
The Nautical Almanac for the Sun 2018



downloaded from:

TheNauticalAlmanac.com

Disclaimer:

These are computer generated tables from a program written by Enno Rodegerdts. Use at your own risk. The accuracy has been checked as good as possible but can not be guaranteed. This means, if you get lost on the oceans because of errors in this publication I can not be held liable. For security relevant applications you should buy an official version of the nautical almanac.

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

$$Hc = \text{asin}[\sin(\text{Declination}) * \sin(\text{Latitude}) + \cos(\text{Latitude}) * \cos(\text{Declination}) * \cos(\text{LHA})]$$

As it would be entered into the Casio calculator

$$\text{Sin}^{-1}(\text{Sin}(\text{Ap Latitude}) \times \text{Sin}(\text{Declination}) + \text{Cos}(\text{Ap Latitude}) \times \text{Cos}(\text{Declination}) \times \text{Cos}(\text{LHA}))$$

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, in **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

$$Z = \text{acos}[(\sin(\text{Declination}) - \sin(\text{Ap Latitude}) \times \sin(\text{Hc})) \div (\cos(\text{Ap Latitude}) \times \cos(\text{Hc}))]$$

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

$$\text{Cos-1}((\text{Sin}(\text{Declination}) - \text{Sin}(\text{AP Latitude}) \times \text{Sin}(\text{Hc})) \div (\text{Cos}(\text{AP Latitude}) \times \text{Cos}(\text{Hc}))$$

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

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

"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...

$$Z = \tan^{-1} ((\sin (\text{LHA}) \div (\cos(\text{AP latitude}) \times \tan(\text{declination}) - (\sin(\text{AP latitude}) \times \cos(\text{LHA})))$$

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

$$0.96 \div \text{Tan of } (H_e)$$

Determine Dip using feet

$$0.97 \times (\text{Square Root of } H_e \text{ (Height of Eye) in feet})$$

Determine Dip using meters

$$1.76 \times (\text{Square Root of } H_e \text{ (Height of eye) in meters})$$



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

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	179°10.0	-23°01.1	0	178°49.2	-22°44.6	0	178°29.3	-22°24.1	0	178°10.3	-21°59.5	0	177°52.6	-21°31.1
1	194°09.7	-23°00.9	1	193°48.9	-22°44.4	1	193°29.0	-22°23.7	1	193°10.1	-21°59.2	1	192°52.4	-21°30.7
2	209°09.5	-23°00.7	2	208°48.6	-22°44.1	2	208°28.7	-22°23.4	2	208°09.8	-21°58.8	2	207°52.2	-21°30.3
3	224°09.2	-23°00.5	3	223°48.4	-22°43.9	3	223°28.4	-22°23.1	3	223°09.6	-21°58.4	3	222°51.9	-21°29.8
4	239°08.9	-23°00.3	4	238°48.1	-22°43.6	4	238°28.2	-22°22.8	4	238°09.3	-21°58.0	4	237°51.7	-21°29.4
5	254°08.6	-23°00.1	5	253°47.8	-22°43.3	5	253°27.9	-22°22.5	5	253°09.1	-21°57.7	5	252°51.5	-21°29.0
6	269°08.3	-22°59.9	6	268°47.5	-22°43.1	6	268°27.6	-22°22.2	6	268°08.8	-21°57.3	6	267°51.2	-21°28.6
7	284°08.0	-22°59.7	7	283°47.2	-22°42.8	7	283°27.4	-22°21.9	7	283°08.6	-21°56.9	7	282°51.0	-21°28.1
8	299°07.7	-22°59.5	8	298°46.9	-22°42.5	8	298°27.1	-22°21.5	8	298°08.3	-21°56.6	8	297°50.8	-21°27.7
9	314°07.4	-22°59.3	9	313°46.7	-22°42.3	9	313°26.8	-22°21.2	9	313°08.1	-21°56.2	9	312°50.5	-21°27.3
10	329°07.1	-22°59.1	10	328°46.4	-22°42.0	10	328°26.6	-22°20.9	10	328°07.8	-21°55.8	10	327°50.3	-21°26.9
11	344°06.8	-22°58.9	11	343°46.1	-22°41.8	11	343°26.3	-22°20.6	11	343°07.6	-21°55.4	11	342°50.1	-21°26.4
12	359°06.5	-22°58.7	12	358°45.8	-22°41.5	12	358°26.0	-22°20.2	12	358°07.3	-21°55.1	12	357°49.8	-21°26.0
13	14°06.2	-22°58.5	13	13°45.5	-22°41.2	13	13°25.8	-22°19.9	13	13°07.1	-21°54.7	13	12°49.6	-21°25.6
14	29°05.9	-22°58.3	14	28°45.3	-22°40.9	14	28°25.5	-22°19.6	14	28°06.8	-21°54.3	14	27°49.4	-21°25.1
15	44°05.6	-22°58.0	15	43°45.0	-22°40.7	15	43°25.2	-22°19.3	15	43°06.5	-21°53.9	15	42°49.1	-21°24.7
16	59°05.3	-22°57.8	16	58°44.7	-22°40.4	16	58°25.0	-22°18.9	16	58°06.3	-21°53.5	16	57°48.9	-21°24.3
17	74°05.1	-22°57.6	17	73°44.4	-22°40.1	17	73°24.7	-22°18.6	17	73°06.0	-21°53.2	17	72°48.7	-21°23.9
18	89°04.8	-22°57.4	18	88°44.1	-22°39.9	18	88°24.4	-22°18.3	18	88°05.8	-21°52.8	18	87°48.4	-21°23.4
19	104°04.5	-22°57.2	19	103°43.9	-22°39.6	19	103°24.2	-22°18.0	19	103°05.5	-21°52.4	19	102°48.2	-21°23.0
20	119°04.2	-22°57.0	20	118°43.6	-22°39.3	20	118°23.9	-22°17.6	20	118°05.3	-21°52.0	20	117°48.0	-21°22.5
21	134°03.9	-22°56.8	21	133°43.3	-22°39.0	21	133°23.6	-22°17.3	21	133°05.0	-21°51.6	21	132°47.7	-21°22.1
22	149°03.6	-22°56.5	22	148°43.0	-22°38.8	22	148°23.4	-22°17.0	22	148°04.8	-21°51.2	22	147°47.5	-21°21.7
23	164°03.3	-22°56.3	23	163°42.7	-22°38.5	23	163°23.1	-22°16.7	23	163°04.5	-21°50.9	23	162°47.3	-21°21.2
	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

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	179°03.0	-22°56.1	0	178°42.5	-22°38.2	0	178°22.8	-22°16.3	0	178°04.3	-21°50.5	0	177°47.0	-21°20.8
1	194°02.7	-22°55.9	1	193°42.2	-22°37.9	1	193°22.6	-22°16.0	1	193°04.0	-21°50.1	1	192°46.8	-21°20.4
2	209°02.4	-22°55.7	2	208°41.9	-22°37.7	2	208°22.3	-22°15.7	2	208°03.8	-21°49.7	2	207°46.6	-21°19.9
3	224°02.1	-22°55.4	3	223°41.6	-22°37.4	3	223°22.0	-22°15.3	3	223°03.6	-21°49.3	3	222°46.3	-21°19.5
4	239°01.8	-22°55.2	4	238°41.3	-22°37.1	4	238°21.8	-22°15.0	4	238°03.3	-21°48.9	4	237°46.1	-21°19.0
5	254°01.6	-22°55.0	5	253°41.1	-22°36.8	5	253°21.5	-22°14.7	5	253°03.1	-21°48.5	5	252°45.9	-21°18.6
6	269°01.3	-22°54.8	6	268°40.8	-22°36.6	6	268°21.2	-22°14.3	6	268°02.8	-21°48.1	6	267°45.7	-21°18.2
7	284°01.0	-22°54.5	7	283°40.5	-22°36.3	7	283°21.0	-22°14.0	7	283°02.6	-21°47.7	7	282°45.4	-21°17.7
8	299°00.7	-22°54.3	8	298°40.2	-22°36.0	8	298°20.7	-22°13.6	8	298°02.3	-21°47.4	8	297°45.2	-21°17.3
9	314°00.4	-22°54.1	9	313°39.9	-22°35.7	9	313°20.4	-22°13.3	9	313°02.1	-21°47.0	9	312°45.0	-21°16.8
10	329°00.1	-22°53.9	10	328°39.7	-22°35.4	10	328°20.2	-22°13.0	10	328°01.8	-21°46.6	10	327°44.7	-21°16.4
11	343°59.8	-22°53.6	11	343°39.4	-22°35.1	11	343°19.9	-22°12.6	11	343°01.6	-21°46.2	11	342°44.5	-21°15.9
12	358°59.5	-22°53.4	12	358°39.1	-22°34.9	12	358°19.7	-22°12.3	12	358°01.3	-21°45.8	12	357°44.3	-21°15.5
13	13°59.2	-22°53.2	13	13°38.8	-22°34.6	13	13°19.4	-22°11.9	13	13°01.1	-21°45.4	13	12°44.1	-21°15.0
14	28°59.0	-22°52.9	14	28°38.6	-22°34.3	14	28°19.1	-22°11.6	14	28°00.8	-21°45.0	14	27°43.8	-21°14.6
15	43°58.7	-22°52.7	15	43°38.3	-22°34.0	15	43°18.9	-22°11.3	15	43°00.6	-21°44.6	15	42°43.6	-21°14.1
16	58°58.4	-22°52.5	16	58°38.0	-22°33.7	16	58°18.6	-22°10.9	16	58°00.3	-21°44.2	16	57°43.4	-21°13.7
17	73°58.1	-22°52.2	17	73°37.7	-22°33.4	17	73°18.3	-22°10.6	17	73°00.1	-21°43.8	17	72°43.2	-21°13.2
18	88°57.8	-22°52.0	18	88°37.5	-22°33.1	18	88°18.1	-22°10.2	18	87°59.9	-21°43.4	18	87°42.9	-21°12.8
19	103°57.5	-22°51.8	19	103°37.2	-22°32.8	19	103°17.8	-22°09.9	19	102°59.6	-21°43.0	19	102°42.7	-21°12.3
20	118°57.2	-22°51.5	20	118°36.9	-22°32.5	20	118°17.6	-22°09.5	20	117°59.4	-21°42.6	20	117°42.5	-21°11.9
21	133°56.9	-22°51.3	21	133°36.6	-22°32.2	21	133°17.3	-22°09.2	21	132°59.1	-21°42.2	21	132°42.3	-21°11.4
22	148°56.6	-22°51.1	22	148°36.4	-22°32.0	22	148°17.0	-22°08.8	22	147°58.9	-21°41.8	22	147°42.0	-21°11.0
23	163°56.4	-22°50.8	23	163°36.1	-22°31.7	23	163°16.8	-22°08.5	23	162°58.6	-21°41.4	23	162°41.8	-21°10.5
	SD.=16.3	d=0.2		SD.=16.3	d=0.3		SD.=16.3	d=0.3		SD.=16.3	d=0.4		SD.=16.3	d=0.4

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	178°56.1	-22°50.6	0	178°35.8	-22°31.4	0	178°16.5	-22°08.1	0	177°58.4	-21°41.0	0	177°41.6	-21°10.1
1	193°55.8	-22°50.4	1	193°35.5	-22°31.1	1	193°16.3	-22°07.8	1	192°58.2	-21°40.6	1	192°41.4	-21°09.6
2	208°55.5	-22°50.1	2	208°35.3	-22°30.8	2	208°16.0	-22°07.4	2	207°57.9	-21°40.2	2	207°41.1	-21°09.2
3	223°55.2	-22°49.9	3	223°35.0	-22°30.5	3	223°15.7	-22°07.1	3	222°57.7	-21°39.8	3	222°40.9	-21°08.7
4	238°54.9	-22°49.6	4	238°34.7	-22°30.2	4	238°15.5	-22°06.7	4	237°57.4	-21°39.4	4	237°40.7	-21°08.3
5	253°54.6	-22°49.4	5	253°34.4	-22°29.9	5	253°15.2	-22°06.4	5	252°57.2	-21°39.0	5	252°40.5	-21°07.8
6	268°54.3	-22°49.1	6	268°34.2	-22°29.6	6	268°15.0	-22°06.0	6	267°56.9	-21°38.6	6	267°40.3	-21°07.3
7	283°54.1	-22°48.9	7	283°33.9	-22°29.3	7	283°14.7	-22°05.7	7	282°56.7	-21°38.2	7	282°40.0	-21°06.9
8	298°53.8	-22°48.7	8	298°33.6	-22°29.0	8	298°14.4	-22°05.3	8	297°56.5	-21°37.8	8	297°39.8	-21°06.4
9	313°53.5	-22°48.4	9	313°33.3	-22°28.7	9	313°14.2	-22°05.0	9	312°56.2	-21°37.3	9	312°39.6	-21°06.0
10	328°53.2	-22°48.2	10	328°33.1	-22°28.4	10	328°13.9	-22°04.6	10	327°56.0	-21°36.9	10	327°39.4	-21°05.5
11	343°52.9	-22°47.9	11	343°32.8	-22°28.1	11	343°13.7	-22°04.2	11	342°55.7	-21°36.5	11	342°39.2	-21°05.0
12	358°52.6	-22°47.7	12	358°32.5	-22°27.8	12	358°13.4	-22°03.9	12	357°55.5	-21°36.1	12	357°38.9	-21°04.6
13	13°52.3	-22°47.4	13	13°32.2	-22°27.5	13	13°13.2	-22°03.5	13	12°55.3	-21°35.7	13	12°38.7	-21°04.1
14	28°52.1	-22°47.2	14	28°32.0	-22°27.2	14	28°12.9	-22°03.2	14	27°55.0	-21°35.3	14	27°38.5	-21°03.6
15	43°51.8	-22°46.9	15	43°31.7	-22°26.9	15	43°12.6	-22°02.8	15	42°54.8	-21°34.9	15	42°38.3	-21°03.2
16	58°51.5	-22°46.7	16	58°31.4	-22°26.5	16	58°12.4	-22°02.4	16	57°54.5	-21°34.5	16	57°38.1	-21°02.7
17	73°51.2	-22°46.4	17	73°31.2	-22°26.2	17	73°12.1	-22°02.1	17	72°54.3	-21°34.0	17	72°37.8	-21°02.2
18	88°50.9	-22°46.2	18	88°30.9	-22°25.9	18	88°11.9	-22°01.7	18	87°54.1	-21°33.6	18	87°37.6	-21°01.8
19	103°50.6	-22°45.9	19	103°30.6	-22°25.6	19	103°11.6	-22°01.4	19	102°53.8	-21°33.2	19	102°37.4	-21°01.3
20	118°50.3	-22°45.7	20	118°30.3	-22°25.3	20	118°11.4	-22°01.0	20	117°53.6	-21°32.8	20	117°37.2	-21°00.8
21	133°50.1	-22°45.4	21	133°30.1	-22°25.0	21	133°11.1	-22°00.6	21	132°53.4	-21°32.4	21	132°37.0	-21°00.4
22	148°49.8	-22°45.1	22	148°29.8	-22°24.7	22	148°10.9	-22°00.3	22	147°53.1	-21°31.9	22	147°36.7	-20°59.9
23	163°49.5	-22°44.9	23	163°29.5	-22°24.4	23	163°10.6	-21°59.9	23	162°52.9	-21°31.5	23	162°36.5	

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	177° 36.3	-20° 59.0	0	177° 21.5	-20° 23.2	0	177° 08.4	-19° 44.0	0	176° 57.0	-19° 01.5	0	176° 47.4	-18° 15.8
1	192° 36.1	-20° 58.5	1	192° 21.3	-20° 22.7	1	192° 08.2	-19° 43.4	1	191° 56.8	-19° 00.8	1	191° 47.3	-18° 15.2
2	207° 35.9	-20° 58.0	2	207° 21.1	-20° 22.2	2	207° 08.0	-19° 42.8	2	206° 56.7	-19° 00.2	2	206° 47.2	-18° 14.5
3	222° 35.7	-20° 57.5	3	222° 20.9	-20° 21.6	3	222° 07.9	-19° 42.3	3	221° 56.6	-18° 59.6	3	221° 47.1	-18° 13.8
4	237° 35.5	-20° 57.1	4	237° 20.7	-20° 21.1	4	237° 07.7	-19° 41.7	4	236° 56.4	-18° 59.0	4	236° 47.0	-18° 13.2
5	252° 35.2	-20° 56.6	5	252° 20.5	-20° 20.6	5	252° 07.5	-19° 41.1	5	251° 56.3	-18° 58.4	5	251° 46.8	-18° 12.5
6	267° 35.0	-20° 56.1	6	267° 20.4	-20° 20.1	6	267° 07.4	-19° 40.6	6	266° 56.1	-18° 57.8	6	266° 46.7	-18° 11.9
7	282° 34.8	-20° 55.6	7	282° 20.2	-20° 19.5	7	282° 07.2	-19° 40.0	7	281° 56.0	-18° 57.2	7	281° 46.6	-18° 11.2
8	297° 34.6	-20° 55.2	8	297° 20.0	-20° 19.0	8	297° 07.0	-19° 39.4	8	296° 55.8	-18° 56.5	8	296° 46.5	-18° 10.6
9	312° 34.4	-20° 54.7	9	312° 19.8	-20° 18.5	9	312° 06.9	-19° 38.8	9	311° 55.7	-18° 55.9	9	311° 46.4	-18° 09.9
10	327° 34.2	-20° 54.2	10	327° 19.6	-20° 18.0	10	327° 06.7	-19° 38.3	10	326° 55.6	-18° 55.3	10	326° 46.3	-18° 09.2
11	342° 34.0	-20° 53.7	11	342° 19.4	-20° 17.4	11	342° 06.5	-19° 37.7	11	341° 55.4	-18° 54.7	11	341° 46.1	-18° 08.6
12	357° 33.7	-20° 53.2	12	357° 19.2	-20° 16.9	12	357° 06.3	-19° 37.1	12	356° 55.3	-18° 54.1	12	356° 46.0	-18° 07.9
13	12° 33.5	-20° 52.8	13	12° 19.0	-20° 16.4	13	12° 06.2	-19° 36.5	13	11° 55.1	-18° 53.4	13	11° 45.9	-18° 07.2
14	27° 33.3	-20° 52.3	14	27° 18.8	-20° 15.8	14	27° 06.0	-19° 36.0	14	26° 55.0	-18° 52.8	14	26° 45.8	-18° 06.6
15	42° 33.1	-20° 51.8	15	42° 18.6	-20° 15.3	15	42° 05.9	-19° 35.4	15	41° 54.8	-18° 52.2	15	41° 45.7	-18° 05.9
16	57° 32.9	-20° 51.3	16	57° 18.4	-20° 14.8	16	57° 05.7	-19° 34.8	16	56° 54.7	-18° 51.6	16	56° 45.6	-18° 05.3
17	72° 32.7	-20° 50.8	17	72° 18.3	-20° 14.2	17	72° 05.5	-19° 34.2	17	71° 54.6	-18° 51.0	17	71° 45.5	-18° 04.6
18	87° 32.5	-20° 50.3	18	87° 18.1	-20° 13.7	18	87° 05.4	-19° 33.7	18	86° 54.4	-18° 50.3	18	86° 45.3	-18° 03.9
19	102° 32.3	-20° 49.9	19	102° 17.9	-20° 13.2	19	102° 05.2	-19° 33.1	19	101° 54.3	-18° 49.7	19	101° 45.2	-18° 03.3
20	117° 32.0	-20° 49.4	20	117° 17.7	-20° 12.6	20	117° 05.0	-19° 32.5	20	116° 54.1	-18° 49.1	20	116° 45.1	-18° 02.6
21	132° 31.8	-20° 48.9	21	132° 17.5	-20° 12.1	21	132° 04.9	-19° 31.9	21	131° 54.0	-18° 48.5	21	131° 45.0	-18° 01.9
22	147° 31.6	-20° 48.4	22	147° 17.3	-20° 11.6	22	147° 04.7	-19° 31.3	22	146° 53.9	-18° 47.8	22	146° 44.9	-18° 01.3
23	162° 31.4	-20° 47.9	23	162° 17.1	-20° 11.0	23	162° 04.5	-19° 30.7	23	161° 53.7	-18° 47.2	23	161° 44.8	-18° 00.6
	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
17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	177° 31.2	-20° 47.4	0	177° 16.9	-20° 10.5	0	177° 04.4	-19° 30.2	0	176° 53.6	-18° 46.6	0	176° 44.7	-17° 59.9
1	192° 31.0	-20° 46.9	1	192° 16.8	-20° 10.0	1	192° 04.2	-19° 29.6	1	191° 53.5	-18° 46.0	1	191° 44.6	-17° 59.3
2	207° 30.8	-20° 46.5	2	207° 16.6	-20° 09.4	2	207° 04.1	-19° 29.0	2	206° 53.3	-18° 45.3	2	206° 44.4	-17° 58.6
3	222° 30.6	-20° 46.0	3	222° 16.4	-20° 08.9	3	222° 03.9	-19° 28.4	3	221° 53.2	-18° 44.7	3	221° 44.3	-17° 57.9
4	237° 30.4	-20° 45.5	4	237° 16.2	-20° 08.3	4	237° 03.7	-19° 27.8	4	236° 53.1	-18° 44.1	4	236° 44.2	-17° 57.3
5	252° 30.2	-20° 45.0	5	252° 16.0	-20° 07.8	5	252° 03.6	-19° 27.2	5	251° 52.9	-18° 43.4	5	251° 44.1	-17° 56.6
6	267° 30.0	-20° 44.5	6	267° 15.8	-20° 07.3	6	267° 03.4	-19° 26.6	6	266° 52.8	-18° 42.8	6	266° 44.0	-17° 55.9
7	282° 29.7	-20° 44.0	7	282° 15.6	-20° 06.7	7	282° 03.2	-19° 26.1	7	281° 52.6	-18° 42.2	7	281° 43.9	-17° 55.2
8	297° 29.5	-20° 43.5	8	297° 15.5	-20° 06.2	8	297° 03.1	-19° 25.5	8	296° 52.5	-18° 41.5	8	296° 43.8	-17° 54.6
9	312° 29.3	-20° 43.0	9	312° 15.3	-20° 05.6	9	312° 02.9	-19° 24.9	9	311° 52.4	-18° 40.9	9	311° 43.7	-17° 53.9
10	327° 29.1	-20° 42.5	10	327° 15.1	-20° 05.1	10	327° 02.8	-19° 24.3	10	326° 52.2	-18° 40.3	10	326° 43.6	-17° 53.2
11	342° 28.9	-20° 42.0	11	342° 14.9	-20° 04.6	11	342° 02.6	-19° 23.7	11	341° 52.1	-18° 39.6	11	341° 43.5	-17° 52.5
12	357° 28.7	-20° 41.5	12	357° 14.7	-20° 04.0	12	357° 02.5	-19° 23.1	12	356° 52.0	-18° 39.0	12	356° 43.4	-17° 51.9
13	12° 28.5	-20° 41.0	13	12° 14.5	-20° 03.5	13	12° 02.3	-19° 22.5	13	11° 51.8	-18° 38.4	13	11° 43.2	-17° 51.2
14	27° 28.3	-20° 40.5	14	27° 14.4	-20° 02.9	14	27° 02.1	-19° 21.9	14	26° 51.7	-18° 37.7	14	26° 43.1	-17° 50.5
15	42° 28.1	-20° 40.0	15	42° 14.2	-20° 02.4	15	42° 02.0	-19° 21.3	15	41° 51.6	-18° 37.1	15	41° 43.0	-17° 49.8
16	57° 27.9	-20° 39.5	16	57° 14.0	-20° 01.8	16	57° 01.8	-19° 20.8	16	56° 51.5	-18° 36.5	16	56° 42.9	-17° 49.2
17	72° 27.7	-20° 39.0	17	72° 13.8	-20° 01.3	17	72° 01.7	-19° 20.2	17	71° 51.3	-18° 35.8	17	71° 42.8	-17° 48.5
18	87° 27.5	-20° 38.5	18	87° 13.6	-20° 00.7	18	87° 01.5	-19° 19.6	18	86° 51.2	-18° 35.2	18	86° 42.7	-17° 47.8
19	102° 27.3	-20° 38.0	19	102° 13.5	-20° 00.2	19	102° 01.4	-19° 19.0	19	101° 51.1	-18° 34.6	19	101° 42.6	-17° 47.1
20	117° 27.1	-20° 37.5	20	117° 13.3	-19° 59.6	20	117° 01.2	-19° 18.4	20	116° 50.9	-18° 33.9	20	116° 42.5	-17° 46.4
21	132° 26.9	-20° 37.0	21	132° 13.1	-19° 59.1	21	132° 01.0	-19° 17.8	21	131° 50.8	-18° 33.3	21	131° 42.4	-17° 45.8
22	147° 26.7	-20° 36.5	22	147° 12.9	-19° 58.5	22	147° 00.9	-19° 17.2	22	146° 50.7	-18° 32.6	22	146° 42.3	-17° 45.1
23	162° 26.5	-20° 36.0	23	162° 12.7	-19° 58.0	23	162° 00.7	-19° 16.6	23	161° 50.5	-18° 32.0	23	161° 42.2	-17° 44.4
	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
18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	177° 26.3	-20° 35.5	0	177° 12.6	-19° 57.4	0	177° 00.6	-19° 16.0	0	176° 50.4	-18° 31.4	0	176° 42.1	-17° 43.7
1	192° 26.1	-20° 35.0	1	192° 12.4	-19° 56.9	1	192° 00.4	-19° 15.4	1	191° 50.3	-18° 30.7	1	191° 42.0	-17° 43.0
2	207° 25.9	-20° 34.5	2	207° 12.2	-19° 56.3	2	207° 00.3	-19° 14.8	2	206° 50.2	-18° 30.1	2	206° 41.9	-17° 42.4
3	222° 25.7	-20° 34.0	3	222° 12.0	-19° 55.8	3	222° 00.1	-19° 14.2	3	221° 50.0	-18° 29.4	3	221° 41.8	-17° 41.7
4	237° 25.5	-20° 33.5	4	237° 11.8	-19° 55.2	4	236° 60.0	-19° 13.6	4	236° 49.9	-18° 28.8	4	236° 41.7	-17° 41.0
5	252° 25.3	-20° 33.0	5	252° 11.7	-19° 54.7	5	251° 59.8	-19° 13.0	5	251° 49.8	-18° 28.2	5	251° 41.6	-17° 40.3
6	267° 25.1	-20° 32.5	6	267° 11.5	-19° 54.1	6	266° 59.7	-19° 12.4	6	266° 49.7	-18° 27.5	6	266° 41.5	-17° 39.6
7	282° 24.9	-20° 32.0	7	282° 11.3	-19° 53.5	7	281° 59.5	-19° 11.8	7	281° 49.5	-18° 26.9	7	281° 41.4	-17° 38.9
8	297° 24.7	-20° 31.4	8	297° 11.1	-19° 53.0	8	296° 59.4	-19° 11.2	8	296° 49.4	-18° 26.2	8	296° 41.3	-17° 38.3
9	312° 24.5	-20° 30.9	9	312° 11.0	-19° 52.4	9	311° 59.2	-19° 10.6	9	311° 49.3	-18° 25.6	9	311° 41.2	-17° 37.6
10	327° 24.3	-20° 30.4	10	327° 10.8	-19° 51.9	10	326° 59.1	-19° 10.0	10	326° 49.1	-18° 24.9	10	326° 41.1	-17° 36.9
11	342° 24.1	-20° 29.9	11	342° 10.6	-19° 51.3	11	341° 58.9	-19° 09.4	11	341° 49.0	-18° 24.3	11	341° 41.0	-17° 36.2
12	357° 23.9	-20° 29.4	12	357° 10.4	-19° 50.7	12	356° 58.8	-19° 08.8	12	356° 48.9	-18° 23.6	12	356° 40.9	-17° 35.5
13	12° 23.7	-20° 28.9	13	12° 10.3	-19° 50.2	13	11° 58.6	-19° 08.2	13	11° 48.8	-18° 23.0	13	11° 40.8	-17° 34.8
14	27° 23.5	-20° 28.4	14	27° 10.1	-19° 49.6	14	26° 58.5	-19° 07.6	14	26° 48.7	-18° 22.3	14	26° 40.7	-17° 34.1
15	42° 23.3	-20° 27.9	15	42° 09.9	-19° 49.1	15	41° 58.3	-19° 06.9	15	41° 48.5	-18° 21.7	15	41° 40.6	-17° 33.4
16	57° 23.1	-20° 27.3	16	57° 09.7	-19° 48.5	16	56° 58.2	-19° 06.3	16	56° 48.4	-18° 21.0	16	56° 40.5	-17° 32.7
17	72° 22.9	-20° 26.8	17	72° 09.6	-19° 47.9	17	71° 58.0	-19° 05.7	17	71° 48.3	-18° 20.4	17	71° 40.4	-17° 32.1
18	87° 22.7	-20° 26.3												

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	176°39.7	-17°27.2	0	176°33.9	-16°35.8	0	176°29.8	-15°41.8	0	176°27.5	-14°45.4	0	176°27.0	-13°46.8
1	191°39.6	-17°26.5	1	191°33.8	-16°35.1	1	191°29.8	-15°41.1	1	191°27.5	-14°44.6	1	191°27.0	-13°45.9
2	206°39.6	-17°25.8	2	206°33.7	-16°34.4	2	206°29.7	-15°40.3	2	206°27.5	-14°43.8	2	206°27.0	-13°45.1
3	221°39.5	-17°25.1	3	221°33.7	-16°33.6	3	221°29.7	-15°39.5	3	221°27.5	-14°43.0	3	221°27.0	-13°44.3
4	236°39.4	-17°24.4	4	236°33.6	-16°32.9	4	236°29.7	-15°38.8	4	236°27.5	-14°42.2	4	236°27.0	-13°43.4
5	251°39.3	-17°23.7	5	251°33.5	-16°32.2	5	251°29.6	-15°38.0	5	251°27.5	-14°41.4	5	251°27.0	-13°42.6
6	266°39.2	-17°23.0	6	266°33.5	-16°31.4	6	266°29.6	-15°37.2	6	266°27.4	-14°40.6	6	266°27.0	-13°41.8
7	281°39.1	-17°22.3	7	281°33.4	-16°30.7	7	281°29.5	-15°36.5	7	281°27.4	-14°39.8	7	281°27.0	-13°40.9
8	296°39.0	-17°21.6	8	296°33.3	-16°30.0	8	296°29.5	-15°35.7	8	296°27.4	-14°39.0	8	296°27.0	-13°40.1
9	311°38.9	-17°20.9	9	311°33.3	-16°29.2	9	311°29.5	-15°34.9	9	311°27.4	-14°38.2	9	311°27.0	-13°39.3
10	326°38.8	-17°20.2	10	326°33.2	-16°28.5	10	326°29.4	-15°34.1	10	326°27.4	-14°37.4	10	326°27.0	-13°38.5
11	341°38.7	-17°19.5	11	341°33.1	-16°27.7	11	341°29.4	-15°33.4	11	341°27.3	-14°36.6	11	341°27.0	-13°37.6
12	356°38.6	-17°18.8	12	356°33.1	-16°27.0	12	356°29.3	-15°32.6	12	356°27.3	-14°35.8	12	356°27.1	-13°36.8
13	11°38.5	-17°18.1	13	11°33.0	-16°26.3	13	11°29.3	-15°31.8	13	11°27.3	-14°35.0	13	11°27.1	-13°35.9
14	26°38.5	-17°17.4	14	26°33.0	-16°25.5	14	26°29.3	-15°31.0	14	26°27.3	-14°34.2	14	26°27.1	-13°35.1
15	41°38.4	-17°16.7	15	41°32.9	-16°24.8	15	41°29.2	-15°30.3	15	41°27.3	-14°33.4	15	41°27.1	-13°34.3
16	56°38.3	-17°16.0	16	56°32.8	-16°24.0	16	56°29.2	-15°29.5	16	56°27.3	-14°32.6	16	56°27.1	-13°33.4
17	71°38.2	-17°15.3	17	71°32.8	-16°23.3	17	71°29.1	-15°28.7	17	71°27.3	-14°31.8	17	71°27.1	-13°32.6
18	86°38.1	-17°14.6	18	86°32.7	-16°22.6	18	86°29.1	-15°28.0	18	86°27.2	-14°31.0	18	86°27.1	-13°31.8
19	101°38.0	-17°13.9	19	101°32.6	-16°21.8	19	101°29.1	-15°27.2	19	101°27.2	-14°30.2	19	101°27.1	-13°30.9
20	116°37.9	-17°13.2	20	116°32.6	-16°21.1	20	116°29.0	-15°26.4	20	116°27.2	-14°29.3	20	116°27.1	-13°30.1
21	131°37.8	-17°12.5	21	131°32.5	-16°20.3	21	131°29.0	-15°25.6	21	131°27.2	-14°28.5	21	131°27.1	-13°29.3
22	146°37.8	-17°11.8	22	146°32.5	-16°19.6	22	146°28.9	-15°24.8	22	146°27.2	-14°27.7	22	146°27.2	-13°28.4
23	161°37.7	-17°11.1	23	161°32.4	-16°18.9	23	161°28.9	-15°24.1	23	161°27.2	-14°26.9	23	161°27.2	-13°27.6
	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
<hr/>														
01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	176°37.6	-17°10.4	0	176°32.3	-16°18.1	0	176°28.9	-15°23.3	0	176°27.2	-14°26.1	0	176°27.2	-13°26.7
1	191°37.5	-17°09.7	1	191°32.3	-16°17.4	1	191°28.8	-15°22.5	1	191°27.2	-14°25.3	1	191°27.2	-13°25.9
2	206°37.4	-17°09.0	2	206°32.2	-16°16.6	2	206°28.8	-15°21.7	2	206°27.1	-14°24.5	2	206°27.2	-13°25.1
3	221°37.3	-17°08.3	3	221°32.2	-16°15.9	3	221°28.8	-15°21.0	3	221°27.1	-14°23.7	3	221°27.2	-13°24.2
4	236°37.2	-17°07.5	4	236°32.1	-16°15.1	4	236°28.7	-15°20.2	4	236°27.1	-14°22.9	4	236°27.2	-13°23.4
5	251°37.2	-17°06.8	5	251°32.0	-16°14.4	5	251°28.7	-15°19.4	5	251°27.1	-14°22.1	5	251°27.2	-13°22.5
6	266°37.1	-17°06.1	6	266°32.0	-16°13.6	6	266°28.7	-15°18.6	6	266°27.1	-14°21.2	6	266°27.2	-13°21.7
7	281°37.0	-17°05.4	7	281°31.9	-16°12.9	7	281°28.6	-15°17.8	7	281°27.1	-14°20.4	7	281°27.3	-13°20.9
8	296°36.9	-17°04.7	8	296°31.9	-16°12.1	8	296°28.6	-15°17.1	8	296°27.1	-14°19.6	8	296°27.3	-13°20.0
9	311°36.8	-17°04.0	9	311°31.8	-16°11.4	9	311°28.6	-15°16.3	9	311°27.1	-14°18.8	9	311°27.3	-13°19.2
10	326°36.7	-17°03.3	10	326°31.7	-16°10.6	10	326°28.5	-15°15.5	10	326°27.1	-14°18.0	10	326°27.3	-13°18.3
11	341°36.7	-17°02.6	11	341°31.7	-16°09.9	11	341°28.5	-15°14.7	11	341°27.1	-14°17.2	11	341°27.3	-13°17.5
12	356°36.6	-17°01.9	12	356°31.6	-16°09.1	12	356°28.5	-15°13.9	12	356°27.1	-14°16.4	12	356°27.3	-13°16.7
13	11°36.5	-17°01.1	13	11°31.6	-16°08.4	13	11°28.4	-15°13.1	13	11°27.0	-14°15.5	13	11°27.4	-13°15.8
14	26°36.4	-17°00.4	14	26°31.5	-16°07.6	14	26°28.4	-15°12.4	14	26°27.0	-14°14.7	14	26°27.4	-13°15.0
15	41°36.3	-16°59.7	15	41°31.5	-16°06.9	15	41°28.4	-15°11.6	15	41°27.0	-14°13.9	15	41°27.4	-13°14.1
16	56°36.3	-16°59.0	16	56°31.4	-16°06.1	16	56°28.3	-15°10.8	16	56°27.0	-14°13.1	16	56°27.4	-13°13.3
17	71°36.2	-16°58.3	17	71°31.4	-16°05.4	17	71°28.3	-15°10.0	17	71°27.0	-14°12.3	17	71°27.4	-13°12.4
18	86°36.1	-16°57.6	18	86°31.3	-16°04.6	18	86°28.3	-15°09.2	18	86°27.0	-14°11.5	18	86°27.4	-13°11.6
19	101°36.0	-16°56.8	19	101°31.2	-16°03.9	19	101°28.3	-15°08.4	19	101°27.0	-14°10.6	19	101°27.5	-13°10.7
20	116°35.9	-16°56.1	20	116°31.2	-16°03.1	20	116°28.2	-15°07.6	20	116°27.0	-14°09.8	20	116°27.5	-13°09.9
21	131°35.9	-16°55.4	21	131°31.1	-16°02.4	21	131°28.2	-15°06.8	21	131°27.0	-14°09.0	21	131°27.5	-13°09.1
22	146°35.8	-16°54.7	22	146°31.1	-16°01.6	22	146°28.2	-15°06.1	22	146°27.0	-14°08.2	22	146°27.5	-13°08.2
23	161°35.7	-16°54.0	23	161°31.0	-16°00.9	23	161°28.1	-15°05.3	23	161°27.0	-14°07.4	23	161°27.5	-13°07.4
	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
<hr/>														
02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	176°35.6	-16°53.2	0	176°31.0	-16°00.1	0	176°28.1	-15°04.5	0	176°27.0	-14°06.6	0	176°27.5	-13°06.5
1	191°35.6	-16°52.5	1	191°30.9	-15°59.4	1	191°28.1	-15°03.7	1	191°27.0	-14°05.7	1	191°27.6	-13°05.7
2	206°35.5	-16°51.8	2	206°30.9	-15°58.6	2	206°28.1	-15°02.9	2	206°27.0	-14°04.9	2	206°27.6	-13°04.8
3	221°35.4	-16°51.1	3	221°30.8	-15°57.8	3	221°28.0	-15°02.1	3	221°27.0	-14°04.1	3	221°27.6	-13°04.0
4	236°35.3	-16°50.4	4	236°30.8	-15°57.1	4	236°28.0	-15°01.3	4	236°27.0	-14°03.3	4	236°27.6	-13°03.1
5	251°35.3	-16°49.6	5	251°30.7	-15°56.3	5	251°28.0	-15°00.5	5	251°27.0	-14°02.4	5	251°27.6	-13°02.3
6	266°35.2	-16°48.9	6	266°30.7	-15°55.6	6	266°28.0	-14°59.7	6	266°27.0	-14°01.6	6	266°27.7	-13°01.4
7	281°35.1	-16°48.2	7	281°30.6	-15°54.8	7	281°27.9	-14°58.9	7	281°27.0	-14°00.8	7	281°27.7	-13°00.6
8	296°35.0	-16°47.5	8	296°30.6	-15°54.0	8	296°27.9	-14°58.2	8	296°27.0	-13°60.0	8	296°27.7	-12°59.7
9	311°35.0	-16°46.7	9	311°30.5	-15°53.3	9	311°27.9	-14°57.4	9	311°27.0	-13°59.2	9	311°27.7	-12°58.9
10	326°34.9	-16°46.0	10	326°30.5	-15°52.5	10	326°27.9	-14°56.6	10	326°27.0	-13°58.3	10	326°27.8	-12°58.0
11	341°34.8	-16°45.3	11	341°30.4	-15°51.8	11	341°27.8	-14°55.8	11	341°27.0	-13°57.5	11	341°27.8	-12°57.2
12	356°34.7	-16°44.6	12	356°30.4	-15°51.0	12	356°27.8	-14°55.0	12	356°27.0	-13°56.7	12	356°27.8	-12°56.3
13	11°34.7	-16°43.8	13	11°30.3	-15°50.2	13	11°27.8	-14°54.2	13	11°27.0	-13°55.9	13	11°27.8	-12°55.5
14	26°34.6	-16°43.1	14	26°30.3	-15°49.5	14	26°27.8	-14°53.4	14	26°27.0	-13°55.0	14	26°27.8	-12°54.6
15	41°34.5	-16°42.4	15	41°30.2	-15°48.7	15	41°27.7	-14°52.6	15	41°27.0	-13°54.2	15	41°27.9	-12°53.8
16	56°34.4	-16°41.7	16	56°30.2	-15°48.0	16	56°27.7	-14°51.8	16	56°27.0	-13°53.4	16	56°27.9	-12°52.9
17	71°34.4	-16°40.9	17	71°30.1	-15°47.2	17	71°27.7	-14°51.0	17	71°27.0	-13°52.6	17	71°27.9	-12°52.0
18	86°34.3	-16°40.2	18	86°30.1	-15°46.4	18	86°27.7	-14°50.2	18	86°27.0	-13°51.7	18	86°27.9	-12°51.2
19	101°34.2	-16°39.5	19	101°30.1	-15°45.7	19	101°27.6	-14°49.4	19	101°27.0	-13°50.9	19	101°28.0	-12°50.3
20	116°34.2	-16°38.7	20	116°30.0	-15°44.9	20	116°27.6	-14°48.6	20	116°27.0	-13°50.1	20	116°28.0	-12°49.5
21	131°34.1	-16°38.0	21	131°30.0	-15°44.1	21	131°27.6	-14°47.8	21	131°27.0	-13°49.3	21	13	

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	176°28.1	-12°46.1	0	176°30.8	-11°43.5	0	176°35.2	-10°39.3	0	176°41.0	-9°33.6	0	176°48.2	-8°26.6
1	191°28.1	-12°45.2	1	191°30.9	-11°42.6	1	191°35.2	-10°38.4	1	191°41.1	-9°32.6	1	191°48.3	-8°25.6
2	206°28.2	-12°44.3	2	206°30.9	-11°41.7	2	206°35.3	-10°37.5	2	206°41.1	-9°31.7	2	206°48.4	-8°24.7
3	221°28.2	-12°43.5	3	221°31.0	-11°40.9	3	221°35.4	-10°36.6	3	221°41.2	-9°30.8	3	221°48.5	-8°23.7
4	236°28.2	-12°42.6	4	236°31.0	-11°40.0	4	236°35.4	-10°35.7	4	236°41.3	-9°29.9	4	236°48.6	-8°22.8
5	251°28.2	-12°41.8	5	251°31.1	-11°39.1	5	251°35.5	-10°34.7	5	251°41.4	-9°28.9	5	251°48.7	-8°21.9
6	266°28.3	-12°40.9	6	266°31.2	-11°38.2	6	266°35.6	-10°33.8	6	266°41.5	-9°28.0	6	266°48.8	-8°20.9
7	281°28.3	-12°40.1	7	281°31.2	-11°37.3	7	281°35.7	-10°32.9	7	281°41.6	-9°27.1	7	281°48.9	-8°20.0
8	296°28.3	-12°39.2	8	296°31.3	-11°36.4	8	296°35.7	-10°32.0	8	296°41.7	-9°26.2	8	296°49.0	-8°19.0
9	311°28.4	-12°38.3	9	311°31.3	-11°35.6	9	311°35.8	-10°31.1	9	311°41.8	-9°25.3	9	311°49.1	-8°18.1
10	326°28.4	-12°37.5	10	326°31.4	-11°34.7	10	326°35.9	-10°30.2	10	326°41.9	-9°24.3	10	326°49.3	-8°17.2
11	341°28.4	-12°36.6	11	341°31.4	-11°33.8	11	341°36.0	-10°29.3	11	341°42.0	-9°23.4	11	341°49.4	-8°16.2
12	356°28.4	-12°35.8	12	356°31.5	-11°32.9	12	356°36.0	-10°28.4	12	356°42.1	-9°22.5	12	356°49.5	-8°15.3
13	11°28.5	-12°34.9	13	11°31.5	-11°32.0	13	11°36.1	-10°27.5	13	11°42.2	-9°21.6	13	11°49.6	-8°14.3
14	26°28.5	-12°34.0	14	26°31.6	-11°31.1	14	26°36.2	-10°26.6	14	26°42.3	-9°20.6	14	26°49.7	-8°13.4
15	41°28.5	-12°33.2	15	41°31.6	-11°30.2	15	41°36.3	-10°25.7	15	41°42.4	-9°19.7	15	41°49.8	-8°12.5
16	56°28.6	-12°32.3	16	56°31.7	-11°29.4	16	56°36.3	-10°24.8	16	56°42.4	-9°18.8	16	56°49.9	-8°11.5
17	71°28.6	-12°31.4	17	71°31.7	-11°28.5	17	71°36.4	-10°23.9	17	71°42.5	-9°17.9	17	71°50.0	-8°10.6
18	86°28.6	-12°30.6	18	86°31.8	-11°27.6	18	86°36.5	-10°23.0	18	86°42.6	-9°16.9	18	86°50.2	-8°09.6
19	101°28.7	-12°29.7	19	101°31.8	-11°26.7	19	101°36.6	-10°22.1	19	101°42.7	-9°16.0	19	101°50.3	-8°08.7
20	116°28.7	-12°28.9	20	116°31.9	-11°25.8	20	116°36.6	-10°21.2	20	116°42.8	-9°15.1	20	116°50.4	-8°07.8
21	131°28.7	-12°28.0	21	131°31.9	-11°24.9	21	131°36.7	-10°20.2	21	131°42.9	-9°14.1	21	131°50.5	-8°06.8
22	146°28.8	-12°27.1	22	146°32.0	-11°24.0	22	146°36.8	-10°19.3	22	146°43.0	-9°13.2	22	146°50.6	-8°05.9
23	161°28.8	-12°26.3	23	161°32.1	-11°23.2	23	161°36.9	-10°18.4	23	161°43.1	-9°12.3	23	161°50.7	-8°04.9
	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.=16.2	d=0.9

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	176°28.8	-12°25.4	0	176°32.1	-11°22.3	0	176°36.9	-10°17.5	0	176°43.2	-9°11.4	0	176°50.8	-8°04.0
1	191°28.9	-12°24.5	1	191°32.2	-11°21.4	1	191°37.0	-10°16.6	1	191°43.3	-9°10.4	1	191°51.0	-8°03.0
2	206°28.9	-12°23.7	2	206°32.2	-11°20.5	2	206°37.1	-10°15.7	2	206°43.4	-9°09.5	2	206°51.1	-8°02.1
3	221°28.9	-12°22.8	3	221°32.3	-11°19.6	3	221°37.2	-10°14.8	3	221°43.5	-9°08.6	3	221°51.2	-8°01.1
4	236°29.0	-12°21.9	4	236°32.3	-11°18.7	4	236°37.2	-10°13.9	4	236°43.6	-9°07.6	4	236°51.3	-8°00.2
5	251°29.0	-12°21.1	5	251°32.4	-11°17.8	5	251°37.3	-10°13.0	5	251°43.7	-9°06.7	5	251°51.4	-7°59.3
6	266°29.1	-12°20.2	6	266°32.5	-11°16.9	6	266°37.4	-10°12.1	6	266°43.8	-9°05.8	6	266°51.5	-7°58.3
7	281°29.1	-12°19.3	7	281°32.5	-11°16.0	7	281°37.5	-10°11.1	7	281°43.9	-9°04.9	7	281°51.7	-7°57.4
8	296°29.1	-12°18.5	8	296°32.6	-11°15.1	8	296°37.6	-10°10.2	8	296°44.0	-9°03.9	8	296°51.8	-7°56.4
9	311°29.2	-12°17.6	9	311°32.6	-11°14.3	9	311°37.6	-10°09.3	9	311°44.1	-9°03.0	9	311°51.9	-7°55.5
10	326°29.2	-12°16.7	10	326°32.7	-11°13.4	10	326°37.7	-10°08.4	10	326°44.2	-9°02.1	10	326°52.0	-7°54.5
11	341°29.2	-12°15.9	11	341°32.8	-11°12.5	11	341°37.8	-10°07.5	11	341°44.3	-9°01.1	11	341°52.1	-7°53.6
12	356°29.3	-12°15.0	12	356°32.8	-11°11.6	12	356°37.9	-10°06.6	12	356°44.4	-9°00.2	12	356°52.2	-7°52.6
13	11°29.3	-12°14.1	13	11°32.9	-11°10.7	13	11°38.0	-10°05.7	13	11°44.5	-8°59.3	13	11°52.4	-7°51.7
14	26°29.4	-12°13.3	14	26°32.9	-11°09.8	14	26°38.0	-10°04.8	14	26°44.6	-8°58.4	14	26°52.5	-7°50.7
15	41°29.4	-12°12.4	15	41°33.0	-11°08.9	15	41°38.1	-10°03.8	15	41°44.7	-8°57.4	15	41°52.6	-7°49.8
16	56°29.4	-12°11.5	16	56°33.1	-11°08.0	16	56°38.2	-10°02.9	16	56°44.8	-8°56.5	16	56°52.7	-7°48.9
17	71°29.5	-12°10.6	17	71°33.1	-11°07.1	17	71°38.3	-10°02.0	17	71°44.9	-8°55.6	17	71°52.8	-7°47.9
18	86°29.5	-12°09.8	18	86°33.2	-11°06.2	18	86°38.4	-10°01.1	18	86°45.0	-8°54.6	18	86°52.9	-7°47.0
19	101°29.6	-12°08.9	19	101°33.2	-11°05.3	19	101°38.5	-10°00.2	19	101°45.1	-8°53.7	19	101°53.1	-7°46.0
20	116°29.6	-12°08.0	20	116°33.3	-11°04.4	20	116°38.5	-9°59.3	20	116°45.2	-8°52.8	20	116°53.2	-7°45.1
21	131°29.6	-12°07.2	21	131°33.4	-11°03.5	21	131°38.6	-9°58.4	21	131°45.3	-8°51.8	21	131°53.3	-7°44.1
22	146°29.7	-12°06.3	22	146°33.4	-11°02.6	22	146°38.7	-9°57.4	22	146°45.4	-8°50.9	22	146°53.4	-7°43.2
23	161°29.7	-12°05.4	23	161°33.5	-11°01.7	23	161°38.8	-9°56.5	23	161°45.5	-8°50.0	23	161°53.5	-7°42.2
	SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.1	d=0.9

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	01	GHA	Dec
0	176°29.8	-12°04.5	0	176°33.6	-11°00.9	0	176°38.9	-9°55.6	0	176°45.6	-8°49.0	0	176°53.7	-7°41.3
1	191°29.8	-12°03.7	1	191°33.6	-10°60.0	1	191°39.0	-9°54.7	1	191°45.7	-8°48.1	1	191°53.8	-7°40.3
2	206°29.8	-12°02.8	2	206°33.7	-10°59.1	2	206°39.0	-9°53.8	2	206°45.8	-8°47.2	2	206°53.9	-7°39.4
3	221°29.9	-12°01.9	3	221°33.7	-10°58.2	3	221°39.1	-9°52.9	3	221°45.9	-8°46.2	3	221°54.0	-7°38.4
4	236°29.9	-12°01.1	4	236°33.8	-10°57.3	4	236°39.2	-9°51.9	4	236°46.0	-8°45.3	4	236°54.1	-7°37.5
5	251°30.0	-12°00.2	5	251°33.9	-10°56.4	5	251°39.3	-9°51.0	5	251°46.1	-8°44.4	5	251°54.3	-7°36.5
6	266°30.0	-11°59.3	6	266°33.9	-10°55.5	6	266°39.4	-9°50.1	6	266°46.2	-8°43.4	6	266°54.4	-7°35.6
7	281°30.1	-11°58.4	7	281°34.0	-10°54.6	7	281°39.5	-9°49.2	7	281°46.3	-8°42.5	7	281°54.5	-7°34.6
8	296°30.1	-11°57.6	8	296°34.1	-10°53.7	8	296°39.6	-9°48.3	8	296°46.4	-8°41.6	8	296°54.6	-7°33.7
9	311°30.1	-11°56.7	9	311°34.1	-10°52.8	9	311°39.6	-9°47.4	9	311°46.6	-8°40.6	9	311°54.8	-7°32.7
10	326°30.2	-11°55.8	10	326°34.2	-10°51.9	10	326°39.7	-9°46.4	10	326°46.7	-8°39.7	10	326°54.9	-7°31.8
11	341°30.2	-11°54.9	11	341°34.3	-10°51.0	11	341°39.8	-9°45.5	11	341°46.8	-8°38.7	11	341°55.0	-7°30.8
12	356°30.3	-11°54.0	12	356°34.3	-10°50.1	12	356°39.9	-9°44.6	12	356°46.9	-8°37.8	12	356°55.1	-7°29.9
13	11°30.3	-11°53.2	13	11°34.4	-10°49.2	13	11°40.0	-9°43.7	13	11°47.0	-8°36.9	13	11°55.2	-7°28.9
14	26°30.4	-11°52.3	14	26°34.5	-10°48.3	14	26°40.1	-9°42.8	14	26°47.1	-8°35.9	14	26°55.4	-7°28.0
15	41°30.4	-11°51.4	15	41°34.5	-10°47.4	15	41°40.2	-9°41.8	15	41°47.2	-8°35.0	15	41°55.5	-7°27.0
16	56°30.5	-11°50.5	16	56°34.6	-10°46.5	16	56°40.3	-9°40.9	16	56°47.3	-8°34.1	16	56°55.6	-7°26.1
17	71°30.5	-11°49.7	17	71°34.7	-10°45.6	17	71°40.3	-9°40.0	17	71°47.4	-8°33.1	17	71°55.7	-7°25.1
18	86°30.6	-11°48.8	18	86°34.7	-10°44.7	18	86°40.4	-9°39.1	18	86°47.5	-8°32.2	18	86°55.9	-7°24.2
19	101°30.6	-11°47.9	19	101°34.8	-10°43.8	19	101°40.5	-9°38.2	19	101°47.6	-8°31.3	19	101°56.0	-7°23.2
20	116°30.7	-11°47.0	20	116°34.9	-10°42.9	20	116°40.6	-9°37.2	20	116°47.7	-8°30.3	20	116°56.1	-7°22.3
21	131°30.7	-11°46.1	21	131°35.0	-10°42.0	21	131°40.7	-9°36.3	21	131°47.8	-8°29.4	21	131°56.2	-7°21.3
22	146°30.8	-11°45.3	22	146°35.0	-10°41.1	22	146°40.8	-9°35.4	22	146°47.9	-8°28.4	22	146°56.4	-7°20.4
23	161°30.8	-11°44.4	23	161°35.1	-10°40.2	23	161°40.9	-9°34.5	23	161°48.0	-8°27.5	23	161°56.5	-7°19.4
	SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.1	d=0.9

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	176°56.6	-7°18.5	0	177°06.2	-6°09.4	0	177°16.7	-4°59.6	0	177°28.0	-3°49.2	0	177°40.1	-2°38.4
1	191°56.7	-7°17.5	1	192°06.3	-6°08.5	1	192°16.8	-4°58.6	1	192°28.2	-3°48.2	1	192°40.2	-2°37.4
2	206°56.9	-7°16.6	2	207°06.5	-6°07.5	2	207°17.0	-4°57.7	2	207°28.4	-3°47.2	2	207°40.4	-2°36.4
3	221°57.0	-7°15.6	3	222°06.6	-6°06.5	3	222°17.2	-4°56.7	3	222°28.5	-3°46.3	3	222°40.6	-2°35.4
4	236°57.1	-7°14.7	4	237°06.7	-6°05.6	4	237°17.3	-4°55.7	4	237°28.7	-3°45.3	4	237°40.7	-2°34.4
5	251°57.2	-7°13.7	5	252°06.9	-6°04.6	5	252°17.5	-4°54.7	5	252°28.8	-3°44.3	5	252°40.9	-2°33.4
6	266°57.4	-7°12.7	6	267°07.0	-6°03.6	6	267°17.6	-4°53.8	6	267°29.0	-3°43.3	6	267°41.1	-2°32.4
7	281°57.5	-7°11.8	7	282°07.2	-6°02.7	7	282°17.8	-4°52.8	7	282°29.2	-3°42.3	7	282°41.3	-2°31.5
8	296°57.6	-7°10.8	8	297°07.3	-6°01.7	8	297°17.9	-4°51.8	8	297°29.3	-3°41.4	8	297°41.4	-2°30.5
9	311°57.7	-7°09.9	9	312°07.4	-6°00.7	9	312°18.1	-4°50.8	9	312°29.5	-3°40.4	9	312°41.6	-2°29.5
10	326°57.9	-7°08.9	10	327°07.6	-5°59.8	10	327°18.2	-4°49.9	10	327°29.7	-3°39.4	10	327°41.8	-2°28.5
11	341°58.0	-7°08.0	11	342°07.7	-5°58.8	11	342°18.4	-4°48.9	11	342°29.8	-3°38.4	11	342°41.9	-2°27.5
12	356°58.1	-7°07.0	12	357°07.9	-5°57.8	12	357°18.5	-4°47.9	12	357°30.0	-3°37.4	12	357°42.1	-2°26.5
13	11°58.3	-7°06.1	13	12°08.0	-5°56.9	13	12°18.7	-4°46.9	13	12°30.2	-3°36.4	13	12°42.3	-2°25.5
14	26°58.4	-7°05.1	14	27°08.1	-5°55.9	14	27°18.8	-4°46.0	14	27°30.3	-3°35.5	14	27°42.5	-2°24.6
15	41°58.5	-7°04.2	15	42°08.3	-5°54.9	15	42°19.0	-4°45.0	15	42°30.5	-3°34.5	15	42°42.6	-2°23.6
16	56°58.6	-7°03.2	16	57°08.4	-5°54.0	16	57°19.1	-4°44.0	16	57°30.6	-3°33.5	16	57°42.8	-2°22.6
17	71°58.8	-7°02.2	17	72°08.6	-5°53.0	17	72°19.3	-4°43.0	17	72°30.8	-3°32.5	17	72°43.0	-2°21.6
18	86°58.9	-7°01.3	18	87°08.7	-5°52.0	18	87°19.5	-4°42.1	18	87°31.0	-3°31.5	18	87°43.1	-2°20.6
19	101°59.0	-7°00.3	19	102°08.9	-5°51.1	19	102°19.6	-4°41.1	19	102°31.1	-3°30.5	19	102°43.3	-2°19.6
20	116°59.2	-6°59.4	20	117°09.0	-5°50.1	20	117°19.8	-4°40.1	20	117°31.3	-3°29.6	20	117°43.5	-2°18.6
21	131°59.3	-6°58.4	21	132°09.2	-5°49.1	21	132°19.9	-4°39.1	21	132°31.5	-3°28.6	21	132°43.7	-2°17.6
22	146°59.4	-6°57.5	22	147°09.3	-5°48.2	22	147°20.1	-4°38.2	22	147°31.6	-3°27.6	22	147°43.8	-2°16.7
23	161°59.6	-6°56.5	23	162°09.4	-5°47.2	23	162°20.2	-4°37.2	23	162°31.8	-3°26.6	23	162°44.0	-2°15.7
	SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0
03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	176°59.7	-6°55.5	0	177°09.6	-5°46.2	0	177°20.4	-4°36.2	0	177°32.0	-3°25.6	0	177°44.2	-2°14.7
1	191°59.8	-6°54.6	1	192°09.7	-5°45.3	1	192°20.5	-4°35.2	1	192°32.1	-3°24.6	1	192°44.4	-2°13.7
2	206°59.9	-6°53.6	2	207°09.9	-5°44.3	2	207°20.7	-4°34.2	2	207°32.3	-3°23.7	2	207°44.5	-2°12.7
3	222°00.1	-6°52.7	3	222°10.0	-5°43.3	3	222°20.9	-4°33.3	3	222°32.5	-3°22.7	3	222°44.7	-2°11.7
4	237°00.2	-6°51.7	4	237°10.2	-5°42.4	4	237°21.0	-4°32.3	4	237°32.6	-3°21.7	4	237°44.9	-2°10.7
5	252°00.3	-6°50.8	5	252°10.3	-5°41.4	5	252°21.2	-4°31.3	5	252°32.8	-3°20.7	5	252°45.1	-2°09.7
6	267°00.5	-6°49.8	6	267°10.4	-5°40.4	6	267°21.3	-4°30.3	6	267°33.0	-3°19.7	6	267°45.2	-2°08.8
7	282°00.6	-6°48.8	7	282°10.6	-5°39.5	7	282°21.5	-4°29.4	7	282°33.1	-3°18.7	7	282°45.4	-2°07.8
8	297°00.7	-6°47.9	8	297°10.7	-5°38.5	8	297°21.6	-4°28.4	8	297°33.3	-3°17.8	8	297°45.6	-2°06.8
9	312°00.9	-6°46.9	9	312°10.9	-5°37.5	9	312°21.8	-4°27.4	9	312°33.5	-3°16.8	9	312°45.8	-2°05.8
10	327°01.0	-6°46.0	10	327°11.0	-5°36.5	10	327°22.0	-4°26.4	10	327°33.6	-3°15.8	10	327°45.9	-2°04.8
11	342°01.1	-6°45.0	11	342°11.2	-5°35.6	11	342°22.1	-4°25.5	11	342°33.8	-3°14.8	11	342°46.1	-2°03.8
12	357°01.3	-6°44.1	12	357°11.3	-5°34.6	12	357°22.3	-4°24.5	12	357°34.0	-3°13.8	12	357°46.3	-2°02.8
13	12°01.4	-6°43.1	13	12°11.5	-5°33.6	13	12°22.4	-4°23.5	13	12°34.1	-3°12.8	13	12°46.5	-2°01.8
14	27°01.5	-6°42.1	14	27°11.6	-5°32.7	14	27°22.6	-4°22.5	14	27°34.3	-3°11.9	14	27°46.6	-2°00.9
15	42°01.7	-6°41.2	15	42°11.8	-5°31.7	15	42°22.7	-4°21.5	15	42°34.5	-3°10.9	15	42°46.8	-1°59.9
16	57°01.8	-6°40.2	16	57°11.9	-5°30.7	16	57°22.9	-4°20.6	16	57°34.6	-3°09.9	16	57°47.0	-1°58.9
17	72°01.9	-6°39.3	17	72°12.1	-5°29.8	17	72°23.1	-4°19.6	17	72°34.8	-3°08.9	17	72°47.2	-1°57.9
18	87°02.1	-6°38.3	18	87°12.2	-5°28.8	18	87°23.2	-4°18.6	18	87°35.0	-3°07.9	18	87°47.3	-1°56.9
19	102°02.2	-6°37.3	19	102°12.4	-5°27.8	19	102°23.4	-4°17.6	19	102°35.1	-3°06.9	19	102°47.5	-1°55.9
20	117°02.3	-6°36.4	20	117°12.5	-5°26.8	20	117°23.5	-4°16.6	20	117°35.3	-3°06.0	20	117°47.7	-1°54.9
21	132°02.5	-6°35.4	21	132°12.6	-5°25.9	21	132°23.7	-4°15.7	21	132°35.5	-3°05.0	21	132°47.9	-1°53.9
22	147°02.6	-6°34.5	22	147°12.8	-5°24.9	22	147°23.9	-4°14.7	22	147°35.6	-3°04.0	22	147°48.0	-1°53.0
23	162°02.7	-6°33.5	23	162°12.9	-5°23.9	23	162°24.0	-4°13.7	23	162°35.8	-3°03.0	23	162°48.2	-1°52.0
	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
04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec
0	177°02.9	-6°32.5	0	177°13.1	-5°23.0	0	177°24.2	-4°12.7	0	177°36.0	-3°02.0	0	177°48.4	-1°51.0
1	192°03.0	-6°31.6	1	192°13.2	-5°22.0	1	192°24.3	-4°11.8	1	192°36.1	-3°01.0	1	192°48.6	-1°50.0
2	207°03.1	-6°30.6	2	207°13.4	-5°21.0	2	207°24.5	-4°10.8	2	207°36.3	-3°00.0	2	207°48.7	-1°49.0
3	222°03.3	-6°29.6	3	222°13.5	-5°20.0	3	222°24.6	-4°09.8	3	222°36.5	-2°59.1	3	222°48.9	-1°48.0
4	237°03.4	-6°28.7	4	237°13.7	-5°19.1	4	237°24.8	-4°08.8	4	237°36.7	-2°58.1	4	237°49.1	-1°47.0
5	252°03.6	-6°27.7	5	252°13.8	-5°18.1	5	252°25.0	-4°07.8	5	252°36.8	-2°57.1	5	252°49.3	-1°46.0
6	267°03.7	-6°26.8	6	267°14.0	-5°17.1	6	267°25.1	-4°06.9	6	267°37.0	-2°56.1	6	267°49.4	-1°45.1
7	282°03.8	-6°25.8	7	282°14.1	-5°16.2	7	282°25.3	-4°05.9	7	282°37.2	-2°55.1	7	282°49.6	-1°44.1
8	297°04.0	-6°24.8	8	297°14.3	-5°15.2	8	297°25.4	-4°04.9	8	297°37.3	-2°54.1	8	297°49.8	-1°43.1
9	312°04.1	-6°23.9	9	312°14.4	-5°14.2	9	312°25.6	-4°03.9	9	312°37.5	-2°53.1	9	312°50.0	-1°42.1
10	327°04.2	-6°22.9	10	327°14.6	-5°13.2	10	327°25.8	-4°02.9	10	327°37.7	-2°52.2	10	327°50.1	-1°41.1
11	342°04.4	-6°22.0	11	342°14.7	-5°12.3	11	342°25.9	-4°02.0	11	342°37.8	-2°51.2	11	342°50.3	-1°40.1
12	357°04.5	-6°21.0	12	357°14.9	-5°11.3	12	357°26.1	-4°01.0	12	357°38.0	-2°50.2	12	357°50.5	-1°39.1
13	12°04.6	-6°20.0	13	12°15.0	-5°10.3	13	12°26.3	-3°60.0	13	12°38.2	-2°49.2	13	12°50.7	-1°38.1
14	27°04.8	-6°19.1	14	27°15.2	-5°09.4	14	27°26.4	-3°59.0	14	27°38.3	-2°48.2	14	27°50.9	-1°37.1
15	42°04.9	-6°18.1	15	42°15.3	-5°08.4	15	42°26.6	-3°58.0	15	42°38.5	-2°47.2	15	42°51.0	-1°36.2
16	57°05.1	-6°17.1	16	57°15.5	-5°07.4	16	57°26.7	-3°57.1	16	57°38.7	-2°46.2	16	57°51.2	-1°35.2
17	72°05.2	-6°16.2	17	72°15.6	-5°06.4	17	72°26.9	-3°56.1	17	72°38.9	-2°45.3	17	72°51.4	-1°34.2
18	87°05.3	-6°15.2	18	87°15.8	-5°05.5	18	87°27.1	-3°55.1	18	87°39.0	-2°44.3	18	87°51.6	-1°33.2
19	102°05.5	-6°14.2	19	102°15.9	-5°04.5	19	102°27.2	-3°54.1	19	102°39.2	-2°43.3	19	102°51.7	-1°32.2
20	117°05.6	-6°13.3	20	117°16.1	-5°03.5	20	117°27.4	-3°53.1	20	117°39.4	-2°42.3	20	117°51.9	-1°31.2
21	132°05.8	-6°12.3	21	132°16.2	-5°02.5	21	132°27.5	-3°52.1	21	132°39.5	-2°41.3	21	132°52.1	-1°30.2
22	147°05.9	-6°11.4	22	147°16.4	-5°01.6	22	147°27.7	-3°51.2	22	147°39.7	-2°40.3	22	147°52.3	-1°29.2
23	162°06.0	-6°10.4	23	162°16.5	-5°00.6	23	162°27.9	-3°50.2	23	162°39.9	-2°39.3	23	162°52.5	-1°28.3
	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

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	177°52.6	-1°27.3	0	178°05.7	-0°16.1	0	178°19.0	0°55.0	0	178°32.6	2°05.9	0	178°46.2	3°16.3
1	192°52.8	-1°26.3	1	193°05.8	-0°15.1	1	193°19.2	0°56.0	1	193°32.8	2°06.8	1	193°46.4	3°17.3
2	207°53.0	-1°25.3	2	208°06.0	-0°14.1	2	208°19.4	0°57.0	2	208°32.9	2°07.8	2	208°46.6	3°18.2
3	222°53.2	-1°24.3	3	223°06.2	-0°13.1	3	223°19.6	0°58.0	3	223°33.1	2°08.8	3	223°46.8	3°19.2
4	237°53.3	-1°23.3	4	238°06.4	-0°12.1	4	238°19.7	0°59.0	4	238°33.3	2°09.8	4	238°47.0	3°20.2
5	252°53.5	-1°22.3	5	253°06.6	-0°11.1	5	253°19.9	0°60.0	5	253°33.5	2°10.8	5	253°47.1	3°21.2
6	267°53.7	-1°21.3	6	268°06.8	-0°10.1	6	268°20.1	1°00.9	6	268°33.7	2°11.8	6	268°47.3	3°22.1
7	282°53.9	-1°20.3	7	283°06.9	-0°09.2	7	283°20.3	1°01.9	7	283°33.9	2°12.7	7	283°47.5	3°23.1
8	297°54.1	-1°19.4	8	298°07.1	-0°08.2	8	298°20.5	1°02.9	8	298°34.1	2°13.7	8	298°47.7	3°24.1
9	312°54.2	-1°18.4	9	313°07.3	-0°07.2	9	313°20.7	1°03.9	9	313°34.3	2°14.7	9	313°47.9	3°25.1
10	327°54.4	-1°17.4	10	328°07.5	-0°06.2	10	328°20.9	1°04.9	10	328°34.5	2°15.7	10	328°48.1	3°26.0
11	342°54.6	-1°16.4	11	343°07.7	-0°05.2	11	343°21.1	1°05.9	11	343°34.6	2°16.7	11	343°48.3	3°27.0
12	357°54.8	-1°15.4	12	358°07.9	-0°04.2	12	358°21.2	1°06.9	12	358°34.8	2°17.6	12	358°48.5	3°28.0
13	12°55.0	-1°14.4	13	13°08.0	-0°03.2	13	13°21.4	1°07.8	13	13°35.0	2°18.6	13	13°48.7	3°28.9
14	27°55.1	-1°13.4	14	28°08.2	-0°02.2	14	28°21.6	1°08.8	14	28°35.2	2°19.6	14	28°48.8	3°29.9
15	42°55.3	-1°12.4	15	43°08.4	-0°01.3	15	43°21.8	1°09.8	15	43°35.4	2°20.6	15	43°49.0	3°30.9
16	57°55.5	-1°11.4	16	58°08.6	-0°00.3	16	58°22.0	1°10.8	16	58°35.6	2°21.6	16	58°49.2	3°31.9
17	72°55.7	-1°10.5	17	73°08.8	0°00.7	17	73°22.2	1°11.8	17	73°35.8	2°22.5	17	73°49.4	3°32.8
18	87°55.8	-1°09.5	18	88°09.0	0°01.7	18	88°22.4	1°12.8	18	88°36.0	2°23.5	18	88°49.6	3°33.8
19	102°56.0	-1°08.5	19	103°09.1	0°02.7	19	103°22.6	1°13.8	19	103°36.2	2°24.5	19	103°49.8	3°34.8
20	117°56.2	-1°07.5	20	118°09.3	0°03.7	20	118°22.8	1°14.7	20	118°36.3	2°25.5	20	118°50.0	3°35.8
21	132°56.4	-1°06.5	21	133°09.5	0°04.7	21	133°22.9	1°15.7	21	133°36.5	2°26.5	21	133°50.2	3°36.7
22	147°56.6	-1°05.5	22	148°09.7	0°05.7	22	148°23.1	1°16.7	22	148°36.7	2°27.4	22	148°50.4	3°37.7
23	162°56.7	-1°04.5	23	163°09.9	0°06.7	23	163°23.3	1°17.7	23	163°36.9	2°28.4	23	163°50.5	3°38.7
	SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.0	d=1.0		SD.=16.0	d=1.0		SD.=16.0	d=1.0

18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	177°56.9	-1°03.5	0	178°10.1	0°07.6	0	178°23.5	1°18.7	0	178°37.1	2°29.4	0	178°50.7	3°39.6
1	192°57.1	-1°02.5	1	193°10.3	0°08.6	1	193°23.7	1°19.7	1	193°37.3	2°30.4	1	193°50.9	3°40.6
2	207°57.3	-1°01.6	2	208°10.4	0°09.6	2	208°23.9	1°20.6	2	208°37.5	2°31.4	2	208°51.1	3°41.6
3	222°57.5	-1°00.6	3	223°10.6	0°10.6	3	223°24.1	1°21.6	3	223°37.7	2°32.3	3	223°51.3	3°42.6
4	237°57.6	-0°59.6	4	238°10.8	0°11.6	4	238°24.3	1°22.6	4	238°37.9	2°33.3	4	238°51.5	3°43.5
5	252°57.8	-0°58.6	5	253°11.0	0°12.6	5	253°24.4	1°23.6	5	253°38.1	2°34.3	5	253°51.7	3°44.5
6	267°58.0	-0°57.6	6	268°11.2	0°13.6	6	268°24.6	1°24.6	6	268°38.2	2°35.3	6	268°51.9	3°45.5
7	282°58.2	-0°56.6	7	283°11.4	0°14.6	7	283°24.8	1°25.6	7	283°38.4	2°36.2	7	283°52.1	3°46.4
8	297°58.4	-0°55.6	8	298°11.6	0°15.5	8	298°25.0	1°26.6	8	298°38.6	2°37.2	8	298°52.2	3°47.4
9	312°58.5	-0°54.6	9	313°11.7	0°16.5	9	313°25.2	1°27.5	9	313°38.8	2°38.2	9	313°52.4	3°48.4
10	327°58.7	-0°53.6	10	328°11.9	0°17.5	10	328°25.4	1°28.5	10	328°39.0	2°39.2	10	328°52.6	3°49.3
11	342°58.9	-0°52.7	11	343°12.1	0°18.5	11	343°25.6	1°29.5	11	343°39.2	2°40.2	11	343°52.8	3°50.3
12	357°59.1	-0°51.7	12	358°12.3	0°19.5	12	358°25.8	1°30.5	12	358°39.4	2°41.1	12	358°53.0	3°51.3
13	12°59.3	-0°50.7	13	13°12.5	0°20.5	13	13°26.0	1°31.5	13	13°39.6	2°42.1	13	13°53.2	3°52.3
14	27°59.5	-0°49.7	14	28°12.7	0°21.5	14	28°26.1	1°32.5	14	28°39.8	2°43.1	14	28°53.4	3°53.2
15	42°59.6	-0°48.7	15	43°12.8	0°22.5	15	43°26.3	1°33.4	15	43°39.9	2°44.1	15	43°53.6	3°54.2
16	57°59.8	-0°47.7	16	58°13.0	0°23.4	16	58°26.5	1°34.4	16	58°40.1	2°45.1	16	58°53.7	3°55.2
17	72°60.0	-0°46.7	17	73°13.2	0°24.4	17	73°26.7	1°35.4	17	73°40.3	2°46.0	17	73°53.9	3°56.1
18	88°00.2	-0°45.7	18	88°13.4	0°25.4	18	88°26.9	1°36.4	18	88°40.5	2°47.0	18	88°54.1	3°57.1
19	103°00.4	-0°44.7	19	103°13.6	0°26.4	19	103°27.1	1°37.4	19	103°40.7	2°48.0	19	103°54.3	3°58.1
20	118°00.5	-0°43.8	20	118°13.8	0°27.4	20	118°27.3	1°38.4	20	118°40.9	2°49.0	20	118°54.5	3°59.0
21	133°00.7	-0°42.8	21	133°14.0	0°28.4	21	133°27.5	1°39.3	21	133°41.1	2°49.9	21	133°54.7	4°00.0
22	148°00.9	-0°41.8	22	148°14.1	0°29.4	22	148°27.6	1°40.3	22	148°41.3	2°50.9	22	148°54.9	4°01.0
23	163°01.1	-0°40.8	23	163°14.3	0°30.4	23	163°27.8	1°41.3	23	163°41.5	2°51.9	23	163°55.1	4°02.0
	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

19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec	31	GHA	Dec
0	178°01.3	-0°39.8	0	178°14.5	0°31.3	0	178°28.0	1°42.3	0	178°41.7	2°52.9	0	178°55.3	4°02.9
1	193°01.5	-0°38.8	1	193°14.7	0°32.3	1	193°28.2	1°43.3	1	193°41.8	2°53.8	1	193°55.4	4°03.9
2	208°01.6	-0°37.8	2	208°14.9	0°33.3	2	208°28.4	1°44.3	2	208°42.0	2°54.8	2	208°55.6	4°04.9
3	223°01.8	-0°36.8	3	223°15.1	0°34.3	3	223°28.6	1°45.2	3	223°42.2	2°55.8	3	223°55.8	4°05.8
4	238°02.0	-0°35.8	4	238°15.3	0°35.3	4	238°28.8	1°46.2	4	238°42.4	2°56.8	4	238°56.0	4°06.8
5	253°02.2	-0°34.9	5	253°15.5	0°36.3	5	253°29.0	1°47.2	5	253°42.6	2°57.8	5	253°56.2	4°07.8
6	268°02.4	-0°33.9	6	268°15.6	0°37.3	6	268°29.2	1°48.2	6	268°42.8	2°58.7	6	268°56.4	4°08.7
7	283°02.5	-0°32.9	7	283°15.8	0°38.3	7	283°29.3	1°49.2	7	283°43.0	2°59.7	7	283°56.6	4°09.7
8	298°02.7	-0°31.9	8	298°16.0	0°39.2	8	298°29.5	1°50.2	8	298°43.2	3°00.7	8	298°56.8	4°10.7
9	313°02.9	-0°30.9	9	313°16.2	0°40.2	9	313°29.7	1°51.1	9	313°43.4	3°01.7	9	313°56.9	4°11.6
10	328°03.1	-0°29.9	10	328°16.4	0°41.2	10	328°29.9	1°52.1	10	328°43.5	3°02.6	10	328°57.1	4°12.6
11	343°03.3	-0°28.9	11	343°16.6	0°42.2	11	343°30.1	1°53.1	11	343°43.7	3°03.6	11	343°57.3	4°13.6
12	358°03.5	-0°27.9	12	358°16.8	0°43.2	12	358°30.3	1°54.1	12	358°43.9	3°04.6	12	358°57.5	4°14.5
13	13°03.6	-0°27.0	13	13°16.9	0°44.2	13	13°30.5	1°55.1	13	13°44.1	3°05.6	13	13°57.7	4°15.5
14	28°03.8	-0°26.0	14	28°17.1	0°45.2	14	28°30.7	1°56.0	14	28°44.3	3°06.5	14	28°57.9	4°16.5
15	43°04.0	-0°25.0	15	43°17.3	0°46.1	15	43°30.9	1°57.0	15	43°44.5	3°07.5	15	43°58.1	4°17.4
16	58°04.2	-0°24.0	16	58°17.5	0°47.1	16	58°31.0	1°58.0	16	58°44.7	3°08.5	16	58°58.3	4°18.4
17	73°04.4	-0°23.0	17	73°17.7	0°48.1	17	73°31.2	1°59.0	17	73°44.9	3°09.5	17	73°58.4	4°19.4
18	88°04.6	-0°22.0	18	88°17.9	0°49.1	18	88°31.4	1°60.0	18	88°45.1	3°10.4	18	88°58.6	4°20.3
19	103°04.7	-0°21.0	19	103°18.1	0°50.1	19	103°31.6	2°01.0	19	103°45.3	3°11.4	19	103°58.8	4°21.3
20	118°04.9	-0°20.0	20	118°18.3	0°51.1	20	118°31.8	2°01.9	20	118°45.4	3°12.4	20	118°59.0	4°22.3
21	133°05.1	-0°19.0	21	133°18.4	0°52.1	21	133°32.0	2°02.9	21	133°45.6	3°13.4	21	133°59.2	4°23.2
22	148°05.3	-0°18.1	22	148°18.6	0°53.1	22	148°32.2	2°03.9	22	148°45.8	3°14.3	22	148°59.4	4°24.2
23	163°05.5	-0°17.1	23	163°18.8	0°54.0	23	163°32.4	2°04.9	23	163°46.0	3°15.3	23	163°59.6	4°25.2
	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
0	178°59.8	4°26.1	0	179°13.1	5°35.2	0	179°26.0	6°43.5	0	179°38.4	7°50.7	0	179°50.2	8°56.8
1	193°59.9	4°27.1	1	194°13.3	5°36.2	1	194°26.2	6°44.4	1	194°38.6	7°51.6	1	194°50.4	8°57.7
2	209°00.1	4°28.1	2	209°13.4	5°37.2	2	209°26.4	6°45.4	2	209°38.8	7°52.6	2	209°50.5	8°58.6
3	224°00.3	4°29.0	3	224°13.6	5°38.1	3	224°26.5	6°46.3	3	224°38.9	7°53.5	3	224°50.7	8°59.5
4	239°00.5	4°30.0	4	239°13.8	5°39.1	4	239°26.7	6°47.3	4	239°39.1	7°54.4	4	239°50.8	9°00.4
5	254°00.7	4°31.0	5	254°14.0	5°40.0	5	254°26.9	6°48.2	5	254°39.3	7°55.3	5	254°51.0	9°01.3
6	269°00.9	4°31.9	6	269°14.2	5°41.0	6	269°27.1	6°49.1	6	269°39.4	7°56.3	6	269°51.1	9°02.2
7	284°01.1	4°32.9	7	284°14.3	5°41.9	7	284°27.2	6°50.1	7	284°39.6	7°57.2	7	284°51.3	9°03.1
8	299°01.2	4°33.8	8	299°14.5	5°42.9	8	299°27.4	6°51.0	8	299°39.8	7°58.1	8	299°51.5	9°04.0
9	314°01.4	4°34.8	9	314°14.7	5°43.8	9	314°27.6	6°52.0	9	314°39.9	7°59.0	9	314°51.6	9°04.9
10	329°01.6	4°35.8	10	329°14.9	5°44.8	10	329°27.8	6°52.9	10	329°40.1	7°60.0	10	329°51.8	9°05.8
11	344°01.8	4°36.7	11	344°15.1	5°45.7	11	344°27.9	6°53.8	11	344°40.3	8°00.9	11	344°51.9	9°06.8
12	359°02.0	4°37.7	12	359°15.3	5°46.7	12	359°28.1	6°54.8	12	359°40.4	8°01.8	12	359°52.1	9°07.7
13	14°02.2	4°38.7	13	14°15.4	5°47.6	13	14°28.3	6°55.7	13	14°40.6	8°02.7	13	14°52.2	9°08.6
14	29°02.4	4°39.6	14	29°15.6	5°48.6	14	29°28.5	6°56.7	14	29°40.8	8°03.7	14	29°52.4	9°09.5
15	44°02.6	4°40.6	15	44°15.8	5°49.5	15	44°28.6	6°57.6	15	44°40.9	8°04.6	15	44°52.6	9°10.4
16	59°02.7	4°41.6	16	59°16.0	5°50.5	16	59°28.8	6°58.5	16	59°41.1	8°05.5	16	59°52.7	9°11.3
17	74°02.9	4°42.5	17	74°16.2	5°51.4	17	74°29.0	6°59.5	17	74°41.3	8°06.4	17	74°52.9	9°12.2
18	89°03.1	4°43.5	18	89°16.3	5°52.4	18	89°29.2	7°00.4	18	89°41.4	8°07.4	18	89°53.0	9°13.1
19	104°03.3	4°44.4	19	104°16.5	5°53.3	19	104°29.3	7°01.3	19	104°41.6	8°08.3	19	104°53.2	9°14.0
20	119°03.5	4°45.4	20	119°16.7	5°54.3	20	119°29.5	7°02.3	20	119°41.8	8°09.2	20	119°53.3	9°14.9
21	134°03.7	4°46.4	21	134°16.9	5°55.3	21	134°29.7	7°03.2	21	134°41.9	8°10.1	21	134°53.5	9°15.8
22	149°03.9	4°47.3	22	149°17.1	5°56.2	22	149°29.9	7°04.2	22	149°42.1	8°11.0	22	149°53.7	9°16.7
23	164°04.0	4°48.3	23	164°17.3	5°57.2	23	164°30.7	7°05.1	23	164°42.3	8°12.0	23	164°53.8	9°17.6
	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
02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	179°04.2	4°49.3	0	179°17.4	5°58.1	0	179°30.2	7°06.0	0	179°42.4	8°12.9	0	179°54.0	9°18.5
1	194°04.4	4°50.2	1	194°17.6	5°59.1	1	194°30.4	7°07.0	1	194°42.6	8°13.8	1	194°54.1	9°19.4
2	209°04.6	4°51.2	2	209°17.8	6°00.0	2	209°30.6	7°07.9	2	209°42.7	8°14.7	2	209°54.3	9°20.3
3	224°04.8	4°52.1	3	224°18.0	6°01.0	3	224°30.7	7°08.8	3	224°42.9	8°15.6	3	224°54.4	9°21.2
4	239°05.0	4°53.1	4	239°18.2	6°01.9	4	239°30.9	7°09.8	4	239°43.1	8°16.6	4	239°54.6	9°22.1
5	254°05.2	4°54.1	5	254°18.3	6°02.8	5	254°31.1	7°10.7	5	254°43.2	8°17.5	5	254°54.7	9°23.0
6	269°05.3	4°55.0	6	269°18.5	6°03.8	6	269°31.2	7°11.6	6	269°43.4	8°18.4	6	269°54.9	9°23.9
7	284°05.5	4°56.0	7	284°18.7	6°04.7	7	284°31.4	7°12.6	7	284°43.6	8°19.3	7	284°55.0	9°24.8
8	299°05.7	4°56.9	8	299°18.9	6°05.7	8	299°31.6	7°13.5	8	299°43.7	8°20.2	8	299°55.2	9°25.7
9	314°05.9	4°57.9	9	314°19.1	6°06.6	9	314°31.8	7°14.4	9	314°43.9	8°21.2	9	314°55.4	9°26.6
10	329°06.1	4°58.9	10	329°19.2	6°07.6	10	329°31.9	7°15.4	10	329°44.1	8°22.1	10	329°55.5	9°27.5
11	344°06.3	4°59.8	11	344°19.4	6°08.5	11	344°32.1	7°16.3	11	344°44.2	8°23.0	11	344°55.7	9°28.4
12	359°06.5	5°00.8	12	359°19.6	6°09.5	12	359°32.3	7°17.2	12	359°44.4	8°23.9	12	359°55.8	9°29.3
13	14°06.6	5°01.7	13	14°19.8	6°10.4	13	14°32.5	7°18.2	13	14°44.6	8°24.8	13	14°56.0	9°30.2
14	29°06.8	5°02.7	14	29°20.0	6°11.4	14	29°32.6	7°19.1	14	29°44.7	8°25.7	14	29°56.1	9°31.1
15	44°07.0	5°03.7	15	44°20.1	6°12.3	15	44°32.8	7°20.0	15	44°44.9	8°26.6	15	44°56.3	9°32.0
16	59°07.2	5°04.6	16	59°20.3	6°13.3	16	59°33.0	7°21.0	16	59°45.0	8°27.6	16	59°56.4	9°32.9
17	74°07.4	5°05.6	17	74°20.5	6°14.2	17	74°33.1	7°21.9	17	74°45.2	8°28.5	17	74°56.6	9°33.8
18	89°07.6	5°06.5	18	89°20.7	6°15.2	18	89°33.3	7°22.8	18	89°45.4	8°29.4	18	89°56.7	9°34.7
19	104°07.7	5°07.5	19	104°20.8	6°16.1	19	104°33.5	7°23.8	19	104°45.5	8°30.3	19	104°56.9	9°35.6
20	119°07.9	5°08.5	20	119°21.0	6°17.1	20	119°33.7	7°24.7	20	119°45.7	8°31.2	20	119°57.0	9°36.5
21	134°08.1	5°09.4	21	134°21.2	6°18.0	21	134°33.8	7°25.6	21	134°45.9	8°32.2	21	134°57.2	9°37.4
22	149°08.3	5°10.4	22	149°21.4	6°19.0	22	149°34.0	7°26.6	22	149°46.0	8°33.1	22	149°57.3	9°38.3
23	164°08.5	5°11.3	23	164°21.6	6°19.9	23	164°34.2	7°27.5	23	164°46.2	8°34.0	23	164°57.5	9°39.2
	SD.=16.0	d=1.0		SD.=16.0	d=1.0		SD.=16.0	d=0.9		SD.=16.0	d=0.9		SD.=15.9	d=0.9
03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	179°08.7	5°12.3	0	179°21.7	6°20.9	0	179°34.3	7°28.4	0	179°46.3	8°34.9	0	179°57.6	9°40.1
1	194°08.9	5°13.3	1	194°21.9	6°21.8	1	194°34.5	7°29.4	1	194°46.5	8°35.8	1	194°57.8	9°41.0
2	209°09.0	5°14.2	2	209°22.1	6°22.7	2	209°34.7	7°30.3	2	209°46.7	8°36.7	2	209°57.9	9°41.9
3	224°09.2	5°15.2	3	224°22.3	6°23.7	3	224°34.9	7°31.2	3	224°46.8	8°37.6	3	224°58.1	9°42.8
4	239°09.4	5°16.1	4	239°22.5	6°24.6	4	239°35.0	7°32.2	4	239°47.0	8°38.6	4	239°58.2	9°43.7
5	254°09.6	5°17.1	5	254°22.6	6°25.6	5	254°35.2	7°33.1	5	254°47.2	8°39.5	5	254°58.4	9°44.6
6	269°09.8	5°18.0	6	269°22.8	6°26.5	6	269°35.4	7°34.0	6	269°47.3	8°40.4	6	269°58.6	9°45.4
7	284°10.0	5°19.0	7	284°23.0	6°27.5	7	284°35.5	7°34.9	7	284°47.5	8°41.3	7	284°58.7	9°46.3
8	299°10.1	5°20.0	8	299°23.2	6°28.4	8	299°35.7	7°35.9	8	299°47.6	8°42.2	8	299°58.9	9°47.2
9	314°10.3	5°20.9	9	314°23.3	6°29.4	9	314°35.9	7°36.8	9	314°47.8	8°43.1	9	314°59.0	9°48.1
10	329°10.5	5°21.9	10	329°23.5	6°30.3	10	329°36.1	7°37.7	10	329°48.0	8°44.0	10	329°59.2	9°49.0
11	344°10.7	5°22.8	11	344°23.7	6°31.2	11	344°36.2	7°38.7	11	344°48.1	8°44.9	11	344°59.3	9°49.9
12	359°10.9	5°23.8	12	359°23.9	6°32.2	12	359°36.4	7°39.6	12	359°48.3	8°45.9	12	359°59.5	9°50.8
13	14°11.1	5°24.7	13	14°24.1	6°33.1	13	14°36.6	7°40.5	13	14°48.4	8°46.8	13	14°59.6	9°51.7
14	29°11.2	5°25.7	14	29°24.2	6°34.1	14	29°36.7	7°41.5	14	29°48.6	8°47.7	14	29°59.8	9°52.6
15	44°11.4	5°26.7	15	44°24.4	6°35.0	15	44°36.9	7°42.4	15	44°48.8	8°48.6	15	44°59.9	9°53.5
16	59°11.6	5°27.6	16	59°24.6	6°36.0	16	59°37.1	7°43.3	16	59°48.9	8°49.5	16	60°00.0	9°54.4
17	74°11.8	5°28.6	17	74°24.8	6°36.9	17	74°37.2	7°44.2	17	74°49.1	8°50.4	17	75°00.2	9°55.3
18	89°12.0	5°29.5	18	89°24.9	6°37.8	18	89°37.4	7°45.2	18	89°49.2	8°51.3	18	90°00.3	9°56.2
19	104°12.2	5°30.5	19	104°25.1	6°38.8	19	104°37.6	7°46.1	19	104°49.4	8°52.2	19	105°00.5	9°57.0
20	119°12.3	5°31.4	20	119°25.3	6°39.7	20	119°37.7	7°47.0	20	119°49.6	8°53.1	20	120°00.6	9°57.9
21	134°12.5	5°32.4	21	134°25.5	6°40.7	21	134°37.9	7°47.9	21	134°49.7	8°54.0	21	135°00.8	9°58.8
22	149°12.7	5°33.3	22	149°25.7	6°41.6	22	149°38.1	7°48.9	22	149°49.9	8°55.0	22	150°00.9	9°59.7
23	164°12.9	5°34.3	23	164°25.8	6°42.6	23	164°38.2	7°49.8	23	164°50.0	8°55.9	23	165°01.1	10°00.6
	SD.=16.0	d=1.0		SD.=16.0	d=0.9									

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	180°01.2	10°01.5	0	180°11.5	11°04.7	0	180°20.8	12°06.3	0	180°29.2	13°06.1	0	180°36.5	14°03.9
1	195°01.4	10°02.4	1	195°11.6	11°05.6	1	195°20.9	12°07.1	1	195°29.3	13°06.9	1	195°36.6	14°04.7
2	210°01.5	10°03.3	2	210°11.7	11°06.5	2	210°21.0	12°08.0	2	210°29.4	13°07.7	2	210°36.7	14°05.5
3	225°01.7	10°04.2	3	225°11.9	11°07.3	3	225°21.2	12°08.8	3	225°29.5	13°08.5	3	225°36.8	14°06.3
4	240°01.8	10°05.0	4	240°12.0	11°08.2	4	240°21.3	12°09.7	4	240°29.6	13°09.3	4	240°36.9	14°07.1
5	255°02.0	10°05.9	5	255°12.1	11°09.1	5	255°21.4	12°10.5	5	255°29.7	13°10.2	5	255°37.0	14°07.8
6	270°02.1	10°06.8	6	270°12.3	11°09.9	6	270°21.5	12°11.4	6	270°29.8	13°11.0	6	270°37.1	14°08.6
7	285°02.3	10°07.7	7	285°12.4	11°10.8	7	285°21.7	12°12.2	7	285°29.9	13°11.8	7	285°37.2	14°09.4
8	300°02.4	10°08.6	8	300°12.5	11°11.6	8	300°21.8	12°13.0	8	300°30.0	13°12.6	8	300°37.3	14°10.2
9	315°02.6	10°09.5	9	315°12.7	11°12.5	9	315°21.9	12°13.9	9	315°30.2	13°13.4	9	315°37.4	14°11.0
10	330°02.7	10°10.4	10	330°12.8	11°13.4	10	330°22.0	12°14.7	10	330°30.3	13°14.2	10	330°37.5	14°11.8
11	345°02.9	10°11.3	11	345°12.9	11°14.2	11	345°22.1	12°15.6	11	345°30.4	13°15.0	11	345°37.5	14°12.6
12	0°03.0	10°12.1	12	0°13.1	11°15.1	12	0°22.3	12°16.4	12	0°30.5	13°15.9	12	0°37.6	14°13.3
13	15°03.1	10°13.0	13	15°13.2	11°16.0	13	15°22.4	12°17.2	13	15°30.6	13°16.7	13	15°37.7	14°14.1
14	30°03.3	10°13.9	14	30°13.3	11°16.8	14	30°22.5	12°18.1	14	30°30.7	13°17.5	14	30°37.8	14°14.9
15	45°03.4	10°14.8	15	45°13.5	11°17.7	15	45°22.6	12°18.9	15	45°30.8	13°18.3	15	45°37.9	14°15.7
16	60°03.6	10°15.7	16	60°13.6	11°18.6	16	60°22.7	12°19.7	16	60°30.9	13°19.1	16	60°38.0	14°16.5
17	75°03.7	10°16.6	17	75°13.7	11°19.4	17	75°22.9	12°20.6	17	75°31.0	13°19.9	17	75°38.1	14°17.3
18	90°03.9	10°17.4	18	90°13.9	11°20.3	18	90°23.0	12°21.4	18	90°31.1	13°20.7	18	90°38.2	14°18.0
19	105°04.0	10°18.3	19	105°14.0	11°21.1	19	105°23.1	12°22.3	19	105°31.2	13°21.5	19	105°38.3	14°18.8
20	120°04.2	10°19.2	20	120°14.1	11°22.0	20	120°23.2	12°23.1	20	120°31.3	13°22.3	20	120°38.4	14°19.6
21	135°04.3	10°20.1	21	135°14.3	11°22.9	21	135°23.3	12°23.9	21	135°31.4	13°23.2	21	135°38.5	14°20.4
22	150°04.5	10°21.0	22	150°14.4	11°23.7	22	150°23.5	12°24.8	22	150°31.5	13°24.0	22	150°38.5	14°21.2
23	165°04.6	10°21.9	23	165°14.5	11°24.6	23	165°23.6	12°25.6	23	165°31.6	13°24.8	23	165°38.6	14°21.9
	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
17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	180°04.7	10°22.7	0	180°14.7	11°25.4	0	180°23.7	12°26.4	0	180°31.7	13°25.6	0	180°38.7	14°22.7
1	195°04.9	10°23.6	1	195°14.8	11°26.3	1	195°23.8	12°27.3	1	195°31.9	13°26.4	1	195°38.8	14°23.5
2	210°05.0	10°24.5	2	210°14.9	11°27.2	2	210°23.9	12°28.1	2	210°32.0	13°27.2	2	210°38.9	14°24.3
3	225°05.2	10°25.4	3	225°15.1	11°28.0	3	225°24.1	12°28.9	3	225°32.1	13°28.0	3	225°39.0	14°25.0
4	240°05.3	10°26.3	4	240°15.2	11°28.9	4	240°24.2	12°29.8	4	240°32.2	13°28.8	4	240°39.1	14°25.8
5	255°05.5	10°27.1	5	255°15.3	11°29.7	5	255°24.3	12°30.6	5	255°32.3	13°29.6	5	255°39.2	14°26.6
6	270°05.6	10°28.0	6	270°15.5	11°30.6	6	270°24.4	12°31.4	6	270°32.4	13°30.4	6	270°39.2	14°27.4
7	285°05.7	10°28.9	7	285°15.6	11°31.4	7	285°24.5	12°32.3	7	285°32.5	13°31.2	7	285°39.3	14°28.2
8	300°05.9	10°29.8	8	300°15.7	11°32.3	8	300°24.6	12°33.1	8	300°32.6	13°32.0	8	300°39.4	14°28.9
9	315°06.0	10°30.7	9	315°15.9	11°33.2	9	315°24.8	12°33.9	9	315°32.7	13°32.8	9	315°39.5	14°29.7
10	330°06.2	10°31.5	10	330°16.0	11°34.0	10	330°24.9	12°34.8	10	330°32.8	13°33.6	10	330°39.6	14°30.5
11	345°06.3	10°32.4	11	345°16.1	11°34.9	11	345°25.0	12°35.6	11	345°32.9	13°34.4	11	345°39.7	14°31.3
12	0°06.5	10°33.3	12	0°16.2	11°35.7	12	0°25.1	12°36.4	12	0°33.0	13°35.2	12	0°39.8	14°32.0
13	15°06.6	10°34.2	13	15°16.4	11°36.6	13	15°25.2	12°37.3	13	15°33.1	13°36.0	13	15°39.9	14°32.8
14	30°06.7	10°35.1	14	30°16.5	11°37.4	14	30°25.3	12°38.1	14	30°33.2	13°36.8	14	30°39.9	14°33.6
15	45°06.9	10°35.9	15	45°16.6	11°38.3	15	45°25.5	12°38.9	15	45°33.3	13°37.7	15	45°40.0	14°34.4
16	60°07.0	10°36.8	16	60°16.8	11°39.1	16	60°25.6	12°39.7	16	60°33.4	13°38.5	16	60°40.1	14°35.1
17	75°07.2	10°37.7	17	75°16.9	11°40.0	17	75°25.7	12°40.6	17	75°33.5	13°39.3	17	75°40.2	14°35.9
18	90°07.3	10°38.6	18	90°17.0	11°40.9	18	90°25.8	12°41.4	18	90°33.6	13°40.1	18	90°40.3	14°36.7
19	105°07.4	10°39.4	19	105°17.2	11°41.7	19	105°25.9	12°42.2	19	105°33.7	13°40.9	19	105°40.4	14°37.4
20	120°07.6	10°40.3	20	120°17.3	11°42.6	20	120°26.0	12°43.1	20	120°33.8	13°41.7	20	120°40.5	14°38.2
21	135°07.7	10°41.2	21	135°17.4	11°43.4	21	135°26.2	12°43.9	21	135°33.9	13°42.5	21	135°40.5	14°39.0
22	150°07.9	10°42.1	22	150°17.5	11°44.3	22	150°26.3	12°44.7	22	150°34.0	13°43.3	22	150°40.6	14°39.8
23	165°08.0	10°42.9	23	165°17.7	11°45.1	23	165°26.4	12°45.5	23	165°34.1	13°44.1	23	165°40.7	14°40.5
	SD.=15.9	d=0.9		SD.=15.9	d=0.9		SD.=15.9	d=0.8		SD.=15.9	d=0.8		SD.=15.9	d=0.8
18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	180°08.1	10°43.8	0	180°17.8	11°46.0	0	180°26.5	12°46.4	0	180°34.2	13°44.9	0	180°40.8	14°41.3
1	195°08.3	10°44.7	1	195°17.9	11°46.8	1	195°26.6	12°47.2	1	195°34.3	13°45.7	1	195°40.9	14°42.1
2	210°08.4	10°45.6	2	210°18.0	11°47.7	2	210°26.7	12°48.0	2	210°34.4	13°46.4	2	210°41.0	14°42.8
3	225°08.6	10°46.4	3	225°18.2	11°48.5	3	225°26.8	12°48.8	3	225°34.5	13°47.2	3	225°41.0	14°43.6
4	240°08.7	10°47.3	4	240°18.3	11°49.4	4	240°27.0	12°49.7	4	240°34.6	13°48.0	4	240°41.1	14°44.4
5	255°08.8	10°48.2	5	255°18.4	11°50.2	5	255°27.1	12°50.5	5	255°34.7	13°48.8	5	255°41.2	14°45.1
6	270°09.0	10°49.1	6	270°18.6	11°51.1	6	270°27.2	12°51.3	6	270°34.8	13°49.6	6	270°41.3	14°45.9
7	285°09.1	10°49.9	7	285°18.7	11°51.9	7	285°27.3	12°52.1	7	285°34.9	13°50.4	7	285°41.4	14°46.7
8	300°09.3	10°50.8	8	300°18.8	11°52.8	8	300°27.4	12°53.0	8	300°35.0	13°51.2	8	300°41.5	14°47.4
9	315°09.4	10°51.7	9	315°18.9	11°53.6	9	315°27.5	12°53.8	9	315°35.1	13°52.0	9	315°41.5	14°48.2
10	330°09.5	10°52.6	10	330°19.1	11°54.5	10	330°27.6	12°54.6	10	330°35.2	13°52.8	10	330°41.6	14°49.0
11	345°09.7	10°53.4	11	345°19.2	11°55.3	11	345°27.7	12°55.4	11	345°35.3	13°53.6	11	345°41.7	14°49.7
12	0°09.8	10°54.3	12	0°19.3	11°56.2	12	0°27.9	12°56.2	12	0°35.4	13°54.4	12	0°41.8	14°50.5
13	15°10.0	10°55.2	13	15°19.4	11°57.0	13	15°28.0	12°57.1	13	15°35.5	13°55.2	13	15°41.9	14°51.3
14	30°10.1	10°56.0	14	30°19.6	11°57.9	14	30°28.1	12°57.9	14	30°35.6	13°56.0	14	30°41.9	14°52.0
15	45°10.2	10°56.9	15	45°19.7	11°58.7	15	45°28.2	12°58.7	15	45°35.7	13°56.8	15	45°42.0	14°52.8
16	60°10.4	10°57.8	16	60°19.8	11°59.5	16	60°2							

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	180°42.7	14°59.6	0	180°47.7	15°53.1	0	180°51.5	16°44.3	0	180°53.9	17°32.9	0	180°55.0	18°18.9
1	195°42.8	15°00.4	1	195°47.8	15°53.8	1	195°51.5	16°44.9	1	195°53.9	17°33.5	1	195°55.0	18°19.5
2	210°42.9	15°01.1	2	210°47.8	15°54.6	2	210°51.5	16°45.6	2	210°53.9	17°34.2	2	210°55.0	18°20.1
3	225°43.0	15°01.9	3	225°47.9	15°55.3	3	225°51.6	16°46.3	3	225°53.9	17°34.9	3	225°55.0	18°20.7
4	240°43.0	15°02.7	4	240°48.0	15°56.0	4	240°51.6	16°47.0	4	240°54.0	17°35.5	4	240°55.0	18°21.4
5	255°43.1	15°03.4	5	255°48.0	15°56.7	5	255°51.7	16°47.7	5	255°54.0	17°36.2	5	255°55.0	18°22.0
6	270°43.2	15°04.2	6	270°48.1	15°57.5	6	270°51.7	16°48.4	6	270°54.0	17°36.8	6	270°55.0	18°22.6
7	285°43.3	15°04.9	7	285°48.1	15°58.2	7	285°51.7	16°49.1	7	285°54.0	17°37.5	7	285°55.0	18°23.2
8	300°43.3	15°05.7	8	300°48.2	15°58.9	8	300°51.8	16°49.8	8	300°54.1	17°38.1	8	300°55.0	18°23.8
9	315°43.4	15°06.4	9	315°48.3	15°59.6	9	315°51.8	16°50.5	9	315°54.1	17°38.8	9	315°55.0	18°24.4
10	330°43.5	15°07.2	10	330°48.3	16°00.4	10	330°51.9	16°51.2	10	330°54.1	17°39.4	10	330°55.0	18°25.1
11	345°43.6	15°07.9	11	345°48.4	16°01.1	11	345°51.9	16°51.8	11	345°54.1	17°40.1	11	345°55.0	18°25.7
12	0°43.6	15°08.7	12	0°48.4	16°01.8	12	0°51.9	16°52.5	12	0°54.1	17°40.7	12	0°55.0	18°26.3
13	15°43.7	15°09.5	13	15°48.5	16°02.5	13	15°52.0	16°53.2	13	15°54.2	17°41.4	13	15°55.0	18°26.9
14	30°43.8	15°10.2	14	30°48.6	16°03.3	14	30°52.0	16°53.9	14	30°54.2	17°42.0	14	30°55.0	18°27.5
15	45°43.9	15°11.0	15	45°48.6	16°04.0	15	45°52.1	16°54.6	15	45°54.2	17°42.7	15	45°55.0	18°28.1
16	60°43.9	15°11.7	16	60°48.7	16°04.7	16	60°52.1	16°55.3	16	60°54.2	17°43.3	16	60°55.0	18°28.7
17	75°44.0	15°12.5	17	75°48.7	16°05.4	17	75°52.1	16°56.0	17	75°54.3	17°44.0	17	75°55.0	18°29.3
18	90°44.1	15°13.2	18	90°48.8	16°06.1	18	90°52.2	16°56.6	18	90°54.3	17°44.6	18	90°55.0	18°30.0
19	105°44.2	15°14.0	19	105°48.8	16°06.8	19	105°52.2	16°57.3	19	105°54.3	17°45.3	19	105°55.0	18°30.6
20	120°44.2	15°14.7	20	120°48.9	16°07.6	20	120°52.3	16°58.0	20	120°54.3	17°45.9	20	120°55.0	18°31.2
21	135°44.3	15°15.5	21	135°48.9	16°08.3	21	135°52.3	16°58.7	21	135°54.3	17°46.6	21	135°55.0	18°31.8
22	150°44.4	15°16.2	22	150°49.0	16°09.0	22	150°52.3	16°59.4	22	150°54.3	17°47.2	22	150°55.0	18°32.4
23	165°44.5	15°17.0	23	165°49.1	16°09.7	23	165°52.4	17°00.1	23	165°54.4	17°47.9	23	165°55.0	18°33.0
	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

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	180°44.5	15°17.7	0	180°49.1	16°10.4	0	180°52.4	17°00.7	0	180°54.4	17°48.5	0	180°55.0	18°33.6
1	195°44.6	15°18.5	1	195°49.2	16°11.1	1	195°52.4	17°01.4	1	195°54.4	17°49.2	1	195°55.0	18°34.2
2	210°44.7	15°19.2	2	210°49.2	16°11.9	2	210°52.5	17°02.1	2	210°54.4	17°49.8	2	210°55.0	18°34.8
3	225°44.7	15°20.0	3	225°49.3	16°12.6	3	225°52.5	17°02.8	3	225°54.4	17°50.5	3	225°55.0	18°35.4
4	240°44.8	15°20.7	4	240°49.3	16°13.3	4	240°52.6	17°03.5	4	240°54.5	17°51.1	4	240°55.0	18°36.0
5	255°44.9	15°21.4	5	255°49.4	16°14.0	5	255°52.6	17°04.1	5	255°54.5	17°51.7	5	255°55.0	18°36.6
6	270°45.0	15°22.2	6	270°49.4	16°14.7	6	270°52.6	17°04.8	6	270°54.5	17°52.4	6	270°55.0	18°37.2
7	285°45.0	15°22.9	7	285°49.5	16°15.4	7	285°52.7	17°05.5	7	285°54.5	17°53.0	7	285°55.0	18°37.8
8	300°45.1	15°23.7	8	300°49.5	16°16.1	8	300°52.7	17°06.2	8	300°54.5	17°53.7	8	300°55.0	18°38.4
9	315°45.2	15°24.4	9	315°49.6	16°16.9	9	315°52.7	17°06.9	9	315°54.5	17°54.3	9	315°55.0	18°39.1
10	330°45.2	15°25.2	10	330°49.6	16°17.6	10	330°52.8	17°07.5	10	330°54.6	17°54.9	10	330°55.0	18°39.7
11	345°45.3	15°25.9	11	345°49.7	16°18.3	11	345°52.8	17°08.2	11	345°54.6	17°55.6	11	345°55.0	18°40.3
12	0°45.4	15°26.7	12	0°49.8	16°19.0	12	0°52.8	17°08.9	12	0°54.6	17°56.2	12	0°55.0	18°40.9
13	15°45.5	15°27.4	13	15°49.8	16°19.7	13	15°52.9	17°09.6	13	15°54.6	17°56.9	13	15°55.0	18°41.5
14	30°45.5	15°28.1	14	30°49.9	16°20.4	14	30°52.9	17°10.2	14	30°54.6	17°57.5	14	30°55.0	18°42.1
15	45°45.6	15°28.9	15	45°49.9	16°21.1	15	45°52.9	17°10.9	15	45°54.6	17°58.1	15	45°55.0	18°42.7
16	60°45.7	15°29.6	16	60°50.0	16°21.8	16	60°53.0	17°11.6	16	60°54.6	17°58.8	16	60°55.0	18°43.3
17	75°45.7	15°30.4	17	75°50.0	16°22.5	17	75°53.0	17°12.3	17	75°54.7	17°59.4	17	75°55.0	18°43.8
18	90°45.8	15°31.1	18	90°50.1	16°23.2	18	90°53.0	17°12.9	18	90°54.7	18°00.0	18	90°55.0	18°44.4
19	105°45.9	15°31.8	19	105°50.1	16°23.9	19	105°53.1	17°13.6	19	105°54.7	18°00.7	19	105°55.0	18°45.0
20	120°45.9	15°32.6	20	120°50.2	16°24.7	20	120°53.1	17°14.3	20	120°54.7	18°01.3	20	120°55.0	18°45.6
21	135°46.0	15°33.3	21	135°50.2	16°25.4	21	135°53.1	17°14.9	21	135°54.7	18°02.0	21	135°55.0	18°46.2
22	150°46.1	15°34.1	22	150°50.3	16°26.1	22	150°53.2	17°15.6	22	150°54.7	18°02.6	22	150°55.0	18°46.8
23	165°46.1	15°34.8	23	165°50.3	16°26.8	23	165°53.2	17°16.3	23	165°54.7	18°03.2	23	165°55.0	18°47.4
	SD.=15.9	d=0.7		SD.=15.9	d=0.7		SD.=15.8	d=0.7		SD.=15.8	d=0.6		SD.=15.8	d=0.6

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	180°46.2	15°35.5	0	180°50.4	16°27.5	0	180°53.2	17°17.0	0	180°54.7	18°03.9	0	180°55.0	18°48.0
1	195°46.3	15°36.3	1	195°50.4	16°28.2	1	195°53.2	17°17.6	1	195°54.8	18°04.5	1	195°55.0	18°48.6
2	210°46.3	15°37.0	2	210°50.5	16°28.9	2	210°53.3	17°18.3	2	210°54.8	18°05.1	2	210°55.0	18°49.2
3	225°46.4	15°37.8	3	225°50.5	16°29.6	3	225°53.3	17°19.0	3	225°54.8	18°05.7	3	225°54.9	18°49.8
4	240°46.5	15°38.5	4	240°50.5	16°30.3	4	240°53.3	17°19.6	4	240°54.8	18°06.4	4	240°54.9	18°50.4
5	255°46.5	15°39.2	5	255°50.6	16°31.0	5	255°53.4	17°20.3	5	255°54.8	18°07.0	5	255°54.9	18°51.0
6	270°46.6	15°40.0	6	270°50.6	16°31.7	6	270°53.4	17°21.0	6	270°54.8	18°07.6	6	270°54.9	18°51.6
7	285°46.7	15°40.7	7	285°50.7	16°32.4	7	285°53.4	17°21.6	7	285°54.8	18°08.3	7	285°54.9	18°52.2
8	300°46.7	15°41.4	8	300°50.7	16°33.1	8	300°53.5	17°22.3	8	300°54.8	18°08.9	8	300°54.9	18°52.8
9	315°46.8	15°42.2	9	315°50.8	16°33.8	9	315°53.5	17°23.0	9	315°54.8	18°09.5	9	315°54.9	18°53.3
10	330°46.9	15°42.9	10	330°50.8	16°34.5	10	330°53.5	17°23.6	10	330°54.9	18°10.2	10	330°54.9	18°53.9
11	345°46.9	15°43.6	11	345°50.9	16°35.2	11	345°53.5	17°24.3	11	345°54.9	18°10.8	11	345°54.9	18°54.5
12	0°47.0	15°44.4	12	0°50.9	16°35.9	12	0°53.6	17°25.0	12	0°54.9	18°11.4	12	0°54.9	18°55.1
13	15°47.0	15°45.1	13	15°51.0	16°36.6	13	15°53.6	17°25.6	13	15°54.9	18°12.0	13	15°54.9	18°55.7
14	30°47.1	15°45.8	14	30°51.0	16°37.3	14	30°53.6	17°26.3	14	30°54.9	18°12.7	14	30°54.9	18°56.3
15	45°47.2	15°46.6	15	45°51.1	16°38.0	15	45°53.6	17°26.9	15	45°54.9	18°13.3	15	45°54.9	18°56.9
16	60°47.2	15°47.3	16	60°51.1	16°38.7	16	60°53.7	17°27.6	16	60°54.9	18°13.9	16	60°54.8	18°57.5
17	75°47.3	15°48.0	17	75°51.1	16°39.4	17	75°53.7	17°28.3	17	75°54.9	18°14.5	17	75°54.8	18°58.0
18	90°47.4	15°48.7	18	90°51.2	16°40.1	18	90°53.7	17°28.9	18	90°54.9	18°15.2	18	90°54.8	18°58.6
19	105°47.4	15°49.5	19	105°51.2	16°40.8	19	105°53.7	17°29.6	19	105°54.9	18°15.8	19	105°54.8	18°59.2
20	120°47.5	15°50.2	20	120°51.3	16°41.5	20	120°53.8	17°30.3	20	120°54.9	18°16.4	20	120°54.8	18°59.8
21	135°47.5	15°50.9	21	135°51.3	16°42.2	21	135°53.8	17°30.9	21	135°54.9	18°17.0	21	135°54.8	19°00.4
22	150°47.6	15°51.7	22	150°51.4	16°42.9	22	150°53.8	17°31.6	22	150°55.0	18°17.6	22	150°54.8	19°01.0
23	165°47.7	15°52.4	23	165°51.4	16°43.6	23	165°53.8	17°32.2	23	165°55.0	18°18.3			

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	180°54.8	19°02.1	0	180°53.3	19°42.4	0	180°50.6	20°19.8	0	180°46.8	20°53.9	0	180°41.9	21°24.8
1	195°54.7	19°02.7	1	195°53.2	19°43.0	1	195°50.6	20°20.3	1	195°46.7	20°54.4	1	195°41.8	21°25.2
2	210°54.7	19°03.3	2	210°53.2	19°43.5	2	210°50.5	20°20.7	2	210°46.7	20°54.8	2	210°41.8	21°25.6
3	225°54.7	19°03.9	3	225°53.2	19°44.1	3	225°50.5	20°21.2	3	225°46.6	20°55.3	3	225°41.7	21°26.0
4	240°54.7	19°04.4	4	240°53.2	19°44.6	4	240°50.4	20°21.7	4	240°46.5	20°55.7	4	240°41.6	21°26.5
5	255°54.7	19°05.0	5	255°53.1	19°45.1	5	255°50.4	20°22.2	5	255°46.5	20°56.2	5	255°41.5	21°26.9
6	270°54.7	19°05.6	6	270°53.1	19°45.7	6	270°50.3	20°22.7	6	270°46.4	20°56.6	6	270°41.4	21°27.3
7	285°54.7	19°06.2	7	285°53.1	19°46.2	7	285°50.3	20°23.2	7	285°46.4	20°57.1	7	285°41.4	21°27.7
8	300°54.7	19°06.7	8	300°53.0	19°46.7	8	300°50.2	20°23.7	8	300°46.3	20°57.5	8	300°41.3	21°28.1
9	315°54.6	19°07.3	9	315°53.0	19°47.3	9	315°50.2	20°24.2	9	315°46.2	20°58.0	9	315°41.2	21°28.5
10	330°54.6	19°07.9	10	330°53.0	19°47.8	10	330°50.1	20°24.7	10	330°46.2	20°58.4	10	330°41.1	21°28.9
11	345°54.6	19°08.5	11	345°52.9	19°48.3	11	345°50.1	20°25.2	11	345°46.1	20°58.9	11	345°41.1	21°29.3
12	0°54.6	19°09.0	12	0°52.9	19°48.9	12	0°50.0	20°25.7	12	0°46.1	20°59.3	12	0°41.0	21°29.7
13	15°54.6	19°09.6	13	15°52.9	19°49.4	13	15°50.0	20°26.2	13	15°46.0	20°59.7	13	15°40.9	21°30.1
14	30°54.6	19°10.2	14	30°52.8	19°49.9	14	30°49.9	20°26.6	14	30°45.9	21°00.2	14	30°40.8	21°30.5
15	45°54.5	19°10.8	15	45°52.8	19°50.5	15	45°49.9	20°27.1	15	45°45.9	21°00.6	15	45°40.8	21°30.9
16	60°54.5	19°11.3	16	60°52.8	19°51.0	16	60°49.9	20°27.6	16	60°45.8	21°01.1	16	60°40.7	21°31.2
17	75°54.5	19°11.9	17	75°52.8	19°51.5	17	75°49.8	20°28.1	17	75°45.7	21°01.5	17	75°40.6	21°31.6
18	90°54.5	19°12.5	18	90°52.7	19°52.1	18	90°49.8	20°28.6	18	90°45.7	21°02.0	18	90°40.5	21°32.0
19	105°54.5	19°13.0	19	105°52.7	19°52.6	19	105°49.7	20°29.1	19	105°45.6	21°02.4	19	105°40.4	21°32.4
20	120°54.5	19°13.6	20	120°52.7	19°53.1	20	120°49.7	20°29.6	20	120°45.5	21°02.8	20	120°40.4	21°32.8
21	135°54.5	19°14.2	21	135°52.6	19°53.6	21	135°49.6	20°30.1	21	135°45.5	21°03.3	21	135°40.3	21°33.2
22	150°54.4	19°14.8	22	150°52.6	19°54.2	22	150°49.6	20°30.5	22	150°45.4	21°03.7	22	150°40.2	21°33.6
23	165°54.4	19°15.3	23	165°52.6	19°54.7	23	165°49.5	20°31.0	23	165°45.3	21°04.2	23	165°40.1	21°34.0
	SD.=15.8	d=0.6		SD.=15.8	d=0.5		SD.=15.8	d=0.5		SD.=15.8	d=0.5		SD.=15.8	d=0.4
17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	180°54.4	19°15.9	0	180°52.5	19°55.2	0	180°49.5	20°31.5	0	180°45.3	21°04.6	0	180°40.0	21°34.4
1	195°54.4	19°16.5	1	195°52.5	19°55.8	1	195°49.4	20°32.0	1	195°45.2	21°05.0	1	195°40.0	21°34.8
2	210°54.4	19°17.0	2	210°52.4	19°56.3	2	210°49.4	20°32.5	2	210°45.1	21°05.5	2	210°39.9	21°35.2
3	225°54.3	19°17.6	3	225°52.4	19°56.8	3	225°49.3	20°32.9	3	225°45.1	21°05.9	3	225°39.8	21°35.6
4	240°54.3	19°18.2	4	240°52.4	19°57.3	4	240°49.3	20°33.4	4	240°45.0	21°06.3	4	240°39.7	21°36.0
5	255°54.3	19°18.7	5	255°52.3	19°57.8	5	255°49.2	20°33.9	5	255°45.0	21°06.8	5	255°39.6	21°36.3
6	270°54.3	19°19.3	6	270°52.3	19°58.4	6	270°49.2	20°34.4	6	270°44.9	21°07.2	6	270°39.6	21°36.7
7	285°54.3	19°19.8	7	285°52.3	19°58.9	7	285°49.1	20°34.9	7	285°44.8	21°07.6	7	285°39.5	21°37.1
8	300°54.2	19°20.4	8	300°52.2	19°59.4	8	300°49.0	20°35.3	8	300°44.8	21°08.1	8	300°39.4	21°37.5
9	315°54.2	19°21.0	9	315°52.2	19°59.9	9	315°49.0	20°35.8	9	315°44.7	21°08.5	9	315°39.3	21°37.9
10	330°54.2	19°21.5	10	330°52.2	20°00.5	10	330°48.9	20°36.3	10	330°44.6	21°08.9	10	330°39.2	21°38.3
11	345°54.2	19°22.1	11	345°52.1	20°01.0	11	345°48.9	20°36.8	11	345°44.5	21°09.4	11	345°39.2	21°38.7
12	0°54.2	19°22.7	12	0°52.1	20°01.5	12	0°48.8	20°37.2	12	0°44.5	21°09.8	12	0°39.1	21°39.0
13	15°54.1	19°23.2	13	15°52.0	20°02.0	13	15°48.8	20°37.7	13	15°44.4	21°10.2	13	15°39.0	21°39.4
14	30°54.1	19°23.8	14	30°52.0	20°02.5	14	30°48.7	20°38.2	14	30°44.3	21°10.6	14	30°38.9	21°39.8
15	45°54.1	19°24.3	15	45°52.0	20°03.0	15	45°48.7	20°38.7	15	45°44.3	21°11.1	15	45°38.8	21°40.2
16	60°54.1	19°24.9	16	60°51.9	20°03.6	16	60°48.6	20°39.1	16	60°44.2	21°11.5	16	60°38.7	21°40.6
17	75°54.1	19°25.4	17	75°51.9	20°04.1	17	75°48.6	20°39.6	17	75°44.1	21°11.9	17	75°38.7	21°40.9
18	90°54.0	19°26.0	18	90°51.9	20°04.6	18	90°48.5	20°40.1	18	90°44.1	21°12.4	18	90°38.6	21°41.3
19	105°54.0	19°26.6	19	105°51.8	20°05.1	19	105°48.5	20°40.5	19	105°44.0	21°12.8	19	105°38.5	21°41.7
20	120°54.0	19°27.1	20	120°51.8	20°05.6	20	120°48.4	20°41.0	20	120°43.9	21°13.2	20	120°38.4	21°42.1
21	135°54.0	19°27.7	21	135°51.7	20°06.1	21	135°48.4	20°41.5	21	135°43.9	21°13.6	21	135°38.3	21°42.5
22	150°54.0	19°28.2	22	150°51.7	20°06.6	22	150°48.3	20°42.0	22	150°43.8	21°14.0	22	150°38.2	21°42.8
23	165°53.9	19°28.8	23	165°51.7	20°07.2	23	165°48.2	20°42.4	23	165°43.7	21°14.5	23	165°38.2	21°43.2
	SD.=15.8	d=0.6		SD.=15.8	d=0.5		SD.=15.8	d=0.5		SD.=15.8	d=0.4		SD.=15.8	d=0.4
18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	180°53.9	19°29.3	0	180°51.6	20°07.7	0	180°48.2	20°42.9	0	180°43.6	21°14.9	0	180°38.1	21°43.6
1	195°53.9	19°29.9	1	195°51.6	20°08.2	1	195°48.1	20°43.4	1	195°43.6	21°15.3	1	195°38.0	21°44.0
2	210°53.9	19°30.4	2	210°51.5	20°08.7	2	210°48.1	20°43.8	2	210°43.5	21°15.7	2	210°37.9	21°44.3
3	225°53.8	19°31.0	3	225°51.5	20°09.2	3	225°48.0	20°44.3	3	225°43.4	21°16.2	3	225°37.8	21°44.7
4	240°53.8	19°31.5	4	240°51.5	20°09.7	4	240°48.0	20°44.8	4	240°43.4	21°16.6	4	240°37.7	21°45.1
5	255°53.8	19°32.1	5	255°51.4	20°10.2	5	255°47.9	20°45.2	5	255°43.3	21°17.0	5	255°37.6	21°45.5
6	270°53.8	19°32.6	6	270°51.4	20°10.7	6	270°47.8	20°45.7	6	270°43.2	21°17.4	6	270°37.6	21°45.8
7	285°53.7	19°33.2	7	285°51.3	20°11.2	7	285°47.8	20°46.1	7	285°43.2	21°17.8	7	285°37.5	21°46.2
8	300°53.7	19°33.7	8	300°51.3	20°11.7	8	300°47.7	20°46.6	8	300°43.1	21°18.2	8	300°37.4	21°46.6
9	315°53.7	19°34.3	9	315°51.3	20°12.2	9	315°47.7	20°47.1	9	315°43.0	21°18.7	9	315°37.3	21°46.9
10	330°53.7	19°34.8	10	330°51.2	20°12.7	10	330°47.6	20°47.5	10	330°42.9	21°19.1	10	330°37.2	21°47.3
11	345°53.6	19°35.4	11	345°51.2	20°13.3	11	345°47.6	20°48.0	11	345°42.9	21°19.5	11	345°37.1	21°47.7
12	0°53.6	19°35.9	12	0°51.1	20°13.8	12	0°47.5	20°48.4	12	0°42.8	21°19.9	12	0°37.0	21°48.0
13	15°53.6	19°36.5	13	15°51.1	20°14.3	13	15°47.4	20°48.9	13	15°42.7	21°20.3	13	15°37.0	21°48.4
14	30°53.6	19°37.0	14	30°51.0	20°14.8	14	30°47.4	20°49.4	14	30°42.6	21°20.7	14	30°36.9	21°48.8
15	45°53.5	19°37.6	15	45°51.0	20°15.3	15	45°47.3	20°49.8	15	45°42.6	21°21.1	15	45°36.8	21°49.1
16	60°53.5	19°38.1	16	60°51.0	20°15.8	16	60°47.3	20°50.3	16	60°42.5	21°21.6	16	60°36.7	21°49.5
17	75°53.5	19°38.7	17	75°50.9	20°16.3	17	75°47.2	20°50.7	17	75°42.4	21°22.0	17	75°36.6	21°49.9
18	90°53.4	19°39.2	18	90°50.9	20°16.8	18	90°47.2	20°51.2	18	90°42.3	21°22.4	18	90°36.5	21°50.2
19	105°53.4	19°39.7	19	105°50.8	20°17.3	19	105°47.1	20°51.7	19	105°42.3	21°22.8	19	105°36.4	21°50.6
20	120°53.4	19°40.3	20	120°50.8	20°17.8	20	120°47.0	20°52.1	20	120°42.2	21°23.2	20	120°36.3	21°51.0
21	135°53.4	19°40.8	21	135°50.7	20°18.3	21	135°47.0	20°52.6	21	135°42.1	21°23.6	21	135°36.3	21°51.3
22	150°53.3	19°41.4	22	150°50.7	2									

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	180°36.0	21°52.4	0	180°29.1	22°16.6	0	180°21.4	22°37.2	0	180°13.0	22°54.3	0	180°03.9	23°07.8
1	195°35.9	21°52.8	1	195°29.0	22°16.9	1	195°21.3	22°37.5	1	195°12.8	22°54.5	1	195°03.8	23°07.9
2	210°35.8	21°53.1	2	210°28.9	22°17.2	2	210°21.2	22°37.7	2	210°12.7	22°54.7	2	210°03.6	23°08.1
3	225°35.7	21°53.5	3	225°28.8	22°17.5	3	225°21.1	22°38.0	3	225°12.6	22°54.9	3	225°03.5	23°08.3
4	240°35.6	21°53.8	4	240°28.7	22°17.8	4	240°21.0	22°38.3	4	240°12.5	22°55.1	4	240°03.4	23°08.4
5	255°35.5	21°54.2	5	255°28.6	22°18.1	5	255°20.8	22°38.5	5	255°12.3	22°55.4	5	255°03.2	23°08.6
6	270°35.5	21°54.5	6	270°28.5	22°18.4	6	270°20.7	22°38.8	6	270°12.2	22°55.6	6	270°03.1	23°08.7
7	285°35.4	21°54.9	7	285°28.4	22°18.7	7	285°20.6	22°39.0	7	285°12.1	22°55.8	7	285°03.0	23°08.9
8	300°35.3	21°55.3	8	300°28.3	22°19.0	8	300°20.5	22°39.3	8	300°12.0	22°56.0	8	300°02.9	23°09.0
9	315°35.2	21°55.6	9	315°28.2	22°19.3	9	315°20.4	22°39.5	9	315°11.9	22°56.2	9	315°02.7	23°09.2
10	330°35.1	21°56.0	10	330°28.1	22°19.6	10	330°20.3	22°39.8	10	330°11.7	22°56.4	10	330°02.6	23°09.4
11	345°35.0	21°56.3	11	345°28.0	22°19.9	11	345°20.2	22°40.1	11	345°11.6	22°56.6	11	345°02.5	23°09.5
12	0°34.9	21°56.7	12	0°27.9	22°20.2	12	0°20.1	22°40.3	12	0°11.5	22°56.8	12	0°02.3	23°09.7
13	15°34.8	21°57.0	13	15°27.8	22°20.5	13	15°19.9	22°40.6	13	15°11.4	22°57.0	13	15°02.2	23°09.8
14	30°34.7	21°57.4	14	30°27.7	22°20.8	14	30°19.8	22°40.8	14	30°11.2	22°57.2	14	30°02.1	23°10.0
15	45°34.6	21°57.7	15	45°27.6	22°21.1	15	45°19.7	22°41.1	15	45°11.1	22°57.4	15	45°01.9	23°10.1
16	60°34.5	21°58.1	16	60°27.5	22°21.4	16	60°19.6	22°41.3	16	60°11.0	22°57.6	16	60°01.8	23°10.3
17	75°34.5	21°58.4	17	75°27.4	22°21.7	17	75°19.5	22°41.6	17	75°10.9	22°57.8	17	75°01.7	23°10.4
18	90°34.4	21°58.8	18	90°27.3	22°22.0	18	90°19.4	22°41.8	18	90°10.7	22°58.0	18	90°01.6	23°10.6
19	105°34.3	21°59.1	19	105°27.2	22°22.3	19	105°19.2	22°42.1	19	105°10.6	22°58.2	19	105°01.4	23°10.7
20	120°34.2	21°59.5	20	120°27.1	22°22.6	20	120°19.1	22°42.3	20	120°10.5	22°58.4	20	120°01.3	23°10.9
21	135°34.1	21°59.8	21	135°27.0	22°22.9	21	135°19.0	22°42.6	21	135°10.4	22°58.6	21	135°01.2	23°11.0
22	150°34.0	22°00.1	22	150°26.9	22°23.2	22	150°18.9	22°42.8	22	150°10.2	22°58.8	22	150°01.0	23°11.2
23	165°33.9	22°00.5	23	165°26.8	22°23.5	23	165°18.8	22°43.1	23	165°10.1	22°59.0	23	165°00.9	23°11.3
	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

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	180°33.8	22°00.8	0	180°26.6	22°23.8	0	180°18.7	22°43.3	0	180°10.0	22°59.2	0	180°00.8	23°11.4
1	195°33.7	22°01.2	1	195°26.5	22°24.1	1	195°18.6	22°43.6	1	195°09.9	22°59.4	1	195°00.6	23°11.6
2	210°33.6	22°01.5	2	210°26.4	22°24.4	2	210°18.4	22°43.8	2	210°09.7	22°59.6	2	210°00.5	23°11.7
3	225°33.5	22°01.9	3	225°26.3	22°24.7	3	225°18.3	22°44.0	3	225°09.6	22°59.8	3	225°00.4	23°11.9
4	240°33.4	22°02.2	4	240°26.2	22°25.0	4	240°18.2	22°44.3	4	240°09.5	22°60.0	4	240°00.2	23°12.0
5	255°33.3	22°02.5	5	255°26.1	22°25.3	5	255°18.1	22°44.5	5	255°09.4	23°00.2	5	255°00.1	23°12.2
6	270°33.2	22°02.9	6	270°26.0	22°25.6	6	270°18.0	22°44.8	6	270°09.2	23°00.4	6	269°59.9	23°12.3
7	285°33.1	22°03.2	7	285°25.9	22°25.9	7	285°17.9	22°45.0	7	285°09.1	23°00.5	7	284°59.8	23°12.4
8	300°33.1	22°03.6	8	300°25.8	22°26.2	8	300°17.7	22°45.2	8	300°09.0	23°00.7	8	299°59.7	23°12.6
9	315°33.0	22°03.9	9	315°25.7	22°26.5	9	315°17.6	22°45.5	9	315°08.9	23°00.9	9	314°59.6	23°12.7
10	330°32.9	22°04.2	10	330°25.6	22°26.7	10	330°17.5	22°45.7	10	330°08.7	23°01.1	10	329°59.4	23°12.9
11	345°32.8	22°04.6	11	345°25.5	22°27.0	11	345°17.4	22°46.0	11	345°08.6	23°01.3	11	344°59.3	23°13.0
12	0°32.7	22°04.9	12	0°25.4	22°27.3	12	0°17.3	22°46.2	12	0°08.5	23°01.5	12	359°59.2	23°13.1
13	15°32.6	22°05.2	13	15°25.3	22°27.6	13	15°17.2	22°46.4	13	15°08.4	23°01.7	13	14°59.1	23°13.3
14	30°32.5	22°05.6	14	30°25.2	22°27.9	14	30°17.0	22°46.7	14	30°08.2	23°01.9	14	29°58.9	23°13.4
15	45°32.4	22°05.9	15	45°25.0	22°28.2	15	45°16.9	22°46.9	15	45°08.1	23°02.0	15	44°58.8	23°13.5
16	60°32.3	22°06.2	16	60°24.9	22°28.5	16	60°16.8	22°47.1	16	60°08.0	23°02.2	16	59°58.7	23°13.7
17	75°32.2	22°06.6	17	75°24.8	22°28.7	17	75°16.7	22°47.4	17	75°07.9	23°02.4	17	74°58.5	23°13.8
18	90°32.1	22°06.9	18	90°24.7	22°29.0	18	90°16.6	22°47.6	18	90°07.7	23°02.6	18	89°58.4	23°13.9
19	105°32.0	22°07.2	19	105°24.6	22°29.3	19	105°16.4	22°47.8	19	105°07.6	23°02.8	19	104°58.3	23°14.1
20	120°31.9	22°07.6	20	120°24.5	22°29.6	20	120°16.3	22°48.1	20	120°07.5	23°03.0	20	119°58.1	23°14.2
21	135°31.8	22°07.9	21	135°24.4	22°29.9	21	135°16.2	22°48.3	21	135°07.4	23°03.1	21	134°58.0	23°14.3
22	150°31.7	22°08.2	22	150°24.3	22°30.2	22	150°16.1	22°48.5	22	150°07.2	23°03.3	22	149°57.9	23°14.5
23	165°31.6	22°08.6	23	165°24.2	22°30.4	23	165°16.0	22°48.8	23	165°07.1	23°03.5	23	164°57.7	23°14.6
	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.=15.7	d=0.1

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	180°31.5	22°08.9	0	180°24.1	22°30.7	0	180°15.8	22°49.0	0	180°07.0	23°03.7	0	179°57.6	23°14.7
1	195°31.4	22°09.2	1	195°24.0	22°31.0	1	195°15.7	22°49.2	1	195°06.8	23°03.9	1	194°57.5	23°14.8
2	210°31.3	22°09.5	2	210°23.9	22°31.3	2	210°15.6	22°49.5	2	210°06.7	23°04.0	2	209°57.3	23°15.0
3	225°31.2	22°09.9	3	225°23.7	22°31.5	3	225°15.5	22°49.7	3	225°06.6	23°04.2	3	224°57.2	23°15.1
4	240°31.1	22°10.2	4	240°23.6	22°31.8	4	240°15.4	22°49.9	4	240°06.5	23°04.4	4	239°57.1	23°15.2
5	255°31.0	22°10.5	5	255°23.5	22°32.1	5	255°15.3	22°50.1	5	255°06.3	23°04.6	5	254°56.9	23°15.3
6	270°30.9	22°10.8	6	270°23.4	22°32.4	6	270°15.1	22°50.4	6	270°06.2	23°04.7	6	269°56.8	23°15.5
7	285°30.8	22°11.2	7	285°23.3	22°32.7	7	285°15.0	22°50.6	7	285°06.1	23°04.9	7	284°56.7	23°15.6
8	300°30.7	22°11.5	8	300°23.2	22°32.9	8	300°14.9	22°50.8	8	300°06.0	23°05.1	8	299°56.5	23°15.7
9	315°30.6	22°11.8	9	315°23.1	22°33.2	9	315°14.8	22°51.0	9	315°05.8	23°05.3	9	314°56.4	23°15.8
10	330°30.5	22°12.1	10	330°23.0	22°33.5	10	330°14.7	22°51.3	10	330°05.7	23°05.4	10	329°56.3	23°16.0
11	345°30.4	22°12.5	11	345°22.9	22°33.7	11	345°14.5	22°51.5	11	345°05.6	23°05.6	11	344°56.1	23°16.1
12	0°30.3	22°12.8	12	0°22.8	22°34.0	12	0°14.4	22°51.7	12	0°05.4	23°05.8	12	359°56.0	23°16.2
13	15°30.2	22°13.1	13	15°22.6	22°34.3	13	15°14.3	22°51.9	13	15°05.3	23°05.9	13	14°55.9	23°16.3
14	30°30.1	22°13.4	14	30°22.5	22°34.6	14	30°14.2	22°52.1	14	30°05.2	23°06.1	14	29°55.7	23°16.4
15	45°30.0	22°13.7	15	45°22.4	22°34.8	15	45°14.0	22°52.4	15	45°05.1	23°06.3	15	44°55.6	23°16.6
16	60°29.9	22°14.0	16	60°22.3	22°35.1	16	60°13.9	22°52.6	16	60°04.9	23°06.5	16	59°55.5	23°16.7
17	75°29.8	22°14.4	17	75°22.2	22°35.4	17	75°13.8	22°52.8	17	75°04.8	23°06.6	17	74°55.3	23°16.8
18	90°29.7	22°14.7	18	90°22.1	22°35.6	18	90°13.7	22°53.0	18	90°04.7	23°06.8	18	89°55.2	23°16.9
19	105°29.6	22°15.0	19	105°22.0	22°35.9	19	105°13.6	22°53.2	19	105°04.5	23°07.0	19	104°55.1	23°17.0
20	120°29.5	22°15.3	20	120°21.9	22°36.2	20	120°13.4	22°53.4	20	120°04.4	23°07.1	20	119°54.9	23°17.1
21	135°29.4	22°15.6	21	135°21.7	22°36.4	21	135°13.3	22°53.7	21	135°04.3	23°07.3	21	134°54.8	23°17.2
22	150°29.3	22°15.9	22	150°21.6	22°36.7	22	150°13.2	22°53.9	22	150°04.2	23°07.4	22	149°54.7	23°17.4
23	165°29.2	22°16.2	23	165°21.5	22°36.9	23	165°13.1	22°54.1	23	165°04.0	23°07.6	23	164°54.5	23°17.5
	SD.=1													

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	179°54.4	23°17.6	0	179°44.6	23°23.7	0	179°34.8	23°26.1	0	179°25.1	23°24.7	0	179°15.6	23°19.7
1	194°54.3	23°17.7	1	194°44.5	23°23.7	1	194°34.7	23°26.1	1	194°24.9	23°24.7	1	194°15.5	23°19.6
2	209°54.1	23°17.8	2	209°44.4	23°23.8	2	209°34.5	23°26.1	2	209°24.8	23°24.7	2	209°15.3	23°19.5
3	224°54.0	23°17.9	3	224°44.2	23°23.9	3	224°34.4	23°26.1	3	224°24.7	23°24.6	3	224°15.2	23°19.4
4	239°53.9	23°18.0	4	239°44.1	23°23.9	4	239°34.3	23°26.1	4	239°24.5	23°24.6	4	239°15.1	23°19.3
5	254°53.7	23°18.1	5	254°43.9	23°24.0	5	254°34.1	23°26.1	5	254°24.4	23°24.5	5	254°15.0	23°19.2
6	269°53.6	23°18.2	6	269°43.8	23°24.0	6	269°34.0	23°26.1	6	269°24.3	23°24.5	6	269°14.8	23°19.1
7	284°53.4	23°18.3	7	284°43.7	23°24.1	7	284°33.9	23°26.1	7	284°24.1	23°24.4	7	284°14.7	23°19.0
8	299°53.3	23°18.4	8	299°43.5	23°24.1	8	299°33.7	23°26.1	8	299°24.0	23°24.4	8	299°14.6	23°18.9
9	314°53.2	23°18.5	9	314°43.4	23°24.2	9	314°33.6	23°26.1	9	314°23.9	23°24.3	9	314°14.4	23°18.8
10	329°53.0	23°18.6	10	329°43.3	23°24.2	10	329°33.4	23°26.1	10	329°23.7	23°24.3	10	329°14.3	23°18.7
11	344°52.9	23°18.8	11	344°43.1	23°24.3	11	344°33.3	23°26.1	11	344°23.6	23°24.2	11	344°14.2	23°18.6
12	359°52.8	23°18.9	12	359°43.0	23°24.3	12	359°33.2	23°26.1	12	359°23.5	23°24.2	12	359°14.1	23°18.5
13	14°52.6	23°19.0	13	14°42.9	23°24.4	13	14°33.0	23°26.1	13	14°23.3	23°24.1	13	14°13.9	23°18.4
14	29°52.5	23°19.1	14	29°42.7	23°24.4	14	29°32.9	23°26.1	14	29°23.2	23°24.1	14	29°13.8	23°18.3
15	44°52.4	23°19.2	15	44°42.6	23°24.5	15	44°32.8	23°26.1	15	44°23.1	23°24.0	15	44°13.7	23°18.2
16	59°52.2	23°19.3	16	59°42.4	23°24.5	16	59°32.6	23°26.1	16	59°22.9	23°23.9	16	59°13.5	23°18.1
17	74°52.1	23°19.4	17	74°42.3	23°24.6	17	74°32.5	23°26.1	17	74°22.8	23°23.9	17	74°13.4	23°18.0
18	89°52.0	23°19.5	18	89°42.2	23°24.6	18	89°32.4	23°26.1	18	89°22.7	23°23.8	18	89°13.3	23°17.9
19	104°51.8	23°19.6	19	104°42.0	23°24.7	19	104°32.2	23°26.1	19	104°22.6	23°23.8	19	104°13.2	23°17.7
20	119°51.7	23°19.6	20	119°41.9	23°24.7	20	119°32.1	23°26.1	20	119°22.4	23°23.7	20	119°13.0	23°17.6
21	134°51.6	23°19.7	21	134°41.8	23°24.8	21	134°32.0	23°26.1	21	134°22.3	23°23.7	21	134°12.9	23°17.5
22	149°51.4	23°19.8	22	149°41.6	23°24.8	22	149°31.8	23°26.1	22	149°22.2	23°23.6	22	149°12.8	23°17.4
23	164°51.3	23°19.9	23	164°41.5	23°24.9	23	164°31.7	23°26.1	23	164°22.0	23°23.5	23	164°12.6	23°17.3
	SD.=15.7	d=0.1		SD.=15.7	d=0.1		SD.=15.7	d=0.0		SD.=15.7	d=-0.0		SD.=15.7	d=-0.1

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	179°51.2	23°20.0	0	179°41.4	23°24.9	0	179°31.5	23°26.0	0	179°21.9	23°23.5	0	179°12.5	23°17.2
1	194°51.0	23°20.1	1	194°41.2	23°24.9	1	194°31.4	23°26.0	1	194°21.8	23°23.4	1	194°12.4	23°17.1
2	209°50.9	23°20.2	2	209°41.1	23°25.0	2	209°31.3	23°26.0	2	209°21.6	23°23.3	2	209°12.3	23°17.0
3	224°50.7	23°20.3	3	224°40.9	23°25.0	3	224°31.1	23°26.0	3	224°21.5	23°23.3	3	224°12.1	23°16.9
4	239°50.6	23°20.4	4	239°40.8	23°25.1	4	239°31.0	23°26.0	4	239°21.4	23°23.2	4	239°12.0	23°16.7
5	254°50.5	23°20.5	5	254°40.7	23°25.1	5	254°30.9	23°26.0	5	254°21.2	23°23.2	5	254°11.9	23°16.6
6	269°50.3	23°20.6	6	269°40.5	23°25.1	6	269°30.7	23°26.0	6	269°21.1	23°23.1	6	269°11.7	23°16.5
7	284°50.2	23°20.7	7	284°40.4	23°25.2	7	284°30.6	23°26.0	7	284°21.0	23°23.0	7	284°11.6	23°16.4
8	299°50.1	23°20.8	8	299°40.3	23°25.2	8	299°30.5	23°25.9	8	299°20.8	23°23.0	8	299°11.5	23°16.3
9	314°49.9	23°20.8	9	314°40.1	23°25.2	9	314°30.3	23°25.9	9	314°20.7	23°22.9	9	314°11.4	23°16.1
10	329°49.8	23°20.9	10	329°40.0	23°25.3	10	329°30.2	23°25.9	10	329°20.6	23°22.8	10	329°11.2	23°16.0
11	344°49.7	23°21.0	11	344°39.9	23°25.3	11	344°30.1	23°25.9	11	344°20.4	23°22.8	11	344°11.1	23°15.9
12	359°49.5	23°21.1	12	359°39.7	23°25.4	12	359°29.9	23°25.9	12	359°20.3	23°22.7	12	359°11.0	23°15.8
13	14°49.4	23°21.2	13	14°39.6	23°25.4	13	14°29.8	23°25.9	13	14°20.2	23°22.6	13	14°10.9	23°15.7
14	29°49.3	23°21.3	14	29°39.4	23°25.4	14	29°29.7	23°25.8	14	29°20.0	23°22.5	14	29°10.7	23°15.5
15	44°49.1	23°21.3	15	44°39.3	23°25.4	15	44°29.5	23°25.8	15	44°19.9	23°22.5	15	44°10.6	23°15.4
16	59°49.0	23°21.4	16	59°39.2	23°25.5	16	59°29.4	23°25.8	16	59°19.8	23°22.4	16	59°10.5	23°15.3
17	74°48.9	23°21.5	17	74°39.0	23°25.5	17	74°29.2	23°25.8	17	74°19.6	23°22.3	17	74°10.4	23°15.2
18	89°48.7	23°21.6	18	89°38.9	23°25.5	18	89°29.1	23°25.8	18	89°19.5	23°22.2	18	89°10.2	23°15.0
19	104°48.6	23°21.7	19	104°38.8	23°25.6	19	104°29.0	23°25.7	19	104°19.4	23°22.2	19	104°10.1	23°14.9
20	119°48.4	23°21.8	20	119°38.6	23°25.6	20	119°28.8	23°25.7	20	119°19.2	23°22.1	20	119°10.0	23°14.8
21	134°48.3	23°21.8	21	134°38.5	23°25.6	21	134°28.7	23°25.7	21	134°19.1	23°22.0	21	134°09.9	23°14.7
22	149°48.2	23°21.9	22	149°38.4	23°25.6	22	149°28.6	23°25.7	22	149°19.0	23°21.9	22	149°09.7	23°14.5
23	164°48.0	23°22.0	23	164°38.2	23°25.7	23	164°28.4	23°25.6	23	164°18.9	23°21.9	23	164°09.6	23°14.4
	SD.=15.7	d=0.1		SD.=15.7	d=0.0		SD.=15.7	d=0.0		SD.=15.7	d=-0.1		SD.=15.7	d=-0.1

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	179°47.9	23°22.1	0	179°38.1	23°25.7	0	179°28.3	23°25.6	0	179°18.7	23°21.8	0	179°09.5	23°14.3
1	194°47.8	23°22.1	1	194°37.9	23°25.7	1	194°28.2	23°25.6	1	194°18.6	23°21.7	1	194°09.4	23°14.2
2	209°47.6	23°22.2	2	209°37.8	23°25.7	2	209°28.0	23°25.5	2	209°18.5	23°21.6	2	209°09.2	23°14.0
3	224°47.5	23°22.3	3	224°37.7	23°25.8	3	224°27.9	23°25.5	3	224°18.3	23°21.6	3	224°09.1	23°13.9
4	239°47.4	23°22.4	4	239°37.5	23°25.8	4	239°27.8	23°25.5	4	239°18.2	23°21.5	4	239°09.0	23°13.8
5	254°47.2	23°22.4	5	254°37.4	23°25.8	5	254°27.6	23°25.5	5	254°18.1	23°21.4	5	254°08.8	23°13.6
6	269°47.1	23°22.5	6	269°37.3	23°25.8	6	269°27.5	23°25.4	6	269°17.9	23°21.3	6	269°08.7	23°13.5
7	284°46.9	23°22.6	7	284°37.1	23°25.9	7	284°27.4	23°25.4	7	284°17.8	23°21.2	7	284°08.6	23°13.4
8	299°46.8	23°22.7	8	299°37.0	23°25.9	8	299°27.2	23°25.4	8	299°17.7	23°21.1	8	299°08.5	23°13.2
9	314°46.7	23°22.7	9	314°36.9	23°25.9	9	314°27.1	23°25.3	9	314°17.5	23°21.1	9	314°08.3	23°13.1
10	329°46.5	23°22.8	10	329°36.7	23°25.9	10	329°27.0	23°25.3	10	329°17.4	23°21.0	10	329°08.2	23°12.9
11	344°46.4	23°22.9	11	344°36.6	23°25.9	11	344°26.8	23°25.3	11	344°17.3	23°20.9	11	344°08.1	23°12.8
12	359°46.3	23°22.9	12	359°36.4	23°25.9	12	359°26.7	23°25.2	12	359°17.2	23°20.8	12	359°08.0	23°12.7
13	14°46.1	23°23.0	13	14°36.3	23°26.0	13	14°26.6	23°25.2	13	14°17.0	23°20.7	13	14°07.9	23°12.5
14	29°46.0	23°23.1	14	29°36.2	23°26.0	14	29°26.4	23°25.2	14	29°16.9	23°20.6	14	29°07.7	23°12.4
15	44°45.9	23°23.1	15	44°36.0	23°26.0	15	44°26.3	23°25.1	15	44°16.8	23°20.5	15	44°07.6	23°12.3
16	59°45.7	23°23.2	16	59°35.9	23°26.0	16	59°26.2	23°25.1	16	59°16.6	23°20.4	16	59°07.5	23°12.1
17	74°45.6	23°23.3	17	74°35.8	23°26.0	17	74°26.0	23°25.0	17	74°16.5	23°20.3	17	74°07.4	23°12.0
18	89°45.4	23°23.3	18	89°35.6	23°26.0	18	89°25.9	23°25.0	18	89°16.4	23°20.3	18	89°07.2	23°11.8
19	104°45.3	23°23.4	19	104°35.5	23°26.0	19	104°25.8	23°25.0	19	104°16.2	23°20.2	19	104°07.1	23°11.7
20	119°45.2	23°23.4	20	119°35.4	23°26.0	20	119°25.6	23°24.9	20	119°16.1	23°20.1	20	119°07.0	23°11.5
21	134°45.0	23°23.5	21	134°35.2	23°26.1	21	134°25.5	23°24.9	21	134°16.0	23°20.0	21	134°06.9	23°11.4
22	149°44.9	23°23.6	22	149°35.1	23°26.1	22	149°25.4	23°24.8	22	149°15.9	23°19.9	22	149°06.7	23°11.3
23	164°44.8	23°23.6	23	164°34.9	23°26.1	23	164°25.2	23°24.8	23	164°15.7	23°19.8	23	164°06.6	23°11.1
	SD.=15.7	d=0.1		SD.=										

30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	179°06.5	23°11.0	0	178°57.9	22°58.6	0	178°49.9	22°42.6	0	178°42.7	22°23.0	0	178°36.3	22°00.0
1	194°06.4	23°10.8	1	193°57.8	22°58.4	1	193°49.8	22°42.3	1	193°42.6	22°22.8	1	193°36.3	21°59.7
2	209°06.2	23°10.7	2	208°57.7	22°58.2	2	208°49.7	22°42.1	2	208°42.5	22°22.5	2	208°36.2	21°59.3
3	224°06.1	23°10.5	3	223°57.5	22°58.0	3	223°49.6	22°41.8	3	223°42.4	22°22.2	3	223°36.1	21°59.0
4	239°06.0	23°10.4	4	238°57.4	22°57.8	4	238°49.5	22°41.6	4	238°42.3	22°21.9	4	238°36.0	21°58.6
5	254°05.9	23°10.2	5	253°57.3	22°57.6	5	253°49.4	22°41.3	5	253°42.2	22°21.6	5	253°35.9	21°58.3
6	269°05.8	23°10.1	6	268°57.2	22°57.4	6	268°49.3	22°41.1	6	268°42.1	22°21.3	6	268°35.9	21°58.0
7	284°05.6	23°09.9	7	283°57.1	22°57.2	7	283°49.2	22°40.8	7	283°42.0	22°21.0	7	283°35.8	21°57.6
8	299°05.5	23°09.8	8	298°57.0	22°57.0	8	298°49.1	22°40.6	8	298°41.9	22°20.7	8	298°35.7	21°57.3
9	314°05.4	23°09.6	9	313°56.9	22°56.8	9	313°49.0	22°40.3	9	313°41.8	22°20.4	9	313°35.6	21°56.9
10	329°05.3	23°09.5	10	328°56.7	22°56.6	10	328°48.9	22°40.1	10	328°41.8	22°20.1	10	328°35.5	21°56.6
11	344°05.1	23°09.3	11	343°56.6	22°56.4	11	343°48.8	22°39.8	11	343°41.7	22°19.8	11	343°35.5	21°56.2
12	359°05.0	23°09.1	12	358°56.5	22°56.2	12	358°48.7	22°39.6	12	358°41.6	22°19.4	12	358°35.4	21°55.9
13	14°04.9	23°09.0	13	13°56.4	22°56.0	13	13°48.5	22°39.3	13	13°41.5	22°19.1	13	13°35.3	21°55.5
14	29°04.8	23°08.8	14	28°56.3	22°55.7	14	28°48.4	22°39.1	14	28°41.4	22°18.8	14	28°35.2	21°55.2
15	44°04.7	23°08.7	15	43°56.2	22°55.5	15	43°48.3	22°38.8	15	43°41.3	22°18.5	15	43°35.1	21°54.8
16	59°04.5	23°08.5	16	58°56.1	22°55.3	16	58°48.2	22°38.5	16	58°41.2	22°18.2	16	58°35.1	21°54.4
17	74°04.4	23°08.4	17	73°55.9	22°55.1	17	73°48.1	22°38.3	17	73°41.1	22°17.9	17	73°35.0	21°54.1
18	89°04.3	23°08.2	18	88°55.8	22°54.9	18	88°48.0	22°38.0	18	88°41.0	22°17.6	18	88°34.9	21°53.7
19	104°04.2	23°08.0	19	103°55.7	22°54.7	19	103°47.9	22°37.8	19	103°40.9	22°17.3	19	103°34.8	21°53.4
20	119°04.0	23°07.9	20	118°55.6	22°54.5	20	118°47.8	22°37.5	20	118°40.8	22°17.0	20	118°34.8	21°53.0
21	134°03.9	23°07.7	21	133°55.5	22°54.3	21	133°47.7	22°37.3	21	133°40.7	22°16.7	21	133°34.7	21°52.7
22	149°03.8	23°07.6	22	148°55.4	22°54.1	22	148°47.6	22°37.0	22	148°40.6	22°16.4	22	148°34.6	21°52.3
23	164°03.7	23°07.4	23	163°55.3	22°53.9	23	163°47.5	22°36.7	23	163°40.6	22°16.1	23	163°34.5	21°52.0
	SD.=15.7	d=-0.1		SD.=15.7	d=-0.2		SD.=15.7	d=-0.2		SD.=15.7	d=-0.3		SD.=15.7	d=-0.3

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	179°03.6	23°07.2	0	178°55.2	22°53.6	0	178°47.4	22°36.5	0	178°40.5	22°15.8	0	178°34.4	21°51.6
1	194°03.4	23°07.1	1	193°55.0	22°53.4	1	193°47.3	22°36.2	1	193°40.4	22°15.4	1	193°34.4	21°51.2
2	209°03.3	23°06.9	2	208°54.9	22°53.2	2	208°47.2	22°35.9	2	208°40.3	22°15.1	2	208°34.3	21°50.9
3	224°03.2	23°06.7	3	223°54.8	22°53.0	3	223°47.1	22°35.7	3	223°40.2	22°14.8	3	223°34.2	21°50.5
4	239°03.1	23°06.6	4	238°54.7	22°52.8	4	238°47.0	22°35.4	4	238°40.1	22°14.5	4	238°34.1	21°50.2
5	254°03.0	23°06.4	5	253°54.6	22°52.6	5	253°46.9	22°35.1	5	253°40.0	22°14.2	5	253°34.1	21°49.8
6	269°02.8	23°06.2	6	268°54.5	22°52.3	6	268°46.8	22°34.9	6	268°39.9	22°13.9	6	268°34.0	21°49.4
7	284°02.7	23°06.1	7	283°54.4	22°52.1	7	283°46.7	22°34.6	7	283°39.8	22°13.6	7	283°33.9	21°49.1
8	299°02.6	23°05.9	8	298°54.3	22°51.9	8	298°46.6	22°34.3	8	298°39.8	22°13.2	8	298°33.8	21°48.7
9	314°02.5	23°05.7	9	313°54.1	22°51.7	9	313°46.5	22°34.1	9	313°39.7	22°12.9	9	313°33.8	21°48.3
10	329°02.4	23°05.6	10	328°54.0	22°51.5	10	328°46.4	22°33.8	10	328°39.6	22°12.6	10	328°33.7	21°48.0
11	344°02.2	23°05.4	11	343°53.9	22°51.3	11	343°46.3	22°33.5	11	343°39.5	22°12.3	11	343°33.6	21°47.6
12	359°02.1	23°05.2	12	358°53.8	22°51.0	12	358°46.2	22°33.3	12	358°39.4	22°12.0	12	358°33.5	21°47.2
13	14°02.0	23°05.1	13	13°53.7	22°50.8	13	13°46.1	22°33.0	13	13°39.3	22°11.6	13	13°33.5	21°46.9
14	29°01.9	23°04.9	14	28°53.6	22°50.6	14	28°46.0	22°32.7	14	28°39.2	22°11.3	14	28°33.4	21°46.5
15	44°01.8	23°04.7	15	43°53.5	22°50.4	15	43°45.9	22°32.4	15	43°39.1	22°11.0	15	43°33.3	21°46.1
16	59°01.6	23°04.5	16	58°53.4	22°50.1	16	58°45.8	22°32.2	16	58°39.0	22°10.7	16	58°33.2	21°45.8
17	74°01.5	23°04.4	17	73°53.3	22°49.9	17	73°45.7	22°31.9	17	73°39.0	22°10.4	17	73°33.2	21°45.4
18	89°01.4	23°04.2	18	88°53.1	22°49.7	18	88°45.6	22°31.6	18	88°38.9	22°10.0	18	88°33.1	21°45.0
19	104°01.3	23°04.0	19	103°53.0	22°49.5	19	103°45.5	22°31.3	19	103°38.8	22°09.7	19	103°33.0	21°44.7
20	119°01.2	23°03.8	20	118°52.9	22°49.2	20	118°45.4	22°31.1	20	118°38.7	22°09.4	20	118°33.0	21°44.3
21	134°01.0	23°03.6	21	133°52.8	22°49.0	21	133°45.3	22°30.8	21	133°38.6	22°09.1	21	133°32.9	21°43.9
22	149°00.9	23°03.5	22	148°52.7	22°48.8	22	148°45.2	22°30.5	22	148°38.5	22°08.7	22	148°32.8	21°43.5
23	164°00.8	23°03.3	23	163°52.6	22°48.5	23	163°45.1	22°30.2	23	163°38.4	22°08.4	23	163°32.7	21°43.2
	SD.=15.7	d=-0.2		SD.=15.7	d=-0.2		SD.=15.7	d=-0.3		SD.=15.7	d=-0.3		SD.=15.7	d=-0.4

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	179°00.7	23°03.1	0	178°52.5	22°48.3	0	178°45.0	22°29.9	0	178°38.4	22°08.1	0	178°32.7	21°42.8
1	194°00.6	23°02.9	1	193°52.4	22°48.1	1	193°44.9	22°29.7	1	193°38.3	22°07.8	1	193°32.6	21°42.4
2	209°00.5	23°02.7	2	208°52.3	22°47.9	2	208°44.8	22°29.4	2	208°38.2	22°07.4	2	208°32.5	21°42.0
3	224°00.3	23°02.6	3	223°52.2	22°47.6	3	223°44.7	22°29.1	3	223°38.1	22°07.1	3	223°32.5	21°41.7
4	239°00.2	23°02.4	4	238°52.1	22°47.4	4	238°44.6	22°28.8	4	238°38.0	22°06.8	4	238°32.4	21°41.3
5	254°00.1	23°02.2	5	253°51.9	22°47.2	5	253°44.5	22°28.5	5	253°37.9	22°06.4	5	253°32.3	21°40.9
6	269°00.0	23°02.0	6	268°51.8	22°46.9	6	268°44.4	22°28.3	6	268°37.8	22°06.1	6	268°32.2	21°40.5
7	284°00.0	23°01.8	7	283°51.7	22°46.7	7	283°44.3	22°28.0	7	283°37.8	22°05.8	7	283°32.2	21°40.2
8	299°00.0	23°01.6	8	298°51.6	22°46.4	8	298°44.2	22°27.7	8	298°37.7	22°05.5	8	298°32.1	21°39.8
9	313°59.6	23°01.5	9	313°51.5	22°46.2	9	313°44.1	22°27.4	9	313°37.6	22°05.1	9	313°32.0	21°39.4
10	328°59.5	23°01.3	10	328°51.4	22°46.0	10	328°44.0	22°27.1	10	328°37.5	22°04.8	10	328°32.0	21°39.0
11	343°59.4	23°01.1	11	343°51.3	22°45.7	11	343°43.9	22°26.8	11	343°37.4	22°04.4	11	343°31.9	21°38.6
12	358°59.3	23°00.9	12	358°51.2	22°45.5	12	358°43.8	22°26.5	12	358°37.3	22°04.1	12	358°31.8	21°38.3
13	13°59.2	23°00.7	13	13°51.1	22°45.3	13	13°43.7	22°26.3	13	13°37.3	22°03.8	13	13°31.8	21°37.9
14	28°59.0	23°00.5	14	28°51.0	22°45.0	14	28°43.6	22°26.0	14	28°37.2	22°03.4	14	28°31.7	21°37.5
15	43°58.9	23°00.3	15	43°50.9	22°44.8	15	43°43.5	22°25.7	15	43°37.1	22°03.1	15	43°31.6	21°37.1
16	58°58.8	23°00.1	16	58°50.8	22°44.5	16	58°43.4	22°25.4	16	58°37.0	22°02.8	16	58°31.6	21°36.7
17	73°58.7	22°59.9	17	73°50.7	22°44.3	17	73°43.4	22°25.1	17	73°36.9	22°02.4	17	73°31.5	21°36.3
18	88°58.6	22°59.7	18	88°50.5	22°44.1	18	88°43.3	22°24.8	18	88°36.8	22°02.1	18	88°31.4	21°35.9
19	103°58.5	22°59.6	19	103°50.4	22°43.8	19	103°43.2	22°24.5	19	103°36.8	22°01.7	19	103°31.3	21°35.6
20	118°58.3	22°59.4	20	118°50.3	22°43.6	20	118°43.1	22°24.2	20	118°36.7	22°01.4	20	118°31.3	21°35.2
21	133°58.2	22°59.2	21	133°50.2	22°43.3	21	133°43.0	22°23.9	21	133°36.6	22°01.1	21	133°31.2	21°34.8
22	148°58.1	22°59.0	22	148°50.1	22°43.1	22	148°42.9	22°23.6	22	148°36.5	22°00.7	22	148°31.1	21°34.4
23	163°58.0	22°58.8	23	163°50.0	22°42.8	23	163°42.8	22°23.3	23	163°36.4	22°00.4	23	163°31.1	

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	178°31.0	21°33.6	0	178°26.8	21°03.9	0	178°23.9	20°31.0	0	178°22.3	19°55.0	0	178°22.0	19°16.0
1	193°30.9	21°33.2	1	193°26.8	21°03.5	1	193°23.9	20°30.5	1	193°22.3	19°54.4	1	193°22.0	19°15.4
2	208°30.9	21°32.8	2	208°26.7	21°03.0	2	208°23.8	20°30.0	2	208°22.3	19°53.9	2	208°22.0	19°14.8
3	223°30.8	21°32.4	3	223°26.7	21°02.6	3	223°23.8	20°29.5	3	223°22.2	19°53.4	3	223°22.0	19°14.3
4	238°30.8	21°32.1	4	238°26.6	21°02.2	4	238°23.8	20°29.1	4	238°22.2	19°52.9	4	238°22.0	19°13.7
5	253°30.7	21°31.7	5	253°26.6	21°01.7	5	253°23.7	20°28.6	5	253°22.2	19°52.4	5	253°22.0	19°13.2
6	268°30.6	21°31.3	6	268°26.5	21°01.3	6	268°23.7	20°28.1	6	268°22.2	19°51.8	6	268°22.0	19°12.6
7	283°30.6	21°30.9	7	283°26.5	21°00.8	7	283°23.7	20°27.6	7	283°22.2	19°51.3	7	283°22.1	19°12.0
8	298°30.5	21°30.5	8	298°26.4	21°00.4	8	298°23.7	20°27.1	8	298°22.2	19°50.8	8	298°22.1	19°11.5
9	313°30.4	21°30.1	9	313°26.4	20°59.9	9	313°23.6	20°26.6	9	313°22.2	19°50.3	9	313°22.1	19°10.9
10	328°30.4	21°29.7	10	328°26.4	20°59.5	10	328°23.6	20°26.2	10	328°22.2	19°49.7	10	328°22.1	19°10.3
11	343°30.3	21°29.3	11	343°26.3	20°59.1	11	343°23.6	20°25.7	11	343°22.2	19°49.2	11	343°22.1	19°09.8
12	358°30.2	21°28.9	12	358°26.3	20°58.6	12	358°23.5	20°25.2	12	358°22.1	19°48.7	12	358°22.1	19°09.2
13	13°30.2	21°28.5	13	13°26.2	20°58.2	13	13°23.5	20°24.7	13	13°22.1	19°48.1	13	13°22.1	19°08.6
14	28°30.1	21°28.1	14	28°26.2	20°57.7	14	28°23.5	20°24.2	14	28°22.1	19°47.6	14	28°22.1	19°08.1
15	43°30.0	21°27.7	15	43°26.1	20°57.3	15	43°23.5	20°23.7	15	43°22.1	19°47.1	15	43°22.1	19°07.5
16	58°30.0	21°27.3	16	58°26.1	20°56.9	16	58°23.4	20°23.2	16	58°22.1	19°46.6	16	58°22.1	19°06.9
17	73°29.9	21°26.9	17	73°26.0	20°56.4	17	73°23.4	20°22.8	17	73°22.1	19°46.0	17	73°22.1	19°06.3
18	88°29.9	21°26.5	18	88°26.0	20°56.0	18	88°23.4	20°22.3	18	88°22.1	19°45.5	18	88°22.2	19°05.8
19	103°29.8	21°26.1	19	103°25.9	20°55.5	19	103°23.3	20°21.8	19	103°22.1	19°45.0	19	103°22.2	19°05.2
20	118°29.7	21°25.7	20	118°25.9	20°55.1	20	118°23.3	20°21.3	20	118°22.1	19°44.4	20	118°22.2	19°04.6
21	133°29.7	21°25.3	21	133°25.8	20°54.6	21	133°23.3	20°20.8	21	133°22.1	19°43.9	21	133°22.2	19°04.1
22	148°29.6	21°24.9	22	148°25.8	20°54.2	22	148°23.3	20°20.3	22	148°22.1	19°43.4	22	148°22.2	19°03.5
23	163°29.5	21°24.5	23	163°25.8	20°53.7	23	163°23.2	20°19.8	23	163°22.1	19°42.8	23	163°22.2	19°02.9
	SD.=15.7	d=-0.4		SD.=15.7	d=-0.4		SD.=15.7	d=-0.5		SD.=15.7	d=-0.5		SD.=15.7	d=-0.6
16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	178°29.5	21°24.1	0	178°25.7	20°53.3	0	178°23.2	20°19.3	0	178°22.0	19°42.3	0	178°22.2	19°02.3
1	193°29.4	21°23.7	1	193°25.7	20°52.8	1	193°23.2	20°18.8	1	193°22.0	19°41.8	1	193°22.2	19°01.8
2	208°29.4	21°23.3	2	208°25.6	20°52.4	2	208°23.2	20°18.3	2	208°22.0	19°41.2	2	208°22.2	19°01.2
3	223°29.3	21°22.9	3	223°25.6	20°51.9	3	223°23.1	20°17.8	3	223°22.0	19°40.7	3	223°22.3	19°00.6
4	238°29.2	21°22.4	4	238°25.5	20°51.5	4	238°23.1	20°17.3	4	238°22.0	19°40.2	4	238°22.3	19°00.0
5	253°29.2	21°22.0	5	253°25.5	20°51.0	5	253°23.1	20°16.8	5	253°22.0	19°39.6	5	253°22.3	18°59.5
6	268°29.1	21°21.6	6	268°25.5	20°50.6	6	268°23.1	20°16.3	6	268°22.0	19°39.1	6	268°22.3	18°58.9
7	283°29.1	21°21.2	7	283°25.4	20°50.1	7	283°23.0	20°15.8	7	283°22.0	19°38.5	7	283°22.3	18°58.3
8	298°29.0	21°20.8	8	298°25.4	20°49.7	8	298°23.0	20°15.4	8	298°22.0	19°38.0	8	298°22.3	18°57.7
9	313°28.9	21°20.4	9	313°25.3	20°49.2	9	313°23.0	20°14.9	9	313°22.0	19°37.5	9	313°22.3	18°57.1
10	328°28.9	21°20.0	10	328°25.3	20°48.8	10	328°23.0	20°14.4	10	328°22.0	19°36.9	10	328°22.4	18°56.6
11	343°28.8	21°19.6	11	343°25.2	20°48.3	11	343°23.0	20°13.9	11	343°22.0	19°36.4	11	343°22.4	18°56.0
12	358°28.8	21°19.2	12	358°25.2	20°47.8	12	358°22.9	20°13.4	12	358°22.0	19°35.8	12	358°22.4	18°55.4
13	13°28.7	21°18.8	13	13°25.2	20°47.4	13	13°22.9	20°12.9	13	13°22.0	19°35.3	13	13°22.4	18°54.8
14	28°28.7	21°18.3	14	28°25.1	20°46.9	14	28°22.9	20°12.4	14	28°22.0	19°34.8	14	28°22.4	18°54.2
15	43°28.6	21°17.9	15	43°25.1	20°46.5	15	43°22.9	20°11.9	15	43°22.0	19°34.2	15	43°22.4	18°53.6
16	58°28.5	21°17.5	16	58°25.0	20°46.0	16	58°22.8	20°11.3	16	58°22.0	19°33.7	16	58°22.4	18°53.1
17	73°28.5	21°17.1	17	73°25.0	20°45.5	17	73°22.8	20°10.8	17	73°22.0	19°33.1	17	73°22.5	18°52.5
18	88°28.4	21°16.7	18	88°25.0	20°45.1	18	88°22.8	20°10.3	18	88°22.0	19°32.6	18	88°22.5	18°51.9
19	103°28.4	21°16.3	19	103°24.9	20°44.6	19	103°22.8	20°09.8	19	103°22.0	19°32.0	19	103°22.5	18°51.3
20	118°28.3	21°15.8	20	118°24.9	20°44.2	20	118°22.8	20°09.3	20	118°22.0	19°31.5	20	118°22.5	18°50.7
21	133°28.3	21°15.4	21	133°24.9	20°43.7	21	133°22.7	20°08.8	21	133°22.0	19°30.9	21	133°22.5	18°50.1
22	148°28.2	21°15.0	22	148°24.8	20°43.2	22	148°22.7	20°08.3	22	148°22.0	19°30.4	22	148°22.5	18°49.6
23	163°28.1	21°14.6	23	163°24.8	20°42.8	23	163°22.7	20°07.8	23	163°22.0	19°29.8	23	163°22.6	18°49.0
	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
17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	178°28.1	21°14.2	0	178°24.7	20°42.3	0	178°22.7	20°07.3	0	178°22.0	19°29.3	0	178°22.6	18°48.4
1	193°28.0	21°13.7	1	193°24.7	20°41.8	1	193°22.7	20°06.8	1	193°22.0	19°28.7	1	193°22.6	18°47.8
2	208°28.0	21°13.3	2	208°24.7	20°41.4	2	208°22.6	20°06.3	2	208°22.0	19°28.2	2	208°22.6	18°47.2
3	223°27.9	21°12.9	3	223°24.6	20°40.9	3	223°22.6	20°05.8	3	223°22.0	19°27.6	3	223°22.6	18°46.6
4	238°27.9	21°12.5	4	238°24.6	20°40.4	4	238°22.6	20°05.3	4	238°22.0	19°27.1	4	238°22.7	18°46.0
5	253°27.8	21°12.1	5	253°24.6	20°40.0	5	253°22.6	20°04.8	5	253°22.0	19°26.5	5	253°22.7	18°45.4
6	268°27.8	21°11.6	6	268°24.5	20°39.5	6	268°22.6	20°04.3	6	268°22.0	19°26.0	6	268°22.7	18°44.8
7	283°27.7	21°11.2	7	283°24.5	20°39.0	7	283°22.5	20°03.7	7	283°22.0	19°25.4	7	283°22.7	18°44.3
8	298°27.7	21°10.8	8	298°24.4	20°38.6	8	298°22.5	20°03.2	8	298°22.0	19°24.9	8	298°22.7	18°43.7
9	313°27.6	21°10.4	9	313°24.4	20°38.1	9	313°22.5	20°02.7	9	313°22.0	19°24.3	9	313°22.8	18°43.1
10	328°27.6	21°09.9	10	328°24.4	20°37.6	10	328°22.5	20°02.2	10	328°22.0	19°23.8	10	328°22.8	18°42.5
11	343°27.5	21°09.5	11	343°24.3	20°37.2	11	343°22.5	20°01.7	11	343°22.0	19°23.2	11	343°22.8	18°41.9
12	358°27.4	21°09.1	12	358°24.3	20°36.7	12	358°22.5	20°01.2	12	358°22.0	19°22.7	12	358°22.8	18°41.3
13	13°27.4	21°08.7	13	13°24.3	20°36.2	13	13°22.4	20°00.7	13	13°22.0	19°22.1	13	13°22.8	18°40.7
14	28°27.3	21°08.2	14	28°24.2	20°35.7	14	28°22.4	20°00.2	14	28°22.0	19°21.6	14	28°22.9	18°40.1
15	43°27.3	21°07.8	15	43°24.2	20°35.3	15	43°22.4	19°59.6	15	43°22.0	19°21.0	15	43°22.9	18°39.5
16	58°27.2	21°07.4	16	58°24.2</										

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	178°23.1	18°34.1	0	178°25.5	17°49.5	0	178°29.3	17°02.3	0	178°34.3	16°12.6	0	178°40.7	15°20.6
1	193°23.1	18°33.5	1	193°25.6	17°48.9	1	193°29.3	17°01.6	1	193°34.4	16°11.9	1	193°40.8	15°19.8
2	208°23.1	18°32.9	2	208°25.6	17°48.2	2	208°29.4	17°01.0	2	208°34.5	16°11.2	2	208°40.9	15°19.1
3	223°23.2	18°32.3	3	223°25.6	17°47.6	3	223°29.5	17°00.3	3	223°34.6	16°10.5	3	223°41.0	15°18.3
4	238°23.2	18°31.7	4	238°25.7	17°47.0	4	238°29.5	16°59.6	4	238°34.7	16°09.8	4	238°41.1	15°17.6
5	253°23.2	18°31.1	5	253°25.7	17°46.3	5	253°29.6	16°58.9	5	253°34.7	16°09.1	5	253°41.2	15°16.9
6	268°23.2	18°30.5	6	268°25.8	17°45.7	6	268°29.6	16°58.3	6	268°34.8	16°08.4	6	268°41.3	15°16.1
7	283°23.3	18°29.9	7	283°25.8	17°45.0	7	283°29.7	16°57.6	7	283°34.9	16°07.6	7	283°41.4	15°15.4
8	298°23.3	18°29.3	8	298°25.9	17°44.4	8	298°29.8	16°56.9	8	298°35.0	16°06.9	8	298°41.5	15°14.6
9	313°23.3	18°28.7	9	313°25.9	17°43.8	9	313°29.8	16°56.2	9	313°35.1	16°06.2	9	313°41.6	15°13.9
10	328°23.3	18°28.1	10	328°26.0	17°43.1	10	328°29.9	16°55.6	10	328°35.1	16°05.5	10	328°41.7	15°13.1
11	343°23.4	18°27.5	11	343°26.0	17°42.5	11	343°30.0	16°54.9	11	343°35.2	16°04.8	11	343°41.8	15°12.4
12	358°23.4	18°26.9	12	358°26.1	17°41.8	12	358°30.0	16°54.2	12	358°35.3	16°04.1	12	358°41.9	15°11.7
13	13°23.4	18°26.3	13	13°26.1	17°41.2	13	13°30.1	16°53.5	13	13°35.4	16°03.4	13	13°42.0	15°10.9
14	28°23.5	18°25.7	14	28°26.1	17°40.5	14	28°30.2	16°52.8	14	28°35.5	16°02.7	14	28°42.1	15°10.2
15	43°23.5	18°25.0	15	43°26.2	17°39.9	15	43°30.2	16°52.2	15	43°35.6	16°02.0	15	43°42.2	15°09.4
16	58°23.5	18°24.4	16	58°26.2	17°39.3	16	58°30.3	16°51.5	16	58°35.6	16°01.2	16	58°42.3	15°08.7
17	73°23.5	18°23.8	17	73°26.3	17°38.6	17	73°30.4	16°50.8	17	73°35.7	16°00.5	17	73°42.4	15°07.9
18	88°23.6	18°23.2	18	88°26.3	17°38.0	18	88°30.4	16°50.1	18	88°35.8	15°59.8	18	88°42.5	15°07.2
19	103°23.6	18°22.6	19	103°26.4	17°37.3	19	103°30.5	16°49.4	19	103°35.9	15°59.1	19	103°42.6	15°06.4
20	118°23.6	18°22.0	20	118°26.4	17°36.7	20	118°30.6	16°48.7	20	118°36.0	15°58.4	20	118°42.7	15°05.7
21	133°23.7	18°21.4	21	133°26.5	17°36.0	21	133°30.6	16°48.1	21	133°36.1	15°57.7	21	133°42.8	15°05.0
22	148°23.7	18°20.8	22	148°26.5	17°35.4	22	148°30.7	16°47.4	22	148°36.1	15°56.9	22	148°42.9	15°04.2
23	163°23.7	18°20.2	23	163°26.6	17°34.7	23	163°30.8	16°46.7	23	163°36.2	15°56.2	23	163°43.0	15°03.5
	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=-0.7

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	178°23.7	18°19.6	0	178°26.6	17°34.1	0	178°30.8	16°46.0	0	178°36.3	15°55.5	0	178°43.1	15°02.7
1	193°23.8	18°18.9	1	193°26.7	17°33.4	1	193°30.9	16°45.3	1	193°36.4	15°54.8	1	193°43.2	15°02.0
2	208°23.8	18°18.3	2	208°26.7	17°32.8	2	208°31.0	16°44.6	2	208°36.5	15°54.1	2	208°43.3	15°01.2
3	223°23.8	18°17.7	3	223°26.8	17°32.1	3	223°31.0	16°44.0	3	223°36.6	15°53.4	3	223°43.4	15°00.5
4	238°23.9	18°17.1	4	238°26.8	17°31.5	4	238°31.1	16°43.3	4	238°36.7	15°52.6	4	238°43.5	14°59.7
5	253°23.9	18°16.5	5	253°26.9	17°30.8	5	253°31.2	16°42.6	5	253°36.7	15°51.9	5	253°43.6	14°59.0
6	268°23.9	18°15.9	6	268°26.9	17°30.2	6	268°31.2	16°41.9	6	268°36.8	15°51.2	6	268°43.7	14°58.2
7	283°24.0	18°15.2	7	283°27.0	17°29.5	7	283°31.3	16°41.2	7	283°36.9	15°50.5	7	283°43.8	14°57.5
8	298°24.0	18°14.6	8	298°27.0	17°28.9	8	298°31.4	16°40.5	8	298°37.0	15°49.8	8	298°43.9	14°56.7
9	313°24.0	18°14.0	9	313°27.1	17°28.2	9	313°31.4	16°39.8	9	313°37.1	15°49.0	9	313°44.0	14°56.0
10	328°24.1	18°13.4	10	328°27.1	17°27.5	10	328°31.5	16°39.1	10	328°37.2	15°48.3	10	328°44.1	14°55.2
11	343°24.1	18°12.8	11	343°27.2	17°26.9	11	343°31.6	16°38.5	11	343°37.3	15°47.6	11	343°44.2	14°54.4
12	358°24.1	18°12.2	12	358°27.2	17°26.2	12	358°31.6	16°37.8	12	358°37.4	15°46.9	12	358°44.3	14°53.7
13	13°24.2	18°11.5	13	13°27.3	17°25.6	13	13°31.7	16°37.1	13	13°37.4	15°46.1	13	13°44.4	14°52.9
14	28°24.2	18°10.9	14	28°27.3	17°24.9	14	28°31.8	16°36.4	14	28°37.5	15°45.4	14	28°44.6	14°52.2
15	43°24.2	18°10.3	15	43°27.4	17°24.3	15	43°31.9	16°35.7	15	43°37.6	15°44.7	15	43°44.7	14°51.4
16	58°24.3	18°09.7	16	58°27.4	17°23.6	16	58°31.9	16°35.0	16	58°37.7	15°44.0	16	58°44.8	14°50.7
17	73°24.3	18°09.1	17	73°27.5	17°23.0	17	73°32.0	16°34.3	17	73°37.8	15°43.2	17	73°44.9	14°49.9
18	88°24.3	18°08.4	18	88°27.5	17°22.3	18	88°32.1	16°33.6	18	88°37.9	15°42.5	18	88°45.0	14°49.2
19	103°24.4	18°07.8	19	103°27.6	17°21.6	19	103°32.1	16°32.9	19	103°38.0	15°41.8	19	103°45.1	14°48.4
20	118°24.4	18°07.2	20	118°27.7	17°21.0	20	118°32.2	16°32.2	20	118°38.1	15°41.1	20	118°45.2	14°47.7
21	133°24.4	18°06.6	21	133°27.7	17°20.3	21	133°32.3	16°31.5	21	133°38.2	15°40.3	21	133°45.3	14°46.9
22	148°24.5	18°05.9	22	148°27.8	17°19.7	22	148°32.4	16°30.8	22	148°38.2	15°39.6	22	148°45.4	14°46.1
23	163°24.5	18°05.3	23	163°27.8	17°19.0	23	163°32.4	16°30.1	23	163°38.3	15°38.9	23	163°45.5	14°45.4
	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=-0.7

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	178°24.6	18°04.7	0	178°27.9	17°18.3	0	178°32.5	16°29.4	0	178°38.4	15°38.2	0	178°45.6	14°44.6
1	193°24.6	18°04.1	1	193°27.9	17°17.7	1	193°32.6	16°28.7	1	193°38.5	15°37.4	1	193°45.7	14°43.9
2	208°24.6	18°03.4	2	208°28.0	17°17.0	2	208°32.7	16°28.1	2	208°38.6	15°36.7	2	208°45.8	14°43.1
3	223°24.7	18°02.8	3	223°28.0	17°16.3	3	223°32.7	16°27.4	3	223°38.7	15°36.0	3	223°46.0	14°42.3
4	238°24.7	18°02.2	4	238°28.1	17°15.7	4	238°32.8	16°26.7	4	238°38.8	15°35.2	4	238°46.1	14°41.6
5	253°24.7	18°01.6	5	253°28.2	17°15.0	5	253°32.9	16°26.0	5	253°38.9	15°34.5	5	253°46.2	14°40.8
6	268°24.8	18°00.9	6	268°28.2	17°14.4	6	268°33.0	16°25.3	6	268°39.0	15°33.8	6	268°46.3	14°40.1
7	283°24.8	18°00.3	7	283°28.3	17°13.7	7	283°33.0	16°24.6	7	283°39.1	15°33.1	7	283°46.4	14°39.3
8	298°24.9	17°59.7	8	298°28.3	17°13.0	8	298°33.1	16°23.9	8	298°39.2	15°32.3	8	298°46.5	14°38.5
9	313°24.9	17°59.0	9	313°28.4	17°12.4	9	313°33.2	16°23.2	9	313°39.3	15°31.6	9	313°46.6	14°37.8
10	328°24.9	17°58.4	10	328°28.4	17°11.7	10	328°33.3	16°22.5	10	328°39.4	15°30.9	10	328°46.7	14°37.0
11	343°25.0	17°57.8	11	343°28.5	17°11.0	11	343°33.3	16°21.8	11	343°39.4	15°30.1	11	343°46.8	14°36.3
12	358°25.0	17°57.1	12	358°28.6	17°10.4	12	358°33.4	16°21.1	12	358°39.5	15°29.4	12	358°47.0	14°35.5
13	13°25.1	17°56.5	13	13°28.6	17°09.7	13	13°33.5	16°20.4	13	13°39.6	15°28.7	13	13°47.1	14°34.7
14	28°25.1	17°55.9	14	28°28.7	17°09.0	14	28°33.6	16°19.7	14	28°39.7	15°27.9	14	28°47.2	14°34.0
15	43°25.1	17°55.2	15	43°28.7	17°08.4	15	43°33.6	16°19.0	15	43°39.8	15°27.2	15	43°47.3	14°33.2
16	58°25.2	17°54.6	16	58°28.8	17°07.7	16	58°33.7	16°18.2	16	58°39.9	15°26.5	16	58°47.4	14°32.4
17	73°25.2	17°54.0	17	73°28.9	17°07.0	17	73°33.8	16°17.5	17	73°40.0	15°25.7	17	73°47.5	14°31.7
18	88°25.3	17°53.3	18	88°28.9	17°06.3	18	88°33.9	16°16.8	18	88°40.1	15°25.0	18	88°47.6	14°30.9
19	103°25.3	17°52.7	19	103°29.0	17°05.7	19	103°33.9	16°16.1	19	103°40.2	15°24.2	19	103°47.7	14°30.1
20	118°25.3	17°52.1	20	118°29.0	17°05.0	20	118°34.0	16°15.4	20	118°40.3	15°23.5	20	118°47.9	14°29.4
21	133°25.4	17°51.4	21	133°29.1	17°04.3	21	133°34.1	16°14.7	21	133°40.4	15°22.8	21	133°48.0	14°28.6
22	148°25.4	17°50.8	22	148°29.2	17°03.7	22	148°34.2	16°14.0	22	148°40.5	15°22.0	22	148°48.1	14°27.8
23	163°25.5	17°50.2	23	163°29.2	17°03.0	23	163°34.3	16°13.3	23	163°40.6	15°21.3	23	163°48.2	

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	178°48.3	14°26.3	0	178°57.2	13°30.0	0	179°07.3	12°31.7	0	179°18.5	11°31.7	0	179°30.7	10°30.1
1	193°48.4	14°25.5	1	193°57.3	13°29.2	1	194°07.4	12°30.9	1	194°18.6	11°30.9	1	194°30.8	10°29.2
2	208°48.5	14°24.8	2	208°57.5	13°28.4	2	209°07.6	12°30.1	2	209°18.8	11°30.0	2	209°31.0	10°28.3
3	223°48.7	14°24.0	3	223°57.6	13°27.6	3	224°07.7	12°29.3	3	224°18.9	11°29.2	3	224°31.2	10°27.5
4	238°48.8	14°23.2	4	238°57.7	13°26.8	4	239°07.9	12°28.4	4	239°19.1	11°28.3	4	239°31.4	10°26.6
5	253°48.9	14°22.5	5	253°57.9	13°26.0	5	254°08.0	12°27.6	5	254°19.3	11°27.5	5	254°31.5	10°25.7
6	268°49.0	14°21.7	6	268°58.0	13°25.2	6	269°08.2	12°26.8	6	269°19.4	11°26.6	6	269°31.7	10°24.9
7	283°49.1	14°20.9	7	283°58.1	13°24.4	7	284°08.3	12°26.0	7	284°19.6	11°25.8	7	284°31.9	10°24.0
8	298°49.2	14°20.1	8	298°58.3	13°23.6	8	299°08.5	12°25.1	8	299°19.8	11°24.9	8	299°32.1	10°23.1
9	313°49.4	14°19.4	9	313°58.4	13°22.8	9	314°08.6	12°24.3	9	314°19.9	11°24.1	9	314°32.2	10°22.3
10	328°49.5	14°18.6	10	328°58.5	13°22.0	10	329°08.8	12°23.5	10	329°20.1	11°23.3	10	329°32.4	10°21.4
11	343°49.6	14°17.8	11	343°58.7	13°21.2	11	344°08.9	12°22.7	11	344°20.3	11°22.4	11	344°32.6	10°20.5
12	358°49.7	14°17.0	12	358°58.8	13°20.4	12	359°09.1	12°21.8	12	359°20.4	11°21.6	12	359°32.8	10°19.6
13	13°49.8	14°16.3	13	13°58.9	13°19.6	13	14°09.2	12°21.0	13	14°20.6	11°20.7	13	14°33.0	10°18.8
14	28°49.9	14°15.5	14	28°59.1	13°18.8	14	29°09.4	12°20.2	14	29°20.7	11°19.9	14	29°33.1	10°17.9
15	43°50.1	14°14.7	15	43°59.2	13°18.0	15	44°09.5	12°19.4	15	44°20.9	11°19.0	15	44°33.3	10°17.0
16	58°50.2	14°14.0	16	58°59.3	13°17.2	16	59°09.7	12°18.5	16	59°21.1	11°18.2	16	59°33.5	10°16.2
17	73°50.3	14°13.2	17	73°59.5	13°16.4	17	74°09.8	12°17.7	17	74°21.2	11°17.3	17	74°33.7	10°15.3
18	88°50.4	14°12.4	18	88°59.6	13°15.6	18	89°10.0	12°16.9	18	89°21.4	11°16.5	18	89°33.8	10°14.4
19	103°50.5	14°11.6	19	103°59.7	13°14.8	19	104°10.1	12°16.1	19	104°21.6	11°15.6	19	104°34.0	10°13.6
20	118°50.7	14°10.9	20	118°59.9	13°14.0	20	119°10.3	12°15.2	20	119°21.7	11°14.8	20	119°34.2	10°12.7
21	133°50.8	14°10.1	21	134°00.0	13°13.2	21	134°10.4	12°14.4	21	134°21.9	11°13.9	21	134°34.4	10°11.8
22	148°50.9	14°09.3	22	149°00.1	13°12.4	22	149°10.6	12°13.6	22	149°22.1	11°13.0	22	149°34.6	10°10.9
23	163°51.0	14°08.5	23	164°00.3	13°11.6	23	164°10.7	12°12.7	23	164°22.2	11°12.2	23	164°34.7	10°10.1
	SD.=15.8	d=-0.8		SD.=15.8	d=-0.8		SD.=15.8	d=-0.8		SD.=15.8	d=-0.8		SD.=15.8	d=-0.9

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	178°51.1	14°07.7	0	179°00.4	13°10.8	0	179°10.9	12°11.9	0	179°22.4	11°11.3	0	179°34.9	10°09.2
1	193°51.3	14°07.0	1	194°00.6	13°10.0	1	194°11.0	12°11.1	1	194°22.6	11°10.5	1	194°35.1	10°08.3
2	208°51.4	14°06.2	2	209°00.7	13°09.2	2	209°11.2	12°10.3	2	209°22.7	11°09.6	2	209°35.3	10°07.4
3	223°51.5	14°05.4	3	224°00.8	13°08.4	3	224°11.3	12°09.4	3	224°22.9	11°08.8	3	224°35.5	10°06.6
4	238°51.6	14°04.6	4	239°01.0	13°07.5	4	239°11.5	12°08.6	4	239°23.1	11°07.9	4	239°35.6	10°05.7
5	253°51.7	14°03.9	5	254°01.1	13°06.7	5	254°11.6	12°07.8	5	254°23.3	11°07.1	5	254°35.8	10°04.8
6	268°51.9	14°03.1	6	269°01.2	13°05.9	6	269°11.8	12°06.9	6	269°23.4	11°06.2	6	269°36.0	10°03.9
7	283°52.0	14°02.3	7	284°01.4	13°05.1	7	284°11.9	12°06.1	7	284°23.6	11°05.4	7	284°36.2	10°03.1
8	298°52.1	14°01.5	8	299°01.5	13°04.3	8	299°12.1	12°05.3	8	299°23.8	11°04.5	8	299°36.4	10°02.2
9	313°52.2	14°00.7	9	314°01.7	13°03.5	9	314°12.3	12°04.4	9	314°23.9	11°03.7	9	314°36.6	10°01.3
10	328°52.4	13°59.9	10	329°01.8	13°02.7	10	329°12.4	12°03.6	10	329°24.1	11°02.8	10	329°36.7	10°00.4
11	343°52.5	13°59.2	11	344°01.9	13°01.9	11	344°12.6	12°02.8	11	344°24.3	11°01.9	11	344°36.9	9°59.6
12	358°52.6	13°58.4	12	359°02.1	13°01.1	12	359°12.7	12°01.9	12	359°24.4	11°01.1	12	359°37.1	9°58.7
13	13°52.7	13°57.6	13	14°02.2	13°00.3	13	14°12.9	12°01.1	13	14°24.6	11°00.2	13	14°37.3	9°57.8
14	28°52.8	13°56.8	14	29°02.4	12°59.5	14	29°13.0	12°00.3	14	29°24.8	10°59.4	14	29°37.5	9°56.9
15	43°53.0	13°56.0	15	44°02.5	12°58.7	15	44°13.2	11°59.4	15	44°24.9	10°58.5	15	44°37.6	9°56.0
16	58°53.1	13°55.3	16	59°02.6	12°57.8	16	59°13.3	11°58.6	16	59°25.1	10°57.7	16	59°37.8	9°55.2
17	73°53.2	13°54.5	17	74°02.8	12°57.0	17	74°13.5	11°57.8	17	74°25.3	10°56.8	17	74°38.0	9°54.3
18	88°53.3	13°53.7	18	89°02.9	12°56.2	18	89°13.7	11°56.9	18	89°25.5	10°55.9	18	89°38.2	9°53.4
19	103°53.5	13°52.9	19	104°03.1	12°55.4	19	104°13.8	11°56.1	19	104°25.6	10°55.1	19	104°38.4	9°52.5
20	118°53.6	13°52.1	20	119°03.2	12°54.6	20	119°14.0	11°55.3	20	119°25.8	10°54.2	20	119°38.6	9°51.7
21	133°53.7	13°51.3	21	134°03.3	12°53.8	21	134°14.1	11°54.4	21	134°26.0	10°53.4	21	134°38.7	9°50.8
22	148°53.8	13°50.5	22	149°03.5	12°53.0	22	149°14.3	11°53.6	22	149°26.1	10°52.5	22	149°38.9	9°49.9
23	163°54.0	13°49.8	23	164°03.6	12°52.2	23	164°14.4	11°52.7	23	164°26.3	10°51.7	23	164°39.1	9°49.0
	SD.=15.8	d=-0.8		SD.=15.8	d=-0.8		SD.=15.8	d=-0.8		SD.=15.8	d=-0.9		SD.=15.8	d=-0.9

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	178°54.1	13°49.0	0	179°03.8	12°51.4	0	179°14.6	11°51.9	0	179°26.5	10°50.8	0	179°39.3	9°48.1
1	193°54.2	13°48.2	1	194°03.9	12°50.5	1	194°14.8	11°51.1	1	194°26.7	10°49.9	1	194°39.5	9°47.3
2	208°54.3	13°47.4	2	209°04.1	12°49.7	2	209°14.9	11°50.2	2	209°26.8	10°49.1	2	209°39.7	9°46.4
3	223°54.5	13°46.6	3	224°04.2	12°48.9	3	224°15.1	11°49.4	3	224°27.0	10°48.2	3	224°39.8	9°45.5
4	238°54.6	13°45.8	4	239°04.3	12°48.1	4	239°15.2	11°48.6	4	239°27.2	10°47.4	4	239°40.0	9°44.6
5	253°54.7	13°45.0	5	254°04.5	12°47.3	5	254°15.4	11°47.7	5	254°27.3	10°46.5	5	254°40.2	9°43.7
6	268°54.9	13°44.2	6	269°04.6	12°46.5	6	269°15.6	11°46.9	6	269°27.5	10°45.6	6	269°40.4	9°42.9
7	283°55.0	13°43.5	7	284°04.8	12°45.6	7	284°15.7	11°46.0	7	284°27.7	10°44.8	7	284°40.6	9°42.0
8	298°55.1	13°42.7	8	299°04.9	12°44.8	8	299°15.9	11°45.2	8	299°27.9	10°43.9	8	299°40.8	9°41.1
9	313°55.2	13°41.9	9	314°05.1	12°44.0	9	314°16.0	11°44.4	9	314°28.0	10°43.0	9	314°41.0	9°40.2
10	328°55.4	13°41.1	10	329°05.2	12°43.2	10	329°16.2	11°43.5	10	329°28.2	10°42.2	10	329°41.1	9°39.3
11	343°55.5	13°40.3	11	344°05.4	12°42.4	11	344°16.4	11°42.7	11	344°28.4	10°41.3	11	344°41.3	9°38.4
12	358°55.6	13°39.5	12	359°05.5	12°41.6	12	359°16.5	11°41.8	12	359°28.6	10°40.5	12	359°41.5	9°37.6
13	13°55.8	13°38.7	13	14°05.6	12°40.7	13	14°16.7	11°41.0	13	14°28.7	10°39.6	13	14°41.7	9°36.7
14	28°55.9	13°37.9	14	29°05.8	12°39.9	14	29°16.8	11°40.2	14	29°28.9	10°38.7	14	29°41.9	9°35.8
15	43°56.0	13°37.1	15	44°05.9	12°39.1	15	44°17.0	11°39.3	15	44°29.1	10°37.9	15	44°42.1	9°34.9
16	58°56.1	13°36.3	16	59°06.1	12°38.3	16	59°17.2	11°38.5	16	59°29.3	10°37.0	16	59°42.3	9°34.0
17	73°56.3	13°35.5	17	74°06.2	12°37.5	17	74°17.3	11°37.6	17	74°29.4	10°36.1	17	74°42.4	9°33.1
18	88°56.4	13°34.7	18	89°06.4	12°36.7	18	89°17.5	11°36.8	18	89°29.6	10°35.3	18	89°42.6	9°32.2
19	103°56.5	13°33.9	19	104°06.5	12°35.8	19	104°17.6	11°35.9	19	104°29.8	10°34.4	19	104°42.8	9°31.4
20	118°56.7	13°33.2	20	119°06.7	12°35.0	20	119°17.8	11°35.1	20	119°30.0	10°33.5	20	119°43.0	9°30.5
21	133°56.8	13°32.4	21	134°06.8	12°34.2	21	134°18.0	11°34.3	21	134°30.1	10°32.7	21	134°43.2	9°29.6
22	148°56.9	13°31.6	22	149°07.0	12°33.4	22	149°18.1	11°33.4	22	149°30.3	10°31.8	22	149°43.4	9°28.7
23	163°57.1	13°30.8	23	164°07.1	12°32.6	23	164°18.3	11°32.6	23					

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	179°43.8	9°26.9	0	179°57.6	8°22.4	0	180°12.1	7°16.7	0	180°27.2	6°09.9	0	180°42.6	5°02.2
1	194°43.9	9°26.0	1	194°57.8	8°21.5	1	195°12.3	7°15.8	1	195°27.4	6°09.0	1	195°42.8	5°01.3
2	209°44.1	9°25.2	2	209°58.0	8°20.6	2	210°12.5	7°14.9	2	210°27.6	6°08.1	2	210°43.1	5°00.3
3	224°44.3	9°24.3	3	224°58.2	8°19.7	3	225°12.8	7°14.0	3	225°27.8	6°07.1	3	225°43.3	4°59.4
4	239°44.5	9°23.4	4	239°58.4	8°18.8	4	240°13.0	7°13.0	4	240°28.0	6°06.2	4	240°43.5	4°58.4
5	254°44.7	9°22.5	5	254°58.6	8°17.9	5	255°13.2	7°12.1	5	255°28.2	6°05.3	5	255°43.7	4°57.5
6	269°44.9	9°21.6	6	269°58.8	8°17.0	6	270°13.4	7°11.2	6	270°28.4	6°04.3	6	270°43.9	4°56.5
7	284°45.1	9°20.7	7	284°59.0	8°16.1	7	285°13.6	7°10.3	7	285°28.7	6°03.4	7	285°44.1	4°55.6
8	299°45.3	9°19.8	8	299°59.2	8°15.2	8	300°13.8	7°09.4	8	300°28.9	6°02.5	8	300°44.4	4°54.6
9	314°45.4	9°18.9	9	314°59.4	8°14.3	9	315°14.0	7°08.4	9	315°29.1	6°01.5	9	315°44.6	4°53.7
10	329°45.6	9°18.1	10	329°59.6	8°13.4	10	330°14.2	7°07.5	10	330°29.3	6°00.6	10	330°44.8	4°52.8
11	344°45.8	9°17.2	11	344°59.8	8°12.5	11	345°14.4	7°06.6	11	345°29.5	5°59.6	11	345°45.0	4°51.8
12	359°46.0	9°16.3	12	0°00.0	8°11.6	12	0°14.6	7°05.7	12	0°29.7	5°58.7	12	0°45.2	4°50.9
13	14°46.2	9°15.4	13	15°00.2	8°10.7	13	15°14.8	7°04.7	13	15°29.9	5°57.8	13	15°45.5	4°49.9
14	29°46.4	9°14.5	14	30°00.4	8°09.8	14	30°15.0	7°03.8	14	30°30.1	5°56.8	14	30°45.7	4°49.0
15	44°46.6	9°13.6	15	45°00.6	8°08.8	15	45°15.2	7°02.9	15	45°30.4	5°55.9	15	45°45.9	4°48.0
16	59°46.8	9°12.7	16	60°00.8	8°07.9	16	60°15.4	7°02.0	16	60°30.6	5°55.0	16	60°46.1	4°47.1
17	74°47.0	9°11.8	17	75°01.0	8°07.0	17	75°15.6	7°01.1	17	75°30.8	5°54.0	17	75°46.3	4°46.1
18	89°47.2	9°10.9	18	90°01.2	8°06.1	18	90°15.9	7°00.1	18	90°31.0	5°53.1	18	90°46.5	4°45.2
19	104°47.3	9°10.0	19	105°01.4	8°05.2	19	105°16.1	6°59.2	19	105°31.2	5°52.2	19	105°46.8	4°44.2
20	119°47.5	9°09.2	20	120°01.6	8°04.3	20	120°16.3	6°58.3	20	120°31.4	5°51.2	20	120°47.0	4°43.3
21	134°47.7	9°08.3	21	135°01.8	8°03.4	21	135°16.5	6°57.4	21	135°31.6	5°50.3	21	135°47.2	4°42.3
22	149°47.9	9°07.4	22	150°02.0	8°02.5	22	150°16.7	6°56.4	22	150°31.9	5°49.3	22	150°47.4	4°41.4
23	164°48.1	9°06.5	23	165°02.2	8°01.6	23	165°16.9	6°55.5	23	165°32.1	5°48.4	23	165°47.6	4°40.4
	SD.=15.8	d=-0.9		SD.=15.8	d=-0.9		SD.=15.9	d=-0.9		SD.=15.9	d=-0.9		SD.=15.9	d=-0.9

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	179°48.3	9°05.6	0	180°02.4	8°00.7	0	180°17.1	6°54.6	0	180°32.3	5°47.5	0	180°47.9	4°39.5
1	194°48.5	9°04.7	1	195°02.6	7°59.8	1	195°17.3	6°53.7	1	195°32.5	5°46.5	1	195°48.1	4°38.5
2	209°48.7	9°03.8	2	210°02.8	7°58.8	2	210°17.5	6°52.7	2	210°32.7	5°45.6	2	210°48.3	4°37.6
3	224°48.9	9°02.9	3	225°03.0	7°57.9	3	225°17.7	6°51.8	3	225°32.9	5°44.6	3	225°48.5	4°36.6
4	239°49.1	9°02.0	4	240°03.2	7°57.0	4	240°17.9	6°50.9	4	240°33.1	5°43.7	4	240°48.7	4°35.7
5	254°49.3	9°01.1	5	255°03.4	7°56.1	5	255°18.1	6°49.9	5	255°33.4	5°42.8	5	255°48.9	4°34.7
6	269°49.4	9°00.2	6	270°03.6	7°55.2	6	270°18.3	6°49.0	6	270°33.6	5°41.8	6	270°49.2	4°33.8
7	284°49.6	8°59.3	7	285°03.8	7°54.3	7	285°18.6	6°48.1	7	285°33.8	5°40.9	7	285°49.4	4°32.8
8	299°49.8	8°58.4	8	300°04.0	7°53.4	8	300°18.8	6°47.2	8	300°34.0	5°39.9	8	300°49.6	4°31.9
9	314°50.0	8°57.5	9	315°04.2	7°52.5	9	315°19.0	6°46.2	9	315°34.2	5°39.0	9	315°49.8	4°30.9
10	329°50.2	8°56.6	10	330°04.4	7°51.6	10	330°19.2	6°45.3	10	330°34.4	5°38.1	10	330°50.0	4°30.0
11	344°50.4	8°55.7	11	345°04.6	7°50.6	11	345°19.4	6°44.4	11	345°34.6	5°37.1	11	345°50.3	4°29.0
12	359°50.6	8°54.8	12	0°04.8	7°49.7	12	0°19.6	6°43.5	12	0°34.9	5°36.2	12	0°50.5	4°28.1
13	14°50.8	8°54.0	13	15°05.0	7°48.8	13	15°19.8	6°42.5	13	15°35.1	5°35.2	13	15°50.7	4°27.1
14	29°51.0	8°53.1	14	30°05.2	7°47.9	14	30°20.0	6°41.6	14	30°35.3	5°34.3	14	30°50.9	4°26.2
15	44°51.2	8°52.2	15	45°05.4	7°47.0	15	45°20.2	6°40.7	15	45°35.5	5°33.4	15	45°51.1	4°25.2
16	59°51.4	8°51.3	16	60°05.6	7°46.1	16	60°20.4	6°39.7	16	60°35.7	5°32.4	16	60°51.4	4°24.3
17	74°51.6	8°50.4	17	75°05.8	7°45.2	17	75°20.6	6°38.8	17	75°35.9	5°31.5	17	75°51.6	4°23.3
18	89°51.8	8°49.5	18	90°06.0	7°44.2	18	90°20.9	6°37.9	18	90°36.1	5°30.5	18	90°51.8	4°22.4
19	104°52.0	8°48.6	19	105°06.2	7°43.3	19	105°21.1	6°37.0	19	105°36.4	5°29.6	19	105°52.0	4°21.4
20	119°52.1	8°47.7	20	120°06.4	7°42.4	20	120°21.3	6°36.0	20	120°36.6	5°28.7	20	120°52.2	4°20.4
21	134°52.3	8°46.8	21	135°06.6	7°41.5	21	135°21.5	6°35.1	21	135°36.8	5°27.7	21	135°52.5	4°19.5
22	149°52.5	8°45.9	22	150°06.8	7°40.6	22	150°21.7	6°34.2	22	150°37.0	5°26.8	22	150°52.7	4°18.5
23	164°52.7	8°45.0	23	165°07.0	7°39.7	23	165°21.9	6°33.2	23	165°37.2	5°25.8	23	165°52.9	4°17.6
	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=-0.9

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	179°52.9	8°44.1	0	180°07.2	7°38.8	0	180°22.1	6°32.3	0	180°37.4	5°24.9	0	180°53.1	4°16.6
1	194°53.1	8°43.2	1	195°07.4	7°37.8	1	195°22.3	6°31.4	1	195°37.7	5°23.9	1	195°53.3	4°15.7
2	209°53.3	8°42.3	2	210°07.6	7°36.9	2	210°22.5	6°30.5	2	210°37.9	5°23.0	2	210°53.6	4°14.7
3	224°53.5	8°41.4	3	225°07.8	7°36.0	3	225°22.7	6°29.5	3	225°38.1	5°22.1	3	225°53.8	4°13.8
4	239°53.7	8°40.5	4	240°08.0	7°35.1	4	240°23.0	6°28.6	4	240°38.3	5°21.1	4	240°54.0	4°12.8
5	254°53.9	8°39.6	5	255°08.3	7°34.2	5	255°23.2	6°27.7	5	255°38.5	5°20.2	5	255°54.2	4°11.9
6	269°54.1	8°38.7	6	270°08.5	7°33.3	6	270°23.4	6°26.7	6	270°38.7	5°19.2	6	270°54.4	4°10.9
7	284°54.3	8°37.8	7	285°08.7	7°32.3	7	285°23.6	6°25.8	7	285°38.9	5°18.3	7	285°54.7	4°10.0
8	299°54.5	8°36.9	8	300°08.9	7°31.4	8	300°23.8	6°24.9	8	300°39.2	5°17.3	8	300°54.9	4°09.0
9	314°54.7	8°36.0	9	315°09.1	7°30.5	9	315°24.0	6°23.9	9	315°39.4	5°16.4	9	315°55.1	4°08.1
10	329°54.9	8°35.1	10	330°09.3	7°29.6	10	330°24.2	6°23.0	10	330°39.6	5°15.5	10	330°55.3	4°07.1
11	344°55.1	8°34.2	11	345°09.5	7°28.7	11	345°24.4	6°22.1	11	345°39.8	5°14.5	11	345°55.5	4°06.1
12	359°55.3	8°33.3	12	0°09.7	7°27.8	12	0°24.6	6°21.1	12	0°40.0	5°13.6	12	0°55.8	4°05.2
13	14°55.5	8°32.4	13	15°09.9	7°26.8	13	15°24.8	6°20.2	13	15°40.2	5°12.6	13	15°56.0	4°04.2
14	29°55.7	8°31.5	14	30°10.1	7°25.9	14	30°25.1	6°19.3	14	30°40.5	5°11.7	14	30°56.2	4°03.3
15	44°55.9	8°30.6	15	45°10.3	7°25.0	15	45°25.3	6°18.3	15	45°40.7	5°10.7	15	45°56.4	4°02.3
16	59°56.0	8°29.7	16	60°10.5	7°24.1	16	60°25.5	6°17.4	16	60°40.9	5°09.8	16	60°56.6	4°01.4
17	74°56.2	8°28.8	17	75°10.7	7°23.2	17	75°25.7	6°16.5	17	75°41.1	5°08.8	17	75°56.9	4°00.4
18	89°56.4	8°27.9	18	90°10.9	7°22.2	18	90°25.9	6°15.5	18	90°41.3	5°07.9	18	90°57.1	3°59.5
19	104°56.6	8°27.0	19	105°11.1	7°21.3	19	105°26.1	6°14.6	19	105°41.5	5°07.0	19	105°57.3	3°58.5
20	119°56.8	8°26.1	20	120°11.3	7°20.4	20	120°26.3	6°13.7	20	120°41.8	5°06.0	20	120°57.5	3°57.6
21	134°57.0	8°25.2	21	135°11.5	7°19.5	21	135°26.5	6°12.7	21	135°42.0	5°05.1	21	135°57.7	3°56.6
22	149°57.2	8°24.3	22	150°11.7	7°18.6	22	150°26.8	6°11.8	22	150°42.2	5°04.1	22	150°58.0	3°55.6
23	164°57.4	8°23.3	23	165°11.9	7°17.6	23	165°27.0	6°10.9	23	165°42.4	5°03.2	23	165°58.2	3°54.7
	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

13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	180°58.4	3°53.7	0	181°14.4	2°44.6	0	181°30.5	1°35.1	0	181°46.5	0°25.2	0	182°02.3	-0°44.9
1	195°58.6	3°52.8	1	196°14.6	2°43.7	1	196°30.7	1°34.1	1	196°46.7	0°24.2	1	197°02.5	-0°45.8
2	210°58.8	3°51.8	2	211°14.8	2°42.7	2	211°30.9	1°33.1	2	211°46.9	0°23.2	2	212°02.7	-0°46.8
3	225°59.1	3°50.9	3	226°15.1	2°41.7	3	226°31.1	1°32.2	3	226°47.2	0°22.3	3	227°03.0	-0°47.8
4	240°59.3	3°49.9	4	241°15.3	2°40.8	4	241°31.4	1°31.2	4	241°47.4	0°21.3	4	242°03.2	-0°48.8
5	255°59.5	3°49.0	5	256°15.5	2°39.8	5	256°31.6	1°30.2	5	256°47.6	0°20.3	5	257°03.4	-0°49.7
6	270°59.7	3°48.0	6	271°15.7	2°38.8	6	271°31.8	1°29.2	6	271°47.8	0°19.3	6	272°03.6	-0°50.7
7	285°59.9	3°47.0	7	286°15.9	2°37.9	7	286°32.0	1°28.3	7	286°48.0	0°18.4	7	287°03.8	-0°51.7
8	301°00.2	3°46.1	8	301°16.2	2°36.9	8	301°32.2	1°27.3	8	301°48.3	0°17.4	8	302°04.1	-0°52.6
9	316°00.4	3°45.1	9	316°16.4	2°36.0	9	316°32.5	1°26.3	9	316°48.5	0°16.4	9	317°04.3	-0°53.6
10	331°00.6	3°44.2	10	331°16.6	2°35.0	10	331°32.7	1°25.4	10	331°48.7	0°15.5	10	332°04.5	-0°54.6
11	346°00.8	3°43.2	11	346°16.8	2°34.0	11	346°32.9	1°24.4	11	346°48.9	0°14.5	11	347°04.7	-0°55.6
12	1°01.1	3°42.3	12	1°17.1	2°33.1	12	1°33.1	1°23.4	12	1°49.1	0°13.5	12	2°04.9	-0°56.5
13	16°01.3	3°41.3	13	16°17.3	2°32.1	13	16°33.4	1°22.5	13	16°49.4	0°12.5	13	17°05.1	-0°57.5
14	31°01.5	3°40.3	14	31°17.5	2°31.1	14	31°33.6	1°21.5	14	31°49.6	0°11.6	14	32°05.4	-0°58.5
15	46°01.7	3°39.4	15	46°17.7	2°30.2	15	46°33.8	1°20.5	15	46°49.8	0°10.6	15	47°05.6	-0°59.5
16	61°01.9	3°38.4	16	61°18.0	2°29.2	16	61°34.0	1°19.6	16	61°50.0	0°09.6	16	62°05.8	-1°00.4
17	76°02.2	3°37.5	17	76°18.2	2°28.2	17	76°34.3	1°18.6	17	76°50.2	0°08.7	17	77°06.0	-1°01.4
18	91°02.4	3°36.5	18	91°18.4	2°27.3	18	91°34.5	1°17.6	18	91°50.5	0°07.7	18	92°06.2	-1°02.4
19	106°02.6	3°35.5	19	106°18.6	2°26.3	19	106°34.7	1°16.6	19	106°50.7	0°06.7	19	107°06.4	-1°03.3
20	121°02.8	3°34.6	20	121°18.8	2°25.3	20	121°34.9	1°15.7	20	121°50.9	0°05.7	20	122°06.7	-1°04.3
21	136°03.0	3°33.6	21	136°19.1	2°24.4	21	136°35.1	1°14.7	21	136°51.1	0°04.8	21	137°06.9	-1°05.3
22	151°03.3	3°32.7	22	151°19.3	2°23.4	22	151°35.4	1°13.7	22	151°51.4	0°03.8	22	152°07.1	-1°06.3
23	166°03.5	3°31.7	23	166°19.5	2°22.4	23	166°35.6	1°12.8	23	166°51.6	0°02.8	23	167°07.3	-1°07.2
	SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	181°03.7	3°30.8	0	181°19.7	2°21.5	0	181°35.8	1°11.8	0	181°51.8	0°01.8	0	182°07.5	-1°08.2
1	196°03.9	3°29.8	1	196°20.0	2°20.5	1	196°36.0	1°10.8	1	196°52.0	0°00.9	1	197°07.7	-1°09.2
2	211°04.2	3°28.8	2	211°20.2	2°19.5	2	211°36.3	1°09.9	2	211°52.2	-0°00.1	2	212°07.9	-1°10.2
3	226°04.4	3°27.9	3	226°20.4	2°18.6	3	226°36.5	1°08.9	3	226°52.5	-0°01.1	3	227°08.2	-1°11.1
4	241°04.6	3°26.9	4	241°20.6	2°17.6	4	241°36.7	1°07.9	4	241°52.7	-0°02.0	4	242°08.4	-1°12.1
5	256°04.8	3°26.0	5	256°20.9	2°16.7	5	256°36.9	1°06.9	5	256°52.9	-0°03.0	5	257°08.6	-1°13.1
6	271°05.0	3°25.0	6	271°21.1	2°15.7	6	271°37.2	1°06.0	6	271°53.1	-0°04.0	6	272°08.8	-1°14.1
7	286°05.3	3°24.0	7	286°21.3	2°14.7	7	286°37.4	1°05.0	7	286°53.3	-0°05.0	7	287°09.0	-1°15.0
8	301°05.5	3°23.1	8	301°21.5	2°13.8	8	301°37.6	1°04.0	8	301°53.6	-0°05.9	8	302°09.2	-1°16.0
9	316°05.7	3°22.1	9	316°21.7	2°12.8	9	316°37.8	1°03.1	9	316°53.8	-0°06.9	9	317°09.5	-1°17.0
10	331°05.9	3°21.2	10	331°22.0	2°11.8	10	331°38.0	1°02.1	10	331°54.0	-0°07.9	10	332°09.7	-1°17.9
11	346°06.1	3°20.2	11	346°22.2	2°10.9	11	346°38.3	1°01.1	11	346°54.2	-0°08.9	11	347°09.9	-1°18.9
12	1°06.4	3°19.2	12	1°22.4	2°09.9	12	1°38.5	1°00.1	12	1°54.4	-0°09.8	12	2°10.1	-1°19.9
13	16°06.6	3°18.3	13	16°22.6	2°08.9	13	16°38.7	0°59.2	13	16°54.7	-0°10.8	13	17°10.3	-1°20.9
14	31°06.8	3°17.3	14	31°22.9	2°08.0	14	31°38.9	0°58.2	14	31°54.9	-0°11.8	14	32°10.5	-1°21.8
15	46°07.0	3°16.4	15	46°23.1	2°07.0	15	46°39.2	0°57.2	15	46°55.1	-0°12.7	15	47°10.7	-1°22.8
16	61°07.3	3°15.4	16	61°23.3	2°06.0	16	61°39.4	0°56.3	16	61°55.3	-0°13.7	16	62°11.0	-1°23.8
17	76°07.5	3°14.4	17	76°23.5	2°05.1	17	76°39.6	0°55.3	17	76°55.5	-0°14.7	17	77°11.2	-1°24.8
18	91°07.7	3°13.5	18	91°23.8	2°04.1	18	91°39.8	0°54.3	18	91°55.8	-0°15.7	18	92°11.4	-1°25.7
19	106°07.9	3°12.5	19	106°24.0	2°03.1	19	106°40.0	0°53.4	19	106°56.0	-0°16.6	19	107°11.6	-1°26.7
20	121°08.1	3°11.6	20	121°24.2	2°02.2	20	121°40.3	0°52.4	20	121°56.2	-0°17.6	20	122°11.8	-1°27.7
21	136°08.4	3°10.6	21	136°24.4	2°01.2	21	136°40.5	0°51.4	21	136°56.4	-0°18.6	21	137°12.0	-1°28.6
22	151°08.6	3°09.6	22	151°24.7	2°00.2	22	151°40.7	0°50.4	22	151°56.6	-0°19.6	22	152°12.2	-1°29.6
23	166°08.8	3°08.7	23	166°24.9	1°59.3	23	166°40.9	0°49.5	23	166°56.8	-0°20.5	23	167°12.5	-1°30.6
	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

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	181°09.0	3°07.7	0	181°25.1	1°58.3	0	181°41.2	0°48.5	0	181°57.1	-0°21.5	0	182°12.7	-1°31.6
1	196°09.3	3°06.8	1	196°25.3	1°57.3	1	196°41.4	0°47.5	1	196°57.3	-0°22.5	1	197°12.9	-1°32.5
2	211°09.5	3°05.8	2	211°25.5	1°56.4	2	211°41.6	0°46.6	2	211°57.5	-0°23.4	2	212°13.1	-1°33.5
3	226°09.7	3°04.8	3	226°25.8	1°55.4	3	226°41.8	0°45.6	3	226°57.7	-0°24.4	3	227°13.3	-1°34.5
4	241°09.9	3°03.9	4	241°26.0	1°54.4	4	241°42.0	0°44.6	4	241°57.9	-0°25.4	4	242°13.5	-1°35.5
5	256°10.2	3°02.9	5	256°26.2	1°53.5	5	256°42.3	0°43.6	5	256°58.2	-0°26.4	5	257°13.7	-1°36.4
6	271°10.4	3°02.0	6	271°26.4	1°52.5	6	271°42.5	0°42.7	6	271°58.4	-0°27.3	6	272°14.0	-1°37.4
7	286°10.6	3°01.0	7	286°26.7	1°51.5	7	286°42.7	0°41.7	7	286°58.6	-0°28.3	7	287°14.2	-1°38.4
8	301°10.8	3°00.0	8	301°26.9	1°50.5	8	301°42.9	0°40.7	8	301°58.8	-0°29.3	8	302°14.4	-1°39.3
9	316°11.0	2°59.1	9	316°27.1	1°49.6	9	316°43.2	0°39.8	9	316°59.0	-0°30.3	9	317°14.6	-1°40.3
10	331°11.3	2°58.1	10	331°27.3	1°48.6	10	331°43.4	0°38.8	10	331°59.3	-0°31.2	10	332°14.8	-1°41.3
11	346°11.5	2°57.1	11	346°27.6	1°47.6	11	346°43.6	0°37.8	11	346°59.5	-0°32.2	11	347°15.0	-1°42.3
12	1°11.7	2°56.2	12	1°27.8	1°46.7	12	1°43.8	0°36.8	12	1°59.7	-0°33.2	12	2°15.2	-1°43.2
13	16°11.9	2°55.2	13	16°28.0	1°45.7	13	16°44.0	0°35.9	13	16°59.9	-0°34.2	13	17°15.4	-1°44.2
14	31°12.2	2°54.3	14	31°28.2	1°44.7	14	31°44.3	0°34.9	14	32°00.1	-0°35.1	14	32°15.7	-1°45.2
15	46°12.4	2°53.3	15	46°28.5	1°43.8	15	46°44.5	0°33.9	15	47°00.4	-0°36.1	15	47°15.9	-1°46.2
16	61°12.6	2°52.3	16	61°28.7	1°42.8	16	61°44.7	0°33.0	16	62°00.6	-0°37.1	16	62°16.1	-1°47.1
17	76°12.8	2°51.4	17	76°28.9	1°41.8	17	76°44.9	0°32.0	17	77°00.8	-0°38.0	17	77°16.3	-1°48.1
18	91°13.0	2°50.4	18	91°29.1	1°40.9	18	91°45.2	0°31.0	18	92°01.0	-0°39.0	18	92°16.5	-1°49.1
19	106°13.3	2°49.4	19	106°29.3	1°39.9	19	106°45.4	0°30.0	19	107°01.2	-0°40.0	19	107°16.7	-1°50.0
20	121°13.5	2°48.5	20	121°29.6	1°38.9	20	121°45.6	0°29.1	20	122°01.4	-0°41.0	20	122°16.9	-1°51.0
21	136°13.7	2°47.5	21	136°29.8	1°38.0	21	136°45.8	0°28.1	21	137°01.7	-0°41.9	21	137°17.1	-1°52.0
22	151°13.9	2°46.6	22	151°30.0	1°37.0	22	151°46.0	0°27.1	22	152°01.9	-0°42.9	22	152°17.4	-1°53.0
23	166°14.2	2°45.6	23	166°30.2	1°36.0	23	166°46.3	0°26.2	23	167°02.1	-0°43.9	23	167°17.6	-1°53.9
	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.=16.0	d=-1.0

28	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	182°17.8	-1°54.9	0	182°32.7	-3°04.8	0	182°47.0	-4°14.5	0	183°00.5	-5°23.7	0	183°13.0	-6°32.3
1	197°18.0	-1°55.9	1	197°32.9	-3°05.8	1	197°47.2	-4°15.4	1	198°00.6	-5°24.6	1	198°13.2	-6°33.2
2	212°18.2	-1°56.9	2	212°33.1	-3°06.8	2	212°47.4	-4°16.4	2	213°00.8	-5°25.6	2	213°13.3	-6°34.2
3	227°18.4	-1°57.8	3	227°33.3	-3°07.7	3	227°47.6	-4°17.4	3	228°01.0	-5°26.6	3	228°13.5	-6°35.1
4	242°18.6	-1°58.8	4	242°33.5	-3°08.7	4	242°47.8	-4°18.3	4	243°01.2	-5°27.5	4	243°13.7	-6°36.1
5	257°18.8	-1°59.8	5	257°33.7	-3°09.7	5	257°48.0	-4°19.3	5	258°01.4	-5°28.5	5	258°13.8	-6°37.0
6	272°19.0	-2°00.7	6	272°33.9	-3°10.7	6	272°48.1	-4°20.3	6	273°01.5	-5°29.4	6	273°14.0	-6°38.0
7	287°19.3	-2°01.7	7	287°34.1	-3°11.6	7	287°48.3	-4°21.2	7	288°01.7	-5°30.4	7	288°14.2	-6°38.9
8	302°19.5	-2°02.7	8	302°34.3	-3°12.6	8	302°48.5	-4°22.2	8	303°01.9	-5°31.3	8	303°14.3	-6°39.9
9	317°19.7	-2°03.7	9	317°34.5	-3°13.6	9	317°48.7	-4°23.2	9	318°02.1	-5°32.3	9	318°14.5	-6°40.8
10	332°19.9	-2°04.6	10	332°34.7	-3°14.5	10	332°48.9	-4°24.1	10	333°02.3	-5°33.3	10	333°14.6	-6°41.8
11	347°20.1	-2°05.6	11	347°35.0	-3°15.5	11	347°49.1	-4°25.1	11	348°02.4	-5°34.2	11	348°14.8	-6°42.7
12	2°20.3	-2°06.6	12	2°35.2	-3°16.5	12	2°49.3	-4°26.0	12	3°02.6	-5°35.2	12	3°15.0	-6°43.6
13	17°20.5	-2°07.5	13	17°35.4	-3°17.4	13	17°49.5	-4°27.0	13	18°02.8	-5°36.1	13	18°15.1	-6°44.6
14	32°20.7	-2°08.5	14	32°35.6	-3°18.4	14	32°49.7	-4°28.0	14	33°03.0	-5°37.1	14	33°15.3	-6°45.5
15	47°20.9	-2°09.5	15	47°35.8	-3°19.4	15	47°49.9	-4°28.9	15	48°03.1	-5°38.0	15	48°15.5	-6°46.5
16	62°21.1	-2°10.5	16	62°36.0	-3°20.3	16	62°50.1	-4°29.9	16	63°03.3	-5°39.0	16	63°15.6	-6°47.4
17	77°21.4	-2°11.4	17	77°36.2	-3°21.3	17	77°50.2	-4°30.9	17	78°03.5	-5°39.9	17	78°15.8	-6°48.4
18	92°21.6	-2°12.4	18	92°36.4	-3°22.3	18	92°50.4	-4°31.8	18	93°03.7	-5°40.9	18	93°16.0	-6°49.3
19	107°21.8	-2°13.4	19	107°36.6	-3°23.2	19	107°50.6	-4°32.8	19	108°03.9	-5°41.9	19	108°16.1	-6°50.3
20	122°22.0	-2°14.4	20	122°36.8	-3°24.2	20	122°50.8	-4°33.8	20	123°04.0	-5°42.8	20	123°16.3	-6°51.2
21	137°22.2	-2°15.3	21	137°37.0	-3°25.2	21	137°51.0	-4°34.7	21	138°04.2	-5°43.8	21	138°16.5	-6°52.2
22	152°22.4	-2°16.3	22	152°37.2	-3°26.2	22	152°51.2	-4°35.7	22	153°04.4	-5°44.7	22	153°16.6	-6°53.1
23	167°22.6	-2°17.3	23	167°37.4	-3°27.1	23	167°51.4	-4°36.6	23	168°04.6	-5°45.7	23	168°16.8	-6°54.0
	SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-0.9
29	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	182°22.8	-2°18.2	0	182°37.6	-3°28.1	0	182°51.6	-4°37.6	0	183°04.7	-5°46.6	0	183°16.9	-6°55.0
1	197°23.0	-2°19.2	1	197°37.8	-3°29.1	1	197°51.8	-4°38.6	1	198°04.9	-5°47.6	1	198°17.1	-6°55.9
2	212°23.2	-2°20.2	2	212°38.0	-3°30.0	2	212°52.0	-4°39.5	2	213°05.1	-5°48.5	2	213°17.3	-6°56.9
3	227°23.5	-2°21.2	3	227°38.2	-3°31.0	3	227°52.1	-4°40.5	3	228°05.3	-5°49.5	3	228°17.4	-6°57.8
4	242°23.7	-2°22.1	4	242°38.4	-3°32.0	4	242°52.3	-4°41.5	4	243°05.4	-5°50.4	4	243°17.6	-6°58.8
5	257°23.9	-2°23.1	5	257°38.6	-3°32.9	5	257°52.5	-4°42.4	5	258°05.6	-5°51.4	5	258°17.7	-6°59.7
6	272°24.1	-2°24.1	6	272°38.8	-3°33.9	6	272°52.7	-4°43.4	6	273°05.8	-5°52.4	6	273°17.9	-7°00.6
7	287°24.3	-2°25.0	7	287°39.0	-3°34.9	7	287°52.9	-4°44.3	7	288°06.0	-5°53.3	7	288°18.1	-7°01.6
8	302°24.5	-2°26.0	8	302°39.2	-3°35.8	8	302°53.1	-4°45.3	8	303°06.1	-5°54.3	8	303°18.2	-7°02.5
9	317°24.7	-2°27.0	9	317°39.4	-3°36.8	9	317°53.3	-4°46.3	9	318°06.3	-5°55.2	9	318°18.4	-7°03.5
10	332°24.9	-2°28.0	10	332°39.6	-3°37.8	10	332°53.5	-4°47.2	10	333°06.5	-5°56.2	10	333°18.6	-7°04.4
11	347°25.1	-2°28.9	11	347°39.8	-3°38.7	11	347°53.6	-4°48.2	11	348°06.7	-5°57.1	11	348°18.7	-7°05.4
12	2°25.3	-2°29.9	12	2°40.0	-3°39.7	12	2°53.8	-4°49.1	12	3°06.8	-5°58.1	12	3°18.9	-7°06.3
13	17°25.5	-2°30.9	13	17°40.1	-3°40.7	13	17°54.0	-4°50.1	13	18°07.0	-5°59.0	13	18°19.0	-7°07.2
14	32°25.7	-2°31.8	14	32°40.3	-3°41.6	14	32°54.2	-4°51.1	14	33°07.2	-5°60.0	14	33°19.2	-7°08.2
15	47°25.9	-2°32.8	15	47°40.5	-3°42.6	15	47°54.4	-4°52.0	15	48°07.4	-6°00.9	15	48°19.4	-7°09.1
16	62°26.2	-2°33.8	16	62°40.7	-3°43.6	16	62°54.6	-4°53.0	16	63°07.5	-6°01.9	16	63°19.5	-7°10.1
17	77°26.4	-2°34.8	17	77°40.9	-3°44.5	17	77°54.8	-4°54.0	17	78°07.7	-6°02.8	17	78°19.7	-7°11.0
18	92°26.6	-2°35.7	18	92°41.1	-3°45.5	18	92°55.0	-4°54.9	18	93°07.9	-6°03.8	18	93°19.8	-7°12.0
19	107°26.8	-2°36.7	19	107°41.3	-3°46.5	19	107°55.1	-4°55.9	19	108°08.1	-6°04.7	19	108°20.0	-7°12.9
20	122°27.0	-2°37.7	20	122°41.5	-3°47.4	20	122°55.3	-4°56.8	20	123°08.2	-6°05.7	20	123°20.1	-7°13.8
21	137°27.2	-2°38.6	21	137°41.7	-3°48.4	21	137°55.5	-4°57.8	21	138°08.4	-6°06.6	21	138°20.3	-7°14.8
22	152°27.4	-2°39.6	22	152°41.9	-3°49.4	22	152°55.7	-4°58.8	22	153°08.6	-6°07.6	22	153°20.5	-7°15.7
23	167°27.6	-2°40.6	23	167°42.1	-3°50.3	23	167°55.9	-4°59.7	23	168°08.7	-6°08.5	23	168°20.6	-7°16.7
	SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-0.9
30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	182°27.8	-2°41.6	0	182°42.3	-3°51.3	0	182°56.1	-5°00.7	0	183°08.9	-6°09.5	0	183°20.8	-7°17.6
1	197°28.0	-2°42.5	1	197°42.5	-3°52.3	1	197°56.2	-5°01.6	1	198°09.1	-6°10.4	1	198°20.9	-7°18.5
2	212°28.2	-2°43.5	2	212°42.7	-3°53.2	2	212°56.4	-5°02.6	2	213°09.3	-6°11.4	2	213°21.1	-7°19.5
3	227°28.4	-2°44.5	3	227°42.9	-3°54.2	3	227°56.6	-5°03.6	3	228°09.4	-6°12.3	3	228°21.2	-7°20.4
4	242°28.6	-2°45.4	4	242°43.1	-3°55.2	4	242°56.8	-5°04.5	4	243°09.6	-6°13.3	4	243°21.4	-7°21.4
5	257°28.8	-2°46.4	5	257°43.3	-3°56.1	5	257°57.0	-5°05.5	5	258°09.8	-6°14.3	5	258°21.6	-7°22.3
6	272°29.0	-2°47.4	6	272°43.5	-3°57.1	6	272°57.2	-5°06.4	6	273°09.9	-6°15.2	6	273°21.7	-7°23.2
7	287°29.2	-2°48.3	7	287°43.7	-3°58.1	7	287°57.4	-5°07.4	7	288°10.1	-6°16.2	7	288°21.9	-7°24.2
8	302°29.5	-2°49.3	8	302°43.9	-3°59.0	8	302°57.5	-5°08.4	8	303°10.3	-6°17.1	8	303°22.0	-7°25.1
9	317°29.7	-2°50.3	9	317°44.1	-4°00.0	9	317°57.7	-5°09.3	9	318°10.5	-6°18.1	9	318°22.2	-7°26.0
10	332°29.9	-2°51.3	10	332°44.3	-4°01.0	10	332°57.9	-5°10.3	10	333°10.6	-6°19.0	10	333°22.3	-7°27.0
11	347°30.1	-2°52.2	11	347°44.5	-4°01.9	11	347°58.1	-5°11.2	11	348°10.8	-6°20.0	11	348°22.5	-7°27.9
12	2°30.3	-2°53.2	12	2°44.7	-4°02.9	12	2°58.3	-5°12.2	12	3°11.0	-6°20.9	12	3°22.6	-7°28.9
13	17°30.5	-2°54.2	13	17°44.9	-4°03.9	13	17°58.5	-5°13.1	13	18°11.1	-6°21.8	13	18°22.8	-7°29.8
14	32°30.7	-2°55.1	14	32°45.1	-4°04.8	14	32°58.6	-5°14.1	14	33°11.3	-6°22.8	14	33°23.0	-7°30.7
15	47°30.9	-2°56.1	15	47°45.3	-4°05.8	15	47°58.8	-5°15.1	15	48°11.5	-6°23.7	15	48°23.1	-7°31.7
16	62°31.1	-2°57.1	16	62°45.4	-4°06.8	16	62°59.0	-5°16.0	16	63°11.6	-6°24.7	16	63°23.3	-7°32.6
17	77°31.3	-2°58.0	17	77°45.6	-4°07.7	17	77°59.2	-5°17.0	17	78°11.8	-6°25.6	17	78°23.4	-7°33.5
18	92°31.5	-2°59.0	18	92°45.8	-4°08.7	18	92°59.4	-5°17.9	18	93°12.0	-6°26.6	18	93°23.6	-7°34.5
19	107°31.7	-2°60.0	19	107°46.0	-4°09.7	19	107°59.5	-5°18.9	19	108°12.1	-6°27.5	19	108°23.7	-7°35.4
20	122°31.9	-3°01.0	20	122°46.2	-4°10.6	20	122°59.7	-5°19.9	20	123°12.3	-6°28.5	20	123°23.9	-7°36.4
21	137°32.1	-3°01.9	21	137°46.4	-4°11.6	21	137°59.9	-5°20.8	21	138°12.5	-6°29.4	21	138°24.0	-7°37.3
22	152°32.3	-3°02.9	22	152°46.6	-4°12.6	22	153°00.1	-5°21.8	22	153°12.7	-6°30.4	22	153°24.2	-7°38.2
23	167°32.5	-3°03.9	23	167°46.8	-4°13.5	23	168°00.3	-5°22.7	23	168°12.8	-6°31.3	23	168°24.3	-7°39.2
	SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-0.9

13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	
0	183°24.5	-7°40.1	0	183°34.9	-8°47.0	0	183°44.0	-9°52.7	0	183°51.7	-10°57.1	0	183°58.0	-12°00.0	
1	198°24.6	-7°41.0	1	198°35.0	-8°47.9	1	198°44.1	-9°53.6	1	198°51.8	-10°58.0	1	198°58.1	-12°00.9	
2	213°24.8	-7°42.0	2	213°35.1	-8°48.8	2	213°44.2	-9°54.5	2	213°51.9	-10°58.9	2	213°58.2	-12°01.8	
3	228°24.9	-7°42.9	3	228°35.3	-8°49.7	3	228°44.3	-9°55.4	3	228°52.0	-10°59.8	3	228°58.2	-12°02.6	
4	243°25.1	-7°43.8	4	243°35.4	-8°50.6	4	243°44.5	-9°56.3	4	243°52.1	-11°00.6	4	243°58.3	-12°03.5	
5	258°25.2	-7°44.8	5	258°35.5	-8°51.6	5	258°44.6	-9°57.2	5	258°52.2	-11°01.5	5	258°58.4	-12°04.4	
6	273°25.4	-7°45.7	6	273°35.7	-8°52.5	6	273°44.7	-9°58.1	6	273°52.3	-11°02.4	6	273°58.5	-12°05.2	
7	288°25.5	-7°46.6	7	288°35.8	-8°53.4	7	288°44.8	-9°59.0	7	288°52.4	-11°03.3	7	288°58.5	-12°06.1	
8	303°25.7	-7°47.6	8	303°35.9	-8°54.3	8	303°44.9	-9°59.9	8	303°52.5	-11°04.2	8	303°58.6	-12°06.9	
9	318°25.9	-7°48.5	9	318°36.1	-8°55.2	9	318°45.0	-10°00.8	9	318°52.6	-11°05.1	9	318°58.7	-12°07.8	
10	333°26.0	-7°49.4	10	333°36.2	-8°56.1	10	333°45.1	-10°01.7	10	333°52.7	-11°05.9	10	333°58.8	-12°08.7	
11	348°26.2	-7°50.4	11	348°36.3	-8°57.1	11	348°45.3	-10°02.6	11	348°52.8	-11°06.8	11	348°58.8	-12°09.5	
12	3°26.3	-7°51.3	12	3°36.5	-8°58.0	12	3°45.4	-10°03.5	12	3°52.9	-11°07.7	12	3°58.9	-12°10.4	
13	18°26.4	-7°52.3	13	18°36.6	-8°58.9	13	18°45.5	-10°04.4	13	18°53.0	-11°08.6	13	18°59.0	-12°11.2	
14	33°26.6	-7°53.2	14	33°36.7	-8°59.8	14	33°45.6	-10°05.3	14	33°53.1	-11°09.5	14	33°59.0	-12°12.1	
15	48°26.7	-7°54.1	15	48°36.9	-9°00.8	15	48°45.7	-10°06.2	15	48°53.2	-11°10.3	15	48°59.1	-12°13.0	
16	63°26.9	-7°55.0	16	63°37.0	-9°01.7	16	63°45.8	-10°07.1	16	63°53.3	-11°11.2	16	63°59.2	-12°13.8	
17	78°27.0	-7°56.0	17	78°37.1	-9°02.6	17	78°45.9	-10°08.0	17	78°53.4	-11°12.1	17	78°59.3	-12°14.7	
18	93°27.2	-7°56.9	18	93°37.3	-9°03.5	18	93°46.1	-10°08.9	18	93°53.5	-11°13.0	18	93°59.3	-12°15.5	
19	108°27.3	-7°57.8	19	108°37.4	-9°04.4	19	108°46.2	-10°09.8	19	108°53.5	-11°13.9	19	108°59.4	-12°16.4	
20	123°27.5	-7°58.8	20	123°37.5	-9°05.3	20	123°46.3	-10°10.7	20	123°53.6	-11°14.7	20	123°59.5	-12°17.2	
21	138°27.6	-7°59.7	21	138°37.7	-9°06.3	21	138°46.4	-10°11.6	21	138°53.7	-11°15.6	21	138°59.5	-12°18.1	
22	153°27.8	-8°00.6	22	153°37.8	-9°07.2	22	153°46.5	-10°12.5	22	153°53.8	-11°16.5	22	153°59.6	-12°19.0	
23	168°27.9	-8°01.6	23	168°37.9	-9°08.1	23	168°46.6	-10°13.4	23	168°53.9	-11°17.4	23	168°59.7	-12°19.8	
		SD.=16.0	d=-0.9			SD.=16.0	d=-0.9			SD.=16.1	d=-0.9			SD.=16.1	d=-0.9

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	
0	183°28.1	-8°02.5	0	183°38.0	-9°09.0	0	183°46.7	-10°14.3	0	183°54.0	-11°18.3	0	183°59.7	-12°20.7	
1	198°28.2	-8°03.4	1	198°38.2	-9°09.9	1	198°46.8	-10°15.2	1	198°54.1	-11°19.1	1	198°59.8	-12°21.5	
2	213°28.4	-8°04.4	2	213°38.3	-9°10.8	2	213°46.9	-10°16.1	2	213°54.2	-11°20.0	2	213°59.9	-12°22.4	
3	228°28.5	-8°05.3	3	228°38.4	-9°11.8	3	228°47.1	-10°17.0	3	228°54.3	-11°20.9	3	228°60.0	-12°23.2	
4	243°28.7	-8°06.2	4	243°38.6	-9°12.7	4	243°47.2	-10°17.9	4	243°54.4	-11°21.8	4	244°00.0	-12°24.1	
5	258°28.8	-8°07.2	5	258°38.7	-9°13.6	5	258°47.3	-10°18.8	5	258°54.5	-11°22.6	5	259°00.1	-12°24.9	
6	273°29.0	-8°08.1	6	273°38.8	-9°14.5	6	273°47.4	-10°19.7	6	273°54.5	-11°23.5	6	274°00.2	-12°25.8	
7	288°29.1	-8°09.0	7	288°38.9	-9°15.4	7	288°47.5	-10°20.6	7	288°54.6	-11°24.4	7	289°00.2	-12°26.6	
8	303°29.2	-8°09.9	8	303°39.1	-9°16.3	8	303°47.6	-10°21.5	8	303°54.7	-11°25.3	8	304°00.3	-12°27.5	
9	318°29.4	-8°10.9	9	318°39.2	-9°17.2	9	318°47.7	-10°22.4	9	318°54.8	-11°26.1	9	319°00.4	-12°28.3	
10	333°29.5	-8°11.8	10	333°39.3	-9°18.2	10	333°47.8	-10°23.3	10	333°54.9	-11°27.0	10	334°00.4	-12°29.2	
11	348°29.7	-8°12.7	11	348°39.5	-9°19.1	11	348°47.9	-10°24.2	11	348°55.0	-11°27.9	11	349°00.5	-12°30.1	
12	3°29.8	-8°13.7	12	3°39.6	-9°20.0	12	3°48.0	-10°25.1	12	3°55.1	-11°28.8	12	4°00.5	-12°30.9	
13	18°30.0	-8°14.6	13	18°39.7	-9°20.9	13	18°48.1	-10°26.0	13	18°55.2	-11°29.6	13	19°00.6	-12°31.8	
14	33°30.1	-8°15.5	14	33°39.8	-9°21.8	14	33°48.3	-10°26.9	14	33°55.2	-11°30.5	14	34°00.7	-12°32.6	
15	48°30.3	-8°16.4	15	48°40.0	-9°22.7	15	48°48.4	-10°27.8	15	48°55.3	-11°31.4	15	49°00.7	-12°33.5	
16	63°30.4	-8°17.4	16	63°40.1	-9°23.6	16	63°48.5	-10°28.6	16	63°55.4	-11°32.3	16	64°00.8	-12°34.3	
17	78°30.5	-8°18.3	17	78°40.2	-9°24.5	17	78°48.6	-10°29.5	17	78°55.5	-11°33.1	17	79°00.9	-12°35.2	
18	93°30.7	-8°19.2	18	93°40.3	-9°25.5	18	93°48.7	-10°30.4	18	93°55.6	-11°34.0	18	94°00.9	-12°36.0	
19	108°30.8	-8°20.2	19	108°40.5	-9°26.4	19	108°48.8	-10°31.3	19	108°55.7	-11°34.9	19	109°01.0	-12°36.9	
20	123°31.0	-8°21.1	20	123°40.6	-9°27.3	20	123°48.9	-10°32.2	20	123°55.8	-11°35.8	20	124°01.1	-12°37.7	
21	138°31.1	-8°22.0	21	138°40.7	-9°28.2	21	138°49.0	-10°33.1	21	138°55.8	-11°36.6	21	139°01.1	-12°38.6	
22	153°31.3	-8°22.9	22	153°40.8	-9°29.1	22	153°49.1	-10°34.0	22	153°55.9	-11°37.5	22	154°01.2	-12°39.4	
23	168°31.4	-8°23.9	23	168°41.0	-9°30.0	23	168°49.2	-10°34.9	23	168°56.0	-11°38.4	23	169°01.2	-12°40.2	
		SD.=16.0	d=-0.9			SD.=16.0	d=-0.9			SD.=16.1	d=-0.9			SD.=16.1	d=-0.9

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	
0	183°31.5	-8°24.8	0	183°41.1	-9°30.9	0	183°49.3	-10°35.8	0	183°56.1	-11°39.2	0	184°01.3	-12°41.1	
1	198°31.7	-8°25.7	1	198°41.2	-9°31.8	1	198°49.4	-10°36.7	1	198°56.2	-11°40.1	1	199°01.4	-12°41.9	
2	213°31.8	-8°26.6	2	213°41.3	-9°32.7	2	213°49.5	-10°37.6	2	213°56.3	-11°41.0	2	214°01.4	-12°42.8	
3	228°32.0	-8°27.6	3	228°41.5	-9°33.6	3	228°49.6	-10°38.5	3	228°56.3	-11°41.9	3	229°01.5	-12°43.6	
4	243°32.1	-8°28.5	4	243°41.6	-9°34.6	4	243°49.7	-10°39.4	4	243°56.4	-11°42.7	4	244°01.5	-12°44.5	
5	258°32.2	-8°29.4	5	258°41.7	-9°35.5	5	258°49.8	-10°40.2	5	258°56.5	-11°43.6	5	259°01.6	-12°45.3	
6	273°32.4	-8°30.3	6	273°41.8	-9°36.4	6	273°49.9	-10°41.1	6	273°56.6	-11°44.5	6	274°01.7	-12°46.2	
7	288°32.5	-8°31.3	7	288°41.9	-9°37.3	7	288°50.0	-10°42.0	7	288°56.7	-11°45.3	7	289°01.7	-12°47.0	
8	303°32.7	-8°32.2	8	303°42.1	-9°38.2	8	303°50.1	-10°42.9	8	303°56.8	-11°46.2	8	304°01.8	-12°47.9	
9	318°32.8	-8°33.1	9	318°42.2	-9°39.1	9	318°50.2	-10°43.8	9	318°56.8	-11°47.1	9	319°01.8	-12°48.7	
10	333°32.9	-8°34.0	10	333°42.3	-9°40.0	10	333°50.3	-10°44.7	10	333°56.9	-11°47.9	10	334°01.9	-12°49.6	
11	348°33.1	-8°35.0	11	348°42.4	-9°40.9	11	348°50.4	-10°45.6	11	348°57.0	-11°48.8	11	349°02.0	-12°50.4	
12	3°33.2	-8°35.9	12	3°42.6	-9°41.8	12	3°50.5	-10°46.5	12	3°57.1	-11°49.7	12	4°02.0	-12°51.2	
13	18°33.4	-8°36.8	13	18°42.7	-9°42.7	13	18°50.6	-10°47.4	13	18°57.2	-11°50.5	13	19°02.1	-12°52.1	
14	33°33.5	-8°37.7	14	33°42.8	-9°43.6	14	33°50.7	-10°48.2	14	33°57.2	-11°51.4	14	34°02.1	-12°52.9	
15	48°33.6	-8°38.7	15	48°42.9	-9°44.5	15	48°50.9	-10°49.1	15	48°57.3	-11°52.3	15	49°02.2	-12°53.8	
16	63°33.8	-8°39.6	16	63°43.0	-9°45.4	16	63°51.0	-10°50.0	16	63°57.4	-11°53.1	16	64°02.2	-12°54.6	
17	78°33.9	-8°40.5	17	78°43.2	-9°46.4	17	78°51.1	-10°50.9	17	78°57.5	-11°54.0	17	79°02.3	-12°55.5	
18	93°34.0	-8°41.4	18	93°43.3	-9°47.3	18	93°51.1	-10°51.8	18	93°57.5	-11°54.9	18	94°02.3	-12°56.3	
19	108°34.2	-8°42.4	19	108°43.4	-9°48.2	19	108°51.2	-10°52.7	19	108°57.6	-11°55.7	19	109°02.4	-12°57.1	
20	123°34.3	-8°43.3	20	123°43.5	-9°49.1	20	123°51.3	-10°53.6	20	123°57.7	-11°56.6	20	124°02.5	-12°58.0	
21	138°34.5	-8°44.2	21	138°43.6	-9°50.0	21	138°51.4	-10°54.5	21	138°57.8	-11°57.5	21	139°02.5	-12°58.8	
22	153°34.6	-8°45.1	22	153°43.7	-9°50.9	22	153°51.5	-10°55.3	22	153°57.9	-11°58.3	22	154°02.6	-12°59.7	
23	168°34.7	-8°46.0	23	168°43.9	-9°51.8	23	168°51.6	-10°56.2	23	168°57.9	-11°59.2	23	169°02.6	-13°00.5	
		SD.=16.0	d=-0.9			SD.=16.1	d=-0.9			SD.=16.1	d=-0.9			SD.=16.1	d=-0.8

28	GHA	Dec	31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec
0	184°02.7	-13°01.3	0	184°05.6	-14°00.8	0	184°06.7	-14°58.3	0	184°06.0	-15°53.6	0	184°03.4	-16°46.5
1	199°02.7	-13°02.2	1	199°05.6	-14°01.6	1	199°06.7	-14°59.1	1	199°06.0	-15°54.3	1	199°03.3	-16°47.2
2	214°02.8	-13°03.0	2	214°05.7	-14°02.4	2	214°06.7	-14°59.8	2	214°06.0	-15°55.1	2	214°03.3	-16°47.9
3	229°02.8	-13°03.8	3	229°05.7	-14°03.2	3	229°06.7	-15°00.6	3	229°05.9	-15°55.8	3	229°03.2	-16°48.7
4	244°02.9	-13°04.7	4	244°05.7	-14°04.1	4	244°06.7	-15°01.4	4	244°05.9	-15°56.6	4	244°03.2	-16°49.4
5	259°02.9	-13°05.5	5	259°05.7	-14°04.9	5	259°06.7	-15°02.2	5	259°05.9	-15°57.3	5	259°03.1	-16°50.1
6	274°03.0	-13°06.4	6	274°05.8	-14°05.7	6	274°06.8	-15°03.0	6	274°05.9	-15°58.1	6	274°03.1	-16°50.8
7	289°03.0	-13°07.2	7	289°05.8	-14°06.5	7	289°06.8	-15°03.8	7	289°05.8	-15°58.8	7	289°03.0	-16°51.5
8	304°03.1	-13°08.0	8	304°05.8	-14°07.3	8	304°06.8	-15°04.5	8	304°05.8	-15°59.6	8	304°03.0	-16°52.2
9	319°03.1	-13°08.9	9	319°05.9	-14°08.1	9	319°06.8	-15°05.3	9	319°05.8	-16°00.3	9	319°02.9	-16°52.9
10	334°03.2	-13°09.7	10	334°05.9	-14°08.9	10	334°06.8	-15°06.1	10	334°05.8	-16°01.1	10	334°02.9	-16°53.7
11	349°03.2	-13°10.5	11	349°05.9	-14°09.7	11	349°06.7	-15°06.9	11	349°05.7	-16°01.8	11	349°02.8	-16°54.4
12	4°03.3	-13°11.4	12	4°05.9	-14°10.5	12	4°06.7	-15°07.7	12	4°05.7	-16°02.6	12	4°02.8	-16°55.1
13	19°03.3	-13°12.2	13	19°06.0	-14°11.3	13	19°06.7	-15°08.4	13	19°05.7	-16°03.3	13	19°02.7	-16°55.8
14	34°03.4	-13°13.0	14	34°06.0	-14°12.1	14	34°06.7	-15°09.2	14	34°05.6	-16°04.1	14	34°02.6	-16°56.5
15	49°03.4	-13°13.9	15	49°06.0	-14°12.9	15	49°06.7	-15°10.0	15	49°05.6	-16°04.8	15	49°02.6	-16°57.2
16	64°03.5	-13°14.7	16	64°06.0	-14°13.8	16	64°06.7	-15°10.8	16	64°05.6	-16°05.5	16	64°02.5	-16°57.9
17	79°03.5	-13°15.5	17	79°06.0	-14°14.6	17	79°06.7	-15°11.5	17	79°05.6	-16°06.3	17	79°02.5	-16°58.6
18	94°03.6	-13°16.4	18	94°06.1	-14°15.4	18	94°06.7	-15°12.3	18	94°05.5	-16°07.0	18	94°02.4	-16°59.3
19	109°03.6	-13°17.2	19	109°06.1	-14°16.2	19	109°06.7	-15°13.1	19	109°05.5	-16°07.8	19	109°02.4	-17°00.1
20	124°03.7	-13°18.0	20	124°06.1	-14°17.0	20	124°06.7	-15°13.9	20	124°05.5	-16°08.5	20	124°02.3	-17°00.8
21	139°03.7	-13°18.9	21	139°06.1	-14°17.8	21	139°06.7	-15°14.6	21	139°05.4	-16°09.3	21	139°02.3	-17°01.5
22	154°03.8	-13°19.7	22	154°06.2	-14°18.6	22	154°06.7	-15°15.4	22	154°05.4	-16°10.0	22	154°02.2	-17°02.2
23	169°03.8	-13°20.5	23	169°06.2	-14°19.4	23	169°06.7	-15°16.2	23	169°05.4	-16°10.8	23	169°02.1	-17°02.9
	SD.=16.1	d=-0.8		SD.=16.1	d=-0.8		SD.=16.1	d=-0.8		SD.=16.1	d=-0.8		SD.=16.1	d=-0.7

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	184°03.8	-13°21.4	0	184°06.2	-14°20.2	0	184°06.7	-15°17.0	0	184°05.3	-16°11.5	0	184°02.1	-17°03.6
1	199°03.9	-13°22.2	1	199°06.2	-14°21.0	1	199°06.7	-15°17.7	1	199°05.3	-16°12.2	1	199°02.0	-17°04.3
2	214°03.9	-13°23.0	2	214°06.2	-14°21.8	2	214°06.7	-15°18.5	2	214°05.3	-16°13.0	2	214°02.0	-17°05.0
3	229°04.0	-13°23.9	3	229°06.3	-14°22.6	3	229°06.7	-15°19.3	3	229°05.2	-16°13.7	3	229°01.9	-17°05.7
4	244°04.0	-13°24.7	4	244°06.3	-14°23.4	4	244°06.7	-15°20.1	4	244°05.2	-16°14.5	4	244°01.8	-17°06.4
5	259°04.1	-13°25.5	5	259°06.3	-14°24.2	5	259°06.7	-15°20.8	5	259°05.2	-16°15.2	5	259°01.8	-17°07.1
6	274°04.1	-13°26.3	6	274°06.3	-14°25.0	6	274°06.7	-15°21.6	6	274°05.1	-16°15.9	6	274°01.7	-17°07.8
7	289°04.2	-13°27.2	7	289°06.3	-14°25.8	7	289°06.7	-15°22.4	7	289°05.1	-16°16.7	7	289°01.7	-17°08.5
8	304°04.2	-13°28.0	8	304°06.3	-14°26.6	8	304°06.6	-15°23.1	8	304°05.1	-16°17.4	8	304°01.6	-17°09.2
9	319°04.2	-13°28.8	9	319°06.4	-14°27.4	9	319°06.6	-15°23.9	9	319°05.0	-16°18.1	9	319°01.5	-17°09.9
10	334°04.3	-13°29.7	10	334°06.4	-14°28.2	10	334°06.6	-15°24.7	10	334°05.0	-16°18.9	10	334°01.5	-17°10.6
11	349°04.3	-13°30.5	11	349°06.4	-14°29.0	11	349°06.6	-15°25.4	11	349°05.0	-16°19.6	11	349°01.4	-17°11.3
12	4°04.4	-13°31.3	12	4°06.4	-14°29.8	12	4°06.6	-15°26.2	12	4°04.9	-16°20.3	12	4°01.4	-17°12.0
13	19°04.4	-13°32.1	13	19°06.4	-14°30.6	13	19°06.6	-15°27.0	13	19°04.9	-16°21.1	13	19°01.3	-17°12.7
14	34°04.4	-13°33.0	14	34°06.4	-14°31.4	14	34°06.6	-15°27.7	14	34°04.9	-16°21.8	14	34°01.2	-17°13.4
15	49°04.5	-13°33.8	15	49°06.5	-14°32.2	15	49°06.6	-15°28.5	15	49°04.8	-16°22.6	15	49°01.2	-17°14.1
16	64°04.5	-13°34.6	16	64°06.5	-14°33.0	16	64°06.6	-15°29.3	16	64°04.8	-16°23.3	16	64°01.1	-17°14.8
17	79°04.6	-13°35.4	17	79°06.5	-14°33.8	17	79°06.6	-15°30.0	17	79°04.7	-16°24.0	17	79°01.0	-17°15.5
18	94°04.6	-13°36.3	18	94°06.5	-14°34.6	18	94°06.5	-15°30.8	18	94°04.7	-16°24.8	18	94°01.0	-17°16.2
19	109°04.6	-13°37.1	19	109°06.5	-14°35.4	19	109°06.5	-15°31.6	19	109°04.7	-16°25.5	19	109°00.9	-17°16.9
20	124°04.7	-13°37.9	20	124°06.5	-14°36.2	20	124°06.5	-15°32.3	20	124°04.6	-16°26.2	20	124°00.8	-17°17.6
21	139°04.7	-13°38.7	21	139°06.5	-14°37.0	21	139°06.5	-15°33.1	21	139°04.6	-16°26.9	21	139°00.8	-17°18.3
22	154°04.8	-13°39.5	22	154°06.5	-14°37.8	22	154°06.5	-15°33.9	22	154°04.5	-16°27.7	22	154°00.7	-17°19.0
23	169°04.8	-13°40.4	23	169°06.6	-14°38.6	23	169°06.5	-15°34.6	23	169°04.5	-16°28.4	23	169°00.6	-17°19.7
	SD.=16.1	d=-0.8		SD.=16.1	d=-0.8		SD.=16.1	d=-0.8		SD.=16.1	d=-0.7		SD.=16.1	d=-0.7

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	184°04.8	-13°41.2	0	184°06.6	-14°39.4	0	184°06.5	-15°35.4	0	184°04.5	-16°29.1	0	184°00.6	-17°20.4
1	199°04.9	-13°42.0	1	199°06.6	-14°40.1	1	199°06.4	-15°36.2	1	199°04.4	-16°29.9	1	199°00.5	-17°21.1
2	214°04.9	-13°42.8	2	214°06.6	-14°40.9	2	214°06.4	-15°36.9	2	214°04.4	-16°30.6	2	214°00.4	-17°21.8
3	229°04.9	-13°43.7	3	229°06.6	-14°41.7	3	229°06.4	-15°37.7	3	229°04.3	-16°31.3	3	229°00.4	-17°22.5
4	244°05.0	-13°44.5	4	244°06.6	-14°42.5	4	244°06.4	-15°38.4	4	244°04.3	-16°32.1	4	244°00.3	-17°23.2
5	259°05.0	-13°45.3	5	259°06.6	-14°43.3	5	259°06.4	-15°39.2	5	259°04.3	-16°32.8	5	259°00.2	-17°23.9
6	274°05.0	-13°46.1	6	274°06.6	-14°44.1	6	274°06.4	-15°40.0	6	274°04.2	-16°33.5	6	274°00.2	-17°24.5
7	289°05.1	-13°46.9	7	289°06.6	-14°44.9	7	289°06.3	-15°40.7	7	289°04.2	-16°34.2	7	289°00.1	-17°25.2
8	304°05.1	-13°47.8	8	304°06.6	-14°45.7	8	304°06.3	-15°41.5	8	304°04.1	-16°35.0	8	304°00.0	-17°25.9
9	319°05.1	-13°48.6	9	319°06.7	-14°46.5	9	319°06.3	-15°42.2	9	319°04.1	-16°35.7	9	318°59.0	-17°26.6
10	334°05.2	-13°49.4	10	334°06.7	-14°47.3	10	334°06.3	-15°43.0	10	334°04.0	-16°36.4	10	333°59.9	-17°27.3
11	349°05.2	-13°50.2	11	349°06.7	-14°48.1	11	349°06.3	-15°43.8	11	349°04.0	-16°37.1	11	348°59.8	-17°28.0
12	4°05.2	-13°51.0	12	4°06.7	-14°48.8	12	4°06.3	-15°44.5	12	4°03.9	-16°37.9	12	3°59.7	-17°28.7
13	19°05.3	-13°51.8	13	19°06.7	-14°49.6	13	19°06.2	-15°45.3	13	19°03.9	-16°38.6	13	18°59.7	-17°29.4
14	34°05.3	-13°52.7	14	34°06.7	-14°50.4	14	34°06.2	-15°46.0	14	34°03.9	-16°39.3	14	33°59.6	-17°30.0
15	49°05.3	-13°53.5	15	49°06.7	-14°51.2	15	49°06.2	-15°46.8	15	49°03.8	-16°40.0	15	48°59.5	-17°30.7
16	64°05.4	-13°54.3	16	64°06.7	-14°52.0	16	64°06.2	-15°47.5	16	64°03.8	-16°40.7	16	63°59.5	-17°31.4
17	79°05.4	-13°55.1	17	79°06.7	-14°52.8	17	79°06.2	-15°48.3	17	79°03.7	-16°41.5	17	78°59.4	-17°32.1
18	94°05.4	-13°55.9	18	94°06.7	-14°53.6	18	94°06.1	-15°49.1	18	94°03.7	-16°42.2	18	93°59.3	-17°32.8
19	109°05.5	-13°56.7	19	109°06.7	-14°54.4	19	109°06.1	-15°49.8	19	109°03.6	-16°42.9	19	108°59.2	-17°33.5
20	124°05.5	-13°57.6	20	124°06.7	-14°55.1	20	124°06.1	-15°50.6	20	124°03.6	-16°43.6	20	123°59.2	-17°34.2
21	139°05.5	-13°58.4	21	139°06.7	-14°55.9	21	139°06.1	-15°51.3	21	139°03.5	-16°44.4	21	138°59.1	-17°34.8
22	154°05.6	-13°59.2	22	154°06.7	-14°56.7	22	154°06.0	-15°52.1	22	154°03.5	-16°45.1	22	153°59.0	-17°35.5
23	169°05.6	-13°60.0	23	169°06.7	-14°57.5	23	169°06.0	-15°52.8	23	169°03.4	-16°45.8	2		

12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec
0	183°58.9	-17°36.9	0	183°52.5	-18°24.5	0	183°44.2	-19°09.2	0	183°34.1	-19°50.8	0	183°22.2	-20°29.2
1	198°58.8	-17°37.6	1	198°52.4	-18°25.2	1	198°44.1	-19°09.8	1	198°34.0	-19°51.4	1	198°22.1	-20°29.7
2	213°58.7	-17°38.2	2	213°52.3	-18°25.8	2	213°43.9	-19°10.4	2	213°33.8	-19°51.9	2	213°21.9	-20°30.2
3	228°58.6	-17°38.9	3	228°52.2	-18°26.4	3	228°43.8	-19°11.0	3	228°33.7	-19°52.5	3	228°21.7	-20°30.7
4	243°58.6	-17°39.6	4	243°52.1	-18°27.1	4	243°43.7	-19°11.6	4	243°33.5	-19°53.0	4	243°21.5	-20°31.2
5	258°58.5	-17°40.3	5	258°51.9	-18°27.7	5	258°43.6	-19°12.2	5	258°33.3	-19°53.6	5	258°21.3	-20°31.7
6	273°58.4	-17°41.0	6	273°51.8	-18°28.4	6	273°43.4	-19°12.8	6	273°33.2	-19°54.2	6	273°21.2	-20°32.2
7	288°58.3	-17°41.6	7	288°51.7	-18°29.0	7	288°43.3	-19°13.4	7	288°33.0	-19°54.7	7	288°21.0	-20°32.7
8	303°58.2	-17°42.3	8	303°51.6	-18°29.6	8	303°43.2	-19°14.0	8	303°32.9	-19°55.3	8	303°20.8	-20°33.2
9	318°58.2	-17°43.0	9	318°51.5	-18°30.3	9	318°43.0	-19°14.6	9	318°32.7	-19°55.8	9	318°20.6	-20°33.7
10	333°58.1	-17°43.7	10	333°51.4	-18°30.9	10	333°42.9	-19°15.2	10	333°32.6	-19°56.4	10	333°20.4	-20°34.2
11	348°58.0	-17°44.3	11	348°51.3	-18°31.5	11	348°42.8	-19°15.8	11	348°32.4	-19°56.9	11	348°20.3	-20°34.7
12	3°57.9	-17°45.0	12	3°51.2	-18°32.2	12	3°42.7	-19°16.4	12	3°32.3	-19°57.5	12	3°20.1	-20°35.2
13	18°57.8	-17°45.7	13	18°51.1	-18°32.8	13	18°42.5	-19°17.0	13	18°32.1	-19°58.0	13	18°19.9	-20°35.7
14	33°57.8	-17°46.4	14	33°51.0	-18°33.4	14	33°42.4	-19°17.6	14	33°31.9	-19°58.5	14	33°19.7	-20°36.2
15	48°57.7	-17°47.0	15	48°50.9	-18°34.1	15	48°42.3	-19°18.1	15	48°31.8	-19°59.1	15	48°19.5	-20°36.7
16	63°57.6	-17°47.7	16	63°50.8	-18°34.7	16	63°42.1	-19°18.7	16	63°31.6	-19°59.6	16	63°19.4	-20°37.2
17	78°57.5	-17°48.4	17	78°50.7	-18°35.3	17	78°42.0	-19°19.3	17	78°31.5	-20°00.2	17	78°19.2	-20°37.7
18	93°57.4	-17°49.1	18	93°50.6	-18°36.0	18	93°41.9	-19°19.9	18	93°31.3	-20°00.7	18	93°19.0	-20°38.2
19	108°57.4	-17°49.7	19	108°50.5	-18°36.6	19	108°41.7	-19°20.5	19	108°31.2	-20°01.3	19	108°18.8	-20°38.7
20	123°57.3	-17°50.4	20	123°50.4	-18°37.2	20	123°41.6	-19°21.1	20	123°31.0	-20°01.8	20	123°18.6	-20°39.2
21	138°57.2	-17°51.1	21	138°50.2	-18°37.9	21	138°41.5	-19°21.7	21	138°30.8	-20°02.4	21	138°18.4	-20°39.7
22	153°57.1	-17°51.7	22	153°50.1	-18°38.5	22	153°41.3	-19°22.3	22	153°30.7	-20°02.9	22	153°18.3	-20°40.2
23	168°57.0	-17°52.4	23	168°50.0	-18°39.1	23	168°41.2	-19°22.9	23	168°30.5	-20°03.4	23	168°18.1	-20°40.7
	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
13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	183°56.9	-17°53.1	0	183°49.9	-18°39.7	0	183°41.0	-19°23.4	0	183°30.4	-20°04.0	0	183°17.9	-20°41.2
1	198°56.9	-17°53.7	1	198°49.8	-18°40.4	1	198°40.9	-19°24.0	1	198°30.2	-20°04.5	1	198°17.7	-20°41.7
2	213°56.8	-17°54.4	2	213°49.7	-18°41.0	2	213°40.8	-19°24.6	2	213°30.0	-20°05.1	2	213°17.5	-20°42.2
3	228°56.7	-17°55.1	3	228°49.6	-18°41.6	3	228°40.6	-19°25.2	3	228°29.9	-20°05.6	3	228°17.3	-20°42.7
4	243°56.6	-17°55.7	4	243°49.5	-18°42.3	4	243°40.5	-19°25.8	4	243°29.7	-20°06.1	4	243°17.1	-20°43.2
5	258°56.5	-17°56.4	5	258°49.4	-18°42.9	5	258°40.4	-19°26.4	5	258°29.5	-20°06.7	5	258°17.0	-20°43.7
6	273°56.4	-17°57.1	6	273°49.2	-18°43.5	6	273°40.2	-19°26.9	6	273°29.4	-20°07.2	6	273°16.8	-20°44.2
7	288°56.3	-17°57.7	7	288°49.1	-18°44.1	7	288°40.1	-19°27.5	7	288°29.2	-20°07.8	7	288°16.6	-20°44.7
8	303°56.2	-17°58.4	8	303°49.0	-18°44.8	8	303°39.9	-19°28.1	8	303°29.1	-20°08.3	8	303°16.4	-20°45.1
9	318°56.2	-17°59.1	9	318°48.9	-18°45.4	9	318°39.8	-19°28.7	9	318°28.9	-20°08.8	9	318°16.2	-20°45.6
10	333°56.1	-17°59.7	10	333°48.8	-18°46.0	10	333°39.7	-19°29.3	10	333°28.7	-20°09.4	10	333°16.0	-20°46.1
11	348°56.0	-18°00.4	11	348°48.7	-18°46.6	11	348°39.5	-19°29.8	11	348°28.6	-20°09.9	11	348°15.8	-20°46.6
12	3°55.9	-18°01.0	12	3°48.6	-18°47.2	12	3°39.4	-19°30.4	12	3°28.4	-20°10.4	12	3°15.6	-20°47.1
13	18°55.8	-18°01.7	13	18°48.5	-18°47.9	13	18°39.2	-19°31.0	13	18°28.2	-20°11.0	13	18°15.4	-20°47.6
14	33°55.7	-18°02.4	14	33°48.3	-18°48.5	14	33°39.1	-19°31.6	14	33°28.1	-20°11.5	14	33°15.3	-20°48.1
15	48°55.6	-18°03.0	15	48°48.2	-18°49.1	15	48°39.0	-19°32.2	15	48°27.9	-20°12.0	15	48°15.1	-20°48.5
16	63°55.5	-18°03.7	16	63°48.1	-18°49.7	16	63°38.8	-19°32.7	16	63°27.7	-20°12.5	16	63°14.9	-20°49.0
17	78°55.4	-18°04.4	17	78°48.0	-18°50.3	17	78°38.7	-19°33.3	17	78°27.6	-20°13.1	17	78°14.7	-20°49.5
18	93°55.4	-18°05.0	18	93°47.9	-18°51.0	18	93°38.5	-19°33.9	18	93°27.4	-20°13.6	18	93°14.5	-20°50.0
19	108°55.3	-18°05.7	19	108°47.8	-18°51.6	19	108°38.4	-19°34.5	19	108°27.2	-20°14.1	19	108°14.3	-20°50.5
20	123°55.2	-18°06.3	20	123°47.6	-18°52.2	20	123°38.3	-19°35.0	20	123°27.1	-20°14.7	20	123°14.1	-20°51.0
21	138°55.1	-18°07.0	21	138°47.5	-18°52.8	21	138°38.1	-19°35.6	21	138°26.9	-20°15.2	21	138°13.9	-20°51.4
22	153°55.0	-18°07.6	22	153°47.4	-18°53.4	22	153°38.0	-19°36.2	22	153°26.7	-20°15.7	22	153°13.7	-20°51.9
23	168°54.9	-18°08.3	23	168°47.3	-18°54.0	23	168°37.8	-19°36.7	23	168°26.6	-20°16.2	23	168°13.5	-20°52.4
	SD.=16.2	d=-0.7		SD.=16.2	d=-0.6		SD.=16.2	d=-0.6		SD.=16.2	d=-0.5		SD.=16.2	d=-0.5
14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	183°54.8	-18°08.9	0	183°47.2	-18°54.7	0	183°37.7	-19°37.3	0	183°26.4	-20°16.8	0	183°13.3	-20°52.9
1	198°54.7	-18°09.6	1	198°47.0	-18°55.3	1	198°37.5	-19°37.9	1	198°26.2	-20°17.3	1	198°13.1	-20°53.3
2	213°54.6	-18°10.3	2	213°46.9	-18°55.9	2	213°37.4	-19°38.5	2	213°26.1	-20°17.8	2	213°13.0	-20°53.8
3	228°54.5	-18°10.9	3	228°46.8	-18°56.5	3	228°37.2	-19°39.0	3	228°25.9	-20°18.3	3	228°12.8	-20°54.3
4	243°54.4	-18°11.6	4	243°46.7	-18°57.1	4	243°37.1	-19°39.6	4	243°25.7	-20°18.9	4	243°12.6	-20°54.8
5	258°54.3	-18°12.2	5	258°46.6	-18°57.7	5	258°37.0	-19°40.2	5	258°25.5	-20°19.4	5	258°12.4	-20°55.2
6	273°54.2	-18°12.9	6	273°46.4	-18°58.3	6	273°36.8	-19°40.7	6	273°25.4	-20°19.9	6	273°12.2	-20°55.7
7	288°54.1	-18°13.5	7	288°46.3	-18°58.9	7	288°36.7	-19°41.3	7	288°25.2	-20°20.4	7	288°12.0	-20°56.2
8	303°54.0	-18°14.2	8	303°46.2	-18°59.5	8	303°36.5	-19°41.9	8	303°25.0	-20°20.9	8	303°11.8	-20°56.7
9	318°53.9	-18°14.8	9	318°46.1	-19°00.2	9	318°36.4	-19°42.4	9	318°24.9	-20°21.5	9	318°11.6	-20°57.1
10	333°53.9	-18°15.5	10	333°46.0	-19°00.8	10	333°36.2	-19°43.0	10	333°24.7	-20°22.0	10	333°11.4	-20°57.6
11	348°53.8	-18°16.1	11	348°45.8	-19°01.4	11	348°36.1	-19°43.6	11	348°24.5	-20°22.5	11	348°11.2	-20°58.1
12	3°53.7	-18°16.8	12	3°45.7	-19°02.0	12	3°35.9	-19°44.1	12	3°24.3	-20°23.0	12	3°11.0	-20°58.5
13	18°53.6	-18°17.4	13	18°45.6	-19°02.6	13	18°35.8	-19°44.7	13	18°24.2	-20°23.5	13	18°10.8	-20°59.0
14	33°53.5	-18°18.1	14	33°45.5	-19°03.2	14	33°35.6	-19°45.2	14	33°24.0	-20°24.1	14	33°10.6	-20°59.5
15	48°53.4	-18°18.7	15	48°45.3	-19°03.8	15	48°35.5	-19°45.8	15	48°23.8	-20°24.6	15	48°10.4	-20°60.0
16	63°53.3	-18°19.4	16	63°45.2	-19°04.4	16	63°35.3	-19°46.4	16	63°23.6	-20°25.1	16	63°10.2	-21°00.4
17	78°53.2	-18°20.0	17	78°45.1	-19°05.0	17	78°35.2	-19°46.9	17	78°23.5	-20°25.6	17	78°10.0	-21°00.9
18	93°53.1	-18°20.7	18	93°45.0	-19°05.6	18	93°35.0	-19°47.5	18	93°23.3	-20°26.1	18	93°09.8	-21°01.4
19	108°53.0	-18°21.3	19	108°44.8	-19°06.2	19	108°34.9	-19°48.0	19	108°23.1	-20°26.6	19	108°09.6	-21°01.8
20	123°52.9	-18°21.9	20	123°44.7	-19°06.8	20	123°34.7	-19°48.6	20	123°22.9	-20°27.1	20	123°09.4	-21°02.3
21	138°52.8	-18°22.6	21	138°44.6	-19°07.4	21	138°34.6	-19°49.2	21	138°22.8	-20°27.7	21	138°09.2	-21°02.7
22	153°52.7	-18°23.2	22	153°44.5	-19°08.0	22	153°34.4	-19°49.7	22	153°22.6	-20°28.2	22	153°09.0	-21°03.2
23	168°52.6	-18°23.9	23	168°44.3	-19°08.6	23	168°34.3	-19°50.3	23	168°22.4	-20°28.7	23	168°08.8	-21°03.7
	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
0	183°08.6	-21°04.1	0	182°53.3	-21°35.5	0	182°36.4	-22°03.2	0	182°18.2	-22°27.1	0	181°58.7	-22°47.1
1	198°08.4	-21°04.6	1	197°53.1	-21°35.9	1	197°36.2	-22°03.6	1	197°17.9	-22°27.4	1	196°58.4	-22°47.4
2	213°08.2	-21°05.1	2	212°52.9	-21°36.4	2	212°36.0	-22°04.0	2	212°17.7	-22°27.7	2	211°58.1	-22°47.6
3	228°08.0	-21°05.5	3	227°52.6	-21°36.8	3	227°35.7	-22°04.3	3	227°17.4	-22°28.0	3	226°57.9	-22°47.8
4	243°07.8	-21°06.0	4	242°52.4	-21°37.2	4	242°35.5	-22°04.7	4	242°17.1	-22°28.4	4	241°57.6	-22°48.1
5	258°07.6	-21°06.4	5	257°52.2	-21°37.6	5	257°35.2	-22°05.0	5	257°16.9	-22°28.7	5	256°57.3	-22°48.3
6	273°07.4	-21°06.9	6	272°52.0	-21°38.0	6	272°35.0	-22°05.4	6	272°16.6	-22°29.0	6	271°57.0	-22°48.6
7	288°07.2	-21°07.3	7	287°51.7	-21°38.4	7	287°34.7	-22°05.7	7	287°16.3	-22°29.3	7	286°56.7	-22°48.8
8	303°07.0	-21°07.8	8	302°51.5	-21°38.8	8	302°34.5	-22°06.1	8	302°16.1	-22°29.6	8	301°56.5	-22°49.1
9	318°06.8	-21°08.3	9	317°51.3	-21°39.2	9	317°34.2	-22°06.4	9	317°15.8	-22°29.9	9	316°56.2	-22°49.3
10	333°06.6	-21°08.7	10	332°51.1	-21°39.6	10	332°34.0	-22°06.8	10	332°15.5	-22°30.1	10	331°55.9	-22°49.6
11	348°06.4	-21°09.2	11	347°50.8	-21°40.0	11	347°33.7	-22°07.1	11	347°15.3	-22°30.4	11	346°55.6	-22°49.8
12	3°06.2	-21°09.6	12	2°50.6	-21°40.4	12	2°33.5	-22°07.5	12	2°15.0	-22°30.7	12	1°55.3	-22°50.0
13	18°06.0	-21°10.1	13	17°50.4	-21°40.8	13	17°33.2	-22°07.8	13	17°14.7	-22°31.0	13	16°55.1	-22°50.3
14	33°05.8	-21°10.5	14	32°50.1	-21°41.2	14	32°33.0	-22°08.2	14	32°14.5	-22°31.3	14	31°54.8	-22°50.5
15	48°05.6	-21°11.0	15	47°49.9	-21°41.6	15	47°32.8	-22°08.5	15	47°14.2	-22°31.6	15	46°54.5	-22°50.8
16	63°05.3	-21°11.4	16	62°49.7	-21°42.0	16	62°32.5	-22°08.9	16	62°13.9	-22°31.9	16	61°54.2	-22°51.0
17	78°05.1	-21°11.9	17	77°49.5	-21°42.4	17	77°32.3	-22°09.2	17	77°13.7	-22°32.2	17	76°53.9	-22°51.2
18	93°04.9	-21°12.3	18	92°49.2	-21°42.8	18	92°32.0	-22°09.6	18	92°13.4	-22°32.5	18	91°53.7	-22°51.5
19	108°04.7	-21°12.8	19	107°49.0	-21°43.2	19	107°31.8	-22°09.9	19	107°13.1	-22°32.8	19	106°53.4	-22°51.7
20	123°04.5	-21°13.2	20	122°48.8	-21°43.6	20	122°31.5	-22°10.3	20	122°12.9	-22°33.1	20	121°53.1	-22°51.9
21	138°04.3	-21°13.7	21	137°48.5	-21°44.0	21	137°31.3	-22°10.6	21	137°12.6	-22°33.4	21	136°52.8	-22°52.2
22	153°04.1	-21°14.1	22	152°48.3	-21°44.4	22	152°31.0	-22°11.0	22	152°12.3	-22°33.7	22	151°52.5	-22°52.4
23	168°03.9	-21°14.6	23	167°48.1	-21°44.8	23	167°30.8	-22°11.3	23	167°12.1	-22°33.9	23	166°52.3	-22°52.6
	SD.=16.2	d=-0.5		SD.=16.2	d=-0.4		SD.=16.2	d=-0.4		SD.=16.2	d=-0.3		SD.=16.2	d=-0.2

28	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	183°03.7	-21°15.0	0	182°47.9	-21°45.2	0	182°30.5	-22°11.6	0	182°11.8	-22°34.2	0	181°52.0	-22°52.9
1	198°03.5	-21°15.4	1	197°47.6	-21°45.6	1	197°30.3	-22°12.0	1	197°11.5	-22°34.5	1	196°51.7	-22°53.1
2	213°03.3	-21°15.9	2	212°47.4	-21°46.0	2	212°30.0	-22°12.3	2	212°11.3	-22°34.8	2	211°51.4	-22°53.3
3	228°03.1	-21°16.3	3	227°47.2	-21°46.4	3	227°29.8	-22°12.7	3	227°11.0	-22°35.1	3	226°51.1	-22°53.6
4	243°02.9	-21°16.8	4	242°46.9	-21°46.8	4	242°29.5	-22°13.0	4	242°10.7	-22°35.4	4	241°50.8	-22°53.8
5	258°02.6	-21°17.2	5	257°46.7	-21°47.1	5	257°29.2	-22°13.3	5	257°10.5	-22°35.7	5	256°50.6	-22°54.0
6	273°02.4	-21°17.7	6	272°46.5	-21°47.5	6	272°29.0	-22°13.7	6	272°10.2	-22°35.9	6	271°50.3	-22°54.2
7	288°02.2	-21°18.1	7	287°46.2	-21°47.9	7	287°28.7	-22°14.0	7	287°09.9	-22°36.2	7	286°50.0	-22°54.5
8	303°02.0	-21°18.5	8	302°46.0	-21°48.3	8	302°28.5	-22°14.3	8	302°09.7	-22°36.5	8	301°49.7	-22°54.7
9	318°01.8	-21°19.0	9	317°45.8	-21°48.7	9	317°28.2	-22°14.7	9	317°09.4	-22°36.8	9	316°49.4	-22°54.9
10	333°01.6	-21°19.4	10	332°45.5	-21°49.1	10	332°28.0	-22°15.0	10	332°09.1	-22°37.1	10	331°49.1	-22°55.1
11	348°01.4	-21°19.8	11	347°45.3	-21°49.5	11	347°27.7	-22°15.3	11	347°08.9	-22°37.3	11	346°48.9	-22°55.4
12	3°01.2	-21°20.3	12	2°45.1	-21°49.9	12	2°27.5	-22°15.7	12	2°08.6	-22°37.6	12	1°48.6	-22°55.6
13	18°00.9	-21°20.7	13	17°44.8	-21°50.2	13	17°27.2	-22°16.0	13	17°08.3	-22°37.9	13	16°48.3	-22°55.8
14	33°00.7	-21°21.2	14	32°44.6	-21°50.6	14	32°27.0	-22°16.3	14	32°08.0	-22°38.2	14	31°48.0	-22°56.0
15	48°00.5	-21°21.6	15	47°44.4	-21°51.0	15	47°26.7	-22°16.7	15	47°07.8	-22°38.4	15	46°47.7	-22°56.2
16	63°00.3	-21°22.0	16	62°44.1	-21°51.4	16	62°26.5	-22°17.0	16	62°07.5	-22°38.7	16	61°47.4	-22°56.5
17	78°00.1	-21°22.5	17	77°43.9	-21°51.8	17	77°26.2	-22°17.3	17	77°07.2	-22°39.0	17	76°47.1	-22°56.7
18	92°59.9	-21°22.9	18	92°43.7	-21°52.2	18	92°26.0	-22°17.7	18	92°07.0	-22°39.3	18	91°46.9	-22°56.9
19	107°59.7	-21°23.3	19	107°43.4	-21°52.5	19	107°25.7	-22°18.0	19	107°06.7	-22°39.5	19	106°46.6	-22°57.1
20	122°59.5	-21°23.8	20	122°43.2	-21°52.9	20	122°25.4	-22°18.3	20	122°06.4	-22°39.8	20	121°46.3	-22°57.3
21	137°59.2	-21°24.2	21	137°42.9	-21°53.3	21	137°25.2	-22°18.6	21	137°06.1	-22°40.1	21	136°46.0	-22°57.5
22	152°59.0	-21°24.6	22	152°42.7	-21°53.7	22	152°24.9	-22°19.0	22	152°05.9	-22°40.4	22	151°45.7	-22°57.8
23	167°58.8	-21°25.0	23	167°42.5	-21°54.0	23	167°24.7	-22°19.3	23	167°05.6	-22°40.6	23	166°45.4	-22°58.0
	SD.=16.2	d=-0.4		SD.=16.2	d=-0.4		SD.=16.2	d=-0.3		SD.=16.2	d=-0.3		SD.=16.2	d=-0.2

29	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	182°58.6	-21°25.5	0	182°42.2	-21°54.4	0	182°24.4	-22°19.6	0	182°05.3	-22°40.9	0	181°45.1	-22°58.2
1	197°58.4	-21°25.9	1	197°42.0	-21°54.8	1	197°24.2	-22°19.9	1	197°05.0	-22°41.2	1	196°44.9	-22°58.4
2	212°58.2	-21°26.3	2	212°41.8	-21°55.2	2	212°23.9	-22°20.2	2	212°04.8	-22°41.4	2	211°44.6	-22°58.6
3	227°57.9	-21°26.7	3	227°41.5	-21°55.5	3	227°23.6	-22°20.6	3	227°04.5	-22°41.7	3	226°44.3	-22°58.8
4	242°57.7	-21°27.2	4	242°41.3	-21°55.9	4	242°23.4	-22°20.9	4	242°04.2	-22°42.0	4	241°44.0	-22°59.0
5	257°57.5	-21°27.6	5	257°41.0	-21°56.3	5	257°23.1	-22°21.2	5	257°03.9	-22°42.2	5	256°43.7	-22°59.2
6	272°57.3	-21°28.0	6	272°40.8	-21°56.7	6	272°22.9	-22°21.5	6	272°03.7	-22°42.5	6	271°43.4	-22°59.4
7	287°57.1	-21°28.4	7	287°40.6	-21°57.0	7	287°22.6	-22°21.8	7	287°03.4	-22°42.7	7	286°43.1	-22°59.6
8	302°56.8	-21°28.9	8	302°40.3	-21°57.4	8	302°22.4	-22°22.2	8	302°03.1	-22°43.0	8	301°42.8	-22°59.8
9	317°56.6	-21°29.3	9	317°40.1	-21°57.8	9	317°22.1	-22°22.5	9	317°02.8	-22°43.3	9	316°42.6	-23°00.1
10	332°56.4	-21°29.7	10	332°39.8	-21°58.2	10	332°21.8	-22°22.8	10	332°02.6	-22°43.5	10	331°42.3	-23°00.3
11	347°56.2	-21°30.1	11	347°39.6	-21°58.5	11	347°21.6	-22°23.1	11	347°02.3	-22°43.8	11	346°42.0	-23°00.5
12	2°56.0	-21°30.6	12	2°39.4	-21°58.9	12	2°21.3	-22°23.4	12	2°02.0	-22°44.1	12	1°41.7	-23°00.7
13	17°55.8	-21°31.0	13	17°39.1	-21°59.3	13	17°21.1	-22°23.7	13	17°01.7	-22°44.3	13	16°41.4	-23°00.9
14	32°55.5	-21°31.4	14	32°38.9	-21°59.6	14	32°20.8	-22°24.1	14	32°01.5	-22°44.6	14	31°41.1	-23°01.1
15	47°55.3	-21°31.8	15	47°38.6	-21°60.0	15	47°20.5	-22°24.4	15	47°01.2	-22°44.8	15	46°40.8	-23°01.3
16	62°55.1	-21°32.2	16	62°38.4	-22°00.4	16	62°20.3	-22°24.7	16	62°00.9	-22°45.1	16	61°40.5	-23°01.5
17	77°54.9	-21°32.6	17	77°38.2	-22°00.7	17	77°20.0	-22°25.0	17	77°00.6	-22°45.3	17	76°40.2	-23°01.7
18	92°54.6	-21°33.1	18	92°37.9	-22°01.1	18	92°19.8	-22°25.3	18	92°00.4	-22°45.6	18	91°40.0	-23°01.9
19	107°54.4	-21°33.5	19	107°37.7	-22°01.4	19	107°19.5	-22°25.6	19	107°00.1	-22°45.8	19	106°39.7	-23°02.1
20	122°54.2	-21°33.9	20	122°37.4	-22°01.8	20	122°19.2	-22°25.9	20	121°59.8	-22°46.1	20	121°39.4	-23°02.3
21	137°54.0	-21°34.3	21	137°37.2	-22°02.2	21	137°19.0	-22°26.2	21	136°59.5	-22°46.4	21	136°39.1	-23°02.5
22	152°53.8	-21°34.7	22	152°36.9	-22°02.5	22	152°18.7	-22°26.5	22	151°59.3	-22°46.6	22	151°38.8	-23°02.6
23	167°53.5	-21°35.1	23	167°36.7	-22°02.9	23	167°18.4	-22°26.8	23	166°59.0	-22°46.9	23	166°38.5	-23°02.8
	SD.=16.2</													

12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec
0	181°38.2	-23°03.0	0	181°16.9	-23°14.9	0	180°55.1	-23°22.5	0	180°32.9	-23°25.9	0	180°10.6	-23°25.1
1	196°37.9	-23°03.2	1	196°16.6	-23°15.0	1	195°54.8	-23°22.6	1	195°32.6	-23°25.9	1	195°10.3	-23°25.1
2	211°37.6	-23°03.4	2	211°16.3	-23°15.1	2	210°54.5	-23°22.7	2	210°32.3	-23°26.0	2	210°10.0	-23°25.0
3	226°37.3	-23°03.6	3	226°16.0	-23°15.3	3	225°54.2	-23°22.7	3	225°32.0	-23°26.0	3	225°09.7	-23°25.0
4	241°37.0	-23°03.8	4	241°15.7	-23°15.4	4	240°53.9	-23°22.8	4	240°31.7	-23°26.0	4	240°09.4	-23°24.9
5	256°36.8	-23°04.0	5	256°15.4	-23°15.5	5	255°53.6	-23°22.9	5	255°31.4	-23°26.0	5	255°09.1	-23°24.9
6	271°36.5	-23°04.2	6	271°15.1	-23°15.7	6	270°53.3	-23°22.9	6	270°31.1	-23°26.0	6	270°08.8	-23°24.9
7	286°36.2	-23°04.4	7	286°14.8	-23°15.8	7	285°53.0	-23°23.0	7	285°30.8	-23°26.0	7	285°08.5	-23°24.8
8	301°35.9	-23°04.6	8	301°14.5	-23°15.9	8	300°52.7	-23°23.1	8	300°30.5	-23°26.0	8	300°08.1	-23°24.8
9	316°35.6	-23°04.7	9	316°14.2	-23°16.0	9	315°52.4	-23°23.2	9	315°30.1	-23°26.1	9	315°07.8	-23°24.7
10	331°35.3	-23°04.9	10	331°13.9	-23°16.2	10	330°52.0	-23°23.2	10	330°29.8	-23°26.1	10	330°07.5	-23°24.7
11	346°35.0	-23°05.1	11	346°13.6	-23°16.3	11	345°51.7	-23°23.3	11	345°29.5	-23°26.1	11	345°07.2	-23°24.6
12	1°34.7	-23°05.3	12	1°13.3	-23°16.4	12	0°51.4	-23°23.4	12	0°29.2	-23°26.1	12	0°06.9	-23°24.6
13	16°34.4	-23°05.5	13	16°13.0	-23°16.5	13	15°51.1	-23°23.4	13	15°28.9	-23°26.1	13	15°06.6	-23°24.5
14	31°34.1	-23°05.7	14	31°12.7	-23°16.7	14	30°50.8	-23°23.5	14	30°28.6	-23°26.1	14	30°06.3	-23°24.5
15	46°33.8	-23°05.8	15	46°12.4	-23°16.8	15	45°50.5	-23°23.6	15	45°28.3	-23°26.1	15	45°06.0	-23°24.4
16	61°33.5	-23°06.0	16	61°12.1	-23°16.9	16	60°50.2	-23°23.6	16	60°28.0	-23°26.1	16	60°05.7	-23°24.4
17	76°33.3	-23°06.2	17	76°11.8	-23°17.0	17	75°49.9	-23°23.7	17	75°27.7	-23°26.1	17	75°05.4	-23°24.3
18	91°33.0	-23°06.4	18	91°11.5	-23°17.2	18	90°49.6	-23°23.8	18	90°27.4	-23°26.1	18	90°05.0	-23°24.3
19	106°32.7	-23°06.6	19	106°11.2	-23°17.3	19	105°49.3	-23°23.8	19	105°27.1	-23°26.1	19	105°04.7	-23°24.2
20	121°32.4	-23°06.7	20	121°10.9	-23°17.4	20	120°49.0	-23°23.9	20	120°26.7	-23°26.1	20	120°04.4	-23°24.1
21	136°32.1	-23°06.9	21	136°10.6	-23°17.5	21	135°48.7	-23°23.9	21	135°26.4	-23°26.1	21	135°04.1	-23°24.1
22	151°31.8	-23°07.1	22	151°10.3	-23°17.6	22	150°48.4	-23°24.0	22	150°26.1	-23°26.1	22	150°03.8	-23°24.0
23	166°31.5	-23°07.3	23	166°10.0	-23°17.8	23	165°48.1	-23°24.1	23	165°25.8	-23°26.1	23	165°03.5	-23°24.0
	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
13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	181°31.2	-23°07.4	0	181°09.7	-23°17.9	0	180°47.7	-23°24.1	0	180°25.5	-23°26.1	0	180°03.2	-23°23.9
1	196°30.9	-23°07.6	1	196°09.4	-23°18.0	1	195°47.4	-23°24.2	1	195°25.2	-23°26.1	1	195°02.9	-23°23.8
2	211°30.6	-23°07.8	2	211°09.1	-23°18.1	2	210°47.1	-23°24.2	2	210°24.9	-23°26.1	2	210°02.6	-23°23.8
3	226°30.3	-23°08.0	3	226°08.8	-23°18.2	3	225°46.8	-23°24.3	3	225°24.6	-23°26.1	3	225°02.3	-23°23.7
4	241°30.0	-23°08.1	4	241°08.5	-23°18.3	4	240°46.5	-23°24.3	4	240°24.3	-23°26.1	4	240°02.0	-23°23.7
5	256°29.7	-23°08.3	5	256°08.2	-23°18.4	5	255°46.2	-23°24.4	5	255°24.0	-23°26.1	5	255°01.6	-23°23.6
6	271°29.4	-23°08.5	6	271°07.9	-23°18.6	6	270°45.9	-23°24.4	6	270°23.6	-23°26.1	6	270°01.3	-23°23.5
7	286°29.1	-23°08.6	7	286°07.6	-23°18.7	7	285°45.6	-23°24.5	7	285°23.3	-23°26.1	7	285°01.0	-23°23.5
8	301°28.8	-23°08.8	8	301°07.3	-23°18.8	8	300°45.3	-23°24.5	8	300°23.0	-23°26.1	8	300°00.7	-23°23.4
9	316°28.5	-23°09.0	9	316°07.0	-23°18.9	9	315°45.0	-23°24.6	9	315°22.7	-23°26.1	9	315°00.4	-23°23.3
10	331°28.3	-23°09.1	10	331°06.7	-23°19.0	10	330°44.7	-23°24.6	10	330°22.4	-23°26.1	10	330°00.1	-23°23.3
11	346°28.0	-23°09.3	11	346°06.4	-23°19.1	11	345°44.4	-23°24.7	11	345°22.1	-23°26.1	11	344°59.8	-23°23.2
12	1°27.7	-23°09.5	12	1°06.1	-23°19.2	12	0°44.0	-23°24.7	12	0°21.8	-23°26.0	12	359°59.5	-23°23.1
13	16°27.4	-23°09.6	13	16°05.8	-23°19.3	13	15°43.7	-23°24.8	13	15°21.5	-23°26.0	13	14°59.2	-23°23.1
14	31°27.1	-23°09.8	14	31°05.5	-23°19.4	14	30°43.4	-23°24.8	14	30°21.2	-23°26.0	14	29°58.9	-23°23.0
15	46°26.8	-23°10.0	15	46°05.2	-23°19.5	15	45°43.1	-23°24.9	15	45°20.9	-23°26.0	15	44°58.6	-23°22.9
16	61°26.5	-23°10.1	16	61°04.9	-23°19.6	16	60°42.8	-23°24.9	16	60°20.5	-23°26.0	16	59°58.2	-23°22.8
17	76°26.2	-23°10.3	17	76°04.6	-23°19.7	17	75°42.5	-23°25.0	17	75°20.2	-23°26.0	17	74°57.9	-23°22.8
18	91°25.9	-23°10.4	18	91°04.3	-23°19.8	18	90°42.2	-23°25.0	18	90°19.9	-23°26.0	18	89°57.6	-23°22.7
19	106°25.6	-23°10.6	19	106°04.0	-23°19.9	19	105°41.9	-23°25.1	19	105°19.6	-23°25.9	19	104°57.3	-23°22.6
20	121°25.3	-23°10.8	20	121°03.7	-23°20.0	20	120°41.6	-23°25.1	20	120°19.3	-23°25.9	20	119°57.0	-23°22.5
21	136°25.0	-23°10.9	21	136°03.3	-23°20.1	21	135°41.3	-23°25.1	21	135°19.0	-23°25.9	21	134°56.7	-23°22.5
22	151°24.7	-23°11.1	22	151°03.0	-23°20.2	22	150°41.0	-23°25.2	22	150°18.7	-23°25.9	22	149°56.4	-23°22.4
23	166°24.4	-23°11.2	23	166°02.7	-23°20.3	23	165°40.7	-23°25.2	23	165°18.4	-23°25.9	23	164°56.1	-23°22.3
	SD.=16.2	d=-0.2		SD.=16.3	d=-0.1		SD.=16.3	d=-0.1		SD.=16.3	d=0.0		SD.=16.3	d=0.1
14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	181°24.1	-23°11.4	0	181°02.4	-23°20.4	0	180°40.3	-23°25.3	0	180°18.1	-23°25.9	0	179°55.8	-23°22.2
1	196°23.8	-23°11.5	1	196°02.1	-23°20.5	1	195°40.0	-23°25.3	1	195°17.8	-23°25.8	1	194°55.5	-23°22.1
2	211°23.5	-23°11.7	2	211°01.8	-23°20.6	2	210°39.7	-23°25.3	2	210°17.4	-23°25.8	2	209°55.2	-23°22.1
3	226°23.2	-23°11.8	3	226°01.5	-23°20.7	3	225°39.4	-23°25.4	3	225°17.1	-23°25.8	3	224°54.8	-23°22.0
4	241°22.9	-23°12.0	4	241°01.2	-23°20.8	4	240°39.1	-23°25.4	4	240°16.8	-23°25.8	4	239°54.5	-23°21.9
5	256°22.6	-23°12.1	5	256°00.9	-23°20.9	5	255°38.8	-23°25.4	5	255°16.5	-23°25.7	5	254°54.2	-23°21.8
6	271°22.3	-23°12.3	6	271°00.6	-23°21.0	6	270°38.5	-23°25.5	6	270°16.2	-23°25.7	6	269°53.9	-23°21.7
7	286°22.0	-23°12.4	7	286°00.3	-23°21.1	7	285°38.2	-23°25.5	7	285°15.9	-23°25.7	7	284°53.6	-23°21.6
8	301°21.7	-23°12.6	8	300°60.0	-23°21.2	8	300°37.9	-23°25.5	8	300°15.6	-23°25.7	8	299°53.3	-23°21.6
9	316°21.4	-23°12.7	9	315°59.7	-23°21.3	9	315°37.6	-23°25.6	9	315°15.3	-23°25.6	9	314°53.0	-23°21.5
10	331°21.1	-23°12.9	10	330°59.4	-23°21.3	10	330°37.3	-23°25.6	10	330°15.0	-23°25.6	10	329°52.7	-23°21.4
11	346°20.8	-23°13.0	11	345°59.1	-23°21.4	11	345°37.0	-23°25.6	11	345°14.7	-23°25.6	11	344°52.4	-23°21.3
12	1°20.5	-23°13.2	12	0°58.8	-23°21.5	12	0°36.6	-23°25.6	12	0°14.3	-23°25.5	12	359°52.1	-23°21.2
13	16°20.2	-23°13.3	13	15°58.5	-23°21.6	13	15°36.3	-23°25.7	13	15°14.0	-23°25.5	13	14°51.8	-23°21.1
14	31°19.9	-23°13.5	14	30°58.2	-23°21.7	14	30°36.0	-23°25.7	14	30°13.7	-23°25.5	14	29°51.5	-23°21.0
15	46°19.6	-23°13.6	15	45°57.9	-23°21.8	15	45°35.7	-23°25.7	15	45°13.4	-23°25.4	15	44°51.2	-23°20.9
16	61°19.3	-23°13.7	16	60°57.6	-23°21.9	16	60°35.4	-23°25.8	16	60°13.1	-23°25.4	16	59°50.8	-23°20.8
17	76°19.0	-23°13.9	17	75°57.2	-23°21.9	17	75°35.1	-23°25.8	17	75°12.8	-23°25.4	17	74°50.5	-23°20.8
18	91°18.7	-23°14.0	18	90°56.9	-23°22.0	18	90°34.8	-23°25.8	18	90°12.5	-23°25.3	18	89°50.2	-23°20.7
19	106°18.4	-23°14.2	19	105°56.6	-23°22.1	19	105°34.5	-23°25.8	19	105°12.2	-23°25.3	19	104°49.9	-23°20.6
20	121°18.1	-23°14.3	20	120°56.3	-23°22.2	20	120°34.2	-23°25.8	20	120°11.9	-23°25.3	20	119°49.6	-23°20.5
21	136°17.8	-23°14.4	21	135°56.0	-23°22.3	21	135°33.9	-23°25.9	21	135°11.6	-23°25.2	21	134°49.3	-23°20.4
22	151°17.5	-23°14.6	22	150°55.7										

27	GHA	Dec	30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec
0	179°48.4	-23°20.1	0	179°26.4	-23°10.8	0	179°04.9	-22°57.4	0	178°44.1	-22°39.9	0	178°24.3	-22°18.3
1	194°48.1	-23°20.0	1	194°26.1	-23°10.7	1	194°04.6	-22°57.2	1	193°43.8	-22°39.6	1	193°24.0	-22°17.9
2	209°47.8	-23°19.9	2	209°25.8	-23°10.5	2	209°04.3	-22°57.0	2	208°43.6	-22°39.3	2	208°23.7	-22°17.6
3	224°47.5	-23°19.8	3	224°25.5	-23°10.4	3	224°04.0	-22°56.7	3	223°43.3	-22°39.0	3	223°23.5	-22°17.3
4	239°47.2	-23°19.7	4	239°25.2	-23°10.2	4	239°03.7	-22°56.5	4	238°43.0	-22°38.8	4	238°23.2	-22°17.0
5	254°46.8	-23°19.6	5	254°24.9	-23°10.0	5	254°03.4	-22°56.3	5	253°42.7	-22°38.5	5	253°22.9	-22°16.6
6	269°46.5	-23°19.5	6	269°24.6	-23°09.9	6	269°03.1	-22°56.1	6	268°42.4	-22°38.2	6	268°22.7	-22°16.3
7	284°46.2	-23°19.4	7	284°24.3	-23°09.7	7	284°02.9	-22°55.9	7	283°42.1	-22°37.9	7	283°22.4	-22°16.0
8	299°45.9	-23°19.3	8	299°24.0	-23°09.5	8	299°02.6	-22°55.7	8	298°41.9	-22°37.7	8	298°22.1	-22°15.6
9	314°45.6	-23°19.2	9	314°23.7	-23°09.4	9	314°02.3	-22°55.4	9	313°41.6	-22°37.4	9	313°21.9	-22°15.3
10	329°45.3	-23°19.0	10	329°23.4	-23°09.2	10	329°02.0	-22°55.2	10	328°41.3	-22°37.1	10	328°21.6	-22°15.0
11	344°45.0	-23°18.9	11	344°23.1	-23°09.0	11	344°01.7	-22°55.0	11	343°41.0	-22°36.8	11	343°21.3	-22°14.6
12	359°44.7	-23°18.8	12	359°22.8	-23°08.9	12	359°01.4	-22°54.8	12	358°40.7	-22°36.5	12	358°21.1	-22°14.3
13	14°44.4	-23°18.7	13	14°22.5	-23°08.7	13	14°01.1	-22°54.5	13	13°40.5	-22°36.3	13	13°20.8	-22°13.9
14	29°44.1	-23°18.6	14	29°22.2	-23°08.5	14	29°00.8	-22°54.3	14	28°40.2	-22°36.0	14	28°20.5	-22°13.6
15	44°43.8	-23°18.5	15	44°21.9	-23°08.4	15	44°00.5	-22°54.1	15	43°39.9	-22°35.7	15	43°20.3	-22°13.3
16	59°43.5	-23°18.4	16	59°21.6	-23°08.2	16	59°00.2	-22°53.9	16	58°39.6	-22°35.4	16	58°20.0	-22°12.9
17	74°43.2	-23°18.3	17	74°21.3	-23°08.0	17	73°59.9	-22°53.6	17	73°39.3	-22°35.1	17	73°19.8	-22°12.6
18	89°42.9	-23°18.2	18	89°21.0	-23°07.9	18	88°59.6	-22°53.4	18	88°39.1	-22°34.8	18	88°19.5	-22°12.2
19	104°42.5	-23°18.0	19	104°20.7	-23°07.7	19	103°59.3	-22°53.2	19	103°38.8	-22°34.5	19	103°19.2	-22°11.9
20	119°42.2	-23°17.9	20	119°20.4	-23°07.5	20	118°59.1	-22°52.9	20	118°38.5	-22°34.3	20	118°19.0	-22°11.6
21	134°41.9	-23°17.8	21	134°20.1	-23°07.3	21	133°58.8	-22°52.7	21	133°38.2	-22°34.0	21	133°18.7	-22°11.2
22	149°41.6	-23°17.7	22	149°19.8	-23°07.2	22	148°58.5	-22°52.5	22	148°38.0	-22°33.7	22	148°18.4	-22°10.9
23	164°41.3	-23°17.6	23	164°19.5	-23°07.0	23	163°58.2	-22°52.2	23	163°37.7	-22°33.4	23	163°18.2	-22°10.5
	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°41.0	-23°17.5	0	179°19.2	-23°06.8	0	178°57.9	-22°52.0	0	178°37.4	-22°33.1	0	178°17.9	-22°10.2
1	194°40.7	-23°17.3	1	194°18.9	-23°06.6	1	193°57.6	-22°51.8	1	193°37.1	-22°32.8	1	193°17.6	-22°09.8
2	209°40.4	-23°17.2	2	209°18.6	-23°06.5	2	208°57.3	-22°51.5	2	208°36.8	-22°32.5	2	208°17.4	-22°09.5
3	224°40.1	-23°17.1	3	224°18.3	-23°06.3	3	223°57.0	-22°51.3	3	223°36.6	-22°32.2	3	223°17.1	-22°09.1
4	239°39.8	-23°17.0	4	239°18.0	-23°06.1	4	238°56.7	-22°51.1	4	238°36.3	-22°31.9	4	238°16.9	-22°08.8
5	254°39.5	-23°16.9	5	254°17.7	-23°05.9	5	253°56.4	-22°50.8	5	253°36.0	-22°31.6	5	253°16.6	-22°08.5
6	269°39.2	-23°16.7	6	269°17.4	-23°05.7	6	268°56.1	-22°50.6	6	268°35.7	-22°31.3	6	268°16.3	-22°08.1
7	284°38.9	-23°16.6	7	284°17.1	-23°05.6	7	283°55.9	-22°50.3	7	283°35.5	-22°31.0	7	283°16.1	-22°07.8
8	299°38.6	-23°16.5	8	299°16.8	-23°05.4	8	298°55.6	-22°50.1	8	298°35.2	-22°30.8	8	298°15.8	-22°07.4
9	314°38.3	-23°16.4	9	314°16.5	-23°05.2	9	313°55.3	-22°49.9	9	313°34.9	-22°30.5	9	313°15.6	-22°07.0
10	329°38.0	-23°16.2	10	329°16.2	-23°05.0	10	328°55.0	-22°49.6	10	328°34.6	-22°30.2	10	328°15.3	-22°06.7
11	344°37.7	-23°16.1	11	344°15.9	-23°04.8	11	343°54.7	-22°49.4	11	343°34.3	-22°29.9	11	343°15.0	-22°06.3
12	359°37.3	-23°16.0	12	359°15.6	-23°04.6	12	358°54.4	-22°49.1	12	358°34.1	-22°29.6	12	358°14.8	-22°06.0
13	14°37.0	-23°15.8	13	14°15.3	-23°04.4	13	13°54.1	-22°48.9	13	13°33.8	-22°29.3	13	13°14.5	-22°05.6
14	29°36.7	-23°15.7	14	29°15.0	-23°04.3	14	28°53.8	-22°48.6	14	28°33.5	-22°29.0	14	28°14.3	-22°05.3
15	44°36.4	-23°15.6	15	44°14.7	-23°04.1	15	43°53.5	-22°48.4	15	43°33.2	-22°28.7	15	43°14.0	-22°04.9
16	59°36.1	-23°15.5	16	59°14.4	-23°03.9	16	58°53.3	-22°48.2	16	58°33.0	-22°28.4	16	58°13.7	-22°04.6
17	74°35.8	-23°15.3	17	74°14.1	-23°03.7	17	73°53.0	-22°47.9	17	73°32.7	-22°28.1	17	73°13.5	-22°04.2
18	89°35.5	-23°15.2	18	89°13.8	-23°03.5	18	88°52.7	-22°47.7	18	88°32.4	-22°27.7	18	88°13.2	-22°03.8
19	104°35.2	-23°15.1	19	104°13.5	-23°03.3	19	103°52.4	-22°47.4	19	103°32.1	-22°27.4	19	103°13.0	-22°03.5
20	119°34.9	-23°14.9	20	119°13.2	-23°03.1	20	118°52.1	-22°47.2	20	118°31.9	-22°27.1	20	118°12.7	-22°03.1
21	134°34.6	-23°14.8	21	134°12.9	-23°02.9	21	133°51.8	-22°46.9	21	133°31.6	-22°26.8	21	133°12.4	-22°02.8
22	149°34.3	-23°14.7	22	149°12.6	-23°02.7	22	148°51.5	-22°46.7	22	148°31.3	-22°26.5	22	148°12.2	-22°02.4
23	164°34.0	-23°14.5	23	164°12.3	-23°02.5	23	163°51.2	-22°46.4	23	163°31.0	-22°26.2	23	163°11.9	-22°02.0
	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

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	179°33.7	-23°14.4	0	179°12.0	-23°02.3	0	178°51.0	-22°46.2	0	178°30.8	-22°25.9	0	178°11.7	-22°01.7
1	194°33.4	-23°14.2	1	194°11.7	-23°02.1	1	193°50.7	-22°45.9	1	193°30.5	-22°25.6	1	193°11.4	-22°01.3
2	209°33.1	-23°14.1	2	209°11.4	-23°01.9	2	208°50.4	-22°45.6	2	208°30.2	-22°25.3	2	208°11.2	-22°00.9
3	224°32.8	-23°14.0	3	224°11.1	-23°01.7	3	223°50.1	-22°45.4	3	223°30.0	-22°25.0	3	223°10.9	-22°00.6
4	239°32.5	-23°13.8	4	239°10.8	-23°01.5	4	238°49.8	-22°45.1	4	238°29.7	-22°24.7	4	238°10.6	-22°00.2
5	254°32.2	-23°13.7	5	254°10.5	-23°01.3	5	253°49.5	-22°44.9	5	253°29.4	-22°24.4	5	253°10.4	-21°59.8
6	269°31.9	-23°13.5	6	269°10.2	-23°01.1	6	268°49.2	-22°44.6	6	268°29.1	-22°24.0	6	268°10.1	-21°59.5
7	284°31.6	-23°13.4	7	284°09.9	-23°00.9	7	283°49.0	-22°44.4	7	283°28.9	-22°23.7	7	283°09.9	-21°59.1
8	299°31.3	-23°13.2	8	299°09.6	-23°00.7	8	298°48.7	-22°44.1	8	298°28.6	-22°23.4	8	298°09.6	-21°58.7
9	314°30.9	-23°13.1	9	314°09.3	-23°00.5	9	313°48.4	-22°43.8	9	313°28.3	-22°23.1	9	313°09.4	-21°58.4
10	329°30.6	-23°13.0	10	329°09.0	-23°00.3	10	328°48.1	-22°43.6	10	328°28.1	-22°22.8	10	328°09.1	-21°58.0
11	344°30.3	-23°12.8	11	344°08.7	-23°00.1	11	343°47.8	-22°43.3	11	343°27.8	-22°22.5	11	343°08.9	-21°57.6
12	359°30.0	-23°12.7	12	359°08.4	-22°59.9	12	358°47.5	-22°43.1	12	358°27.5	-22°22.1	12	358°08.6	-21°57.3
13	14°29.7	-23°12.5	13	14°08.2	-22°59.7	13	13°47.2	-22°42.8	13	13°27.2	-22°21.8	13	13°08.4	-21°56.9
14	29°29.4	-23°12.4	14	29°07.9	-22°59.5	14	28°47.0	-22°42.5	14	28°27.0	-22°21.5	14	28°08.1	-21°56.5
15	44°29.1	-23°12.2	15	44°07.6	-22°59.3	15	43°46.7	-22°42.3	15	43°26.7	-22°21.2	15	43°07.8	-21°56.1
16	59°28.8	-23°12.1	16	59°07.3	-22°59.1	16	58°46.4	-22°42.0	16	58°26.4	-22°20.9	16	58°07.6	-21°55.8
17	74°28.5	-23°11.9	17	74°07.0	-22°58.9	17	73°46.1	-22°41.7	17	73°26.2	-22°20.5	17	73°07.3	-21°55.4
18	89°28.2	-23°11.8	18	89°06.7	-22°58.7	18	88°45.8	-22°41.5	18	88°25.9	-22°20.2	18	88°07.1	-21°55.0
19	104°27.9	-23°11.6	19	104°06.4	-22°58.5	19	103°45.5	-22°41.2	19	103°25.6	-22°19.9	19	103°06.8	-21°54.6
20	119°27.6	-23°11.5	20	119°06.1	-22°58.3	20	118°45.3	-22°40.9	20	118°25.4	-22°19.6	20	118°06.6	-21°54.3
21	134°27.3	-23°11.3	21	134°05.8	-22°58.0	21	133°45.0	-22°40.7	21	133°25.1	-22°19.2	21	133°06.3	-21°53.9
22	149°27.0	-23°11.1	22	149°05.5	-22°57.8	22	148°44.7	-22°40.4	22	148°24.8	-22°18.9	22	148°06.1	-21°53.5
23	164°26.7	-23°11.0	23	164°05.2	-22°57.6	23	163°44.4	-22°40.1	23	163°24.5	-22°18.6	23	163°05.8	