· 53.6	9	318°07.3	·· 02.5	9	318°19.4	·· 10.6	9	318°30.4	·· 17.9	9	318°40.1	·· 24.1	9	318°48.4	·· 29.2	9	318°55.2	·· 32.8	9	319°00.5	·· 34.9
10	332°25.9	35.4	10	332°40.5	45.2	10	332°54.4	54.6	10	333°07.5	03.4	10	333°19.6	11.5	10	333°30.5	18.8	10	333°40.2	25.0	10	333°48.5	30.1	10	333°55.3	33.7	10	334°00.6	35.7
11	347°26.1	36.4	11	347°40.7	46.2	11	347°54.6	55.5	11	348°07.7	04.4	11	348°19.8	12.5	11	348°30.7	19.7	11	348°40.3	25.9	11	348°48.6	30.9	11	348°55.4	34.6	11	349°00.7	36.6
12	2°26.3	S02°37.4	12	2°40.9	S03°47.1	12	2°54.8	S04°56.5	12	3°07.9	S06°05.3	12	3°19.9	S07°13.4	12	3°30.8	S08°20.6	12	3°40.5	S09°26.9	12	3°48.7	S10°31.8	12	3°55.5	S11°35.4	12	4°00.7	S12°37.4
13	17°26.6	38.3	13	17°41.1	48.1	13	17°55.0	57.5	13	18°08.0	06.3	13	18°20.1	14.3	13	18°31.0	21.6	13	18°40.6	27.8	13	18°48.8	32.7	13	18°55.6	36.3	13	19°00.8	38.3
14	32°26.8	39.3	14	32°41.3	49.1	14	32°55.2	58.4	14	33°08.2	07.2	14	33°20.2	15.3	14	33°31.1	22.5	14	33°40.7	28.7	14	33°48.9	33.6	14	33°55.7	37.2	14	34°00.8	39.1
15	47°27.0	·· 40.3	15	47°41.5	·· 50.0	15	47°55.4	04°59.4	15	48°08.4	·· 08.2	15	48°20.4	·· 16.2	15	48°31.3	·· 23.4	15	48°40.8	·· 29.6	15	48°49.0	·· 34.5	15	48°55.7	·· 38.0	15	49°00.9	·· 40.0
16	62°27.2	41.2	16	62°41.7	51.0	16	62°55.6	05°00.3	16	63°08.6	09.1	16	63°20.6	17.2	16	63°31.4	24.4	16	63°41.0	30.5	16	63°49.1	35.4	16	63°55.8	38.9	16	64°01.0	40.8
17	77°27.4	42.2	17	77°41.9	52.0	17	77°55.7	01.3	17	78°08.7	10.1	17	78°20.7	18.1	17	78°31.5	25.3	17	78°41.1	31.4	17	78°49.2	36.3	17	78°55.9	39.8	17	79°01.0	41.7
18	92°27.6	S02°43.2	18	92°42.1	S03°52.9	18	92°55.9	S05°02.3	18	93°08.9	S06°11.0	18	93°20.9	S07°19.0	18	93°31.7	S08°26.2	18	93°41.2	S09°32.3	18	93°49.3	S10°37.2	18	93°56.0	S11°40.7	18	94°01.1	S12°42.5
19	107°27.8	44.2	19	107°42.3	53.9	19	107°56.1	03.2	19	108°09.1	12.0	19	108°21.0	20.0	19	108°31.8	27.1	19	108°41.3	33.2	19	108°49.4	38.1	19	108°56.1	41.5	19	109°01.1	43.4
20	122°28.0	45.1	20	122°42.5	54.9	20	122°56.3	04.2	20	123°09.3	12.9	20	123°21.2	20.9	20	123°32.0	28.1	20	123°41.5	34.1	20	123°49.5	39.0	20	123°56.2	42.4	20	124°01.2	44.2
21	137°28.2	·· 46.1	21	137°42.7	·· 55.8	21	137°56.5	·· 05.1	21	138°09.4	·· 13.9	21	138°21.4	·· 21.9	21	138°32.1	·· 29.0	21	138°41.6	·· 35.0	21	138°49.7	·· 39.9	21	138°56.2	·· 43.3	21	139°01.3	·· 45.1
22	152°28.4	47.1	22	152°42.9	56.8	22	152°56.7	06.1	22	153°09.6	14.8	22	153°21.5	22.8	22	153°32.3	29.9	22	153°41.7	36.0	22	153°49.8	40.8	22	153°56.3	44.1	22	154°01.3	45.9
23	167°28.6	48.0	23	167°43.1	57.8	23	167°56.9	07.1	23	168°09.8	15.8	23	168°21.7	23.7	23	168°32.4	30.8	23	168°41.8	36.9	23	168°49.9	41.6	23	168°56.4	45.0	23	169°01.4	46.8
	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		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

30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	182°28.8	S02°49.0	0	182°43.3	S03°58.7	0	182°57.0	S05°08.0	0	183°09.9	S06°16.7	0	183°21.8	S07°24.7	0	183°32.5	S08°31.8	0	183°41.9	S09°37.8	0	183°50.0	S10°42.5	0	183°56.5	S11°45.9	0	184°01.4	S12°47.6
1	197°29.0	50.0	1	197°43.5	03°59.7	1	197°57.2	09.0	1	198°10.1	17.7	1	198°22.0	25.6	1	198°32.7	32.7	1	198°42.1	38.7	1	198°50.1	43.4	1	198°56.6	46.7	1	199°01.5	48.4
2	212°29.2	51.0	2	212°43.7	04°00.7	2	212°57.4	09.9	2	213°10.3	18.6	2	213°22.1	26.6	2	213°32.8	33.6	2	213°42.2	39.6	2	213°50.2	44.3	2	213°56.6	47.6	2	214°01.6	49.3
3	227°29.4	·· 51.9	3	227°43.9	·· 01.6	3	227°57.6	·· 10.9	3	228°10.5	·· 19.6	3	228°22.3	·· 27.5	3	228°32.9	·· 34.5	3	228°42.3	·· 40.5	3	228°50.3	·· 45.2	3	228°56.7	·· 48.5	3	229°01.6	·· 50.1
4	242°29.6	52.9	4	242°44.1	02.6	4	242°57.8	11.8	4	243°10.6	20.5	4	243°22.5	28.4	4	243°33.1	35.5	4	243°42.4	41.4	4	243°50.4	46.1	4	243°56.8	49.3	4	244°01.7	51.0
5	257°29.8	53.9	5	257°44.3	03.6	5	257°58.0	12.8	5	258°10.8	21.5	5	258°22.6	29.4	5	258°33.2	36.4	5	258°42.5	42.3	5	258°50.5	47.0	5	258°56.9	50.2	5	259°01.7	51.8
6	272°30.0	S02°54.8	6	272°44.5	S04°04.5	6	272°58.2	S05°13.8	6	273°11.0	S06°22.4	6	273°22.8	S07°30.3	6	273°33.4	S08°37.3	6	273°42.7	S09°43.2	6	273°50.6	S10°47.9	6	273°57.0	S11°51.1	6	274°01.8	S12°52.7
7	287°30.2	55.8	7	287°44.7	05.5	7	287°58.3	14.7	7	288°11.1	23.4	7	288°22.9	31.2	7	288°33.5	38.2	7	288°42.8	44.1	7	288°50.7	48.8	7	288°57.0	52.0	7	289°01.8	53.5
8	302°30.5	56.8	8	302°44.9	06.5	8	302°58.5	15.7	8	303°11.3	24.3	8	303°23.1	32.2	8	303°33.6	39.1	8	303°42.9	45.0	8	303°50.8	49.7	8	303°57.1	52.8	8	304°01.9	54.3
9	317°30.7	·· 57.7	9	317°45.0	·· 07.4	9	317°58.7	·· 16.6	9	318°11.5	·· 25.2	9	318°23.2	·· 33.1	9	318°33.8	·· 40.1	9	318°43.0	·· 45.9	9	318°50.9	·· 50.5	9	318°57.2	·· 53.7	9	319°01.9	·· 55.2
10	332°30.9	58.7	10	332°45.2	08.4	10	332°58.9	17.6	10	333°11.7	26.2	10	333°23.4	34.1	10	333°33.9	41.0	10	333°43.1	46.8	10	333°51.0	51.4	10	333°57.3	54.5	10	334°02.0	56.0
11	347°31.1	02°59.7	11	347°45.4	09.3	11	347°59.1	18.5	11	348°11.8	27.1	11	348°23.5	35.0	11	348°34.1	41.9	11	348°43.3	47.8	11	348°51.1	52.3	11	348°57.3	55.4	11	349°02.1	56.9
12	2°31.3	S03°00.7	12	2°45.6	S04°10.3	12	2°59.3	S05°19.5	12	3°12.0	S06°28.1	12	3°23.7	S07°35.9	12	3°34.2	S08°42.8	12	3°43.4	S09°48.7	12	3°51.1	S10°53.2	12	3°57.4	S11°56.3	12	4°02.1	S12°57.7
13	17°31.5	01.6	13	17°45.8	11.3	13	17°59.4	20.5	13	18°12.2	29.0	13	18°23.8	36.9	13	18°34.3	43.8	13	18°43.5	49.6	13	18°51.2	54.1	13	18°57.5	57.1	13	19°02.2	58.6
14	32°31.7	02.6	14	32°46.0	12.2	14	32°59.6	21.4	14	33°12.3	30.0	14	33°24.0	37.8	14	33°34.5	44.7	14	33°43.6	50.5	14	33°51.3	55.0	14	33°57.6	58.0	14	34°02.2	12°59.4
15	47°31.9	·· 03.6	15	47°46.2	·· 13.2	15	47°59.8	·· 22.4	15	48°12.5	·· 30.9	15	48°24.2	·· 38.7	15	48°34.6	·· 45.6	15	48°43.7	·· 51.4	15	48°51.4	·· 55.9	15	48°57.6	·· 58.9	15	49°02.3	13°00.2
16	62°32.1	04.5	16	62°46.4	14.2	16	63°00.0	23.3	16	63°12.7	31.9	16	63°24.3	39.7	16	63°34.7	46.5	16	63°43.8	52.3	16	63°51.5	56.7	16	63°57.7	11°59.7	16	64°02.3	01.1
17	77°32.3	05.5	17	77°46.6	15.1	17	78°00.2	24.3	17	78°12.8	32.8	17	78°24.5	40.6	17	78°34.9	47.4	17	78°44.0	53.2	17	78°51.6	57.6	17	78°57.8	12°00.6	17	79°02.4	01.9
18	92°32.5	S03°06.5	18	92°46.8	S04°16.1	18	93°00.4	S05°25.2	18	93°13.0	S06°33.8	18	93°24.6	S07°41.5	18	93°35.0	S08°48.4	18	93°44.1	S09°54.1	18	93°51.7	S10°58.5	18	93°57.9	S12°01.5	18	94°02.4	S13°02.8
19	107°32.7	07.4	19	107°47.0	17.1	19	108°00.5	26.2	19	108°13.2	34.7	19	108°24.8	42.5	19	108°35.1	49.3	19	108°44.2	55.0	19	108°51.8	10°59.4	19	108°57.9	02.3	19	109°02.5	03.6
20	122°32.9	08.4	20	122°47.2	18.0	20	123°00.7	27.2	20	123°13.4	35.7	20	123°24.9	43.4	20	123°35.3	50.2	20	123°44.3	55.9	20	123°51.9	11°00.3	20	123°58.0	03.2	20	124°02.5	04.4
21	137°33.1	·· 09.4	21	137°47.4	·· 19.0	21	138°00.9	·· 28.1	21	138°13.5	·· 36.6	21	138°25.1	·· 44.3	21	138°35.4	·· 51.1	21	138°44.4	·· 56.8	21	138°52.0	·· 01.2	21	138°58.1	·· 04.1	21	139°02.6	·· 05.3
22	152°33.3	10.4	22	152°47.6	20.0	22	153°01.1	29.1	22	153°13.7	37.6	22	153°25.2	45.3	22	153°35.5	52.1	22	153°44.5	57.7	22	153°52.1	02.1	22	153°58.2	04.9	22	154°02.6	06.1
23	167°33.5	11.3	23	167°47.8	20.9	23	168°01.3	30.0	23	168°13.9	38.5	23	168°25.4	46.2	23	168°35.7	53.0	23	168°44.7	58.6	23	168°52.2	02.9	23	168°58.2	05.8	23	169°02.7	06.9
	SD.=16.0	d=-1.0		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.=16.0	d=-0.9		SD.=16.1	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	12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec
0	184°02.7	S13°07.8	0	184°05.5	S14°07.1	0	184°06.5	S15°04.3	0	184°05.7	S15°59.3	0	184°03.1	S16°51.9	0	183°58.5	S17°42.0	0	183°51.9	S18°29.4	0	183°43.4	S19°13.8	0	183°33.1	S19°55.1	0	183°20.9	S20°33.1
1	199°02.8	08.6	1	199°05.5	07.9	1	199°06.5	05.1	1	199°05.7	16°00.1	1	199°03.0	52.7	1	198°58.4	42.7	1	198°51.8	30.0	1	198°43.3	14.4	1	198°32.9	55.6	1	198°20.7	33.6
2	214°02.8	09.5	2	214°05.5	08.7	2	214°06.5	05.9	2	214°05.7	00.8	2	214°03.0	53.4	2	213°58.3	43.4	2	213°51.7	30.6	2	213°43.2	15.0	2	213°32.7	56.2	2	213°20.5	34.1
3	229°02.9	·· 10.3	3	229°05.6	·· 09.5	3	229°06.5	·· 06.6	3	229°05.6	·· 01.5	3	229°02.9	·· 54.1	3	228°58.2	·· 44.0	3	228°51.6	·· 31.3	3	228°43.0	·· 15.5	3	228°32.6	·· 56.7	3	228°20.3	·· 34.6
4	244°02.9	11.1	4	244°05.6	10.3	4	244°06.5	07.4	4	244°05.6	02.3	4	244°02.8	54.8	4	243°58.1	44.7	4	243°51.5	31.9	4	243°42.9	16.1	4	243°32.4	57.3	4	243°20.2	35.1
5	259°03.0	12.0	5	259°05.6	11.1	5	259°06.5	08.2	5	259°05.6	03.0	5	259°02.8	55.5	5	258°58.1	45.4	5	258°51.4	32.5	5	258°42.8	16.7	5	258°32.3	57.8	5	258°20.0	35.6
6	274°03.0	S13°12.8	6	274°05.6	S14°11.9	6	274°06.5	S15°09.0	6	274°05.6	S16°03.8	6	274°02.7	S16°56.2	6	273°58.0	S17°46.1	6	273°51.3	S18°33.2	6	273°42.6	S19°17.3	6	273°32.1	S19°58.4	6	273°19.8	S20°36.1
7	289°03.1	13.6	7	289°05.7	12.7	7	289°06.5	09.7	7	289°05.5	04.5	7	289°02.7	56.9	7	288°57.9	46.7	7	288°51.2	33.8	7	288°42.5	17.9	7	288°31.9	58.9	7	288°19.6	36.6
8	304°03.1	14.5	8	304°05.7	13.5	8	304°06.5	10.5	8	304°05.5	05.3	8	304°02.6	57.6	8	303°57.8	47.4	8	303°51.1	34.4	8	303°42.4	18.5	8	303°31.8	19°59.5	8	303°19.4	37.1
9	319°03.2	·· 15.3	9	319°05.7	·· 14.3	9	319°06.5	·· 11.3	9	319°05.5	·· 06.0	9	319°02.6	·· 58.3	9	318°57.7	·· 48.1	9	318°50.9	·· 35.1	9	318°42.2	·· 19.1	9	318°31.6	20°00.0	9	318°19.2	·· 37.6
10	334°03.2	16.1	10	334°05.7	15.1	10	334°06.5	12.1	10	334°05.5	06.8	10	334°02.5	59.1	10	333°57.7	48.8	10	333°50.8	35.7	10	333°42.1	19.7	10	333°31.5	00.6	10	333°19.1	38.1
11	349°03.3	17.0	11	349°05.7	15.9	11	349°06.5	12.8	11	349°05.4	07.5	11	349°02.5	16°59.8	11	348°57.6	49.4	11	348°50.7	36.3	11	348°42.0	20.3	11	348°31.3	01.1	11	348°18.9	38.6
12	4°03.3	S13°17.8	12	4°05.8	S14°16.7	12	4°06.5	S15°13.6	12	4°05.4	S16°08.3	12	4°02.4	S17°00.5	12	3°57.5	S17°50.1	12	3°50.6	S18°37.0	12	3°41.8	S19°20.9	12	3°31.1	S20°01.6	12	3°18.7	S20°39.1
13	19°03.3	18.6	13	19°05.8	17.5	13	19°06.5	14.4	13	19°05.4	09.0	13	19°02.4	01.2	13	18°57.4	50.8	13	18°50.5	37.6	13	18°41.7	21.5	13	18°31.0	02.2	13	18°18.5	39.6
14	34°03.4	19.5	14	34°05.8	18.4	14	34°06.5	15.2	14	34°05.3	09.7	14	34°02.3	01.9	14	33°57.3	51.4	14	33°50.4	38.2	14	33°41.5	22.0	14	33°30.8	02.7	14	33°18.3	40.1
15	49°03.4	·· 20.3	15	49°05.8	·· 19.2	15	49°06.5	·· 15.9	15	49°05.3	·· 10.5	15	49°02.3	·· 02.6	15	48°57.3	·· 52.1	15	48°50.3	·· 38.9	15	48°41.4	·· 22.6	15	48°30.7	·· 03.3	15	48°18.1	·· 40.6
16	64°03.5	21.1	16	64°05.9	20.0	16	64°06.5	16.7	16	64°05.3	11.2	16	64°02.2	03.3	16	63°57.2	52.8	16	63°50.2	39.5	16	63°41.3	23.2	16	63°30.5	03.8	16	63°17.9	41.1
17	79°03.5	22.0	17	79°05.9	20.8	17	79°06.5	17.5	17	79°05.3	12.0	17	79°02.1	04.0	17	78°57.1	53.4	17	78°50.1	40.1	17	78°41.1	23.8	17	78°30.3	04.4	17	78°17.8	41.6
18	94°03.6	S13°22.8	18	94°05.9	S14°21.6	18	94°06.5	S15°18.3	18	94°05.2	S16°12.7	18	94°02.1	S17°04.7	18	93°57.0	S17°54.1	18	93°50.0	S18°40.7	18	93°41.0	S19°24.4	18	93°30.2	S20°04.9	18	93°17.6	S20°42.1
19	109°03.6	23.6	19	109°05.9	22.4	19	109°06.5	19.0	19	109°05.2	13.4	19	109°02.0	05.4	19	108°56.9	54.8	19	108°49.9	41.4	19	108°40.9	25.0	19	108°30.0	05.4	19	108°17.4	42.6
20	124°03.7	24.4	20	124°05.9	23.2	20	124°06.5	19.8	20	124°05.2	14.2	20	124°02.0	06.1	20	123°56.8	55.4	20	123°49.7	42.0	20	123°40.7	25.6	20	123°29.8	06.0	20	123°17.2	43.1
21	139°03.7	·· 25.3	21	139°06.0	·· 24.0	21	139°06.5	·· 20.6	21	139°05.1	·· 14.9	21	139°01.9	·· 06.8	21	138°56.7	·· 56.1	21	138°49.6	·· 42.6	21	138°40.6	·· 26.1	21	138°29.7	·· 06.5	21	138°17.0	·· 43.6
22	154°03.7	26.1	22	154°06.0	24.8	22	154°06.5	21.3	22	154°05.1	15.7	22	154°01.9	07.5	22	153°56.7	56.8	22	153°49.5	43.2	22	153°40.4	26.7	22	153°29.5	07.1	22	153°16.8	44.1
23	169°03.8	26.9	23	169°06.0	25.6	23	169°06.4	22.1	23	169°05.1	16.4	23	169°01.8	08.2	23	168°56.6	57.4	23	168°49.4	43.9	23	168°40.3	27.3	23	168°29.4	07.6	23	168°16.6	44.5
	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		SD.=16.2	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

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	184°03.8	S13°27.8	0	184°06.0	S14°26.4	0	184°06.4	S15°22.9	0	184°05.0	S16°17.1	0	184°01.7	S17°08.9	0	183°56.5	S17°58.1	0	183°49.3	S18°44.5	0	183°40.2	S19°27.9	0	183°29.2	S20°08.1	0	183°16.4	S20°45.0
1	199°03.9	28.6	1	199°06.0	27.2	1	199°06.4	23.7	1	199°05.0	17.9	1	199°01.7	09.6	1	198°56.4	58.8	1	198°49.2	45.1	1	198°40.0	28.5	1	198°29.0	08.7	1	198°16.2	45.5
2	214°03.9	29.4	2	214°06.1	28.0	2	214°06.4	24.4	2	214°05.0	18.6	2	214°01.6	10.3	2	213°56.3	17°59.4	2	213°49.1	45.7	2	213°39.9	29.0	2	213°28.9	09.2	2	213°16.1	46.0
3	229°04.0	·· 30.2	3	229°06.1	·· 28.8	3	229°06.4	·· 25.2	3	229°04.9	·· 19.3	3	229°01.6	·· 11.0	3	228°56.2	18°00.1	3	228°48.9	·· 46.4	3	228°39.7	·· 29.6	3	228°28.7	·· 09.7	3	228°15.9	·· 46.5
4	244°04.0	31.1	4	244°06.1	29.6	4	244°06.4	26.0	4	244°04.9	20.1	4	244°01.5	11.7	4	243°56.1	00.8	4	243°48.8	47.0	4	243°39.6	30.2	4	243°28.5	10.3	4	243°15.7	47.0
5	259°04.0	31.9	5	259°06.1	30.4	5	259°06.4	26.7	5	259°04.9	20.8	5	259°01.4	12.4	5	258°56.1	01.4	5	258°48.7	47.6	5	258°39.5	30.8	5	258°28.4	10.8	5	258°15.5	47.5
6	274°04.1	S13°32.7	6	274°06.1	S14°31.2	6	274°06.4	S15°27.5	6	274°04.8	S16°21.5	6	274°01.4	S17°13.1	6	273°56.0	S18°02.1	6	273°48.6	S18°48.2	6	273°39.3	S19°31.4	6	273°28.2	S20°11.3	6	273°15.3	S20°48.0
7	289°04.1	33.5	7	289°06.1	32.0	7	289°06.4	28.3	7	289°04.8	22.3	7	289°01.3	13.8	7	288°55.9	02.7	7	288°48.5	48.8	7	288°39.2	31.9	7	288°28.0	11.9	7	288°15.1	48.4
8	304°04.2	34.4	8	304°06.2	32.8	8	304°06.4	29.0	8	304°04.8	23.0	8	304°01.2	14.5	8	303°55.8	03.4	8	303°48.4	49.5	8	303°39.0	32.5	8	303°27.9	12.4	8	303°14.9	48.9
9	319°04.2	·· 35.2	9	319°06.2	·· 33.6	9	319°06.4	·· 29.8	9	319°04.7	·· 23.7	9	319°01.2	·· 15.2	9	318°55.7	·· 04.1	9	318°48.3	·· 50.1	9	318°38.9	·· 33.1	9	318°27.7	·· 12.9	9	318°14.7	·· 49.4
10	334°04.2	36.0	10	334°06.2	34.4	10	334°06.4	30.6	10	334°04.7	24.5	10	334°01.1	15.9	10	333°55.6	04.7	10	333°48.1	50.7	10	333°38.8	33.7	10	333°27.5	13.5	10	333°14.5	49.9
11	349°04.3	36.8	11	349°06.2	35.1	11	349°06.3	31.3	11	349°04.7	25.2	11	349°01.1	16.6	11	348°55.5	05.4	11	348°48.0	51.3	11	348°38.6	34.2	11	348°27.4	14.0	11	348°14.3	50.4
12	4°04.3	S13°37.7	12	4°06.2	S14°35.9	12	4°06.3	S15°32.1	12	4°04.6	S16°25.9	12	4°01.0	S17°17.3	12	3°55.4	S18°06.0	12	3°47.9	S18°51.9	12	3°38.5	S19°34.8	12	3°27.2	S20°14.5	12	3°14.1	S20°50.9
13	19°04.4	38.5	13	19°06.2	36.7	13	19°06.3	32.9	13	19°04.6	26.7	13	19°00.9	18.0	13	18°55.3	06.7	13	18°47.8	52.6	13	18°38.3	35.4	13	18°27.0	15.0	13	18°14.0	51.3
14	34°04.4	39.3	14	34°06.2	37.5	14	34°06.3	33.6	14	34°04.5	27.4	14	34°00.9	18.7	14	33°55.2	07.4	14	33°47.7	53.2	14	33°38.2	36.0	14	33°26.8	15.6	14	33°13.8	51.8
15	49°04.4	·· 40.1	15	49°06.3	·· 38.3	15	49°06.3	·· 34.4	15	49°04.5	·· 28.1	15	49°00.8	·· 19.4	15	48°55.1	·· 08.0	15	48°47.5	·· 53.8	15	48°38.0	·· 36.5	15	48°26.7	·· 16.1	15	48°13.6	·· 52.3
16	64°04.5	41.0	16	64°06.3	39.1	16	64°06.3	35.1	16	64°04.5	28.9	16	64°00.7	20.1	16	63°55.1	08.7	16	63°47.4	54.4	16	63°37.9	37.1	16	63°26.5	16.6	16	63°13.4	52.8
17	79°04.5	41.8	17	79°06.3	39.9	17	79°06.3	35.9	17	79°04.4	29.6	17	79°00.7	20.8	17	78°55.0	09.3	17	78°47.3	55.0	17	78°37.7	37.7	17	78°26.3	17.1	17	78°13.2	53.2
18	94°04.5	S13°42.6	18	94°06.3	S14°40.7	18	94°06.3	S15°36.7	18	94°04.4	S16°30.3	18	94°00.6	S17°21.5	18	93°54.9	S18°10.0	18	93°47.2	S18°55.6	18	93°37.6	S19°38.2	18	93°26.2	S20°17.7	18	93°13.0	S20°53.7
19	109°04.6	43.4	19	109°06.3	41.5	19	109°06.3	37.4	19	109°04.4	31.0	19	109°00.5	22.2	19	108°54.8	10.6	19	108°47.1	56.2	19	108°37.4	38.8	19	108°26.0	18.2	19	108°12.8	54.2
20	124°04.6	44.2	20	124°06.3	42.3	20	124°06.2	38.2	20	124°04.3	31.8	20	124°00.5	22.9	20	123°54.7	11.3	20	123°46.9	56.9	20	123°37.3	39.4	20	123°25.8	18.7	20	123°12.6	54.7
21	139°04.6	·· 45.1	21	139°06.3	·· 43.1	21	139°06.2	·· 38.9	21	139°04.3	·· 32.5	21	139°00.4	·· 23.6	21	138°54.6	·· 11.9	21	138°46.8	·· 57.5	21	138°37.2	·· 40.0	21	138°25.6	·· 19.2	21	138°12.4	·· 55.2
22	154°04.7	45.9	22	154°06.3	43.9	22	154°06.2	39.7	22	154°04.2	33.2	22	154°00.3	24.2	22	153°54.5	12.6	22	153°46.7	58.1	22	153°37.0	40.5	22	153°25.5	19.8	22	153°12.2	55.6
23	169°04.7	46.7	23	169°06.3	44.7	23	169°06.2	40.5	23	169°04.2	33.9	23	169°00.3	24.9	23	168°54.4	13.2	23	168°46.6	58.7	23	168°36.9	41.1	23	168°25.3	20.3	23	168°12.0	56.1
	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		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

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	184°04.8	S13°47.5	0	184°06.4	S14°45.5	0	184°06.2	S15°41.2	0	184°04.2	S16°34.7	0	184°00.2	S17°25.6	0	183°54.3	S18°13.9	0	183°46.5	S18°59.3	0	183°36.7	S19°41.7	0	183°25.1	S20°20.8	0	183°11.8	S20°56.6
1	199°04.8	48.3	1	199°06.4	46.2	1	199°06.2	42.0	1	199°04.1	35.4	1	199°00.1	26.3	1	198°54.2	14.5	1	198°46.3	18°59.9	1	198°36.6	42.2	1	198°25.0	21.3	1	198°11.6	57.0
2	214°04.8	49.2	2	214°06.4	47.0	2	214°06.2	42.7	2	214°04.1	36.1	2	214°00.1	27.0	2	213°54.1	15.2	2	213°46.2	19°00.5	2	213°36.4	42.8	2	213°24.8	21.8	2	213°11.4	57.5
3	229°04.9	·· 50.0	3	229°06.4	·· 47.8	3	229°06.1	·· 43.5	3	229°04.0	·· 36.8	3	229°00.0	·· 27.7	3	228°54.0	·· 15.8	3	228°46.1	·· 01.1	3	228°36.3	·· 43.4	3	228°24.6	·· 22.4	3	228°11.2	·· 58.0
4	244°04.9	50.8	4	244°06.4	48.6	4	244°06.1	44.3	4	244°04.0	37.6	4	243°59.9	28.4	4	243°53.9	16.5	4	243°46.0	01.7	4	243°36.1	43.9	4	243°24.4	22.9	4	243°11.0	58.5
5	259°04.9	51.6	5	259°06.4	49.4	5	259°06.1	45.0	5	259°03.9	38.3	5	258°59.9	29.1	5	258°53.8	17.1	5	258°45.8	02.3	5	258°36.0	44.5	5	258°24.3	23.4	5	258°10.8	58.9
6	274°05.0	S13°52.4	6	274°06.4	S14°50.2	6	274°06.1	S15°45.8	6	274°03.9	S16°39.0	6	273°59.8	S17°29.7	6	273°53.7	S18°17.8	6	273°45.7	S19°02.9	6	273°35.8	S19°45.0	6	273°24.1	S20°23.9	6	273°10.6	S20°59.4
7	289°05.0	53.2	7	289°06.4	51.0	7	289°06.1	46.5	7	289°03.9	39.7	7	288°59.7	30.4	7	288°53.6	18.4	7	288°45.6	03.6	7	288°35.7	45.6	7	288°23.9	24.4	7	288°10.4	20°59.9
8	304°05.0	54.1	8	304°06.4	51.8	8	304°06.1	47.3	8	304°03.8	40.5	8	303°59.6	31.1	8	303°53.5	19.1	8	303°45.5	04.2	8	303°35.5	46.2	8	303°23.7	25.0	8	303°10.2	21°00.3
9	319°05.0	·· 54.9	9	319°06.4	·· 52.5	9	319°06.0	·· 48.0	9	319°03.8	·· 41.2	9	318°59.6	·· 31.8	9	318°53.4	·· 19.7	9	318°45.3	·· 04.8	9	318°35.4	·· 46.7	9	318°23.6	·· 25.5	9	318°10.0	·· 00.8
10	334°05.1	55.7	10	334°06.4	53.3	10	334°06.0	48.8	10	334°03.7	41.9	10	333°59.5	32.5	10	333°53.3	20.4	10	333°45.2	05.4	10	333°35.2	47.3	10	333°23.4	26.0	10	333°09.8	01.3
11	349°05.1	56.5	11	349°06.4	54.1	11	349°06.0	49.5	11	349°03.7	42.6	11	348°59.4	33.2	11	348°53.2	21.0	11	348°45.1	06.0	11	348°35.1	47.9	11	348°23.2	26.5	11	348°09.6	01.7
12	4°05.1	S13°57.3	12	4°06.5	S14°54.9	12	4°06.0	S15°50.3	12	4°03.6	S16°43.3	12	3°59.4	S17°33.9	12	3°53.1	S18°21.7	12	3°45.0	S19°06.6	12	3°34.9	S19°48.4	12	3°23.0	S20°27.0	12	3°09.4	S21°02.2
13	19°05.2	58.1	13	19°06.5	55.7	13	19°06.0	51.1	13	19°03.6	44.1	13	18°59.3	34.5	13	18°53.0	22.3	13	18°44.8	07.2	13	18°34.8	49.0	13	18°22.9	27.5	13	18°09.2	02.7
14	34°05.2	58.9	14	34°06.5	56.5	14	34°05.9	51.8	14	34°03.5	44.8	14	33°59.2	35.2	14	33°52.9	22.9	14	33°44.7	07.8	14	33°34.6	49.5	14	33°22.7	28.0	14	33°09.0	03.1
15	49°05.2	13°59.8	15	49°06.5	·· 57.3	15	49°05.9	·· 52.6	15	49°03.5	·· 45.5	15	48°59.1	·· 35.9	15	48°52.8	·· 23.6	15	48°44.6	·· 08.4	15	48°34.4	·· 50.1	15	48°22.5	·· 28.5	15	48°08.8	·· 03.6
16	64°05.3	14°00.6	16	64°06.5	58.0	16	64°05.9	53.3	16	64°03.4	46.2	16	63°59.1	36.6	16	63°52.7	24.2	16	63°44.5	09.0	16	63°34.3	50.6	16	63°22.3	29.1	16	63°08.6	04.0
17	79°05.3	01.4	17	79°06.5	58.8	17	79°05.9	54.1	17	79°03.4	46.9	17	78°59.0	37.3	17	78°52.6	24.9	17	78°44.3	09.6	17	78°34.1	51.2	17	78°22.1	29.6	17	78°08.4	04.5
18	94°05.3	S14°02.2	18	94°06.5	S14°59.6	18	94°05.9	S15°54.8	18	94°03.3	S16°47.7	18	93°58.9	S17°37.9	18	93°52.5	S18°25.5	18	93°44.2	S19°10.2	18	93°34.0	S19°51.8	18	93°22.0	S20°30.1	18	93°08.2	S21°05.0
19	109°05.3	03.0	19	109°06.5	15°00.4	19	109°05.8	55.6	19	109°03.3	48.4	19	108°58.8	38.6	19	108°52.4	26.2	19	108°44.1	10.8	19	108°33.8	52.3	19	108°21.8	30.6	19	108°08.0	05.4
20	124°05.4	03.8	20	124°06.5	01.2	20	124°05.8	56.3	20	124°03.3	49.1	20	123°58.8	39.3	20	123°52.3	26.8	20	123°43.9	11.4	20	123°33.7	52.9	20	123°21.6	31.1	20	123°07.8	05.9
21	139°05.4	·· 04.6	21	139°06.5	·· 02.0	21	139°05.8	·· 57.1	21	139°03.2	·· 49.8	21	138°58.7	·· 40.0	21	138°52.2	·· 27.4	21	138°43.8	·· 12.0	21	138°33.5	·· 53.4	21	138°21.4	·· 31.6	21	138°07.6	·· 06.3
22	154°05.4	05.4	22	154°06.5	02.7	22	154°05.8	57.8	22	154°03.2	50.5	22	153°58.6	40.7	22	153°52.1	28.1	22	153°43.7	12.6	22	153°33.4	54.0	22	153°21.2	32.1	22	153°07.4	06.8
23	169°05.5	06.2	23	169°06.5	03.5	23	169°05.7	58.6	23	169°03.1	51.2	23	168°58.5	41.3	23	168°52.0	28.7	23	168°43.5	13.2	23	168°33.2	54.5	23	168°21.1	32.6	23	168°07.2	07.3
	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.=16.2	d=-0.7		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	12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec
0	183°07.0	S21°07.7	0	182°51.6	S21°38.7	0	182°34.6	S22°06.0	0	182°16.4	S22°29.5	0	181°57.0	S22°49.1	0	181°36.5	S23°04.6	0	181°15.2	S23°16.0	0	180°53.3	S23°23.2	0	180°31.0	S23°26.2	0	180°08.5	S23°25.0
1	198°06.8	08.2	1	197°51.3	39.1	1	197°34.4	06.4	1	197°16.2	29.8	1	196°56.7	49.3	1	196°36.2	04.8	1	196°14.9	16.1	1	195°53.0	23.3	1	195°30.7	26.2	1	195°08.2	24.9
2	213°06.6	08.6	2	212°51.1	39.6	2	212°34.2	06.8	2	212°15.9	30.1	2	211°56.4	49.6	2	211°35.9	05.0	2	211°14.6	16.2	2	210°52.7	23.3	2	210°30.3	26.2	2	210°07.9	24.9
3	228°06.4	·· 09.1	3	227°50.9	·· 40.0	3	227°33.9	·· 07.1	3	227°15.6	·· 30.4	3	226°56.1	·· 49.8	3	226°35.6	·· 05.1	3	226°14.3	·· 16.4	3	225°52.3	·· 23.4	3	225°30.0	·· 26.2	3	225°07.6	·· 24.8
4	243°06.2	09.5	4	242°50.7	40.4	4	242°33.7	07.5	4	242°15.4	30.7	4	241°55.9	50.0	4	241°35.3	05.3	4	241°14.0	16.5	4	240°52.0	23.5	4	240°29.7	26.2	4	240°07.3	24.8
5	258°06.0	10.0	5	257°50.4	40.8	5	257°33.4	07.8	5	257°15.1	31.0	5	256°55.6	50.3	5	256°35.1	05.5	5	256°13.7	16.6	5	255°51.7	23.5	5	255°29.4	26.3	5	255°07.0	24.7
6	273°05.8	S21°10.4	6	272°50.2	S21°41.2	6	272°33.2	S22°08.2	6	272°14.8	S22°31.3	6	271°55.3	S22°50.5	6	271°34.8	S23°05.7	6	271°13.4	S23°16.7	6	270°51.4	S23°23.6	6	270°29.1	S23°26.3	6	270°06.7	S23°24.7
7	288°05.6	10.9	7	287°50.0	41.6	7	287°32.9	08.5	7	287°14.6	31.6	7	286°55.0	50.8	7	286°34.5	05.9	7	286°13.1	16.9	7	285°51.1	23.7	7	285°28.8	26.3	7	285°06.4	24.6
8	303°05.4	11.3	8	302°49.7	42.0	8	302°32.7	08.8	8	302°14.3	31.9	8	301°54.8	51.0	8	301°34.2	06.1	8	301°12.8	17.0	8	300°50.8	23.7	8	300°28.5	26.3	8	300°06.0	24.6
9	318°05.2	·· 11.8	9	317°49.5	·· 42.4	9	317°32.4	·· 09.2	9	317°14.0	·· 32.2	9	316°54.5	·· 51.2	9	316°33.9	·· 06.2	9	316°12.5	·· 17.1	9	315°50.5	·· 23.8	9	315°28.2	·· 26.3	9	315°05.7	·· 24.5
10	333°05.0	12.2	10	332°49.3	42.8	10	332°32.2	09.5	10	332°13.8	32.5	10	331°54.2	51.5	10	331°33.6	06.4	10	331°12.2	17.2	10	330°50.2	23.9	10	330°27.9	26.3	10	330°05.4	24.5
11	348°04.7	12.7	11	347°49.1	43.2	11	347°31.9	09.9	11	347°13.5	32.8	11	346°53.9	51.7	11	346°33.3	06.6	11	346°11.9	17.4	11	345°49.9	23.9	11	345°27.5	26.3	11	345°05.1	24.4
12	3°04.5	S21°13.1	12	2°48.8	S21°43.6	12	2°31.7	S22°10.2	12	2°13.3	S22°33.1	12	1°53.6	S22°51.9	12	1°33.0	S23°06.8	12	1°11.6	S23°17.5	12	0°49.6	S23°24.0	12	0°27.2	S23°26.3	12	0°04.8	S23°24.3
13	18°04.3	13.6	13	17°48.6	44.0	13	17°31.4	10.6	13	17°13.0	33.3	13	16°53.4	52.2	13	16°32.7	06.9	13	16°11.3	17.6	13	15°49.3	24.1	13	15°26.9	26.3	13	15°04.5	24.3
14	33°04.1	14.0	14	32°48.4	44.3	14	32°31.2	10.9	14	32°12.7	33.6	14	31°53.1	52.4	14	31°32.4	07.1	14	31°11.0	17.7	14	30°49.0	24.1	14	30°26.6	26.3	14	30°04.2	24.2
15	48°03.9	·· 14.5	15	47°48.1	·· 44.7	15	47°31.0	·· 11.3	15	47°12.5	·· 33.9	15	46°52.8	·· 52.6	15	46°32.1	·· 07.3	15	46°10.7	·· 17.8	15	45°48.6	·· 24.2	15	45°26.3	·· 26.3	15	45°03.9	·· 24.2
16	63°03.7	14.9	16	62°47.9	45.1	16	62°30.7	11.6	16	62°12.2	34.2	16	61°52.5	52.9	16	61°31.8	07.5	16	61°10.4	17.9	16	60°48.3	24.2	16	60°26.0	26.3	16	60°03.6	24.1
17	78°03.5	15.4	17	77°47.7	45.5	17	77°30.5	11.9	17	77°11.9	34.5	17	76°52.2	53.1	17	76°31.5	07.6	17	76°10.1	18.1	17	75°48.0	24.3	17	75°25.7	26.3	17	75°03.3	24.1
18	93°03.3	S21°15.8	18	92°47.5	S21°45.9	18	92°30.2	S22°12.3	18	92°11.7	S22°34.8	18	91°52.0	S22°53.3	18	91°31.3	S23°07.8	18	91°09.8	S23°18.2	18	90°47.7	S23°24.3	18	90°25.4	S23°26.3	18	90°02.9	S23°24.0
19	108°03.1	16.3	19	107°47.2	46.3	19	107°30.0	12.6	19	107°11.4	35.1	19	106°51.7	53.6	19	106°31.0	08.0	19	106°09.5	18.3	19	105°47.4	24.4	19	105°25.0	26.3	19	105°02.6	23.9
20	123°02.9	16.7	20	122°47.0	46.7	20	122°29.7	13.0	20	122°11.1	35.4	20	121°51.4	53.8	20	121°30.7	08.2	20	121°09.2	18.4	20	120°47.1	24.5	20	120°24.7	26.3	20	120°02.3	23.9
21	138°02.7	·· 17.1	21	137°46.8	·· 47.1	21	137°29.5	·· 13.3	21	137°10.9	·· 35.6	21	136°51.1	·· 54.0	21	136°30.4	·· 08.3	21	136°08.9	·· 18.5	21	135°46.8	·· 24.5	21	135°24.4	·· 26.3	21	135°02.0	·· 23.8
22	153°02.4	17.6	22	152°46.5	47.5	22	152°29.2	13.6	22	152°10.6	35.9	22	151°50.8	54.2	22	151°30.1	08.5	22	151°08.6	18.6	22	150°46.5	24.6	22	150°24.1	26.3	22	150°01.7	23.7
23	168°02.2	18.0	23	167°46.3	47.9	23	167°29.0	14.0	23	167°10.3	36.2	23	166°50.5	54.5	23	166°29.8	08.7	23	166°08.3	18.7	23	165°46.2	24.6	23	165°23.8	26.3	23	165°01.4	23.7
	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		SD.=16.2	d=-0.2		SD.=16.2	d=-0.1		SD.=16.3	d=-0.1		SD.=16.3	d=-0.0		SD.=16.3	d=0.0

28	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	183°02.0	S21°18.5	0	182°46.1	S21°48.3	0	182°28.7	S22°14.3	0	182°10.1	S22°36.5	0	181°50.3	S22°54.7	0	181°29.5	S23°08.8	0	181°07.9	S23°18.9	0	180°45.9	S23°24.7	0	180°23.5	S23°26.3	0	180°01.1	S23°23.6
1	198°01.8	18.9	1	197°45.8	48.7	1	197°28.5	14.6	1	197°09.8	36.8	1	196°50.0	54.9	1	196°29.2	09.0	1	196°07.6	19.0	1	195°45.6	24.7	1	195°23.2	26.3	1	195°00.8	23.5
2	213°01.6	19.3	2	212°45.6	49.0	2	212°28.2	15.0	2	212°09.5	37.0	2	211°49.7	55.1	2	211°28.9	09.2	2	211°07.3	19.1	2	210°45.2	24.8	2	210°22.9	26.2	2	210°00.5	23.5
3	228°01.4	·· 19.8	3	227°45.4	·· 49.4	3	227°28.0	·· 15.3	3	227°09.3	·· 37.3	3	226°49.4	·· 55.4	3	226°28.6	·· 09.3	3	226°07.0	·· 19.2	3	225°44.9	·· 24.8	3	225°22.6	·· 26.2	3	225°00.1	·· 23.4
4	243°01.2	20.2	4	242°45.1	49.8	4	242°27.7	15.6	4	242°09.0	37.6	4	241°49.1	55.6	4	241°28.3	09.5	4	241°06.7	19.3	4	240°44.6	24.9	4	240°22.2	26.2	4	239°59.8	23.3
5	258°01.0	20.7	5	257°44.9	50.2	5	257°27.5	16.0	5	257°08.7	37.9	5	256°48.9	55.8	5	256°28.0	09.7	5	256°06.4	19.4	5	255°44.3	24.9	5	255°21.9	26.2	5	254°59.5	23.3
6	273°00.8	S21°21.1	6	272°44.7	S21°50.6	6	272°27.2	S22°16.3	6	272°08.5	S22°38.2	6	271°48.6	S22°56.0	6	271°27.7	S23°09.8	6	271°06.1	S23°19.5	6	270°44.0	S23°25.0	6	270°21.6	S23°26.2	6	269°59.2	S23°23.2
7	288°00.5	21.5	7	287°44.4	51.0	7	287°27.0	16.6	7	287°08.2	38.4	7	286°48.3	56.2	7	286°27.4	10.0	7	286°05.8	19.6	7	285°43.7	25.0	7	285°21.3	26.2	7	284°58.9	23.1
8	303°00.3	22.0	8	302°44.2	51.3	8	302°26.7	17.0	8	302°07.9	38.7	8	301°48.0	56.5	8	301°27.1	10.2	8	301°05.5	19.7	8	300°43.4	25.1	8	300°21.0	26.2	8	299°58.6	23.1
9	318°00.1	·· 22.4	9	317°44.0	·· 51.7	9	317°26.4	·· 17.3	9	317°07.6	·· 39.0	9	316°47.7	·· 56.7	9	316°26.8	·· 10.3	9	316°05.2	·· 19.8	9	315°43.1	·· 25.1	9	315°20.7	·· 26.2	9	314°58.3	·· 23.0
10	332°59.9	22.8	10	332°43.7	52.1	10	332°26.2	17.6	10	332°07.4	39.3	10	331°47.4	56.9	10	331°26.5	10.5	10	331°04.9	19.9	10	330°42.8	25.1	10	330°20.4	26.1	10	329°58.0	22.9
11	347°59.7	23.3	11	347°43.5	52.5	11	347°25.9	17.9	11	347°07.1	39.5	11	346°47.1	57.1	11	346°26.2	10.6	11	346°04.6	20.0	11	345°42.5	25.2	11	345°20.1	26.1	11	344°57.7	22.8
12	2°59.5	S21°23.7	12	2°43.3	S21°52.9	12	2°25.7	S22°18.3	12	2°06.8	S22°39.8	12	1°46.9	S22°57.3	12	1°25.9	S23°10.8	12	1°04.3	S23°20.1	12	0°42.1	S23°25.2	12	0°19.7	S23°26.1	12	359°57.4	S23°22.8
13	17°59.3	24.1	13	17°43.0	53.2	13	17°25.4	18.6	13	17°06.6	40.1	13	16°46.6	57.6	13	16°25.7	11.0	13	16°04.0	20.2	13	15°41.8	25.3	13	15°19.4	26.1	13	14°57.0	22.7
14	32°59.0	24.5	14	32°42.8	53.6	14	32°25.2	18.9	14	32°06.3	40.3	14	31°46.3	57.8	14	31°25.4	11.1	14	31°03.7	20.3	14	30°41.5	25.3	14	30°19.1	26.1	14	29°56.7	22.6
15	47°58.8	·· 25.0	15	47°42.6	·· 54.0	15	47°24.9	·· 19.2	15	47°06.0	·· 40.6	15	46°46.0	·· 58.0	15	46°25.1	·· 11.3	15	46°03.4	·· 20.4	15	45°41.2	·· 25.4	15	45°18.8	·· 26.1	15	44°56.4	·· 22.5
16	62°58.6	25.4	16	62°42.3	54.4	16	62°24.7	19.6	16	62°05.8	40.9	16	61°45.7	58.2	16	61°24.8	11.4	16	61°03.1	20.5	16	60°40.9	25.4	16	60°18.5	26.0	16	59°56.1	22.4
17	77°58.4	25.8	17	77°42.1	54.8	17	77°24.4	19.9	17	77°05.5	41.1	17	76°45.4	58.4	17	76°24.5	11.6	17	76°02.8	20.6	17	75°40.6	25.4	17	75°18.2	26.0	17	74°55.8	22.4
18	92°58.2	S21°26.3	18	92°41.9	S21°55.1	18	92°24.2	S22°20.2	18	92°05.2	S22°41.4	18	91°45.2	S22°58.6	18	91°24.2	S23°11.7	18	91°02.5	S23°20.7	18	90°40.3	S23°25.5	18	90°17.9	S23°26.0	18	89°55.5	S23°22.3
19	107°58.0	26.7	19	107°41.6	55.5	19	107°23.9	20.5	19	107°04.9	41.7	19	106°44.9	58.8	19	106°23.9	11.9	19	106°02.2	20.8	19	105°40.0	25.5	19	105°17.6	26.0	19	104°55.2	22.2
20	122°57.7	27.1	20	122°41.4	55.9	20	122°23.7	20.9	20	122°04.7	41.9	20	121°44.6	59.0	20	121°23.6	12.0	20	121°01.9	20.9	20	120°39.7	25.5	20	120°17.3	26.0	20	119°54.9	22.1
21	137°57.5	·· 27.5	21	137°41.2	·· 56.3	21	137°23.4	·· 21.2	21	137°04.4	·· 42.2	21	136°44.3	·· 59.2	21	136°23.3	·· 12.2	21	136°01.6	·· 21.0	21	135°39.4	·· 25.6	21	135°16.9	·· 25.9	21	134°54.6	·· 22.0
22	152°57.3	28.0	22	152°40.9	56.6	22	152°23.1	21.5	22	152°04.1	42.5	22	151°44.0	59.5	22	151°23.0	12.3	22	151°01.2	21.1	22	150°39.0	25.6	22	150°16.6	25.9	22	149°54.3	22.0
23	167°57.1	28.4	23	167°40.7	57.0	23	167°22.9	21.8	23	167°03.9	42.7	23	166°43.7	59.7	23	166°22.7	12.5	23	166°00.9	21.2	23	165°38.7	25.6	23	165°16.3	25.9	23	164°54.0	21.9
	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		SD.=16.2	d=-0.2		SD.=16.2	d=-0.1		SD.=16.3	d=-0.1		SD.=16.3	d=0.0		SD.=16.3	d=0.1

29	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	182°56.9	S21°28.8	0	182°40.4	S21°57.4	0	182°22.6	S22°22.1	0	182°03.6	S22°43.0	0	181°43.4	S22°59.9	0	181°22.4	S23°12.6	0	181°00.6	S23°21.3	0	180°38.4	S23°25.7	0	180°16.0	S23°25.8	0	179°53.6	S23°21.8
1	197°56.7	29.2	1	197°40.2	57.7	1	197°22.4	22.4	1	197°03.3	43.3	1	196°43.2	23°00.1	1	196°22.1	12.8	1	196°00.3	21.4	1	195°38.1	25.7	1	195°15.7	25.8	1	194°53.3	21.7
2	212°56.4	29.7	2	212°40.0	58.1	2	212°22.1	22.8	2	212°03.0	43.5	2	211°42.9	00.3	2	211°21.8	12.9	2	211°00.0	21.4	2	210°37.8	25.7	2	210°15.4	25.8	2	209°53.0	21.6
3	227°56.2	·· 30.1	3	227°39.7	·· 58.5	3	227°21.9	·· 23.1	3	227°02.8	·· 43.8	3	226°42.6	·· 00.5	3	226°21.5	·· 13.1	3	225°59.7	·· 21.5	3	225°37.5	·· 25.8	3	225°15.1	·· 25.8	3	224°52.7	·· 21.5
4	242°56.0	30.5	4	242°39.5	58.8	4	242°21.6	23.4	4	242°02.5	44.0	4	241°42.3	00.7	4	241°21.2	13.2	4	240°59.4	21.6	4	240°37.2	25.8	4	240°14.8	25.7	4	239°52.4	21.4
5	257°55.8	30.9	5	257°39.2	59.2	5	257°21.3	23.7	5	257°02.2	44.3	5	256°42.0	00.9	5	256°20.9	13.4	5	255°59.1	21.7	5	255°36.9	25.8	5	255°14.5	25.7	5	254°52.1	21.3
6	272°55.6	S21°31.3	6	272°39.0	S21°59.6	6	272°21.1	S22°24.0	6	272°01.9	S22°44.6	6	271°41.7	S23°01.1	6	271°20.6	S23°13.5	6	270°58.8	S23°21.8	6	270°36.6	S23°25.8	6	270°14.1	S23°25.7	6	269°51.8	S23°21.3
7	287°55.3	31.7	7	287°38.8	21°59.9	7	287°20.8	24.3	7	287°01.7	44.8	7	286°41.4	01.3	7	286°20.3	13.7	7	285°58.5	21.9	7	285°36.3	25.9	7	285°13.8	25.6	7	284°51.5	21.2
8	302°55.1	32.2	8	302°38.5	22°00.3	8	302°20.6	24.6	8	302°01.4	45.1	8	301°41.1	01.5	8	301°20.0	13.8	8	300°58.2	22.0	8	300°35.9	25.9	8	300°13.5	25.6	8	299°51.2	21.1
9	317°54.9	·· 32.6	9	317°38.3	·· 00.7	9	317°20.3	·· 25.0	9	317°01.1	·· 45.3	9	316°40.9	·· 01.7	9	316°19.7	·· 13.9	9	315°57.9	·· 22.0	9	315°35.6	·· 25.9	9	315°13.2	·· 25.6	9	314°50.9	·· 21.0
10	332°54.7	33.0	10	332°38.0	01.0	10	332°20.1	25.3	10	332°00.8	45.6	10	331°40.6	01.9	10	331°19.4	14.1	10	330°57.6	22.1	10	330°35.3	25.9	10	330°12.9	25.5	10	329°50.6	20.9
11	347°54.5	33.4	11	347°37.8	01.4	11	347°19.8	25.6	11	347°00.6	45.8	11	346°40.3	02.1	11	346°19.1	14.2	11	345°57.3	22.2	11	345°35.0	26.0	11	345°12.6	25.5	11	344°50.2	20.8
12	2°54.2	S21°33.8	12	2°37.6	S22°01.8	12	2°19.5	S22°25.9	12	2°00.3	S22°46.1	12	1°40.0	S23°02.3	12	1°18.8	S23°14.4	12	0°57.0	S23°22.3	12	0°34.7	S23°26.0	12	0°12.3	S23°25.5	12	359°49.9	S23°20.7
13	17°54.0	34.2	13	17°37.3	02.1	13	17°19.3	26.2	13	17°00.0	46.3	13	16°39.7	02.5	13	16°18.5	14.5	13	15°56.7	22.4	13	15°34.4	26.0	13	15°12.0	25.4	13	14°49.6	20.6
14	32°53.8	34.7	14	32°37.1	02.5	14	32°19.0	26.5	14	31°59.7	46.6	14	31°39.4	02.7	14	31°18.2	14.6	14	30°56.3	22.4	14	30°34.1	26.0	14	30°11.6	25.4	14	29°49.3	20.5
15	47°53.6	·· 35.1	15	47°36.8	·· 02.8	15	47°18.8	·· 26.8	15	46°59.5	·· 46.8	15	46°39.1	·· 02.9	15	46°17.9	·· 14.8	15	45°56.0	·· 22.5	15	45°33.8	·· 26.1	15	45°11.3	·· 25.4	15	44°49.0	·· 20.4
16	62°53.3	35.5	16	62°36.6	03.2	16	62°18.5	27.1	16	61°59.2	47.1	16	61°38.8	03.1	16	61°17.6	14.9	16	60°55.7	22.6	16	60°33.5	26.1	16	60°11.0	25.3	16	59°48.7	20.3
17	77°53.1	35.9	17	77°36.4	03.6	17	77°18.2	27.4	17	76°58.9	47.3	17	76°38.5	03.3	17	76°17.3	15.1	17	75°55.4	22.7	17	75°33.1	26.1	17	75°10.7	25.3	17	74°48.4	20.2
18	92°52.9	S21°36.3	18	92°36.1	S22°03.9	18	92°18.0	S22°27.7	18	91°58.6	S22°47.6	18	91°38.3	S23°03.4	18	91°17.0	S23°15.2	18	90°55.1	S23°22.8	18	90°32.8	S23°26.1	18	90°10.4	S23°25.2	18	89°48.1	S23°20.1
19	107°52.7	36.7	19	107°35.9	04.3	19	107°17.7	28.0	19	106°58.4	47.8	19	106°38.0	03.6	19	106°16.7	15.3	19	105°54.8	22.8	19	105°32.5	26.1	19	105°10.1	25.2	19	104°47.8	20.0
20	122°52.5	37.1	20	122°35.6	04.6	20	122°17.5	28.3	20	121°58.1	48.1	20	121°37.7	03.8	20	121°16.4	15.5	20	120°54.5	22.9	20	120°32.2	26.1	20	120°09.8	25.1	20	119°47.5	19.9
21	137°52.2	·· 37.5	21	137°35.4	·· 05.0	21	137°17.2	·· 28.6	21	136°57.8	·· 48.3	21	136°37.4	·· 04.0	21	136°16.1	·· 15.6	21	135°54.2	·· 23.0	21	135°31.9	·· 26.2	21	135°09.5	·· 25.1	21	134°47.2	·· 19.8
22	152°52.0	37.9	22	152°35.1	05.3	22	152°16.9	28.9	22	151°57.5	48.6	22	151°37.1	04.2	22	151°15.8	15.7	22	150°53.9	23.1	22	150°31.6	26.2	22	150°09.2	25.1	22	149°46.9	19.7
23	167°51.8	38.3	23	167°34.9	05.7	23	167°16.7	29.2	23	166°57.3	48.8	23	166°36.8	04.4	23	166°15.5	15.9	23	165°53.6	23.1	23	165°31.3	26.2	23	165°08.8	25.0	23	164°46.6	19.6
	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		SD.=16.2	d=-0.1		SD.=16.3	d=-0.1		SD.=16.3	d=-0.0		SD.=16.3	d=0.0		SD.=16.3	d=0.1

27	GHA	Dec	30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec
0	179°46.2	S23°19.5	0	179°24.3	S23°09.8	0	179°03.0	S22°56.0	0	178°42.5	S22°38.0	0	178°22.9	S22°16.0
1	194°45.9	19.4	1	194°24.0	09.6	1	194°02.7	55.7	1	193°42.2	37.7	1	193°22.6	15.7
2	209°45.6	19.3	2	209°23.7	09.5	2	209°02.4	55.5	2	208°41.9	37.5	2	208°22.4	15.4
3	224°45.3	·· 19.2	3	224°23.4	·· 09.3	3	224°02.1	·· 55.3	3	223°41.6	·· 37.2	3	223°22.1	·· 15.0
4	239°45.0	19.1	4	239°23.1	09.1	4	239°01.8	55.1	4	238°41.4	36.9	4	238°21.8	14.7
5	254°44.7	19.0	5	254°22.8	09.0	5	254°01.6	54.8	5	253°41.1	36.6	5	253°21.6	14.4
6	269°44.4	S23°18.8	6	269°22.5	S23°08.8	6	269°01.3	S22°54.6	6	268°40.8	S22°36.3	6	268°21.3	S22°14.0
7	284°44.1	18.7	7	284°22.2	08.6	7	284°01.0	54.4	7	283°40.5	36.1	7	283°21.0	13.7
8	299°43.8	18.6	8	299°21.9	08.5	8	299°00.7	54.2	8	298°40.2	35.8	8	298°20.8	13.4
9	314°43.5	·· 18.5	9	314°21.6	·· 08.3	9	314°00.4	·· 53.9	9	313°40.0	·· 35.5	9	313°20.5	·· 13.0
10	329°43.2	18.4	10	329°21.3	08.1	10	329°00.1	53.7	10	328°39.7	35.2	10	328°20.2	12.7
11	344°42.9	18.3	11	344°21.0	08.0	11	343°59.8	53.5	11	343°39.4	34.9	11	343°20.0	12.3
12	359°42.6	S23°18.2	12	359°20.7	S23°07.8	12	358°59.5	S22°53.3	12	358°39.1	S22°34.6	12	358°19.7	S22°12.0
13	14°42.3	18.1	13	14°20.4	07.6	13	13°59.2	53.0	13	13°38.9	34.3	13	13°19.5	11.6
14	29°41.9	17.9	14	29°20.1	07.4	14	28°59.0	52.8	14	28°38.6	34.1	14	28°19.2	11.3
15	44°41.6	·· 17.8	15	44°19.8	·· 07.3	15	43°58.7	·· 52.6	15	43°38.3	·· 33.8	15	43°18.9	·· 11.0
16	59°41.3	17.7	16	59°19.5	07.1	16	58°58.4	52.3	16	58°38.0	33.5	16	58°18.7	10.6
17	74°41.0	17.6	17	74°19.2	06.9	17	73°58.1	52.1	17	73°37.8	33.2	17	73°18.4	10.3
18	89°40.7	S23°17.5	18	89°18.9	S23°06.7	18	88°57.8	S22°51.9	18	88°37.5	S22°32.9	18	88°18.2	S22°09.9
19	104°40.4	17.3	19	104°18.6	06.6	19	103°57.5	51.6	19	103°37.2	32.6	19	103°17.9	09.6
20	119°40.1	17.2	20	119°18.3	06.4	20	118°57.2	51.4	20	118°36.9	32.3	20	118°17.6	09.2
21	134°39.8	·· 17.1	21	134°18.0	·· 06.2	21	133°56.9	·· 51.1	21	133°36.7	·· 32.0	21	133°17.4	·· 08.9
22	149°39.5	17.0	22	149°17.7	06.0	22	148°56.6	50.9	22	148°36.4	31.7	22	148°17.1	08.5
23	164°39.2	16.9	23	164°17.4	05.8	23	163°56.4	50.7	23	163°36.1	31.4	23	163°16.9	08.2
	SD.=16.3	d=0.1		SD.=16.3	d=0.2		SD.=16.3	d=0.2		SD.=16.3	d=0.3		SD.=16.3	d=0.3

28	GHA	Dec	31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec
0	179°38.9	S23°16.7	0	179°17.1	S23°05.7	0	178°56.1	S22°50.4	0	178°35.8	S22°31.1	0	178°16.6	S22°07.8
1	194°38.6	16.6	1	194°16.8	05.5	1	193°55.8	50.2	1	193°35.6	30.8	1	193°16.3	07.5
2	209°38.3	16.5	2	209°16.6	05.3	2	208°55.5	49.9	2	208°35.3	30.5	2	208°16.1	07.1
3	224°38.0	·· 16.4	3	224°16.3	·· 05.1	3	223°55.2	·· 49.7	3	223°35.0	·· 30.2	3	223°15.8	·· 06.8
4	239°37.7	16.2	4	239°16.0	04.9	4	238°54.9	49.5	4	238°34.7	29.9	4	238°15.6	06.4
5	254°37.4	16.1	5	254°15.7	04.7	5	253°54.6	49.2	5	253°34.5	29.6	5	253°15.3	06.1
6	269°37.1	S23°16.0	6	269°15.4	S23°04.5	6	268°54.3	S22°49.0	6	268°34.2	S22°29.3	6	268°15.0	S22°05.7
7	284°36.7	15.8	7	284°15.1	04.4	7	283°54.1	48.7	7	283°33.9	29.0	7	283°14.8	05.4
8	299°36.4	15.7	8	299°14.8	04.2	8	298°53.8	48.5	8	298°33.6	28.7	8	298°14.5	05.0
9	314°36.1	·· 15.6	9	314°14.5	·· 04.0	9	313°53.5	·· 48.2	9	313°33.4	·· 28.4	9	313°14.3	·· 04.6
10	329°35.8	15.4	10	329°14.2	03.8	10	328°53.2	48.0	10	328°33.1	28.1	10	328°14.0	04.3
11	344°35.5	15.3	11	344°13.9	03.6	11	343°52.9	47.7	11	343°32.8	27.8	11	343°13.7	03.9
12	359°35.2	S23°15.2	12	359°13.6	S23°03.4	12	358°52.6	S22°47.5	12	358°32.6	S22°27.5	12	358°13.5	S22°03.6
13	14°34.9	15.0	13	14°13.3	03.2	13	13°52.3	47.2	13	13°32.3	27.2	13	13°13.2	03.2
14	29°34.6	14.9	14	29°13.0	03.0	14	28°52.1	47.0	14	28°32.0	26.9	14	28°13.0	02.8
15	44°34.3	·· 14.8	15	44°12.7	·· 02.8	15	43°51.8	·· 46.7	15	43°31.7	·· 26.6	15	43°12.7	·· 02.5
16	59°34.0	14.6	16	59°12.4	02.6	16	58°51.5	46.5	16	58°31.5	26.3	16	58°12.5	02.1
17	74°33.7	14.5	17	74°12.1	02.4	17	73°51.2	46.2	17	73°31.2	26.0	17	73°12.2	01.8
18	89°33.4	S23°14.4	18	89°11.8	S23°02.2	18	88°50.9	S22°46.0	18	88°30.9	S22°25.7	18	88°12.0	S22°01.4
19	104°33.1	14.2	19	104°11.5	02.0	19	103°50.6	45.7	19	103°30.6	25.4	19	103°11.7	01.0
20	119°32.8	14.1	20	119°11.2	01.8	20	118°50.4	45.5	20	118°30.4	25.1	20	118°11.4	00.7
21	134°32.5	·· 13.9	21	134°10.9	·· 01.6	21	133°50.1	·· 45.2	21	133°30.1	·· 24.7	21	133°11.2	22°00.3
22	149°32.2	13.8	22	149°10.6	01.4	22	148°49.8	45.0	22	148°29.8	24.4	22	148°10.9	21°59.9
23	164°31.9	13.6	23	164°10.3	01.2	23	163°49.5	44.7	23	163°29.6	24.1	23	163°10.7	59.6
	SD.=16.3	d=0.1		SD.=16.3	d=0.2		SD.=16.3	d=0.2		SD.=16.3	d=0.3		SD.=16.3	d=0.4

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	179°31.6	S23°13.5	0	179°10.0	S23°01.0	0	178°49.2	S22°44.4	0	178°29.3	S22°23.8	0	178°10.4	S21°59.2
1	194°31.3	13.4	1	194°09.7	00.8	1	193°48.9	44.2	1	193°29.0	23.5	1	193°10.2	58.8
2	209°31.0	13.2	2	209°09.5	00.6	2	208°48.7	43.9	2	208°28.8	23.2	2	208°09.9	58.5
3	224°30.7	·· 13.1	3	224°09.2	·· 00.4	3	223°48.4	·· 43.7	3	223°28.5	·· 22.9	3	223°09.7	·· 58.1
4	239°30.4	12.9	4	239°08.9	00.2	4	238°48.1	43.4	4	238°28.2	22.5	4	238°09.4	57.7
5	254°30.1	12.8	5	254°08.6	23°00.0	5	253°47.8	43.1	5	253°28.0	22.2	5	253°09.2	57.3
6	269°29.8	S23°12.6	6	269°08.3	S22°59.8	6	268°47.5	S22°42.9	6	268°27.7	S22°21.9	6	268°08.9	S21°57.0
7	284°29.5	12.5	7	284°08.0	59.6	7	283°47.2	42.6	7	283°27.4	21.6	7	283°08.7	56.6
8	299°29.2	12.3	8	299°07.7	59.4	8	298°47.0	42.4	8	298°27.1	21.3	8	298°08.4	56.2
9	314°28.9	·· 12.2	9	314°07.4	·· 59.2	9	313°46.7	·· 42.1	9	313°26.9	·· 20.9	9	313°08.2	·· 55.8
10	329°28.6	12.0	10	329°07.1	59.0	10	328°46.4	41.8	10	328°26.6	20.6	10	328°07.9	55.5
11	344°28.2	11.9	11	344°06.8	58.8	11	343°46.1	41.6	11	343°26.3	20.3	11	343°07.6	55.1
12	359°27.9	S23°11.7	12	359°06.5	S22°58.6	12	358°45.8	S22°41.3	12	358°26.1	S22°20.0	12	358°07.4	S21°54.7
13	14°27.6	11.6	13	14°06.2	58.3	13	13°45.6	41.0	13	13°25.8	19.7	13	13°07.1	54.3
14	29°27.3	11.4	14	29°05.9	58.1	14	28°45.3	40.7	14	28°25.5	19.3	14	28°06.9	54.0
15	44°27.0	·· 11.2	15	44°05.6	·· 57.9	15	43°45.0	·· 40.5	15	43°25.3	·· 19.0	15	43°06.6	·· 53.6
16	59°26.7	11.1	16	59°05.3	57.7	16	58°44.7	40.2	16	58°25.0	18.7	16	58°06.4	53.2
17	74°26.4	10.9	17	74°05.1	57.5	17	73°44.4	39.9	17	73°24.7	18.4	17	73°06.1	52.8
18	89°26.1	S23°10.8	18	89°04.8	S22°57.3	18	88°44.2	S22°39.7	18	88°24.5	S22°18.0	18	88°05.9	S21°52.4
19	104°25.8	10.6	19	104°04.5	57.1	19	103°43.9	39.4	19	103°24.2	17.7	19	103°05.6	52.1
20	119°25.5	10.5	20	119°04.2	56.8	20	118°43.6	39.1	20	118°23.9	17.4	20	118°05.4	51.7
21	134°25.2	·· 10.3	21	134°03.9	·· 56.6	21	133°43.3	·· 38.8	21	133°23.7	·· 17.0	21	133°05.1	·· 51.3
22	149°24.9	10.1	22	149°03.6	56.4	22	148°43.0	38.6	22	148°23.4	16.7	22	148°04.9	50.9
23	164°24.6	10.0	23	164°03.3	56.2	23	163°42.8	38.3	23	163°23.1	16.4	23	163°04.6	50.5
	SD.=16.3	d=0.1		SD.=16.3	d=0.2		SD.=16.3	d=0.3		SD.=16.3	d=0.3		SD.=16.3	d=0.4

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	Sun	Aries	Moon	v and d corr		
12	Plan.					
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	Sun	Aries	Moon	v and d corr		
13	Plan.					
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	Sun	Aries	Moon	v and d corr		
14	Plan.					
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	Sun	Aries	Moon	v and d corr		
18	Plan.					
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	Sun	Aries	Moon	v and d corr		
19	Plan.					
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	Sun	Aries	Moon	v and d corr		
20	Plan.					
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	Sun	Aries	Moon	v and d corr		
42	Plan.					
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	Sun	Aries	Moon	v and d corr		
43	Plan.					
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	Sun	Aries	Moon	v and d corr		
44	Plan.					
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	Sun	Aries	Moon	v and d corr		
57	Plan.					
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	Sun	Aries	Moon	v and d corr		
58	Plan.					
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	Sun	Aries	Moon	v and d corr		
59	Plan.					
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

Increments and Corrections

Refract.

H_a	*ref*
5°	9.9
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

Parallax of the Moon

H_a	0-5°	5-10°	10-15°	15-20°	20-25°	25-30°	30-35°	35-40°	40-45°	45-50°	50-55°	55-60°	60-65°	65-70°	70-75°	75-80°	80-85°	85-90°
′	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°
0	54.0	53.8	53.2	52.2	50.7	48.9	46.8	44.2	41.4	38.2	34.7	31.0	27.0	22.8	18.5	14.0	9.4	4.7
10	54.0	53.8	53.2	52.1	50.7	48.9	46.7	44.1	41.3	38.1	34.6	30.8	26.9	22.7	18.3	13.8	9.2	4.5
20	54.0	53.8	53.1	52.1	50.6	48.8	46.6	44.1	41.2	38.0	34.5	30.7	26.7	22.5	18.2	13.7	9.1	4.4
30	54.0	53.8	53.1	52.0	50.6	48.7	46.5	44.0	41.1	37.8	34.3	30.6	26.6	22.4	18.0	13.5	8.9	4.2
40	54.0	53.7	53.1	52.0	50.5	48.7	46.4	43.9	41.0	37.7	34.2	30.5	26.5	22.3	17.9	13.4	8.8	4.1
50	54.0	53.7	53.0	52.0	50.5	48.6	46.4	43.8	40.9	37.6	34.1	30.3	26.3	22.1	17.7	13.2	8.6	3.9
′	1°	6°	11°	16°	21°	26°	31°	36°	41°	46°	51°	56°	61°	66°	71°	76°	81°	86°
0	54.0	53.7	53.0	51.9	50.4	48.5	46.3	43.7	40.8	37.5	34.0	30.2	26.2	22.0	17.6	13.1	8.4	3.8
10	54.0	53.7	53.0	51.9	50.4	48.5	46.2	43.6	40.7	37.4	33.9	30.1	26.0	21.8	17.4	12.9	8.3	3.6
20	54.0	53.7	52.9	51.8	50.3	48.4	46.1	43.5	40.5	37.3	33.7	29.9	25.9	21.7	17.3	12.8	8.1	3.5
30	54.0	53.7	52.9	51.8	50.2	48.3	46.0	43.4	40.4	37.2	33.6	29.8	25.8	21.5	17.1	12.6	8.0	3.3
40	54.0	53.6	52.9	51.7	50.2	48.3	46.0	43.3	40.3	37.1	33.5	29.7	25.6	21.4	17.0	12.5	7.8	3.1
50	54.0	53.6	52.9	51.7	50.1	48.2	45.9	43.2	40.2	36.9	33.4	29.5	25.5	21.2	16.8	12.3	7.7	3.0
′	2°	7°	12°	17°	22°	27°	32°	37°	42°	47°	52°	57°	62°	67°	72°	77°	82°	87°
0	54.0	53.6	52.8	51.6	50.1	48.1	45.8	43.1	40.1	36.8	33.2	29.4	25.4	21.1	16.7	12.1	7.5	2.8
10	54.0	53.6	52.8	51.6	50.0	48.0	45.7	43.0	40.0	36.7	33.1	29.3	25.2	21.0	16.5	12.0	7.4	2.7
20	54.0	53.6	52.8	51.5	49.9	48.0	45.6	42.9	39.9	36.6	33.0	29.1	25.1	20.8	16.4	11.8	7.2	2.5
30	53.9	53.5	52.7	51.5	49.9	47.9	45.5	42.8	39.8	36.5	32.9	29.0	24.9	20.7	16.2	11.7	7.0	2.4
40	53.9	53.5	52.7	51.5	49.8	47.8	45.5	42.7	39.7	36.4	32.7	28.9	24.8	20.5	16.1	11.5	6.9	2.2
50	53.9	53.5	52.7	51.4	49.8	47.8	45.4	42.6	39.6	36.2	32.6	28.7	24.7	20.4	15.9	11.4	6.7	2.0
′	3°	8°	13°	18°	23°	28°	33°	38°	43°	48°	53°	58°	63°	68°	73°	78°	83°	88°
0	53.9	53.5	52.6	51.4	49.7	47.7	45.3	42.6	39.5	36.1	32.5	28.6	24.5	20.2	15.8	11.2	6.6	1.9
10	53.9	53.5	52.6	51.3	49.6	47.6	45.2	42.5	39.4	36.0	32.4	28.5	24.4	20.1	15.6	11.1	6.4	1.7
20	53.9	53.4	52.5	51.3	49.6	47.5	45.1	42.4	39.3	35.9	32.2	28.3	24.2	19.9	15.5	10.9	6.3	1.6
30	53.9	53.4	52.5	51.2	49.5	47.5	45.0	42.3	39.2	35.8	32.1	28.2	24.1	19.8	15.3	10.8	6.1	1.4
40	53.9	53.4	52.5	51.2	49.5	47.4	44.9	42.2	39.1	35.7	32.0	28.1	24.0	19.6	15.2	10.6	6.0	1.3
50	53.9	53.4	52.4	51.1	49.4	47.3	44.9	42.1	39.0	35.5	31.9	27.9	23.8	19.5	15.0	10.5	5.8	1.1
′	4°	9°	14°	19°	24°	29°	34°	39°	44°	49°	54°	59°	64°	69°	74°	79°	84°	89°
0	53.9	53.3	52.4	51.1	49.3	47.2	44.8	42.0	38.8	35.4	31.7	27.8	23.7	19.4	14.9	10.3	5.6	0.9
10	53.9	53.3	52.4	51.0	49.3	47.2	44.7	41.9	38.7	35.3	31.6	27.7	23.5	19.2	14.7	10.1	5.5	0.8
20	53.8	53.3	52.3	51.0	49.2	47.1	44.6	41.8	38.6	35.2	31.5	27.5	23.4	19.1	14.6	10.0	5.3	0.6
30	53.8	53.3	52.3	50.9	49.1	47.0	44.5	41.7	38.5	35.1	31.4	27.4	23.2	18.9	14.4	9.8	5.2	0.5
40	53.8	53.2	52.2	50.8	49.1	46.9	44.4	41.6	38.4	35.0	31.2	27.3	23.1	18.8	14.3	9.7	5.0	0.3
50	53.8	53.2	52.2	50.8	49.0	46.8	44.3	41.5	38.3	34.8	31.1	27.1	23.0	18.6	14.1	9.5	4.9	0.2
HP	correction for HP per column																	
54.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0
54.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.0
54.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.1	0.0
55.2	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.0	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.1
55.5	1.5	1.5	1.5	1.4	1.4	1.3	1.3	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.3	0.2	0.1
55.8	1.8	1.8	1.8	1.7	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.8	0.7	0.5	0.4	0.2	0.1
56.1	2.1	2.1	2.1	2.0	1.9	1.9	1.8	1.7	1.5	1.4	1.3	1.1	1.0	0.8	0.6	0.5	0.3	0.1
56.4	2.4	2.4	2.3	2.3	2.2	2.1	2.0	1.9	1.8	1.6	1.5	1.3	1.1	0.9	0.7	0.5	0.3	0.1
56.7	2.7	2.7	2.6	2.6	2.5	2.4	2.3	2.1	2.0	1.8	1.6	1.5	1.2	1.0	0.8	0.6	0.4	0.1
57.0	3.0	3.0	2.9	2.9	2.8	2.7	2.5	2.4	2.2	2.0	1.8	1.6	1.4	1.1	0.9	0.6	0.4	0.1
57.3	3.3	3.3	3.2	3.1	3.0	2.9	2.8	2.6	2.4	2.2	2.0	1.8	1.5	1.3	1.0	0.7	0.4	0.1
57.6	3.6	3.6	3.5	3.4	3.3	3.2	3.0	2.9	2.7	2.4	2.2	1.9	1.7	1.4	1.1	0.8	0.5	0.2
57.9	3.9	3.9	3.8	3.7	3.6	3.5	3.3	3.1	2.9	2.6	2.4	2.1	1.8	1.5	1.2	0.8	0.5	0.2
58.2	4.2	4.2	4.1	4.0	3.9	3.7	3.5	3.3	3.1	2.8	2.6	2.3	1.9	1.6	1.3	0.9	0.5	0.2
58.5	4.5	4.5	4.4	4.3	4.2	4.0	3.8	3.6	3.3	3.0	2.7	2.4	2.1	1.7	1.4	1.0	0.6	0.2
58.8	4.8	4.8	4.7	4.6	4.4	4.3	4.0	3.8	3.5	3.2	2.9	2.6	2.2	1.8	1.4	1.0	0.6	0.2
59.1	5.1	5.1	5.0	4.9	4.7	4.5	4.3	4.0	3.8	3.4	3.1	2.7	2.4	2.0	1.5	1.1	0.7	0.2
59.4	5.4	5.4	5.3	5.2	5.0	4.8	4.6	4.3	4.0	3.6	3.3	2.9	2.5	2.1	1.6	1.2	0.7	0.2
59.7	5.7	5.7	5.6	5.4	5.3	5.1	4.8	4.5	4.2	3.9	3.5	3.1	2.6	2.2	1.7	1.2	0.7	0.2
60.0	6.0	5.9	5.9	5.7	5.5	5.3	5.1	4.8	4.4	4.1	3.7	3.2	2.8	2.3	1.8	1.3	0.8	0.3
60.3	6.3	6.2	6.2	6.0	5.8	5.6	5.3	5.0	4.6	4.3	3.8	3.4	2.9	2.4	1.9	1.4	0.8	0.3
60.6	6.6	6.5	6.4	6.3	6.1	5.9	5.6	5.2	4.9	4.5	4.0	3.5	3.0	2.5	2.0	1.4	0.9	0.3
60.9	6.9	6.8	6.7	6.6	6.4	6.1	5.8	5.5	5.1	4.7	4.2	3.7	3.2	2.6	2.1	1.5	0.9	0.3
61.2	7.2	7.1	7.0	6.9	6.7	6.4	6.1	5.7	5.3	4.9	4.4	3.9	3.3	2.8	2.2	1.6	0.9	0.3
61.5	7.5	7.4	7.3	7.2	6.9	6.7	6.3	6.0	5.5	5.1	4.6	4.0	3.5	2.9	2.3	1.6	1.0	0.3

DIP

m	*dip*	*ft*
1	1.8	3.2
1.5	2.2	4.9
2.0	2.5	6.5
2.5	2.8	8.1
3.0	3.0	9.7
3.5	3.3	11.3
4.0	3.5	13.0
4.5	3.7	14.6
5.0	3.9	16.2
5.5	4.1	17.8
6.0	4.3	19.5
6.5	4.5	21.1
7.0	4.7	22.7
7.5	4.8	24.3
8.0	5.0	25.9
8.5	5.1	27.6
9.0	5.3	29.2
9.5	5.4	30.8
10.0	5.6	32.4
10.5	5.7	34.0
11.0	5.8	35.7
11.5	6.0	37.3
12.0	6.1	38.9
12.5	6.2	40.5
13.0	6.3	42.2
13.5	6.5	43.8
14.0	6.6	45.4
14.5	6.7	47.0
15.0	6.8	48.6
15.5	6.9	50.3
16.0	7.0	51.9
16.5	7.1	53.5
17.0	7.2	55.1
17.5	7.4	56.7
18.0	7.5	58.4
18.5	7.6	60.0
19.0	7.7	61.6
19.5	7.8	63.2
20.0	7.9	64.9
20.5	8.0	66.5
21.0	8.1	68.1
21.5	8.2	69.7
22.0	8.2	71.3
22.5	8.3	73.0
23.0	8.4	74.6
23.5	8.5	76.2
24.0	8.6	77.8
24.5	8.7	79.4
25.0	8.8	81.1

Conversion of Arc to Time

0° - 59°		
°	h	m
0	0	00
1	0	04
2	0	08
3	0	12
4	0	16
5	0	20
6	0	24
7	0	28
8	0	32
9	0	36
10	0	40
11	0	44
12	0	48
13	0	52
14	0	56
15	1	00
16	1	04
17	1	08
18	1	12
19	1	16
20	1	20
21	1	24
22	1	28
23	1	32
24	1	36
25	1	40
26	1	44
27	1	48
28	1	52
29	1	56
30	2	00
31	2	04
32	2	08
33	2	12
34	2	16
35	2	20
36	2	24
37	2	28
38	2	32
39	2	36
40	2	40
41	2	44
42	2	48
43	2	52
44	2	56
45	3	00
46	3	04
47	3	08
48	3	12
49	3	16
50	3	20
51	3	24
52	3	28
53	3	32
54	3	36
55	3	40
56	3	44
57	3	48
58	3	52
59	3	56
60	4	00

60° - 119°		
°	h	m
60	4	00
61	4	04
62	4	08
63	4	12
64	4	16
65	4	20
66	4	24
67	4	28
68	4	32
69	4	36
70	4	40
71	4	44
72	4	48
73	4	52
74	4	56
75	5	00
76	5	04
77	5	08
78	5	12
79	5	16
80	5	20
81	5	24
82	5	28
83	5	32
84	5	36
85	5	40
86	5	44
87	5	48
88	5	52
89	5	56
90	6	00
91	6	04
92	6	08
93	6	12
94	6	16
95	6	20
96	6	24
97	6	28
98	6	32
99	6	36
100	6	40
101	6	44
102	6	48
103	6	52
104	6	56
105	7	00
106	7	04
107	7	08
108	7	12
109	7	16
110	7	20
111	7	24
112	7	28
113	7	32
114	7	36
115	7	40
116	7	44
117	7	48
118	7	52
119	7	56
120	8	00

120° - 179°		
°	h	m
120	8	00
121	8	04
122	8	08
123	8	12
124	8	16
125	8	20
126	8	24
127	8	28
128	8	32
129	8	36
130	8	40
131	8	44
132	8	48
133	8	52
134	8	56
135	9	00
136	9	04
137	9	08
138	9	12
139	9	16
140	9	20
141	9	24
142	9	28
143	9	32
144	9	36
145	9	40
146	9	44
147	9	48
148	9	52
149	9	56
150	10	00
151	10	04
152	10	08
153	10	12
154	10	16
155	10	20
156	10	24
157	10	28
158	10	32
159	10	36
160	10	40
161	10	44
162	10	48
163	10	52
164	10	56
165	11	00
166	11	04
167	11	08
168	11	12
169	11	16
170	11	20
171	11	24
172	11	28
173	11	32
174	11	36
175	11	40
176	11	44
177	11	48
178	11	52
179	11	56
180	12	00

180° - 239°		
°	h	m
180	12	00
181	12	04
182	12	08
183	12	12
184	12	16
185	12	20
186	12	24
187	12	28
188	12	32
189	12	36
190	12	40
191	12	44
192	12	48
193	12	52
194	12	56
195	13	00
196	13	04
197	13	08
198	13	12
199	13	16
200	13	20
201	13	24
202	13	28
203	13	32
204	13	36
205	13	40
206	13	44
207	13	48
208	13	52
209	13	56
210	14	00
211	14	04
212	14	08
213	14	12
214	14	16
215	14	20
216	14	24
217	14	28
218	14	32
219	14	36
220	14	40
221	14	44
222	14	48
223	14	52
224	14	56
225	15	00
226	15	04
227	15	08
228	15	12
229	15	16
230	15	20
231	15	24
232	15	28
233	15	32
234	15	36
235	15	40
236	15	44
237	15	48
238	15	52
239	15	56
240	16	00

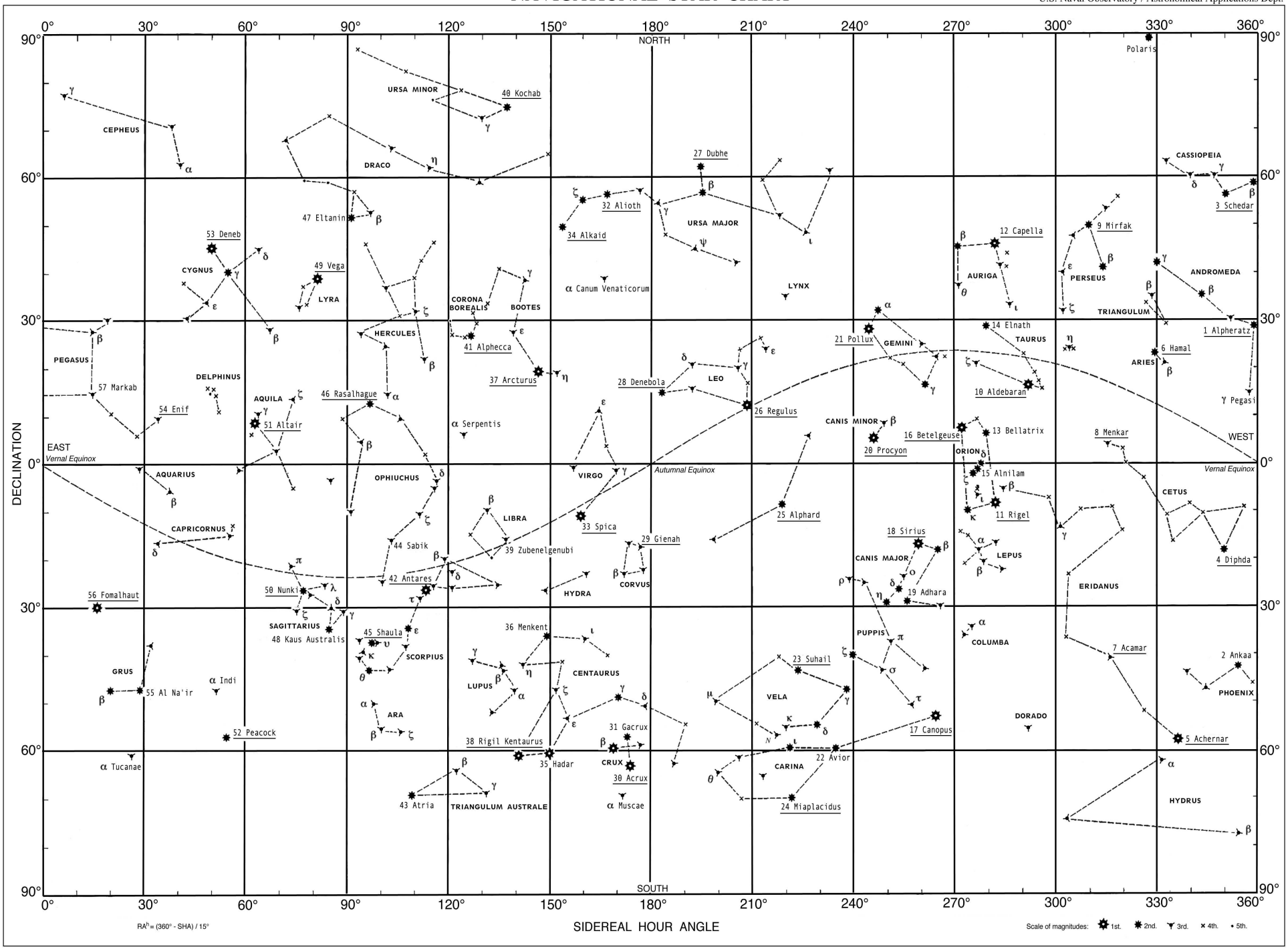
240° - 299°		
°	h	m
240	16	00
241	16	04
242	16	08
243	16	12
244	16	16
245	16	20
246	16	24
247	16	28
248	16	32
249	16	36
250	16	40
251	16	44
252	16	48
253	16	52
254	16	56
255	17	00
256	17	04
257	17	08
258	17	12
259	17	16
260	17	20
261	17	24
262	17	28
263	17	32
264	17	36
265	17	40
266	17	44
267	17	48
268	17	52
269	17	56
270	18	00
271	18	04
272	18	08
273	18	12
274	18	16
275	18	20
276	18	24
277	18	28
278	18	32
279	18	36
280	18	40
281	18	44
282	18	48
283	18	52
284	18	56
285	19	00
286	19	04
287	19	08
288	19	12
289	19	16
290	19	20
291	19	24
292	19	28
293	19	32
294	19	36
295	19	40
296	19	44
297	19	48
298	19	52
299	19	56
300	20	00

300° - 360°		
°	h	m
300	20	00
301	20	04
302	20	08
303	20	12
304	20	16
305	20	20
306	20	24
307	20	28
308	20	32
309	20	36
310	20	40
311	20	44
312	20	48
313	20	52
314	20	56
315	21	00
316	21	04
317	21	08
318	21	12
319	21	16
320	21	20
321	21	24
322	21	28
323	21	32
324	21	36
325	21	40
326	21	44
327	21	48
328	21	52
329	21	56
330	22	00
331	22	04
332	22	08
333	22	12
334	22	16
335	22	20
336	22	24
337	22	28
338	22	32
339	22	36
340	22	40
341	22	44
342	22	48
343	22	52
344	22	56
345	23	00
346	23	04
347	23	08
348	23	12
349	23	16
350	23	20
351	23	24
352	23	28
353	23	32
354	23	36
355	23	40
356	23	44
357	23	48
358	23	52
359	23	56
360	24	00

0′ - 59′		
′	m	s
0	0	00
1	0	04
2	0	08
3	0	12
4	0	16
5	0	20
6	0	24
7	0	28
8	0	32
9	0	36
10	0	40
11	0	44
12	0	48
13	0	52
14	0	56
15	1	00
16	1	04
17	1	08
18	1	12
19	1	16
20	1	20
21	1	24
22	1	28
23	1	32
24	1	36
25	1	40
26	1	44
27	1	48
28	1	52
29	1	56
30	2	00
31	2	04
32	2	08
33	2	12
34	2	16
35	2	20
36	2	24
37	2	28
38	2	32
39	2	36
40	2	40
41	2	44
42	2	48
43	2	52
44	2	56
45	3	00
46	3	04
47	3	08
48	3	12
49	3	16
50	3	20
51	3	24
52	3	28
53	3	32
54	3	36
55	3	40
56	3	44
57	3	48
58	3	52
59	3	56
60	4	00

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

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

NAVIGATIONAL STAR CHART

U.S. Naval Observatory / Astronomical Applications Dept.