
The Nautical Almanac for the Sun 2017



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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
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01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	179°08.4	-22°59.9	0	178°47.5	-22°43.1	0	178°27.5	-22°22.2	0	178°08.7	-21°57.3	0	177°51.2	-21°28.6
1	194°08.1	-22°59.7	1	193°47.2	-22°42.8	1	193°27.3	-22°21.9	1	193°08.5	-21°57.0	1	192°51.0	-21°28.2
2	209°07.8	-22°59.5	2	208°46.9	-22°42.6	2	208°27.0	-22°21.6	2	208°08.2	-21°56.6	2	207°50.8	-21°27.8
3	224°07.5	-22°59.3	3	223°46.6	-22°42.3	3	223°26.7	-22°21.2	3	223°08.0	-21°56.2	3	222°50.6	-21°27.4
4	239°07.2	-22°59.1	4	238°46.3	-22°42.0	4	238°26.5	-22°20.9	4	238°07.7	-21°55.9	4	237°50.3	-21°26.9
5	254°06.9	-22°58.9	5	253°46.1	-22°41.8	5	253°26.2	-22°20.6	5	253°07.5	-21°55.5	5	252°50.1	-21°26.5
6	269°06.6	-22°58.7	6	268°45.8	-22°41.5	6	268°25.9	-22°20.3	6	268°07.2	-21°55.1	6	267°49.9	-21°26.1
7	284°06.3	-22°58.5	7	283°45.5	-22°41.2	7	283°25.7	-22°20.0	7	283°07.0	-21°54.7	7	282°49.6	-21°25.6
8	299°06.0	-22°58.3	8	298°45.2	-22°41.0	8	298°25.4	-22°19.6	8	298°06.7	-21°54.3	8	297°49.4	-21°25.2
9	314°05.7	-22°58.1	9	313°44.9	-22°40.7	9	313°25.1	-22°19.3	9	313°06.5	-21°54.0	9	312°49.2	-21°24.8
10	329°05.4	-22°57.8	10	328°44.6	-22°40.4	10	328°24.9	-22°19.0	10	328°06.2	-21°53.6	10	327°48.9	-21°24.4
11	344°05.1	-22°57.6	11	343°44.4	-22°40.2	11	343°24.6	-22°18.7	11	343°06.0	-21°53.2	11	342°48.7	-21°23.9
12	359°04.8	-22°57.4	12	358°44.1	-22°39.9	12	358°24.3	-22°18.3	12	358°05.7	-21°52.8	12	357°48.5	-21°23.5
13	14°04.5	-22°57.2	13	13°43.8	-22°39.6	13	13°24.1	-22°18.0	13	13°05.5	-21°52.4	13	12°48.2	-21°23.1
14	29°04.2	-22°57.0	14	28°43.5	-22°39.4	14	28°23.8	-22°17.7	14	28°05.2	-21°52.1	14	27°48.0	-21°22.6
15	44°04.0	-22°56.8	15	43°43.2	-22°39.1	15	43°23.5	-22°17.3	15	43°05.0	-21°51.7	15	42°47.8	-21°22.2
16	59°03.7	-22°56.6	16	58°43.0	-22°38.8	16	58°23.3	-22°17.0	16	58°04.7	-21°51.3	16	57°47.5	-21°21.7
17	74°03.4	-22°56.3	17	73°42.7	-22°38.5	17	73°23.0	-22°16.7	17	73°04.5	-21°50.9	17	72°47.3	-21°21.3
18	89°03.1	-22°56.1	18	88°42.4	-22°38.3	18	88°22.7	-22°16.4	18	88°04.2	-21°50.5	18	87°47.1	-21°20.9
19	104°02.8	-22°55.9	19	103°42.1	-22°38.0	19	103°22.5	-22°16.0	19	103°04.0	-21°50.1	19	102°46.9	-21°20.4
20	119°02.5	-22°55.7	20	118°41.8	-22°37.7	20	118°22.2	-22°15.7	20	118°03.8	-21°49.8	20	117°46.6	-21°20.0
21	134°02.2	-22°55.5	21	133°41.6	-22°37.4	21	133°21.9	-22°15.4	21	133°03.5	-21°49.4	21	132°46.4	-21°19.6
22	149°01.9	-22°55.2	22	148°41.3	-22°37.1	22	148°21.7	-22°15.0	22	148°03.3	-21°49.0	22	147°46.2	-21°19.1
23	164°01.6	-22°55.0	23	163°41.0	-22°36.9	23	163°21.4	-22°14.7	23	163°03.0	-21°48.6	23	162°46.0	-21°18.7
	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°01.3	-22°54.8	0	178°40.7	-22°36.6	0	178°21.1	-22°14.4	0	178°02.8	-21°48.2	0	177°45.7	-21°18.2
1	194°01.0	-22°54.6	1	193°40.4	-22°36.3	1	193°20.9	-22°14.0	1	193°02.5	-21°47.8	1	192°45.5	-21°17.8
2	209°00.7	-22°54.3	2	208°40.2	-22°36.0	2	208°20.6	-22°13.7	2	208°02.3	-21°47.4	2	207°45.3	-21°17.3
3	224°00.4	-22°54.1	3	223°39.9	-22°35.7	3	223°20.3	-22°13.3	3	223°02.0	-21°47.0	3	222°45.0	-21°16.9
4	239°00.1	-22°53.9	4	238°39.6	-22°35.4	4	238°20.1	-22°13.0	4	238°01.8	-21°46.6	4	237°44.8	-21°16.5
5	253°59.9	-22°53.6	5	253°39.3	-22°35.2	5	253°19.8	-22°12.7	5	253°01.5	-21°46.2	5	252°44.6	-21°16.0
6	268°59.6	-22°53.4	6	268°39.0	-22°34.9	6	268°19.6	-22°12.3	6	268°01.3	-21°45.8	6	267°44.4	-21°15.6
7	283°59.3	-22°53.2	7	283°38.8	-22°34.6	7	283°19.3	-22°12.0	7	283°01.0	-21°45.5	7	282°44.1	-21°15.1
8	298°59.0	-22°53.0	8	298°38.5	-22°34.3	8	298°19.0	-22°11.6	8	298°00.8	-21°45.1	8	297°43.9	-21°14.7
9	313°58.7	-22°52.7	9	313°38.2	-22°34.0	9	313°18.8	-22°11.3	9	313°00.6	-21°44.7	9	312°43.7	-21°14.2
10	328°58.4	-22°52.5	10	328°37.9	-22°33.7	10	328°18.5	-22°11.0	10	328°00.3	-21°44.3	10	327°43.5	-21°13.8
11	343°58.1	-22°52.3	11	343°37.7	-22°33.4	11	343°18.2	-22°10.6	11	343°00.1	-21°43.9	11	342°43.2	-21°13.3
12	358°57.8	-22°52.0	12	358°37.4	-22°33.2	12	358°18.0	-22°10.3	12	357°59.8	-21°43.5	12	357°43.0	-21°12.9
13	13°57.5	-22°51.8	13	13°37.1	-22°32.9	13	13°17.7	-22°09.9	13	12°59.6	-21°43.1	13	12°42.8	-21°12.4
14	28°57.2	-22°51.6	14	28°36.8	-22°32.6	14	28°17.5	-22°09.6	14	27°59.3	-21°42.7	14	27°42.6	-21°12.0
15	43°56.9	-22°51.3	15	43°36.5	-22°32.3	15	43°17.2	-22°09.2	15	42°59.1	-21°42.3	15	42°42.4	-21°11.5
16	58°56.7	-22°51.1	16	58°36.3	-22°32.0	16	58°16.9	-22°08.9	16	57°58.9	-21°41.9	16	57°42.1	-21°11.1
17	73°56.4	-22°50.9	17	73°36.0	-22°31.7	17	73°16.7	-22°08.5	17	72°58.6	-21°41.5	17	72°41.9	-21°10.6
18	88°56.1	-22°50.6	18	88°35.7	-22°31.4	18	88°16.4	-22°08.2	18	87°58.4	-21°41.1	18	87°41.7	-21°10.2
19	103°55.8	-22°50.4	19	103°35.4	-22°31.1	19	103°16.2	-22°07.8	19	102°58.1	-21°40.7	19	102°41.5	-21°09.7
20	118°55.5	-22°50.1	20	118°35.2	-22°30.8	20	118°15.9	-22°07.5	20	117°57.9	-21°40.3	20	117°41.2	-21°09.2
21	133°55.2	-22°49.9	21	133°34.9	-22°30.5	21	133°15.6	-22°07.1	21	132°57.7	-21°39.8	21	132°41.0	-21°08.8
22	148°54.9	-22°49.7	22	148°34.6	-22°30.2	22	148°15.4	-22°06.8	22	147°57.4	-21°39.4	22	147°40.8	-21°08.3
23	163°54.6	-22°49.4	23	163°34.3	-22°29.9	23	163°15.1	-22°06.4	23	162°57.2	-21°39.0	23	162°40.6	-21°07.9
	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°54.3	-22°49.2	0	178°34.1	-22°29.6	0	178°14.9	-22°06.1	0	177°56.9	-21°38.6	0	177°40.4	-21°07.4
1	193°54.1	-22°48.9	1	193°33.8	-22°29.3	1	193°14.6	-22°05.7	1	192°56.7	-21°38.2	1	192°40.1	-21°07.0
2	208°53.8	-22°48.7	2	208°33.5	-22°29.0	2	208°14.4	-22°05.4	2	207°56.5	-21°37.8	2	207°39.9	-21°06.5
3	223°53.5	-22°48.4	3	223°33.2	-22°28.7	3	223°14.1	-22°05.0	3	222°56.2	-21°37.4	3	222°39.7	-21°06.0
4	238°53.2	-22°48.2	4	238°33.0	-22°28.4	4	238°13.8	-22°04.6	4	237°56.0	-21°37.0	4	237°39.5	-21°05.6
5	253°52.9	-22°47.9	5	253°32.7	-22°28.1	5	253°13.6	-22°04.3	5	252°55.7	-21°36.6	5	252°39.3	-21°05.1
6	268°52.6	-22°47.7	6	268°32.4	-22°27.8	6	268°13.3	-22°03.9	6	267°55.5	-21°36.2	6	267°39.0	-21°04.7
7	283°52.3	-22°47.4	7	283°32.1	-22°27.5	7	283°13.1	-22°03.6	7	282°55.3	-21°35.8	7	282°38.8	-21°04.2
8	298°52.0	-22°47.2	8	298°31.9	-22°27.2	8	298°12.8	-22°03.2	8	297°55.0	-21°35.3	8	297°38.6	-21°03.7
9	313°51.8	-22°46.9	9	313°31.6	-22°26.9	9	313°12.6	-22°02.8	9	312°54.8	-21°34.9	9	312°38.4	-21°03.3
10	328°51.5	-22°46.7	10	328°31.3	-22°26.6	10	328°12.3	-22°02.5	10	327°54.5	-21°34.5	10	327°38.2	-21°02.8
11	343°51.2	-22°46.4	11	343°31.1	-22°26.3	11	343°12.0	-22°02.1	11	342°54.3	-21°34.1	11	342°38.0	-21°02.3
12	358°50.9	-22°46.2	12	358°30.8	-22°26.0	12	358°11.8	-22°01.8	12	357°54.1	-21°33.7	12	357°37.7	-21°01.9
13	13°50.6	-22°45.9	13	13°30.5	-22°25.7	13	13°11.5	-22°01.4	13	12°53.8	-21°33.3	13	12°37.5	-21°01.4
14	28°50.3	-22°45.7	14	28°30.2	-22°25.3	14	28°11.3	-22°01.0	14	27°53.6	-21°32.9	14	27°37.3	-21°00.9
15	43°50.0	-22°45.4	15	43°30.0	-22°25.0	15	43°11.0	-22°00.7	15	42°53.4	-21°32.4	15	42°37.1	-21°00.5
16	58°49.8	-22°45.2	16	58°29.7	-22°24.7	16	58°10.8	-22°00.3	16	57°53.1	-21°32.0	16	57°36.9	-20°60.0
17	73°49.5	-22°44.9	17	73°29.4	-22°24.4	17	73°10.5	-21°59.9	17	72°52.9	-21°31.6	17	72°36.7	-20°59.5
18	88°49.2	-22°44.7	18	88°29.2	-22°24.1	18	88°10.3	-21°59.6	18	87°52.7	-21°31.2	18	87°36.4	-20°59.0
19	103°48.9	-22°44.4	19	103°28.9	-22°23.8	19	103°10.0	-21°59.2	19	102°52.4	-21°30.8	19	102°36.2	-20°58.6
20	118°48.6	-22°44.1	20	118°28.6	-22°23.5	20	118°09.8	-21°58.8	20	117°52.2	-21°30.3	20	117°36.0	-20°58.1
21	133°48.3	-22°43.9	21	133°28.3	-22°23.2	21	133°09.5	-21°58.5	21	132°52.0	-21°29.9	21	132°35.8	-20°57.6
22	148°48.0	-22°43.6	22	148°28.1	-22°22.8	22	148°09.3	-21°58.1	22	147°51.7	-21°29.5	22	147°35.6	-20°57.1
23	163°47.8	-22°43.4	23	163°27.8	-22°22.5	23	163°09.0	-21°57.7	23	162°51.5	-21°29.1	23	162°35.4	

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	177°35.2	-20°56.2	0	177°20.6	-20°20.2	0	177°07.6	-19°40.7	0	176°56.4	-18°57.9	0	176°46.8	-18°12.0
1	192°35.0	-20°55.7	1	192°20.4	-20°19.6	1	192°07.5	-19°40.1	1	191°56.2	-18°57.3	1	191°46.7	-18°11.3
2	207°34.7	-20°55.2	2	207°20.2	-20°19.1	2	207°07.3	-19°39.5	2	206°56.1	-18°56.7	2	206°46.6	-18°10.7
3	222°34.5	-20°54.8	3	222°20.0	-20°18.6	3	222°07.1	-19°39.0	3	221°55.9	-18°56.0	3	221°46.5	-18°10.0
4	237°34.3	-20°54.3	4	237°19.8	-20°18.1	4	237°07.0	-19°38.4	4	236°55.8	-18°55.4	4	236°46.4	-18°09.3
5	252°34.1	-20°53.8	5	252°19.6	-20°17.5	5	252°06.8	-19°37.8	5	251°55.6	-18°54.8	5	251°46.3	-18°08.7
6	267°33.9	-20°53.3	6	267°19.5	-20°17.0	6	267°06.6	-19°37.2	6	266°55.5	-18°54.2	6	266°46.1	-18°08.0
7	282°33.7	-20°52.9	7	282°19.3	-20°16.5	7	282°06.5	-19°36.7	7	281°55.4	-18°53.6	7	281°46.0	-18°07.4
8	297°33.5	-20°52.4	8	297°19.1	-20°15.9	8	297°06.3	-19°36.1	8	296°55.2	-18°52.9	8	296°45.9	-18°06.7
9	312°33.3	-20°51.9	9	312°18.9	-20°15.4	9	312°06.1	-19°35.5	9	311°55.1	-18°52.3	9	311°45.8	-18°06.0
10	327°33.0	-20°51.4	10	327°18.7	-20°14.9	10	327°06.0	-19°34.9	10	326°54.9	-18°51.7	10	326°45.7	-18°05.4
11	342°32.8	-20°50.9	11	342°18.5	-20°14.3	11	342°05.8	-19°34.3	11	341°54.8	-18°51.1	11	341°45.5	-18°04.7
12	357°32.6	-20°50.4	12	357°18.3	-20°13.8	12	357°05.6	-19°33.8	12	356°54.6	-18°50.4	12	356°45.4	-18°04.0
13	12°32.4	-20°50.0	13	12°18.1	-20°13.3	13	12°05.5	-19°33.2	13	11°54.5	-18°49.8	13	11°45.3	-18°03.4
14	27°32.2	-20°49.5	14	27°17.9	-20°12.7	14	27°05.3	-19°32.6	14	26°54.4	-18°49.2	14	26°45.2	-18°02.7
15	42°32.0	-20°49.0	15	42°17.8	-20°12.2	15	42°05.1	-19°32.0	15	41°54.2	-18°48.6	15	41°45.1	-18°02.0
16	57°31.8	-20°48.5	16	57°17.6	-20°11.7	16	57°05.0	-19°31.4	16	56°54.1	-18°47.9	16	56°45.0	-18°01.4
17	72°31.6	-20°48.0	17	72°17.4	-20°11.1	17	72°04.8	-19°30.9	17	71°53.9	-18°47.3	17	71°44.9	-18°00.7
18	87°31.4	-20°47.5	18	87°17.2	-20°10.6	18	87°04.6	-19°30.3	18	86°53.8	-18°46.7	18	86°44.7	-18°00.0
19	102°31.2	-20°47.0	19	102°17.0	-20°10.1	19	102°04.5	-19°29.7	19	101°53.7	-18°46.1	19	101°44.6	-17°59.4
20	117°31.0	-20°46.5	20	117°16.8	-20°09.5	20	117°04.3	-19°29.1	20	116°53.5	-18°45.4	20	116°44.5	-17°58.7
21	132°30.8	-20°46.1	21	132°16.6	-20°09.0	21	132°04.2	-19°28.5	21	131°53.4	-18°44.8	21	131°44.4	-17°58.0
22	147°30.5	-20°45.6	22	147°16.5	-20°08.5	22	147°04.0	-19°27.9	22	146°53.3	-18°44.2	22	146°44.3	-17°57.4
23	162°30.3	-20°45.1	23	162°16.3	-20°07.9	23	162°03.8	-19°27.4	23	161°53.1	-18°43.6	23	161°44.2	-17°56.7
	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°30.1	-20°44.6	0	177°16.1	-20°07.4	0	177°03.7	-19°26.8	0	176°53.0	-18°42.9	0	176°44.1	-17°56.0
1	192°29.9	-20°44.1	1	192°15.9	-20°06.8	1	192°03.5	-19°26.2	1	191°52.8	-18°42.3	1	191°44.0	-17°55.3
2	207°29.7	-20°43.6	2	207°15.7	-20°06.3	2	207°03.4	-19°25.6	2	206°52.7	-18°41.7	2	206°43.9	-17°54.7
3	222°29.5	-20°43.1	3	222°15.5	-20°05.7	3	222°03.2	-19°25.0	3	221°52.6	-18°41.0	3	221°43.7	-17°54.0
4	237°29.3	-20°42.6	4	237°15.4	-20°05.2	4	237°03.0	-19°24.4	4	236°52.4	-18°40.4	4	236°43.6	-17°53.3
5	252°29.1	-20°42.1	5	252°15.2	-20°04.7	5	252°02.9	-19°23.8	5	251°52.3	-18°39.8	5	251°43.5	-17°52.6
6	267°28.9	-20°41.6	6	267°15.0	-20°04.1	6	267°02.7	-19°23.2	6	266°52.2	-18°39.1	6	266°43.4	-17°52.0
7	282°28.7	-20°41.1	7	282°14.8	-20°03.6	7	282°02.6	-19°22.6	7	281°52.0	-18°38.5	7	281°43.3	-17°51.3
8	297°28.5	-20°40.6	8	297°14.6	-20°03.0	8	297°02.4	-19°22.1	8	296°51.9	-18°37.9	8	296°43.2	-17°50.6
9	312°28.3	-20°40.1	9	312°14.4	-20°02.5	9	312°02.2	-19°21.5	9	311°51.8	-18°37.2	9	311°43.1	-17°49.9
10	327°28.1	-20°39.6	10	327°14.3	-20°01.9	10	327°02.1	-19°20.9	10	326°51.6	-18°36.6	10	326°43.0	-17°49.3
11	342°27.9	-20°39.1	11	342°14.1	-20°01.4	11	342°01.9	-19°20.3	11	341°51.5	-18°35.9	11	341°42.9	-17°48.6
12	357°27.7	-20°38.6	12	357°13.9	-20°00.8	12	357°01.8	-19°19.7	12	356°51.4	-18°35.3	12	356°42.8	-17°47.9
13	12°27.5	-20°38.1	13	12°13.7	-20°00.3	13	12°01.6	-19°19.1	13	11°51.2	-18°34.7	13	11°42.7	-17°47.2
14	27°27.3	-20°37.6	14	27°13.5	-19°59.7	14	27°01.5	-19°18.5	14	26°51.1	-18°34.0	14	26°42.6	-17°46.5
15	42°27.1	-20°37.1	15	42°13.4	-19°59.2	15	42°01.3	-19°17.9	15	41°51.0	-18°33.4	15	41°42.4	-17°45.9
16	57°26.9	-20°36.6	16	57°13.2	-19°58.6	16	57°01.2	-19°17.3	16	56°50.8	-18°32.8	16	56°42.3	-17°45.2
17	72°26.7	-20°36.1	17	72°13.0	-19°58.1	17	72°01.0	-19°16.7	17	71°50.7	-18°32.1	17	71°42.2	-17°44.5
18	87°26.5	-20°35.6	18	87°12.8	-19°57.5	18	87°00.8	-19°16.1	18	86°50.6	-18°31.5	18	86°42.1	-17°43.8
19	102°26.3	-20°35.1	19	102°12.7	-19°57.0	19	102°00.7	-19°15.5	19	101°50.5	-18°30.8	19	101°42.0	-17°43.1
20	117°26.1	-20°34.6	20	117°12.5	-19°56.4	20	117°00.5	-19°14.9	20	116°50.3	-18°30.2	20	116°41.9	-17°42.5
21	132°25.9	-20°34.1	21	132°12.3	-19°55.9	21	132°00.4	-19°14.3	21	131°50.2	-18°29.5	21	131°41.8	-17°41.8
22	147°25.7	-20°33.6	22	147°12.1	-19°55.3	22	147°00.2	-19°13.7	22	146°50.1	-18°28.9	22	146°41.7	-17°41.1
23	162°25.5	-20°33.1	23	162°11.9	-19°54.8	23	162°00.1	-19°13.1	23	161°49.9	-18°28.3	23	161°41.6	-17°40.4
	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°25.3	-20°32.6	0	177°11.8	-19°54.2	0	176°59.9	-19°12.5	0	176°49.8	-18°27.6	0	176°41.5	-17°39.7
1	192°25.1	-20°32.1	1	192°11.6	-19°53.7	1	191°59.8	-19°11.9	1	191°49.7	-18°27.0	1	191°41.4	-17°39.0
2	207°24.9	-20°31.5	2	207°11.4	-19°53.1	2	206°59.6	-19°11.3	2	206°49.6	-18°26.3	2	206°41.3	-17°38.4
3	222°24.7	-20°31.0	3	222°11.2	-19°52.5	3	221°59.5	-19°10.7	3	221°49.4	-18°25.7	3	221°41.2	-17°37.7
4	237°24.5	-20°30.5	4	237°11.1	-19°52.0	4	236°59.3	-19°10.1	4	236°49.3	-18°25.0	4	236°41.1	-17°37.0
5	252°24.3	-20°30.0	5	252°10.9	-19°51.4	5	251°59.2	-19°09.5	5	251°49.2	-18°24.4	5	251°41.0	-17°36.3
6	267°24.1	-20°29.5	6	267°10.7	-19°50.9	6	266°59.0	-19°08.9	6	266°49.1	-18°23.7	6	266°40.9	-17°35.6
7	282°23.9	-20°29.0	7	282°10.5	-19°50.3	7	281°58.9	-19°08.3	7	281°48.9	-18°23.1	7	281°40.8	-17°34.9
8	297°23.7	-20°28.5	8	297°10.4	-19°49.7	8	296°58.7	-19°07.7	8	296°48.8	-18°22.4	8	296°40.7	-17°34.2
9	312°23.5	-20°28.0	9	312°10.2	-19°49.2	9	311°58.6	-19°07.1	9	311°48.7	-18°21.8	9	311°40.6	-17°33.5
10	327°23.3	-20°27.4	10	327°10.0	-19°48.6	10	326°58.4	-19°06.5	10	326°48.6	-18°21.1	10	326°40.5	-17°32.8
11	342°23.1	-20°26.9	11	342°09.8	-19°48.1	11	341°58.3	-19°05.8	11	341°48.4	-18°20.5	11	341°40.4	-17°32.1
12	357°22.9	-20°26.4	12	357°09.7	-19°47.5	12	356°58.1	-19°05.2	12	356°48.3	-18°19.8	12	356°40.3	-17°31.5
13	12°22.7	-20°25.9	13	12°09.5	-19°46.9	13	11°58.0	-19°04.6	13	11°48.2	-18°19.2	13	11°40.2	-17°30.8
14	27°22.5	-20°25.4	14	27°09.3	-19°46.4	14	26°57.8	-19°04.0	14	26°48.1	-18°18.5	14	26°40.1	-17°30.1
15	42°22.3	-20°24.9	15	42°09.2	-19°45.8	15	41°57.7	-19°03.4	15	41°47.9	-18°17.9	15	41°40.0	-17°29.4
16	57°22.1	-20°24.3	16	57°09.0	-19°45.2	16	56°57.5	-19°02.8	16	56°47.8	-18°17.2	16	56°39.9	-17°28.7
17	72°21.9	-20°23.8	17	72°08.8	-19°44.7	17	71°57.4	-19°02.2	17	71°47.7	-18°16.6	17	71°39.8	-17°28.0
18	87°21.7	-20°23.3	18	87°08.6	-19°44.1	18	86°57.2	-19°01.6	18	86°47.6	-18°15.9	18	86°39.7	-17°27.3
19	102°21.6	-20°22.8	19	102°08.5	-19°43.5	19	101°57.1	-19°01.0	19	101°47.4	-18°15.3	19	101°39.6	-17°26.6
20	117°21.4	-20°22.3	20	117°08.3	-19°43.0	20	116°56.9	-19°00.3	20	116°47.3	-18°14.6	20	116°39.5	-17°25.9
21	132°21.2	-20°21.7	21	132°08.1	-19°42.4	21	131°56.8	-18°59.7	21	131°47.2	-18°14.0	21	131°39.4	-17°25.2
22	147°21.0	-20°21.2	22	147°08.0	-19°41.8	22	146°56.6	-18°59.1	22	146°47.1	-18°13.3	22	146°39.3	-17°24.5
23	162°20.8	-20°20.7	23	162°07.8	-19°41.2	23	161°56.5	-18°58.5	23	161°47.0	-18°12.6	23	161°39.2	

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	176°39.2	-17°23.1	0	176°33.3	-16°31.5	0	176°29.4	-15°37.3	0	176°27.3	-14°40.7	0	176°27.0	-13°41.9
1	191°39.1	-17°22.4	1	191°33.3	-16°30.8	1	191°29.3	-15°36.5	1	191°27.3	-14°39.9	1	191°27.0	-13°41.1
2	206°39.0	-17°21.7	2	206°33.2	-16°30.0	2	206°29.3	-15°35.8	2	206°27.2	-14°39.1	2	206°27.0	-13°40.2
3	221°38.9	-17°21.0	3	221°33.1	-16°29.3	3	221°29.3	-15°35.0	3	221°27.2	-14°38.3	3	221°27.0	-13°39.4
4	236°38.8	-17°20.3	4	236°33.1	-16°28.6	4	236°29.2	-15°34.2	4	236°27.2	-14°37.5	4	236°27.0	-13°38.6
5	251°38.7	-17°19.6	5	251°33.0	-16°27.8	5	251°29.2	-15°33.4	5	251°27.2	-14°36.7	5	251°27.0	-13°37.7
6	266°38.6	-17°18.9	6	266°32.9	-16°27.1	6	266°29.1	-15°32.7	6	266°27.2	-14°35.9	6	266°27.0	-13°36.9
7	281°38.5	-17°18.2	7	281°32.9	-16°26.3	7	281°29.1	-15°31.9	7	281°27.2	-14°35.1	7	281°27.0	-13°36.1
8	296°38.4	-17°17.5	8	296°32.8	-16°25.6	8	296°29.1	-15°31.1	8	296°27.2	-14°34.3	8	296°27.0	-13°35.2
9	311°38.3	-17°16.8	9	311°32.7	-16°24.9	9	311°29.0	-15°30.3	9	311°27.1	-14°33.5	9	311°27.0	-13°34.4
10	326°38.2	-17°16.1	10	326°32.7	-16°24.1	10	326°29.0	-15°29.6	10	326°27.1	-14°32.7	10	326°27.0	-13°33.6
11	341°38.1	-17°15.4	11	341°32.6	-16°23.4	11	341°28.9	-15°28.8	11	341°27.1	-14°31.9	11	341°27.1	-13°32.7
12	356°38.1	-17°14.7	12	356°32.5	-16°22.6	12	356°28.9	-15°28.0	12	356°27.1	-14°31.0	12	356°27.1	-13°31.9
13	11°38.0	-17°14.0	13	11°32.5	-16°21.9	13	11°28.9	-15°27.2	13	11°27.1	-14°30.2	13	11°27.1	-13°31.1
14	26°37.9	-17°13.3	14	26°32.4	-16°21.2	14	26°28.8	-15°26.5	14	26°27.1	-14°29.4	14	26°27.1	-13°30.2
15	41°37.8	-17°12.6	15	41°32.4	-16°20.4	15	41°28.8	-15°25.7	15	41°27.1	-14°28.6	15	41°27.1	-13°29.4
16	56°37.7	-17°11.9	16	56°32.3	-16°19.7	16	56°28.8	-15°24.9	16	56°27.1	-14°27.8	16	56°27.1	-13°28.5
17	71°37.6	-17°11.2	17	71°32.2	-16°18.9	17	71°28.7	-15°24.1	17	71°27.0	-14°27.0	17	71°27.1	-13°27.7
18	86°37.5	-17°10.5	18	86°32.2	-16°18.2	18	86°28.7	-15°23.4	18	86°27.0	-14°26.2	18	86°27.1	-13°26.9
19	101°37.4	-17°09.8	19	101°32.1	-16°17.4	19	101°28.7	-15°22.6	19	101°27.0	-14°25.4	19	101°27.2	-13°26.0
20	116°37.4	-17°09.1	20	116°32.0	-16°16.7	20	116°28.6	-15°21.8	20	116°27.0	-14°24.6	20	116°27.2	-13°25.2
21	131°37.3	-17°08.3	21	131°32.0	-16°15.9	21	131°28.6	-15°21.0	21	131°27.0	-14°23.8	21	131°27.2	-13°24.4
22	146°37.2	-17°07.6	22	146°31.9	-16°15.2	22	146°28.5	-15°20.2	22	146°27.0	-14°23.0	22	146°27.2	-13°23.5
23	161°37.1	-17°06.9	23	161°31.9	-16°14.5	23	161°28.5	-15°19.5	23	161°27.0	-14°22.1	23	161°27.2	-13°22.7
	SD.=16.2	d=0.7		SD.=16.2	d=0.7		SD.=16.2	d=0.8		SD.=16.2	d=0.8		SD.=16.2	d=0.8

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	176°37.0	-17°06.2	0	176°31.8	-16°13.7	0	176°28.5	-15°18.7	0	176°27.0	-14°21.3	0	176°27.2	-13°21.8
1	191°36.9	-17°05.5	1	191°31.7	-16°13.0	1	191°28.4	-15°17.9	1	191°27.0	-14°20.5	1	191°27.2	-13°21.0
2	206°36.8	-17°04.8	2	206°31.7	-16°12.2	2	206°28.4	-15°17.1	2	206°27.0	-14°19.7	2	206°27.3	-13°20.1
3	221°36.8	-17°04.1	3	221°31.6	-16°11.5	3	221°28.4	-15°16.3	3	221°27.0	-14°18.9	3	221°27.3	-13°19.3
4	236°36.7	-17°03.4	4	236°31.6	-16°10.7	4	236°28.3	-15°15.6	4	236°26.9	-14°18.1	4	236°27.3	-13°18.5
5	251°36.6	-17°02.7	5	251°31.5	-16°10.0	5	251°28.3	-15°14.8	5	251°26.9	-14°17.3	5	251°27.3	-13°17.6
6	266°36.5	-17°01.9	6	266°31.5	-16°09.2	6	266°28.3	-15°14.0	6	266°26.9	-14°16.5	6	266°27.3	-13°16.8
7	281°36.4	-17°01.2	7	281°31.4	-16°08.5	7	281°28.3	-15°13.2	7	281°26.9	-14°15.6	7	281°27.3	-13°15.9
8	296°36.3	-17°00.5	8	296°31.3	-16°07.7	8	296°28.2	-15°12.4	8	296°26.9	-14°14.8	8	296°27.4	-13°15.1
9	311°36.3	-16°59.8	9	311°31.3	-16°07.0	9	311°28.2	-15°11.6	9	311°26.9	-14°14.0	9	311°27.4	-13°14.3
10	326°36.2	-16°59.1	10	326°31.2	-16°06.2	10	326°28.2	-15°10.9	10	326°26.9	-14°13.2	10	326°27.4	-13°13.4
11	341°36.1	-16°58.4	11	341°31.2	-16°05.5	11	341°28.1	-15°10.1	11	341°26.9	-14°12.4	11	341°27.4	-13°12.6
12	356°36.0	-16°57.6	12	356°31.1	-16°04.7	12	356°28.1	-15°09.3	12	356°26.9	-14°11.6	12	356°27.4	-13°11.7
13	11°35.9	-16°56.9	13	11°31.1	-16°04.0	13	11°28.1	-15°08.5	13	11°26.9	-14°10.7	13	11°27.5	-13°10.9
14	26°35.8	-16°56.2	14	26°31.0	-16°03.2	14	26°28.0	-15°07.7	14	26°26.9	-14°09.9	14	26°27.5	-13°10.0
15	41°35.8	-16°55.5	15	41°31.0	-16°02.4	15	41°28.0	-15°06.9	15	41°26.9	-14°09.1	15	41°27.5	-13°09.2
16	56°35.7	-16°54.8	16	56°30.9	-16°01.7	16	56°28.0	-15°06.1	16	56°26.9	-14°08.3	16	56°27.5	-13°08.3
17	71°35.6	-16°54.1	17	71°30.9	-16°00.9	17	71°28.0	-15°05.3	17	71°26.9	-14°07.5	17	71°27.5	-13°07.5
18	86°35.5	-16°53.3	18	86°30.8	-16°00.2	18	86°27.9	-15°04.6	18	86°26.9	-14°06.7	18	86°27.6	-13°06.6
19	101°35.5	-16°52.6	19	101°30.7	-15°59.4	19	101°27.9	-15°03.8	19	101°26.9	-14°05.8	19	101°27.6	-13°05.8
20	116°35.4	-16°51.9	20	116°30.7	-15°58.7	20	116°27.9	-15°03.0	20	116°26.9	-14°05.0	20	116°27.6	-13°04.9
21	131°35.3	-16°51.2	21	131°30.6	-15°57.9	21	131°27.9	-15°02.2	21	131°26.9	-14°04.2	21	131°27.6	-13°04.1
22	146°35.2	-16°50.4	22	146°30.6	-15°57.2	22	146°27.8	-15°01.4	22	146°26.9	-14°03.4	22	146°27.6	-13°03.2
23	161°35.1	-16°49.7	23	161°30.5	-15°56.4	23	161°27.8	-15°00.6	23	161°26.9	-14°02.6	23	161°27.7	-13°02.4
	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

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	176°35.1	-16°49.0	0	176°30.5	-15°55.6	0	176°27.8	-14°59.8	0	176°26.9	-14°01.7	0	176°27.7	-13°01.6
1	191°35.0	-16°48.3	1	191°30.4	-15°54.9	1	191°27.8	-14°59.0	1	191°26.9	-14°00.9	1	191°27.7	-13°00.7
2	206°34.9	-16°47.6	2	206°30.4	-15°54.1	2	206°27.7	-14°58.2	2	206°26.9	-14°00.1	2	206°27.7	-12°59.9
3	221°34.8	-16°46.8	3	221°30.3	-15°53.4	3	221°27.7	-14°57.4	3	221°26.9	-13°59.3	3	221°27.8	-12°59.0
4	236°34.8	-16°46.1	4	236°30.3	-15°52.6	4	236°27.7	-14°56.6	4	236°26.9	-13°58.4	4	236°27.8	-12°58.2
5	251°34.7	-16°45.4	5	251°30.2	-15°51.8	5	251°27.7	-14°55.9	5	251°26.9	-13°57.6	5	251°27.8	-12°57.3
6	266°34.6	-16°44.7	6	266°30.2	-15°51.1	6	266°27.6	-14°55.1	6	266°26.9	-13°56.8	6	266°27.8	-12°56.4
7	281°34.5	-16°43.9	7	281°30.1	-15°50.3	7	281°27.6	-14°54.3	7	281°26.9	-13°56.0	7	281°27.9	-12°55.6
8	296°34.5	-16°43.2	8	296°30.1	-15°49.6	8	296°27.6	-14°53.5	8	296°26.9	-13°55.1	8	296°27.9	-12°54.7
9	311°34.4	-16°42.5	9	311°30.1	-15°48.8	9	311°27.6	-14°52.7	9	311°26.9	-13°54.3	9	311°27.9	-12°53.9
10	326°34.3	-16°41.7	10	326°30.0	-15°48.0	10	326°27.5	-14°51.9	10	326°26.9	-13°53.5	10	326°27.9	-12°53.0
11	341°34.2	-16°41.0	11	341°30.0	-15°47.3	11	341°27.5	-14°51.1	11	341°26.9	-13°52.7	11	341°28.0	-12°52.2
12	356°34.2	-16°40.3	12	356°29.9	-15°46.5	12	356°27.5	-14°50.3	12	356°26.9	-13°51.8	12	356°28.0	-12°51.3
13	11°34.1	-16°39.6	13	11°29.9	-15°45.7	13	11°27.5	-14°49.5	13	11°26.9	-13°51.0	13	11°28.0	-12°50.5
14	26°34.0	-16°38.8	14	26°29.8	-15°45.0	14	26°27.5	-14°48.7	14	26°26.9	-13°50.2	14	26°28.0	-12°49.6
15	41°34.0	-16°38.1	15	41°29.8	-15°44.2	15	41°27.4	-14°47.9	15	41°26.9	-13°49.4	15	41°28.1	-12°48.8
16	56°33.9	-16°37.4	16	56°29.7	-15°43.4	16	56°27.4	-14°47.1	16	56°26.9	-13°48.5	16	56°28.1	-12°47.9
17	71°33.8	-16°36.6	17	71°29.7	-15°42.7	17	71°27.4	-14°46.3	17	71°26.9	-13°47.7	17	71°28.1	-12°47.1
18	86°33.7	-16°35.9	18	86°29.6	-15°41.9	18	86°27.4	-14°45.5	18	86°26.9	-13°46.9	18	86°28.2	-12°46.2
19	101°33.7	-16°35.2	19	101°29.6	-15°41.1	19	101°27.4	-14°44.7	19	101°26.9	-13°46.0	19	101°28.2	-12°45.3
20	116°33.6	-16°34.4	20	116°29.6	-15°40.4	20	116°27.4	-14°43.9	20	116°26.9	-13°45.2	20	116°28.2	-12°44.5
21	131°33.5	-16°33.7	21	131°29.5	-15°39.6	21	131°27.3	-14°43.1	21	131°26.9	-13°44.4	21	131°28.2	-12°43.6
22	146°33.5	-16°33.0	22	146°29.5	-15°38.8	22	146°27.3	-14°42.3	22	146°26.9	-13°43.6	22	146°28.3	-12°42.8
23	161°33.4	-16°32.2	23	161°29.4	-15°38.1	23	161°27.3	-14°41.5	23	161°27.0	-13°42.7	23	161°28.3	

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	176°28.3	-12°41.1	0	176°31.3	-11°38.4	0	176°35.8	-10°34.0	0	176°41.6	-9°28.2	0	176°48.8	-8°21.1
1	191°28.4	-12°40.2	1	191°31.3	-11°37.5	1	191°35.8	-10°33.1	1	191°41.7	-9°27.3	1	191°48.9	-8°20.1
2	206°28.4	-12°39.3	2	206°31.4	-11°36.6	2	206°35.9	-10°32.2	2	206°41.8	-9°26.4	2	206°49.0	-8°19.2
3	221°28.4	-12°38.5	3	221°31.4	-11°35.7	3	221°36.0	-10°31.3	3	221°41.9	-9°25.4	3	221°49.2	-8°18.3
4	236°28.5	-12°37.6	4	236°31.5	-11°34.8	4	236°36.1	-10°30.4	4	236°42.0	-9°24.5	4	236°49.3	-8°17.3
5	251°28.5	-12°36.8	5	251°31.6	-11°34.0	5	251°36.1	-10°29.5	5	251°42.1	-9°23.6	5	251°49.4	-8°16.4
6	266°28.5	-12°35.9	6	266°31.6	-11°33.1	6	266°36.2	-10°28.6	6	266°42.2	-9°22.7	6	266°49.5	-8°15.4
7	281°28.5	-12°35.0	7	281°31.7	-11°32.2	7	281°36.3	-10°27.7	7	281°42.3	-9°21.7	7	281°49.6	-8°14.5
8	296°28.6	-12°34.2	8	296°31.7	-11°31.3	8	296°36.3	-10°26.8	8	296°42.4	-9°20.8	8	296°49.7	-8°13.6
9	311°28.6	-12°33.3	9	311°31.8	-11°30.4	9	311°36.4	-10°25.9	9	311°42.5	-9°19.9	9	311°49.8	-8°12.6
10	326°28.6	-12°32.5	10	326°31.8	-11°29.5	10	326°36.5	-10°25.0	10	326°42.6	-9°19.0	10	326°49.9	-8°11.7
11	341°28.7	-12°31.6	11	341°31.9	-11°28.6	11	341°36.6	-10°24.1	11	341°42.7	-9°18.0	11	341°50.0	-8°10.7
12	356°28.7	-12°30.7	12	356°31.9	-11°27.8	12	356°36.6	-10°23.2	12	356°42.7	-9°17.1	12	356°50.2	-8°09.8
13	11°28.7	-12°29.9	13	11°32.0	-11°26.9	13	11°36.7	-10°22.2	13	11°42.8	-9°16.2	13	11°50.3	-8°08.8
14	26°28.8	-12°29.0	14	26°32.0	-11°26.0	14	26°36.8	-10°21.3	14	26°42.9	-9°15.2	14	26°50.4	-8°07.9
15	41°28.8	-12°28.1	15	41°32.1	-11°25.1	15	41°36.9	-10°20.4	15	41°43.0	-9°14.3	15	41°50.5	-8°07.0
16	56°28.9	-12°27.3	16	56°32.2	-11°24.2	16	56°36.9	-10°19.5	16	56°43.1	-9°13.4	16	56°50.6	-8°06.0
17	71°28.9	-12°26.4	17	71°32.2	-11°23.3	17	71°37.0	-10°18.6	17	71°43.2	-9°12.5	17	71°50.7	-8°05.1
18	86°28.9	-12°25.6	18	86°32.3	-11°22.4	18	86°37.1	-10°17.7	18	86°43.3	-9°11.5	18	86°50.8	-8°04.1
19	101°29.0	-12°24.7	19	101°32.3	-11°21.6	19	101°37.2	-10°16.8	19	101°43.4	-9°10.6	19	101°50.9	-8°03.2
20	116°29.0	-12°23.8	20	116°32.4	-11°20.7	20	116°37.3	-10°15.9	20	116°43.5	-9°09.7	20	116°51.0	-8°02.2
21	131°29.0	-12°23.0	21	131°32.4	-11°19.8	21	131°37.3	-10°15.0	21	131°43.6	-9°08.8	21	131°51.2	-8°01.3
22	146°29.1	-12°22.1	22	146°32.5	-11°18.9	22	146°37.4	-10°14.1	22	146°43.7	-9°07.8	22	146°51.3	-8°00.4
23	161°29.1	-12°21.2	23	161°32.6	-11°18.0	23	161°37.5	-10°13.2	23	161°43.8	-9°06.9	23	161°51.4	-7°59.4
	SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.1	d=0.9

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	176°29.1	-12°20.4	0	176°32.6	-11°17.1	0	176°37.6	-10°12.2	0	176°43.9	-9°06.0	0	176°51.5	-7°58.5
1	191°29.2	-12°19.5	1	191°32.7	-11°16.2	1	191°37.6	-10°11.3	1	191°44.0	-9°05.0	1	191°51.6	-7°57.5
2	206°29.2	-12°18.6	2	206°32.7	-11°15.3	2	206°37.7	-10°10.4	2	206°44.1	-9°04.1	2	206°51.7	-7°56.6
3	221°29.3	-12°17.8	3	221°32.8	-11°14.4	3	221°37.8	-10°09.5	3	221°44.2	-9°03.2	3	221°51.8	-7°55.6
4	236°29.3	-12°16.9	4	236°32.9	-11°13.5	4	236°37.9	-10°08.6	4	236°44.3	-9°02.2	4	236°52.0	-7°54.7
5	251°29.3	-12°16.0	5	251°32.9	-11°12.6	5	251°38.0	-10°07.7	5	251°44.4	-9°01.3	5	251°52.1	-7°53.7
6	266°29.4	-12°15.2	6	266°33.0	-11°11.8	6	266°38.0	-10°06.8	6	266°44.5	-9°00.4	6	266°52.2	-7°52.8
7	281°29.4	-12°14.3	7	281°33.0	-11°10.9	7	281°38.1	-10°05.9	7	281°44.6	-8°59.5	7	281°52.3	-7°51.8
8	296°29.5	-12°13.4	8	296°33.1	-11°10.0	8	296°38.2	-10°04.9	8	296°44.7	-8°58.5	8	296°52.4	-7°50.9
9	311°29.5	-12°12.5	9	311°33.2	-11°09.1	9	311°38.3	-10°04.0	9	311°44.8	-8°57.6	9	311°52.5	-7°49.9
10	326°29.5	-12°11.7	10	326°33.2	-11°08.2	10	326°38.4	-10°03.1	10	326°44.9	-8°56.7	10	326°52.7	-7°49.0
11	341°29.6	-12°10.8	11	341°33.3	-11°07.3	11	341°38.4	-10°02.2	11	341°45.0	-8°55.7	11	341°52.8	-7°48.1
12	356°29.6	-12°09.9	12	356°33.3	-11°06.4	12	356°38.5	-10°01.3	12	356°45.1	-8°54.8	12	356°52.9	-7°47.1
13	11°29.7	-12°09.1	13	11°33.4	-11°05.5	13	11°38.6	-10°00.4	13	11°45.2	-8°53.9	13	11°53.0	-7°46.2
14	26°29.7	-12°08.2	14	26°33.5	-11°04.6	14	26°38.7	-9°59.5	14	26°45.3	-8°52.9	14	26°53.1	-7°45.2
15	41°29.7	-12°07.3	15	41°33.5	-11°03.7	15	41°38.8	-9°58.5	15	41°45.4	-8°52.0	15	41°53.2	-7°44.3
16	56°29.8	-12°06.5	16	56°33.6	-11°02.8	16	56°38.9	-9°57.6	16	56°45.5	-8°51.1	16	56°53.4	-7°43.3
17	71°29.8	-12°05.6	17	71°33.7	-11°01.9	17	71°38.9	-9°56.7	17	71°45.6	-8°50.1	17	71°53.5	-7°42.4
18	86°29.9	-12°04.7	18	86°33.7	-11°01.0	18	86°39.0	-9°55.8	18	86°45.7	-8°49.2	18	86°53.6	-7°41.4
19	101°29.9	-12°03.8	19	101°33.8	-11°00.1	19	101°39.1	-9°54.9	19	101°45.8	-8°48.3	19	101°53.7	-7°40.5
20	116°30.0	-12°03.0	20	116°33.9	-10°59.2	20	116°39.2	-9°54.0	20	116°45.9	-8°47.3	20	116°53.8	-7°39.5
21	131°30.0	-12°02.1	21	131°33.9	-10°58.3	21	131°39.3	-9°53.1	21	131°46.0	-8°46.4	21	131°54.0	-7°38.6
22	146°30.0	-12°01.2	22	146°34.0	-10°57.4	22	146°39.4	-9°52.2	22	146°46.1	-8°45.5	22	146°54.1	-7°37.6
23	161°30.1	-12°00.3	23	161°34.0	-10°56.6	23	161°39.4	-9°51.2	23	161°46.2	-8°44.5	23	161°54.2	-7°36.7
	SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.1	d=0.9

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	01	GHA	Dec
0	176°30.1	-11°59.5	0	176°34.1	-10°55.7	0	176°39.5	-9°50.3	0	176°46.3	-8°43.6	0	176°54.3	-7°35.7
1	191°30.2	-11°58.6	1	191°34.2	-10°54.8	1	191°39.6	-9°49.4	1	191°46.4	-8°42.7	1	191°54.4	-7°34.8
2	206°30.2	-11°57.7	2	206°34.2	-10°53.9	2	206°39.7	-9°48.5	2	206°46.5	-8°41.7	2	206°54.6	-7°33.8
3	221°30.3	-11°56.8	3	221°34.3	-10°53.0	3	221°39.8	-9°47.5	3	221°46.6	-8°40.8	3	221°54.7	-7°32.9
4	236°30.3	-11°56.0	4	236°34.4	-10°52.1	4	236°39.9	-9°46.6	4	236°46.7	-8°39.9	4	236°54.8	-7°31.9
5	251°30.4	-11°55.1	5	251°34.4	-10°51.2	5	251°40.0	-9°45.7	5	251°46.8	-8°38.9	5	251°54.9	-7°31.0
6	266°30.4	-11°54.2	6	266°34.5	-10°50.3	6	266°40.0	-9°44.8	6	266°46.9	-8°38.0	6	266°55.0	-7°30.0
7	281°30.5	-11°53.3	7	281°34.6	-10°49.4	7	281°40.1	-9°43.9	7	281°47.0	-8°37.0	7	281°55.2	-7°29.1
8	296°30.5	-11°52.5	8	296°34.6	-10°48.5	8	296°40.2	-9°43.0	8	296°47.1	-8°36.1	8	296°55.3	-7°28.1
9	311°30.5	-11°51.6	9	311°34.7	-10°47.6	9	311°40.3	-9°42.0	9	311°47.2	-8°35.2	9	311°55.4	-7°27.2
10	326°30.6	-11°50.7	10	326°34.8	-10°46.7	10	326°40.4	-9°41.1	10	326°47.3	-8°34.2	10	326°55.5	-7°26.2
11	341°30.6	-11°49.8	11	341°34.8	-10°45.8	11	341°40.5	-9°40.2	11	341°47.4	-8°33.3	11	341°55.6	-7°25.3
12	356°30.7	-11°48.9	12	356°34.9	-10°44.9	12	356°40.6	-9°39.3	12	356°47.5	-8°32.4	12	356°55.8	-7°24.3
13	11°30.7	-11°48.1	13	11°35.0	-10°44.0	13	11°40.7	-9°38.3	13	11°47.6	-8°31.4	13	11°55.9	-7°23.4
14	26°30.8	-11°47.2	14	26°35.1	-10°43.1	14	26°40.7	-9°37.4	14	26°47.8	-8°30.5	14	26°56.0	-7°22.4
15	41°30.8	-11°46.3	15	41°35.1	-10°42.2	15	41°40.8	-9°36.5	15	41°47.9	-8°29.5	15	41°56.1	-7°21.4
16	56°30.9	-11°45.4	16	56°35.2	-10°41.3	16	56°40.9	-9°35.6	16	56°48.0	-8°28.6	16	56°56.3	-7°20.5
17	71°30.9	-11°44.5	17	71°35.3	-10°40.4	17	71°41.0	-9°34.7	17	71°48.1	-8°27.7	17	71°56.4	-7°19.5
18	86°31.0	-11°43.7	18	86°35.3	-10°39.5	18	86°41.1	-9°33.7	18	86°48.2	-8°26.7	18	86°56.5	-7°18.6
19	101°31.0	-11°42.8	19	101°35.4	-10°38.5	19	101°41.2	-9°32.8	19	101°48.3	-8°25.8	19	101°56.6	-7°17.6
20	116°31.1	-11°41.9	20	116°35.5	-10°37.6	20	116°41.3	-9°31.9	20	116°48.4	-8°24.8	20	116°56.8	-7°16.7
21	131°31.1	-11°41.0	21	131°35.5	-10°36.7	21	131°41.4	-9°31.0	21	131°48.5	-8°23.9	21	131°56.9	-7°15.7
22	146°31.2	-11°40.1	22	146°35.6	-10°35.8	22	146°41.5	-9°30.1	22	146°48.6	-8°23.0	22	146°57.0	-7°14.8
23	161°31.2	-11°39.3	23	161°35.7	-10°34.9	23	161°41.5	-9°29.1	23	161°48.7	-8°22.0	23	161°57.1	-7°13.8
	SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.1	d

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	176°57.2	-7°12.9	0	177°06.8	-6°03.7	0	177°17.4	-4°53.8	0	177°28.8	-3°43.4	0	177°41.0	-2°32.6
1	191°57.4	-7°11.9	1	192°06.9	-6°02.8	1	192°17.5	-4°52.9	1	192°29.0	-3°42.4	1	192°41.2	-2°31.6
2	206°57.5	-7°11.0	2	207°07.1	-6°01.8	2	207°17.7	-4°51.9	2	207°29.2	-3°41.4	2	207°41.3	-2°30.6
3	221°57.6	-7°10.0	3	222°07.2	-6°00.8	3	222°17.8	-4°50.9	3	222°29.3	-3°40.5	3	222°41.5	-2°29.6
4	236°57.8	-7°09.0	4	237°07.4	-5°59.9	4	237°18.0	-4°49.9	4	237°29.5	-3°39.5	4	237°41.7	-2°28.6
5	251°57.9	-7°08.1	5	252°07.5	-5°58.9	5	252°18.1	-4°49.0	5	252°29.6	-3°38.5	5	252°41.9	-2°27.6
6	266°58.0	-7°07.1	6	267°07.6	-5°57.9	6	267°18.3	-4°48.0	6	267°29.8	-3°37.5	6	267°42.0	-2°26.7
7	281°58.1	-7°06.2	7	282°07.8	-5°57.0	7	282°18.4	-4°47.0	7	282°30.0	-3°36.5	7	282°42.2	-2°25.7
8	296°58.3	-7°05.2	8	297°07.9	-5°56.0	8	297°18.6	-4°46.0	8	297°30.1	-3°35.6	8	297°42.4	-2°24.7
9	311°58.4	-7°04.3	9	312°08.1	-5°55.0	9	312°18.8	-4°45.1	9	312°30.3	-3°34.6	9	312°42.6	-2°23.7
10	326°58.5	-7°03.3	10	327°08.2	-5°54.1	10	327°18.9	-4°44.1	10	327°30.5	-3°33.6	10	327°42.7	-2°22.7
11	341°58.6	-7°02.4	11	342°08.4	-5°53.1	11	342°19.1	-4°43.1	11	342°30.6	-3°32.6	11	342°42.9	-2°21.7
12	356°58.8	-7°01.4	12	357°08.5	-5°52.1	12	357°19.2	-4°42.1	12	357°30.8	-3°31.6	12	357°43.1	-2°20.7
13	11°58.9	-7°00.4	13	12°08.6	-5°51.2	13	12°19.4	-4°41.2	13	12°31.0	-3°30.6	13	12°43.3	-2°19.8
14	26°59.0	-6°59.5	14	27°08.8	-5°50.2	14	27°19.5	-4°40.2	14	27°31.1	-3°29.7	14	27°43.4	-2°18.8
15	41°59.1	-6°58.5	15	42°08.9	-5°49.2	15	42°19.7	-4°39.2	15	42°31.3	-3°28.7	15	42°43.6	-2°17.8
16	56°59.3	-6°57.6	16	57°09.1	-5°48.3	16	57°19.8	-4°38.2	16	57°31.5	-3°27.7	16	57°43.8	-2°16.8
17	71°59.4	-6°56.6	17	72°09.2	-5°47.3	17	72°20.0	-4°37.3	17	72°31.6	-3°26.7	17	72°44.0	-2°15.8
18	86°59.5	-6°55.7	18	87°09.4	-5°46.3	18	87°20.2	-4°36.3	18	87°31.8	-3°25.7	18	87°44.1	-2°14.8
19	101°59.7	-6°54.7	19	102°09.5	-5°45.4	19	102°20.3	-4°35.3	19	102°32.0	-3°24.7	19	102°44.3	-2°13.8
20	116°59.8	-6°53.7	20	117°09.6	-5°44.4	20	117°20.5	-4°34.3	20	117°32.1	-3°23.8	20	117°44.5	-2°12.8
21	131°59.9	-6°52.8	21	132°09.8	-5°43.4	21	132°20.6	-4°33.4	21	132°32.3	-3°22.8	21	132°44.7	-2°11.9
22	147°00.1	-6°51.8	22	147°09.9	-5°42.4	22	147°20.8	-4°32.4	22	147°32.5	-3°21.8	22	147°44.8	-2°10.9
23	162°00.2	-6°50.9	23	162°10.1	-5°41.5	23	162°20.9	-4°31.4	23	162°32.6	-3°20.8	23	162°45.0	-2°09.9
	SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0
03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	177°00.3	-6°49.9	0	177°10.2	-5°40.5	0	177°21.1	-4°30.4	0	177°32.8	-3°19.8	0	177°45.2	-2°08.9
1	192°00.4	-6°49.0	1	192°10.4	-5°39.5	1	192°21.3	-4°29.4	1	192°33.0	-3°18.9	1	192°45.4	-2°07.9
2	207°00.6	-6°48.0	2	207°10.5	-5°38.6	2	207°21.4	-4°28.5	2	207°33.1	-3°17.9	2	207°45.5	-2°06.9
3	222°00.7	-6°47.0	3	222°10.7	-5°37.6	3	222°21.6	-4°27.5	3	222°33.3	-3°16.9	3	222°45.7	-2°05.9
4	237°00.8	-6°46.1	4	237°10.8	-5°36.6	4	237°21.7	-4°26.5	4	237°33.5	-3°15.9	4	237°45.9	-2°05.0
5	252°01.0	-6°45.1	5	252°10.9	-5°35.7	5	252°21.9	-4°25.5	5	252°33.6	-3°14.9	5	252°46.1	-2°04.0
6	267°01.1	-6°44.2	6	267°11.1	-5°34.7	6	267°22.0	-4°24.6	6	267°33.8	-3°13.9	6	267°46.2	-2°03.0
7	282°01.2	-6°43.2	7	282°11.2	-5°33.7	7	282°22.2	-4°23.6	7	282°34.0	-3°13.0	7	282°46.4	-2°02.0
8	297°01.4	-6°42.2	8	297°11.4	-5°32.8	8	297°22.4	-4°22.6	8	297°34.2	-3°12.0	8	297°46.6	-2°01.0
9	312°01.5	-6°41.3	9	312°11.5	-5°31.8	9	312°22.5	-4°21.6	9	312°34.3	-3°11.0	9	312°46.8	-2°00.0
10	327°01.6	-6°40.3	10	327°11.7	-5°30.8	10	327°22.7	-4°20.6	10	327°34.5	-3°10.0	10	327°46.9	-1°59.0
11	342°01.8	-6°39.4	11	342°11.8	-5°29.8	11	342°22.8	-4°19.7	11	342°34.7	-3°09.0	11	342°47.1	-1°58.0
12	357°01.9	-6°38.4	12	357°12.0	-5°28.9	12	357°23.0	-4°18.7	12	357°34.8	-3°08.0	12	357°47.3	-1°57.1
13	12°02.0	-6°37.4	13	12°12.1	-5°27.9	13	12°23.2	-4°17.7	13	12°35.0	-3°07.0	13	12°47.5	-1°56.1
14	27°02.2	-6°36.5	14	27°12.3	-5°26.9	14	27°23.3	-4°16.7	14	27°35.2	-3°06.1	14	27°47.7	-1°55.1
15	42°02.3	-6°35.5	15	42°12.4	-5°26.0	15	42°23.5	-4°15.8	15	42°35.3	-3°05.1	15	42°47.8	-1°54.1
16	57°02.4	-6°34.6	16	57°12.6	-5°25.0	16	57°23.6	-4°14.8	16	57°35.5	-3°04.1	16	57°48.0	-1°53.1
17	72°02.6	-6°33.6	17	72°12.7	-5°24.0	17	72°23.8	-4°13.8	17	72°35.7	-3°03.1	17	72°48.2	-1°52.1
18	87°02.7	-6°32.6	18	87°12.9	-5°23.0	18	87°24.0	-4°12.8	18	87°35.8	-3°02.1	18	87°48.4	-1°51.1
19	102°02.8	-6°31.7	19	102°13.0	-5°22.1	19	102°24.1	-4°11.8	19	102°36.0	-3°01.1	19	102°48.5	-1°50.1
20	117°03.0	-6°30.7	20	117°13.1	-5°21.1	20	117°24.3	-4°10.9	20	117°36.2	-3°00.2	20	117°48.7	-1°49.2
21	132°03.1	-6°29.8	21	132°13.3	-5°20.1	21	132°24.4	-4°09.9	21	132°36.4	-2°59.2	21	132°48.9	-1°48.2
22	147°03.2	-6°28.8	22	147°13.4	-5°19.2	22	147°24.6	-4°08.9	22	147°36.5	-2°58.2	22	147°49.1	-1°47.2
23	162°03.4	-6°27.8	23	162°13.6	-5°18.2	23	162°24.8	-4°07.9	23	162°36.7	-2°57.2	23	162°49.3	-1°46.2
	SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0
04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec	16	GHA	Dec
0	177°03.5	-6°26.9	0	177°13.7	-5°17.2	0	177°24.9	-4°06.9	0	177°36.9	-2°56.2	0	177°49.4	-1°45.2
1	192°03.6	-6°25.9	1	192°13.9	-5°16.2	1	192°25.1	-4°06.0	1	192°37.0	-2°55.2	1	192°49.6	-1°44.2
2	207°03.8	-6°24.9	2	207°14.0	-5°15.3	2	207°25.2	-4°05.0	2	207°37.2	-2°54.3	2	207°49.8	-1°43.2
3	222°03.9	-6°24.0	3	222°14.2	-5°14.3	3	222°25.4	-4°04.0	3	222°37.4	-2°53.3	3	222°50.0	-1°42.2
4	237°04.0	-6°23.0	4	237°14.3	-5°13.3	4	237°25.6	-4°03.0	4	237°37.5	-2°52.3	4	237°50.1	-1°41.3
5	252°04.2	-6°22.1	5	252°14.5	-5°12.4	5	252°25.7	-4°02.0	5	252°37.7	-2°51.3	5	252°50.3	-1°40.3
6	267°04.3	-6°21.1	6	267°14.6	-5°11.4	6	267°25.9	-4°01.1	6	267°37.9	-2°50.3	6	267°50.5	-1°39.3
7	282°04.5	-6°20.1	7	282°14.8	-5°10.4	7	282°26.0	-4°00.1	7	282°38.1	-2°49.3	7	282°50.7	-1°38.3
8	297°04.6	-6°19.2	8	297°14.9	-5°09.4	8	297°26.2	-3°59.1	8	297°38.2	-2°48.3	8	297°50.9	-1°37.3
9	312°04.7	-6°18.2	9	312°15.1	-5°08.5	9	312°26.4	-3°58.1	9	312°38.4	-2°47.4	9	312°51.0	-1°36.3
10	327°04.9	-6°17.2	10	327°15.2	-5°07.5	10	327°26.5	-3°57.1	10	327°38.6	-2°46.4	10	327°51.2	-1°35.3
11	342°05.0	-6°16.3	11	342°15.4	-5°06.5	11	342°26.7	-3°56.2	11	342°38.7	-2°45.4	11	342°51.4	-1°34.3
12	357°05.1	-6°15.3	12	357°15.5	-5°05.5	12	357°26.9	-3°55.2	12	357°38.9	-2°44.4	12	357°51.6	-1°33.4
13	12°05.3	-6°14.3	13	12°15.7	-5°04.6	13	12°27.0	-3°54.2	13	12°39.1	-2°43.4	13	12°51.7	-1°32.4
14	27°05.4	-6°13.4	14	27°15.8	-5°03.6	14	27°27.2	-3°53.2	14	27°39.3	-2°42.4	14	27°51.9	-1°31.4
15	42°05.5	-6°12.4	15	42°16.0	-5°02.6	15	42°27.3	-3°52.2	15	42°39.4	-2°41.4	15	42°52.1	-1°30.4
16	57°05.7	-6°11.4	16	57°16.2	-5°01.6	16	57°27.5	-3°51.3	16	57°39.6	-2°40.5	16	57°52.3	-1°29.4
17	72°05.8	-6°10.5	17	72°16.3	-5°00.7	17	72°27.7	-3°50.3	17	72°39.8	-2°39.5	17	72°52.5	-1°28.4
18	87°06.0	-6°09.5	18	87°16.5	-4°59.7	18	87°27.8	-3°49.3	18	87°40.0	-2°38.5	18	87°52.6	-1°27.4
19	102°06.1	-6°08.6	19	102°16.6	-4°58.7	19	102°28.0	-3°48.3	19	102°40.1	-2°37.5	19	102°52.8	-1°26.4
20	117°06.2	-6°07.6	20	117°16.8	-4°57.7	20	117°28.2	-3°47.3	20	117°40.3	-2°36.5	20	117°53.0	-1°25.5
21	132°06.4	-6°06.6	21	132°16.9	-4°56.8	21	132°28.3	-3°46.4	21	132°40.5	-2°35.5	21	132°53.2	-1°24.5
22	147°06.5	-6°05.7	22	147°17.1	-4°55.8	22	147°28.5	-3°45.4	22	147°40.6	-2°34.5	22	147°53.4	-1°23.5
23	162°06.7	-6°04.7	23	162°17.2	-4°54.8	23	162°28.7	-3°44.4	23	162°40.8	-2°33.6	23	162°53.5	-1°22.5
	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°53.7	-1°21.5	0	178°06.9	-0°10.3	0	178°20.3	1°00.7	0	178°33.8	2°11.5	0	178°47.3	3°22.0
1	192°53.9	-1°20.5	1	193°07.0	-0°09.4	1	193°20.4	1°01.7	1	193°34.0	2°12.5	1	193°47.5	3°22.9
2	207°54.1	-1°19.5	2	208°07.2	-0°08.4	2	208°20.6	1°02.7	2	208°34.2	2°13.5	2	208°47.7	3°23.9
3	222°54.3	-1°18.5	3	223°07.4	-0°07.4	3	223°20.8	1°03.7	3	223°34.3	2°14.5	3	223°47.9	3°24.9
4	237°54.4	-1°17.5	4	238°07.6	-0°06.4	4	238°21.0	1°04.7	4	238°34.5	2°15.5	4	238°48.1	3°25.8
5	252°54.6	-1°16.6	5	253°07.8	-0°05.4	5	253°21.2	1°05.6	5	253°34.7	2°16.4	5	253°48.2	3°26.8
6	267°54.8	-1°15.6	6	268°08.0	-0°04.4	6	268°21.4	1°06.6	6	268°34.9	2°17.4	6	268°48.4	3°27.8
7	282°55.0	-1°14.6	7	283°08.2	-0°03.4	7	283°21.6	1°07.6	7	283°35.1	2°18.4	7	283°48.6	3°28.8
8	297°55.2	-1°13.6	8	298°08.3	-0°02.4	8	298°21.8	1°08.6	8	298°35.3	2°19.4	8	298°48.8	3°29.7
9	312°55.3	-1°12.6	9	313°08.5	-0°01.5	9	313°21.9	1°09.6	9	313°35.5	2°20.4	9	313°49.0	3°30.7
10	327°55.5	-1°11.6	10	328°08.7	-0°00.5	10	328°22.1	1°10.6	10	328°35.7	2°21.4	10	328°49.2	3°31.7
11	342°55.7	-1°10.6	11	343°08.9	0°00.5	11	343°22.3	1°11.6	11	343°35.8	2°22.3	11	343°49.4	3°32.7
12	357°55.9	-1°09.6	12	358°09.1	0°01.5	12	358°22.5	1°12.5	12	358°36.0	2°23.3	12	358°49.6	3°33.6
13	12°56.1	-1°08.7	13	13°09.3	0°02.5	13	13°22.7	1°13.5	13	13°36.2	2°24.3	13	13°49.7	3°34.6
14	27°56.3	-1°07.7	14	28°09.5	0°03.5	14	28°22.9	1°14.5	14	28°36.4	2°25.3	14	28°49.9	3°35.6
15	42°56.4	-1°06.7	15	43°09.6	0°04.5	15	43°23.1	1°15.5	15	43°36.6	2°26.3	15	43°50.1	3°36.6
16	57°56.6	-1°05.7	16	58°09.8	0°05.5	16	58°23.3	1°16.5	16	58°36.8	2°27.2	16	58°50.3	3°37.5
17	72°56.8	-1°04.7	17	73°10.0	0°06.4	17	73°23.4	1°17.5	17	73°37.0	2°28.2	17	73°50.5	3°38.5
18	87°57.0	-1°03.7	18	88°10.2	0°07.4	18	88°23.6	1°18.5	18	88°37.2	2°29.2	18	88°50.7	3°39.5
19	102°57.2	-1°02.7	19	103°10.4	0°08.4	19	103°23.8	1°19.4	19	103°37.4	2°30.2	19	103°50.9	3°40.4
20	117°57.3	-1°01.7	20	118°10.6	0°09.4	20	118°24.0	1°20.4	20	118°37.5	2°31.1	20	118°51.0	3°41.4
21	132°57.5	-1°00.7	21	133°10.7	0°10.4	21	133°24.2	1°21.4	21	133°37.7	2°32.1	21	133°51.2	3°42.4
22	147°57.7	-0°59.8	22	148°10.9	0°11.4	22	148°24.4	1°22.4	22	148°37.9	2°33.1	22	148°51.4	3°43.4
23	162°57.9	-0°58.8	23	163°11.1	0°12.4	23	163°24.6	1°23.4	23	163°38.1	2°34.1	23	163°51.6	3°44.3
	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°58.1	-0°57.8	0	178°11.3	0°13.4	0	178°24.8	1°24.4	0	178°38.3	2°35.1	0	178°51.8	3°45.3
1	192°58.2	-0°56.8	1	193°11.5	0°14.3	1	193°24.9	1°25.3	1	193°38.5	2°36.0	1	193°52.0	3°46.3
2	207°58.4	-0°55.8	2	208°11.7	0°15.3	2	208°25.1	1°26.3	2	208°38.7	2°37.0	2	208°52.2	3°47.2
3	222°58.6	-0°54.8	3	223°11.9	0°16.3	3	223°25.3	1°27.3	3	223°38.9	2°38.0	3	223°52.4	3°48.2
4	237°58.8	-0°53.8	4	238°12.0	0°17.3	4	238°25.5	1°28.3	4	238°39.0	2°39.0	4	238°52.5	3°49.2
5	252°59.0	-0°52.8	5	253°12.2	0°18.3	5	253°25.7	1°29.3	5	253°39.2	2°40.0	5	253°52.7	3°50.2
6	267°59.2	-0°51.9	6	268°12.4	0°19.3	6	268°25.9	1°30.3	6	268°39.4	2°40.9	6	268°52.9	3°51.1
7	282°59.3	-0°50.9	7	283°12.6	0°20.3	7	283°26.1	1°31.3	7	283°39.6	2°41.9	7	283°53.1	3°52.1
8	297°59.5	-0°49.9	8	298°12.8	0°21.3	8	298°26.3	1°32.2	8	298°39.8	2°42.9	8	298°53.3	3°53.1
9	312°59.7	-0°48.9	9	313°13.0	0°22.2	9	313°26.4	1°33.2	9	313°40.0	2°43.9	9	313°53.5	3°54.0
10	327°59.9	-0°47.9	10	328°13.2	0°23.2	10	328°26.6	1°34.2	10	328°40.2	2°44.9	10	328°53.7	3°55.0
11	343°00.1	-0°46.9	11	343°13.4	0°24.2	11	343°26.8	1°35.2	11	343°40.4	2°45.8	11	343°53.8	3°56.0
12	358°00.3	-0°45.9	12	358°13.5	0°25.2	12	358°27.0	1°36.2	12	358°40.5	2°46.8	12	358°54.0	3°56.9
13	13°00.4	-0°44.9	13	13°13.7	0°26.2	13	13°27.2	1°37.2	13	13°40.7	2°47.8	13	13°54.2	3°57.9
14	28°00.6	-0°43.9	14	28°13.9	0°27.2	14	28°27.4	1°38.1	14	28°40.9	2°48.8	14	28°54.4	3°58.9
15	43°00.8	-0°43.0	15	43°14.1	0°28.2	15	43°27.6	1°39.1	15	43°41.1	2°49.7	15	43°54.6	3°59.9
16	58°01.0	-0°42.0	16	58°14.3	0°29.2	16	58°27.8	1°40.1	16	58°41.3	2°50.7	16	58°54.8	4°00.8
17	73°01.2	-0°41.0	17	73°14.5	0°30.1	17	73°28.0	1°41.1	17	73°41.5	2°51.7	17	73°55.0	4°01.8
18	88°01.3	-0°40.0	18	88°14.7	0°31.1	18	88°28.1	1°42.1	18	88°41.7	2°52.7	18	88°55.2	4°02.8
19	103°01.5	-0°39.0	19	103°14.8	0°32.1	19	103°28.3	1°43.1	19	103°41.9	2°53.7	19	103°55.3	4°03.7
20	118°01.7	-0°38.0	20	118°15.0	0°33.1	20	118°28.5	1°44.0	20	118°42.1	2°54.6	20	118°55.5	4°04.7
21	133°01.9	-0°37.0	21	133°15.2	0°34.1	21	133°28.7	1°45.0	21	133°42.2	2°55.6	21	133°55.7	4°05.7
22	148°02.1	-0°36.0	22	148°15.4	0°35.1	22	148°28.9	1°46.0	22	148°42.4	2°56.6	22	148°55.9	4°06.6
23	163°02.3	-0°35.1	23	163°15.6	0°36.1	23	163°29.1	1°47.0	23	163°42.6	2°57.6	23	163°56.1	4°07.6
	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°02.4	-0°34.1	0	178°15.8	0°37.1	0	178°29.3	1°48.0	0	178°42.8	2°58.5	0	178°56.3	4°08.6
1	193°02.6	-0°33.1	1	193°16.0	0°38.0	1	193°29.5	1°49.0	1	193°43.0	2°59.5	1	193°56.5	4°09.5
2	208°02.8	-0°32.1	2	208°16.1	0°39.0	2	208°29.6	1°49.9	2	208°43.2	3°00.5	2	208°56.6	4°10.5
3	223°03.0	-0°31.1	3	223°16.3	0°40.0	3	223°29.8	1°50.9	3	223°43.4	3°01.5	3	223°56.8	4°11.5
4	238°03.2	-0°30.1	4	238°16.5	0°41.0	4	238°30.0	1°51.9	4	238°43.6	3°02.4	4	238°57.0	4°12.5
5	253°03.4	-0°29.1	5	253°16.7	0°42.0	5	253°30.2	1°52.9	5	253°43.7	3°03.4	5	253°57.2	4°13.4
6	268°03.5	-0°28.1	6	268°16.9	0°43.0	6	268°30.4	1°53.9	6	268°43.9	3°04.4	6	268°57.4	4°14.4
7	283°03.7	-0°27.1	7	283°17.1	0°44.0	7	283°30.6	1°54.9	7	283°44.1	3°05.4	7	283°57.6	4°15.4
8	298°03.9	-0°26.2	8	298°17.3	0°44.9	8	298°30.8	1°55.8	8	298°44.3	3°06.3	8	298°57.8	4°16.3
9	313°04.1	-0°25.2	9	313°17.5	0°45.9	9	313°31.0	1°56.8	9	313°44.5	3°07.3	9	313°57.9	4°17.3
10	328°04.3	-0°24.2	10	328°17.6	0°46.9	10	328°31.1	1°57.8	10	328°44.7	3°08.3	10	328°58.1	4°18.3
11	343°04.5	-0°23.2	11	343°17.8	0°47.9	11	343°31.3	1°58.8	11	343°44.9	3°09.3	11	343°58.3	4°19.2
12	358°04.7	-0°22.2	12	358°18.0	0°48.9	12	358°31.5	1°59.8	12	358°45.1	3°10.3	12	358°58.5	4°20.2
13	13°04.8	-0°21.2	13	13°18.2	0°49.9	13	13°31.7	2°00.7	13	13°45.2	3°11.2	13	13°58.7	4°21.2
14	28°05.0	-0°20.2	14	28°18.4	0°50.9	14	28°31.9	2°01.7	14	28°45.4	3°12.2	14	28°58.9	4°22.1
15	43°05.2	-0°19.2	15	43°18.6	0°51.8	15	43°32.1	2°02.7	15	43°45.6	3°13.2	15	43°59.1	4°23.1
16	58°05.4	-0°18.3	16	58°18.8	0°52.8	16	58°32.3	2°03.7	16	58°45.8	3°14.2	16	58°59.2	4°24.1
17	73°05.6	-0°17.3	17	73°18.9	0°53.8	17	73°32.5	2°04.7	17	73°46.0	3°15.1	17	73°59.4	4°25.0
18	88°05.8	-0°16.3	18	88°19.1	0°54.8	18	88°32.7	2°05.7	18	88°46.2	3°16.1	18	88°59.6	4°26.0
19	103°05.9	-0°15.3	19	103°19.3	0°55.8	19	103°32.8	2°06.6	19	103°46.4	3°17.1	19	103°59.8	4°27.0
20	118°06.1	-0°14.3	20	118°19.5	0°56.8	20	118°33.0	2°07.6	20	118°46.6	3°18.1	20	118°60.0	4°27.9
21	133°06.3	-0°13.3	21	133°19.7	0°57.8	21	133°33.2	2°08.6	21	133°46.7	3°19.0	21	134°00.2	4°28.9
22	148°06.5	-0°12.3	22	148°19.9	0°58.7	22	148°33.4	2°09.6	22	148°46.9	3°20.0	22	149°00.4	4°29.9
23	163°06.7	-0°11.3	23	163°20.1	0°59.7	23	163°33.6	2°10.6	23	163°47.1	3°21.0	23	164°00.5	4°30.8
	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	179°00.7	4°31.8	0	179°13.9	5°40.9	0	179°26.8	6°49.0	0	179°39.3	7°56.2	0	179°51.1	9°02.1
1	194°00.9	4°32.7	1	194°14.1	5°41.8	1	194°27.0	6°50.0	1	194°39.4	7°57.1	1	194°51.3	9°03.0
2	209°01.1	4°33.7	2	209°14.3	5°42.8	2	209°27.2	6°50.9	2	209°39.6	7°58.0	2	209°51.4	9°03.9
3	224°01.3	4°34.7	3	224°14.5	5°43.7	3	224°27.4	6°51.9	3	224°39.8	7°58.9	3	224°51.6	9°04.8
4	239°01.5	4°35.6	4	239°14.7	5°44.7	4	239°27.5	6°52.8	4	239°39.9	7°59.9	4	239°51.7	9°05.7
5	254°01.7	4°36.6	5	254°14.9	5°45.6	5	254°27.7	6°53.7	5	254°40.1	8°00.8	5	254°51.9	9°06.6
6	269°01.8	4°37.6	6	269°15.0	5°46.6	6	269°27.9	6°54.7	6	269°40.3	8°01.7	6	269°52.1	9°07.5
7	284°02.0	4°38.5	7	284°15.2	5°47.5	7	284°28.1	6°55.6	7	284°40.4	8°02.6	7	284°52.2	9°08.4
8	299°02.2	4°39.5	8	299°15.4	5°48.5	8	299°28.2	6°56.6	8	299°40.6	8°03.6	8	299°52.4	9°09.3
9	314°02.4	4°40.5	9	314°15.6	5°49.4	9	314°28.4	6°57.5	9	314°40.8	8°04.5	9	314°52.5	9°10.2
10	329°02.6	4°41.4	10	329°15.8	5°50.4	10	329°28.6	6°58.4	10	329°41.0	8°05.4	10	329°52.7	9°11.1
11	344°02.8	4°42.4	11	344°15.9	5°51.3	11	344°28.8	6°59.4	11	344°41.1	8°06.3	11	344°52.8	9°12.0
12	359°02.9	4°43.4	12	359°16.1	5°52.3	12	359°28.9	7°00.3	12	359°41.3	8°07.2	12	359°53.0	9°12.9
13	14°03.1	4°44.3	13	14°16.3	5°53.3	13	14°29.1	7°01.3	13	14°41.5	8°08.2	13	14°53.2	9°13.8
14	29°03.3	4°45.3	14	29°16.5	5°54.2	14	29°29.3	7°02.2	14	29°41.6	8°09.1	14	29°53.3	9°14.7
15	44°03.5	4°46.2	15	44°16.7	5°55.2	15	44°29.5	7°03.1	15	44°41.8	8°10.0	15	44°53.5	9°15.6
16	59°03.7	4°47.2	16	59°16.8	5°56.1	16	59°29.6	7°04.1	16	59°42.0	8°10.9	16	59°53.6	9°16.6
17	74°03.9	4°48.2	17	74°17.0	5°57.1	17	74°29.8	7°05.0	17	74°42.1	8°11.8	17	74°53.8	9°17.5
18	89°04.1	4°49.1	18	89°17.2	5°58.0	18	89°30.0	7°05.9	18	89°42.3	8°12.8	18	89°53.9	9°18.4
19	104°04.2	4°50.1	19	104°17.4	5°59.0	19	104°30.2	7°06.9	19	104°42.5	8°13.7	19	104°54.1	9°19.3
20	119°04.4	4°51.1	20	119°17.6	5°59.9	20	119°30.3	7°07.8	20	119°42.6	8°14.6	20	119°54.3	9°20.2
21	134°04.6	4°52.0	21	134°17.7	6°00.9	21	134°30.5	7°08.7	21	134°42.8	8°15.5	21	134°54.4	9°21.1
22	149°04.8	4°53.0	22	149°17.9	6°01.8	22	149°30.7	7°09.7	22	149°43.0	8°16.4	22	149°54.6	9°22.0
23	164°05.0	4°53.9	23	164°18.1	6°02.8	23	164°30.9	7°10.6	23	164°43.1	8°17.2	23	164°54.7	9°22.9
	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°05.2	4°54.9	0	179°18.3	6°03.7	0	179°31.0	7°11.5	0	179°43.3	8°18.3	0	179°54.9	9°23.8
1	194°05.3	4°55.9	1	194°18.5	6°04.7	1	194°31.2	7°12.5	1	194°43.5	8°19.2	1	194°55.0	9°24.7
2	209°05.5	4°56.8	2	209°18.6	6°05.6	2	209°31.4	7°13.4	2	209°43.6	8°20.1	2	209°55.2	9°25.6
3	224°05.7	4°57.8	3	224°18.8	6°06.6	3	224°31.6	7°14.4	3	224°43.8	8°21.0	3	224°55.4	9°26.5
4	239°05.9	4°58.7	4	239°19.0	6°07.5	4	239°31.7	7°15.3	4	239°43.9	8°22.0	4	239°55.5	9°27.4
5	254°06.1	4°59.7	5	254°19.2	6°08.4	5	254°31.9	7°16.2	5	254°44.1	8°22.9	5	254°55.7	9°28.3
6	269°06.3	5°00.7	6	269°19.4	6°09.4	6	269°32.1	7°17.2	6	269°44.3	8°23.8	6	269°55.8	9°29.2
7	284°06.5	5°01.6	7	284°19.5	6°10.3	7	284°32.3	7°18.1	7	284°44.4	8°24.7	7	284°56.0	9°30.1
8	299°06.6	5°02.6	8	299°19.7	6°11.3	8	299°32.4	7°19.0	8	299°44.6	8°25.6	8	299°56.1	9°31.0
9	314°06.8	5°03.6	9	314°19.9	6°12.2	9	314°32.6	7°20.0	9	314°44.8	8°26.5	9	314°56.3	9°31.8
10	329°07.0	5°04.5	10	329°20.1	6°13.2	10	329°32.8	7°20.9	10	329°44.9	8°27.5	10	329°56.4	9°32.7
11	344°07.2	5°05.5	11	344°20.3	6°14.1	11	344°32.9	7°21.8	11	344°45.1	8°28.4	11	344°56.6	9°33.6
12	359°07.4	5°06.4	12	359°20.4	6°15.1	12	359°33.1	7°22.8	12	359°45.3	8°29.3	12	359°56.7	9°34.5
13	14°07.6	5°07.4	13	14°20.6	6°16.0	13	14°33.3	7°23.7	13	14°45.4	8°30.2	13	14°56.9	9°35.4
14	29°07.7	5°08.3	14	29°20.8	6°17.0	14	29°33.5	7°24.6	14	29°45.6	8°31.1	14	29°57.1	9°36.3
15	44°07.9	5°09.3	15	44°21.0	6°17.9	15	44°33.6	7°25.5	15	44°45.8	8°32.0	15	44°57.2	9°37.2
16	59°08.1	5°10.3	16	59°21.2	6°18.9	16	59°33.8	7°26.5	16	59°45.9	8°32.9	16	59°57.4	9°38.1
17	74°08.3	5°11.2	17	74°21.3	6°19.8	17	74°34.0	7°27.4	17	74°46.1	8°33.9	17	74°57.5	9°39.0
18	89°08.5	5°12.2	18	89°21.5	6°20.8	18	89°34.2	7°28.3	18	89°46.3	8°34.8	18	89°57.7	9°39.9
19	104°08.7	5°13.1	19	104°21.7	6°21.7	19	104°34.3	7°29.3	19	104°46.4	8°35.7	19	104°57.8	9°40.8
20	119°08.8	5°14.1	20	119°21.9	6°22.7	20	119°34.5	7°30.2	20	119°46.6	8°36.6	20	119°58.0	9°41.7
21	134°09.0	5°15.1	21	134°22.1	6°23.6	21	134°34.7	7°31.1	21	134°46.7	8°37.5	21	134°58.1	9°42.6
22	149°09.2	5°16.0	22	149°22.2	6°24.5	22	149°34.8	7°32.1	22	149°46.9	8°38.4	22	149°58.3	9°43.5
23	164°09.4	5°17.0	23	164°22.4	6°25.5	23	164°35.0	7°33.0	23	164°47.1	8°39.3	23	164°58.4	9°44.4
	SD.=16.0	d=1.0		SD.=16.0	d=0.9		SD.=16.0	d=0.9		SD.=16.0	d=0.9		SD.=15.9	d=0.9

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	179°09.6	5°17.9	0	179°22.6	6°26.4	0	179°35.2	7°33.9	0	179°47.2	8°40.3	0	179°58.6	9°45.3
1	194°09.8	5°18.9	1	194°22.8	6°27.4	1	194°35.4	7°34.9	1	194°47.4	8°41.2	1	194°58.7	9°46.2
2	209°09.9	5°19.8	2	209°22.9	6°28.3	2	209°35.5	7°35.8	2	209°47.6	8°42.1	2	209°58.9	9°47.1
3	224°10.1	5°20.8	3	224°23.1	6°29.3	3	224°35.7	7°36.7	3	224°47.7	8°43.0	3	224°59.0	9°48.0
4	239°10.3	5°21.8	4	239°23.3	6°30.2	4	239°35.9	7°37.6	4	239°47.9	8°43.9	4	239°59.2	9°48.9
5	254°10.5	5°22.7	5	254°23.5	6°31.2	5	254°36.0	7°38.6	5	254°48.0	8°44.8	5	254°59.3	9°49.7
6	269°10.7	5°23.7	6	269°23.7	6°32.1	6	269°36.2	7°39.5	6	269°48.2	8°45.7	6	269°59.5	9°50.6
7	284°10.9	5°24.6	7	284°23.8	6°33.0	7	284°36.4	7°40.4	7	284°48.4	8°46.6	7	284°59.6	9°51.5
8	299°11.0	5°25.6	8	299°24.0	6°34.0	8	299°36.6	7°41.4	8	299°48.5	8°47.5	8	299°59.8	9°52.4
9	314°11.2	5°26.5	9	314°24.2	6°34.9	9	314°36.7	7°42.3	9	314°48.7	8°48.5	9	314°59.9	9°53.3
10	329°11.4	5°27.5	10	329°24.4	6°35.9	10	329°36.9	7°43.2	10	329°48.9	8°49.4	10	330°00.1	9°54.2
11	344°11.6	5°28.5	11	344°24.5	6°36.8	11	344°37.1	7°44.1	11	344°49.0	8°50.3	11	345°00.2	9°55.1
12	359°11.8	5°29.4	12	359°24.7	6°37.8	12	359°37.2	7°45.1	12	359°49.2	8°51.2	12	0°00.4	9°56.0
13	14°11.9	5°30.4	13	14°24.9	6°38.7	13	14°37.4	7°46.0	13	14°49.3	8°52.1	13	15°00.5	9°56.9
14	29°12.1	5°31.3	14	29°25.1	6°39.6	14	29°37.6	7°46.9	14	29°49.5	8°53.0	14	30°00.7	9°57.8
15	44°12.3	5°32.3	15	44°25.2	6°40.6	15	44°37.7	7°47.8	15	44°49.7	8°53.9	15	45°00.8	9°58.7
16	59°12.5	5°33.2	16	59°25.4	6°41.5	16	59°37.9	7°48.8	16	59°49.8	8°54.8	16	60°01.0	9°59.5
17	74°12.7	5°34.2	17	74°25.6	6°42.5	17	74°38.1	7°49.7	17	74°50.0	8°55.7	17	75°01.1	10°00.4
18	89°12.9	5°35.1	18	89°25.8	6°43.4	18	89°38.3	7°50.6	18	89°50.1	8°56.6	18	90°01.3	10°01.3
19	104°13.0	5°36.1	19	104°26.0	6°44.3	19	104°38.4	7°51.5	19	104°50.3	8°57.5	19	105°01.4	10°02.2
20	119°13.2	5°37.1	20	119°26.1	6°45.3	20	119°38.6	7°52.5	20	119°50.5	8°58.5	20	120°01.6	10°03.1
21	134°13.4	5°38.0	21	134°26.3	6°46.2	21	134°38.8	7°53.4	21	134°50.6	8°59.4	21	135°01.7	10°04.0
22	149°13.6	5°39.0	22	149°26.5	6°47.2	22	149°38.9	7°54.3	22	149°50.8	9°00.3	22	150°01.9	10°04.9
23	164°13.8	5°39.9	23	164°26.7	6°48.1	23	164°39.1	7°55.2	23	164°50.9	9°01.2	23	165°02.0	10°05.8
	SD.=16.0	d=1.0		SD.=16.0	d=0.9		SD.=16.0	d=0.9		SD.=16.0	d=0.9		SD.=15.9	d=0.9

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	180°02.2	10°06.6	0	180°12.4	11°09.7	0	180°21.7	12°11.1	0	180°29.9	13°10.8	0	180°37.1	14°08.5
1	195°02.3	10°07.5	1	195°12.6	11°10.6	1	195°21.8	12°12.0	1	195°30.1	13°11.6	1	195°37.2	14°09.2
2	210°02.5	10°08.4	2	210°12.7	11°11.4	2	210°22.0	12°12.8	2	210°30.2	13°12.4	2	210°37.3	14°10.0
3	225°02.6	10°09.3	3	225°12.8	11°12.3	3	225°22.1	12°13.7	3	225°30.3	13°13.2	3	225°37.4	14°10.8
4	240°02.8	10°10.2	4	240°13.0	11°13.2	4	240°22.2	12°14.5	4	240°30.4	13°14.0	4	240°37.4	14°11.6
5	255°02.9	10°11.1	5	255°13.1	11°14.0	5	255°22.3	12°15.3	5	255°30.5	13°14.8	5	255°37.5	14°12.4
6	270°03.1	10°12.0	6	270°13.2	11°14.9	6	270°22.4	12°16.2	6	270°30.6	13°15.7	6	270°37.6	14°13.2
7	285°03.2	10°12.8	7	285°13.4	11°15.8	7	285°22.6	12°17.0	7	285°30.7	13°16.5	7	285°37.7	14°14.0
8	300°03.4	10°13.7	8	300°13.5	11°16.6	8	300°22.7	12°17.9	8	300°30.8	13°17.3	8	300°37.8	14°14.7
9	315°03.5	10°14.6	9	315°13.6	11°17.5	9	315°22.8	12°18.7	9	315°30.9	13°18.1	9	315°37.9	14°15.5
10	330°03.7	10°15.5	10	330°13.8	11°18.3	10	330°22.9	12°19.5	10	330°31.0	13°18.9	10	330°38.0	14°16.3
11	345°03.8	10°16.4	11	345°13.9	11°19.2	11	345°23.0	12°20.4	11	345°31.1	13°19.7	11	345°38.1	14°17.1
12	0°04.0	10°17.3	12	0°14.0	11°20.1	12	0°23.2	12°21.2	12	0°31.2	13°20.5	12	0°38.2	14°17.9
13	15°04.1	10°18.1	13	15°14.2	11°20.9	13	15°23.3	12°22.0	13	15°31.3	13°21.3	13	15°38.3	14°18.6
14	30°04.3	10°19.0	14	30°14.3	11°21.8	14	30°23.4	12°22.9	14	30°31.4	13°22.1	14	30°38.3	14°19.4
15	45°04.4	10°19.9	15	45°14.4	11°22.6	15	45°23.5	12°23.7	15	45°31.5	13°22.9	15	45°38.4	14°20.2
16	60°04.5	10°20.8	16	60°14.6	11°23.5	16	60°23.6	12°24.5	16	60°31.6	13°23.8	16	60°38.5	14°21.0
17	75°04.7	10°21.7	17	75°14.7	11°24.4	17	75°23.8	12°25.4	17	75°31.7	13°24.6	17	75°38.6	14°21.8
18	90°04.8	10°22.6	18	90°14.8	11°25.2	18	90°23.9	12°26.2	18	90°31.8	13°25.4	18	90°38.7	14°22.6
19	105°05.0	10°23.4	19	105°15.0	11°26.1	19	105°24.0	12°27.1	19	105°31.9	13°26.2	19	105°38.8	14°23.3
20	120°05.1	10°24.3	20	120°15.1	11°26.9	20	120°24.1	12°27.9	20	120°32.0	13°27.0	20	120°38.9	14°24.1
21	135°05.3	10°25.2	21	135°15.2	11°27.8	21	135°24.2	12°28.7	21	135°32.1	13°27.8	21	135°39.0	14°24.9
22	150°05.4	10°26.1	22	150°15.4	11°28.7	22	150°24.3	12°29.6	22	150°32.2	13°28.6	22	150°39.0	14°25.7
23	165°05.6	10°27.0	23	165°15.5	11°29.5	23	165°24.5	12°30.4	23	165°32.3	13°29.4	23	165°39.1	14°26.4
	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°05.7	10°27.8	0	180°15.6	11°30.4	0	180°24.6	12°31.2	0	180°32.5	13°30.2	0	180°39.2	14°27.2
1	195°05.9	10°28.7	1	195°15.8	11°31.2	1	195°24.7	12°32.1	1	195°32.6	13°31.0	1	195°39.3	14°28.0
2	210°06.0	10°29.6	2	210°15.9	11°32.1	2	210°24.8	12°32.9	2	210°32.7	13°31.8	2	210°39.4	14°28.8
3	225°06.1	10°30.5	3	225°16.0	11°32.9	3	225°24.9	12°33.7	3	225°32.8	13°32.6	3	225°39.5	14°29.6
4	240°06.3	10°31.4	4	240°16.2	11°33.8	4	240°25.0	12°34.5	4	240°32.9	13°33.4	4	240°39.6	14°30.3
5	255°06.4	10°32.2	5	255°16.3	11°34.7	5	255°25.2	12°35.4	5	255°33.0	13°34.2	5	255°39.6	14°31.1
6	270°06.6	10°33.1	6	270°16.4	11°35.5	6	270°25.3	12°36.2	6	270°33.1	13°35.0	6	270°39.7	14°31.9
7	285°06.7	10°34.0	7	285°16.6	11°36.4	7	285°25.4	12°37.0	7	285°33.2	13°35.9	7	285°39.8	14°32.7
8	300°06.9	10°34.9	8	300°16.7	11°37.2	8	300°25.5	12°37.9	8	300°33.3	13°36.7	8	300°39.9	14°33.4
9	315°07.0	10°35.7	9	315°16.8	11°38.1	9	315°25.6	12°38.7	9	315°33.4	13°37.5	9	315°40.0	14°34.2
10	330°07.1	10°36.6	10	330°16.9	11°38.9	10	330°25.7	12°39.5	10	330°33.5	13°38.3	10	330°40.1	14°35.0
11	345°07.3	10°37.5	11	345°17.1	11°39.8	11	345°25.9	12°40.4	11	345°33.6	13°39.1	11	345°40.1	14°35.7
12	0°07.4	10°38.4	12	0°17.2	11°40.6	12	0°26.0	12°41.2	12	0°33.7	13°39.9	12	0°40.2	14°36.5
13	15°07.6	10°39.3	13	15°17.3	11°41.5	13	15°26.1	12°42.0	13	15°33.8	13°40.7	13	15°40.3	14°37.3
14	30°07.7	10°40.1	14	30°17.5	11°42.3	14	30°26.2	12°42.8	14	30°33.9	13°41.5	14	30°40.4	14°38.1
15	45°07.9	10°41.0	15	45°17.6	11°43.2	15	45°26.3	12°43.7	15	45°34.0	13°42.3	15	45°40.5	14°38.8
16	60°08.0	10°41.9	16	60°17.7	11°44.0	16	60°26.4	12°44.5	16	60°34.1	13°43.1	16	60°40.6	14°39.6
17	75°08.1	10°42.8	17	75°17.8	11°44.9	17	75°26.5	12°45.3	17	75°34.1	13°43.9	17	75°40.6	14°40.4
18	90°08.3	10°43.6	18	90°18.0	11°45.8	18	90°26.6	12°46.1	18	90°34.2	13°44.7	18	90°40.7	14°41.1
19	105°08.4	10°44.5	19	105°18.1	11°46.6	19	105°26.8	12°47.0	19	105°34.3	13°45.5	19	105°40.8	14°41.9
20	120°08.6	10°45.4	20	120°18.2	11°47.5	20	120°26.9	12°47.8	20	120°34.4	13°46.3	20	120°40.9	14°42.7
21	135°08.7	10°46.2	21	135°18.4	11°48.3	21	135°27.0	12°48.6	21	135°34.5	13°47.1	21	135°41.0	14°43.4
22	150°08.8	10°47.1	22	150°18.5	11°49.2	22	150°27.1	12°49.4	22	150°34.6	13°47.9	22	150°41.0	14°44.2
23	165°09.0	10°48.0	23	165°18.6	11°50.0	23	165°27.2	12°50.3	23	165°34.7	13°48.7	23	165°41.1	14°45.0
	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°09.1	10°48.9	0	180°18.7	11°50.9	0	180°27.3	12°51.1	0	180°34.8	13°49.4	0	180°41.2	14°45.8
1	195°09.3	10°49.7	1	195°18.9	11°51.7	1	195°27.4	12°51.9	1	195°34.9	13°50.2	1	195°41.3	14°46.5
2	210°09.4	10°50.6	2	210°19.0	11°52.6	2	210°27.5	12°52.7	2	210°35.0	13°51.0	2	210°41.4	14°47.3
3	225°09.5	10°51.5	3	225°19.1	11°53.4	3	225°27.7	12°53.6	3	225°35.1	13°51.8	3	225°41.5	14°48.1
4	240°09.7	10°52.4	4	240°19.2	11°54.2	4	240°27.8	12°54.4	4	240°35.2	13°52.6	4	240°41.5	14°48.8
5	255°09.8	10°53.2	5	255°19.4	11°55.1	5	255°27.9	12°55.2	5	255°35.3	13°53.4	5	255°41.6	14°49.6
6	270°10.0	10°54.1	6	270°19.5	11°55.9	6	270°28.0	12°56.0	6	270°35.4	13°54.2	6	270°41.7	14°50.3
7	285°10.1	10°55.0	7	285°19.6	11°56.8	7	285°28.1	12°56.9	7	285°35.5	13°55.0	7	285°41.8	14°51.1
8	300°10.2	10°55.8	8	300°19.7	11°57.6	8	300°28.2	12°57.7	8	300°35.6	13°55.8	8	300°41.8	14°51.9
9	315°10.4	10°56.7	9	315°19.9	11°58.5	9	315°28.3	12°58.5	9	315°35.7	13°56.6	9	315°41.9	14°52.6
10	330°10.5	10°57.6	10	330°20.0	11°59.3	10	330°28.4	12°59.3	10	330°35.8	13°57.4	10	330°42.0	14°53.4
11	345°10.7	10°58.4	11	345°20.1	12°00.2	11	345°28.5	13°00.1	11	345°35.9	13°58.2	11	345°42.1	14°54.2
12	0°10.8	10°59.3	12	0°20.2	12°01.0	12	0°28.7	13°01.0	12	0°36.0	13°59.0	12	0°42.2	14°54.9
13	15°10.9	11°00.2	13	15°20.4	12°01.9	13	15°28.8	13°01.8	13	15°36.1	13°59.8	13	15°42.2	14°55.7
14	30°11.1	11°01.0	14	30°20.5	12°02.7	14	30°28.9	13°02.6	14	30°36.2	14°00.6	14	30°42.3	14°56.4
15	45°11.2	11°01.9	15	45°20.6	12°03.6	15	45°29.0	13°03.4	15	45°36.3	14°01.4	15	45°42.4	14°57.2
16	60°11.3	11°02.8	16	60°20.7	12°04.4	16	60°29							

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	180°43.1	15°04.0	0	180°47.9	15°57.4	0	180°51.6	16°48.3	0	180°53.9	17°36.7	0	180°55.0	18°22.5
1	195°43.2	15°04.8	1	195°48.0	15°58.1	1	195°51.6	16°49.0	1	195°54.0	17°37.4	1	195°55.0	18°23.1
2	210°43.2	15°05.6	2	210°48.0	15°58.8	2	210°51.6	16°49.7	2	210°54.0	17°38.0	2	210°55.1	18°23.7
3	225°43.3	15°06.3	3	225°48.1	15°59.5	3	225°51.7	16°50.4	3	225°54.0	17°38.7	3	225°55.1	18°24.3
4	240°43.4	15°07.1	4	240°48.2	16°00.3	4	240°51.7	16°51.1	4	240°54.0	17°39.3	4	240°55.1	18°24.9
5	255°43.5	15°07.8	5	255°48.2	16°01.0	5	255°51.8	16°51.8	5	255°54.1	17°40.0	5	255°55.1	18°25.6
6	270°43.5	15°08.6	6	270°48.3	16°01.7	6	270°51.8	16°52.4	6	270°54.1	17°40.6	6	270°55.1	18°26.2
7	285°43.6	15°09.3	7	285°48.3	16°02.4	7	285°51.8	16°53.1	7	285°54.1	17°41.3	7	285°55.1	18°26.8
8	300°43.7	15°10.1	8	300°48.4	16°03.2	8	300°51.9	16°53.8	8	300°54.1	17°41.9	8	300°55.1	18°27.4
9	315°43.8	15°10.8	9	315°48.4	16°03.9	9	315°51.9	16°54.5	9	315°54.1	17°42.6	9	315°55.1	18°28.0
10	330°43.8	15°11.6	10	330°48.5	16°04.6	10	330°52.0	16°55.2	10	330°54.2	17°43.2	10	330°55.1	18°28.6
11	345°43.9	15°12.3	11	345°48.6	16°05.3	11	345°52.0	16°55.9	11	345°54.2	17°43.9	11	345°55.1	18°29.2
12	0°44.0	15°13.1	12	0°48.6	16°06.0	12	0°52.0	16°56.6	12	0°54.2	17°44.5	12	0°55.1	18°29.8
13	15°44.0	15°13.8	13	15°48.7	16°06.8	13	15°52.1	16°57.2	13	15°54.2	17°45.2	13	15°55.1	18°30.4
14	30°44.1	15°14.6	14	30°48.7	16°07.5	14	30°52.1	16°57.9	14	30°54.3	17°45.8	14	30°55.1	18°31.1
15	45°44.2	15°15.3	15	45°48.8	16°08.2	15	45°52.2	16°58.6	15	45°54.3	17°46.5	15	45°55.1	18°31.7
16	60°44.3	15°16.1	16	60°48.8	16°08.9	16	60°52.2	16°59.3	16	60°54.3	17°47.1	16	60°55.1	18°32.3
17	75°44.3	15°16.8	17	75°48.9	16°09.6	17	75°52.2	16°60.0	17	75°54.3	17°47.8	17	75°55.1	18°32.9
18	90°44.4	15°17.6	18	90°48.9	16°10.3	18	90°52.3	17°00.7	18	90°54.3	17°48.4	18	90°55.1	18°33.5
19	105°44.5	15°18.3	19	105°49.0	16°11.1	19	105°52.3	17°01.3	19	105°54.4	17°49.1	19	105°55.1	18°34.1
20	120°44.5	15°19.1	20	120°49.1	16°11.8	20	120°52.3	17°02.0	20	120°54.4	17°49.7	20	120°55.1	18°34.7
21	135°44.6	15°19.8	21	135°49.1	16°12.5	21	135°52.4	17°02.7	21	135°54.4	17°50.3	21	135°55.1	18°35.3
22	150°44.7	15°20.6	22	150°49.2	16°13.2	22	150°52.4	17°03.4	22	150°54.4	17°51.0	22	150°55.1	18°35.9
23	165°44.8	15°21.3	23	165°49.2	16°13.9	23	165°52.5	17°04.1	23	165°54.4	17°51.6	23	165°55.1	18°36.5
	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°44.8	15°22.1	0	180°49.3	16°14.6	0	180°52.5	17°04.7	0	180°54.4	17°52.3	0	180°55.1	18°37.1
1	195°44.9	15°22.8	1	195°49.3	16°15.3	1	195°52.5	17°05.4	1	195°54.5	17°52.9	1	195°55.1	18°37.7
2	210°45.0	15°23.6	2	210°49.4	16°16.1	2	210°52.6	17°06.1	2	210°54.5	17°53.6	2	210°55.1	18°38.3
3	225°45.0	15°24.3	3	225°49.4	16°16.8	3	225°52.6	17°06.8	3	225°54.5	17°54.2	3	225°55.1	18°38.9
4	240°45.1	15°25.1	4	240°49.5	16°17.5	4	240°52.6	17°07.4	4	240°54.5	17°54.8	4	240°55.1	18°39.5
5	255°45.2	15°25.8	5	255°49.5	16°18.2	5	255°52.7	17°08.1	5	255°54.5	17°55.5	5	255°55.1	18°40.1
6	270°45.2	15°26.5	6	270°49.6	16°18.9	6	270°52.7	17°08.8	6	270°54.6	17°56.1	6	270°55.1	18°40.7
7	285°45.3	15°27.3	7	285°49.6	16°19.6	7	285°52.7	17°09.5	7	285°54.6	17°56.8	7	285°55.1	18°41.3
8	300°45.4	15°28.0	8	300°49.7	16°20.3	8	300°52.8	17°10.2	8	300°54.6	17°57.4	8	300°55.1	18°41.9
9	315°45.4	15°28.8	9	315°49.7	16°21.0	9	315°52.8	17°10.8	9	315°54.6	17°58.0	9	315°55.1	18°42.5
10	330°45.5	15°29.5	10	330°49.8	16°21.7	10	330°52.8	17°11.5	10	330°54.6	17°58.7	10	330°55.1	18°43.1
11	345°45.6	15°30.3	11	345°49.8	16°22.4	11	345°52.9	17°12.2	11	345°54.6	17°59.3	11	345°55.1	18°43.7
12	0°45.6	15°31.0	12	0°49.9	16°23.2	12	0°52.9	17°12.8	12	0°54.7	17°59.9	12	0°55.1	18°44.3
13	15°45.7	15°31.7	13	15°49.9	16°23.9	13	15°52.9	17°13.5	13	15°54.7	18°00.6	13	15°55.1	18°44.9
14	30°45.8	15°32.5	14	30°50.0	16°24.6	14	30°53.0	17°14.2	14	30°54.7	18°01.2	14	30°55.1	18°45.5
15	45°45.9	15°33.2	15	45°50.0	16°25.3	15	45°53.0	17°14.9	15	45°54.7	18°01.8	15	45°55.1	18°46.1
16	60°45.9	15°34.0	16	60°50.1	16°26.0	16	60°53.0	17°15.5	16	60°54.7	18°02.5	16	60°55.1	18°46.7
17	75°46.0	15°34.7	17	75°50.1	16°26.7	17	75°53.1	17°16.2	17	75°54.7	18°03.1	17	75°55.1	18°47.3
18	90°46.0	15°35.4	18	90°50.2	16°27.4	18	90°53.1	17°16.9	18	90°54.7	18°03.7	18	90°55.1	18°47.9
19	105°46.1	15°36.2	19	105°50.2	16°28.1	19	105°53.1	17°17.5	19	105°54.8	18°04.4	19	105°55.1	18°48.5
20	120°46.2	15°36.9	20	120°50.3	16°28.8	20	120°53.2	17°18.2	20	120°54.8	18°05.0	20	120°55.1	18°49.1
21	135°46.2	15°37.6	21	135°50.3	16°29.5	21	135°53.2	17°18.9	21	135°54.8	18°05.6	21	135°55.1	18°49.7
22	150°46.3	15°38.4	22	150°50.4	16°30.2	22	150°53.2	17°19.5	22	150°54.8	18°06.3	22	150°55.1	18°50.3
23	165°46.4	15°39.1	23	165°50.4	16°30.9	23	165°53.3	17°20.2	23	165°54.8	18°06.9	23	165°55.1	18°50.8
	SD.=15.9	d=0.7		SD.=15.9	d=0.7		SD.=15.8	d=0.7		SD.=15.8	d=0.6		SD.=15.8	d=0.6

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	180°46.4	15°39.9	0	180°50.5	16°31.6	0	180°53.3	17°20.9	0	180°54.8	18°07.5	0	180°55.1	18°51.4
1	195°46.5	15°40.6	1	195°50.5	16°32.3	1	195°53.3	17°21.5	1	195°54.8	18°08.2	1	195°55.1	18°52.0
2	210°46.6	15°41.3	2	210°50.6	16°33.0	2	210°53.3	17°22.2	2	210°54.8	18°08.8	2	210°55.0	18°52.6
3	225°46.6	15°42.1	3	225°50.6	16°33.7	3	225°53.4	17°22.9	3	225°54.9	18°09.4	3	225°55.0	18°53.2
4	240°46.7	15°42.8	4	240°50.7	16°34.4	4	240°53.4	17°23.5	4	240°54.9	18°10.0	4	240°55.0	18°53.8
5	255°46.8	15°43.5	5	255°50.7	16°35.1	5	255°53.4	17°24.2	5	255°54.9	18°10.7	5	255°55.0	18°54.4
6	270°46.8	15°44.3	6	270°50.8	16°35.8	6	270°53.5	17°24.9	6	270°54.9	18°11.3	6	270°55.0	18°55.0
7	285°46.9	15°45.0	7	285°50.8	16°36.5	7	285°53.5	17°25.5	7	285°54.9	18°11.9	7	285°55.0	18°55.6
8	300°46.9	15°45.7	8	300°50.9	16°37.2	8	300°53.5	17°26.2	8	300°54.9	18°12.5	8	300°55.0	18°56.1
9	315°47.0	15°46.5	9	315°50.9	16°37.9	9	315°53.5	17°26.9	9	315°54.9	18°13.2	9	315°55.0	18°56.7
10	330°47.1	15°47.2	10	330°50.9	16°38.6	10	330°53.6	17°27.5	10	330°54.9	18°13.8	10	330°55.0	18°57.3
11	345°47.1	15°47.9	11	345°51.0	16°39.3	11	345°53.6	17°28.2	11	345°54.9	18°14.4	11	345°55.0	18°57.9
12	0°47.2	15°48.6	12	0°51.0	16°40.0	12	0°53.6	17°28.8	12	0°54.9	18°15.0	12	0°55.0	18°58.5
13	15°47.3	15°49.4	13	15°51.1	16°40.7	13	15°53.7	17°29.5	13	15°55.0	18°15.7	13	15°55.0	18°59.1
14	30°47.3	15°50.1	14	30°51.1	16°41.4	14	30°53.7	17°30.2	14	30°55.0	18°16.3	14	30°55.0	18°59.6
15	45°47.4	15°50.8	15	45°51.2	16°42.1	15	45°53.7	17°30.8	15	45°55.0	18°16.9	15	45°54.9	19°00.2
16	60°47.4	15°51.6	16	60°51.2	16°42.8	16	60°53.7	17°31.5	16	60°55.0	18°17.5	16	60°54.9	19°00.8
17	75°47.5	15°52.3	17	75°51.3	16°43.5	17	75°53.8	17°32.1	17	75°55.0	18°18.1	17	75°54.9	19°01.4
18	90°47.6	15°53.0	18	90°51.3	16°44.2	18	90°53.8	17°32.8	18	90°55.0	18°18.8	18	90°54.9	19°02.0
19	105°47.6	15°53.7	19	105°51.3	16°44.9	19	105°53.8	17°33.4	19	105°55.0	18°19.4	19	105°54.9	19°02.6
20	120°47.7	15°54.5	20	120°51.4	16°45.6	20	120°53.8	17°34.1	20	120°55.0	18°20.0	20	120°54.9	19°03.1
21	135°47.7	15°55.2	21	135°51.4	16°46.2	21	135°53.9	17°34.8	21	135°55.0	18°20.6	21	135°54.9	19°03.7
22	150°47.8	15°55.9	22	150°51.5	16°46.9	22	150°53.9	17°35.4	22	150°55.0	18°21.2	22	150°54.9	19°04.3
23	165°47.9	15°56.7	23	165°51.5	16°47.6	23	165°53.9	17°36.1	23	165°55.0	18°21.9	23	165°54.9	19°04.9
	SD.=15.9</													

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	180°54.9	19°05.4	0	180°53.4	19°45.5	0	180°50.6	20°22.6	0	180°46.6	20°56.5	0	180°41.5	21°27.1
1	195°54.8	19°06.0	1	195°53.3	19°46.0	1	195°50.5	20°23.1	1	195°46.6	20°56.9	1	195°41.4	21°27.5
2	210°54.8	19°06.6	2	210°53.3	19°46.6	2	210°50.5	20°23.5	2	210°46.5	20°57.4	2	210°41.4	21°27.9
3	225°54.8	19°07.2	3	225°53.3	19°47.1	3	225°50.5	20°24.0	3	225°46.4	20°57.8	3	225°41.3	21°28.3
4	240°54.8	19°07.7	4	240°53.2	19°47.7	4	240°50.4	20°24.5	4	240°46.4	20°58.3	4	240°41.2	21°28.7
5	255°54.8	19°08.3	5	255°53.2	19°48.2	5	255°50.4	20°25.0	5	255°46.3	20°58.7	5	255°41.1	21°29.1
6	270°54.8	19°08.9	6	270°53.2	19°48.7	6	270°50.3	20°25.5	6	270°46.2	20°59.1	6	270°41.0	21°29.5
7	285°54.8	19°09.5	7	285°53.1	19°49.2	7	285°50.3	20°26.0	7	285°46.2	20°59.6	7	285°41.0	21°29.9
8	300°54.7	19°10.0	8	300°53.1	19°49.8	8	300°50.2	20°26.5	8	300°46.1	21°00.0	8	300°40.9	21°30.3
9	315°54.7	19°10.6	9	315°53.1	19°50.3	9	315°50.2	20°27.0	9	315°46.0	21°00.5	9	315°40.8	21°30.7
10	330°54.7	19°11.2	10	330°53.1	19°50.8	10	330°50.1	20°27.5	10	330°46.0	21°00.9	10	330°40.7	21°31.1
11	345°54.7	19°11.8	11	345°53.0	19°51.4	11	345°50.1	20°27.9	11	345°45.9	21°01.4	11	345°40.6	21°31.5
12	0°54.7	19°12.3	12	0°53.0	19°51.9	12	0°50.0	20°28.4	12	0°45.8	21°01.8	12	0°40.6	21°31.9
13	15°54.7	19°12.9	13	15°53.0	19°52.4	13	15°50.0	20°28.9	13	15°45.8	21°02.2	13	15°40.5	21°32.3
14	30°54.7	19°13.5	14	30°52.9	19°53.0	14	30°49.9	20°29.4	14	30°45.7	21°02.7	14	30°40.4	21°32.7
15	45°54.6	19°14.0	15	45°52.9	19°53.5	15	45°49.9	20°29.9	15	45°45.6	21°03.1	15	45°40.3	21°33.1
16	60°54.6	19°14.6	16	60°52.9	19°54.0	16	60°49.8	20°30.4	16	60°45.6	21°03.6	16	60°40.2	21°33.5
17	75°54.6	19°15.2	17	75°52.8	19°54.5	17	75°49.8	20°30.9	17	75°45.5	21°04.0	17	75°40.2	21°33.9
18	90°54.6	19°15.7	18	90°52.8	19°55.1	18	90°49.7	20°31.3	18	90°45.4	21°04.4	18	90°40.1	21°34.3
19	105°54.6	19°16.3	19	105°52.8	19°55.6	19	105°49.7	20°31.8	19	105°45.4	21°04.9	19	105°40.0	21°34.7
20	120°54.6	19°16.9	20	120°52.7	19°56.1	20	120°49.6	20°32.3	20	120°45.3	21°05.3	20	120°39.9	21°35.1
21	135°54.5	19°17.4	21	135°52.7	19°56.6	21	135°49.6	20°32.8	21	135°45.2	21°05.8	21	135°39.8	21°35.5
22	150°54.5	19°18.0	22	150°52.6	19°57.2	22	150°49.5	20°33.3	22	150°45.2	21°06.2	22	150°39.8	21°35.8
23	165°54.5	19°18.6	23	165°52.6	19°57.7	23	165°49.5	20°33.7	23	165°45.1	21°06.6	23	165°39.7	21°36.2
	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

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	180°54.5	19°19.1	0	180°52.6	19°58.2	0	180°49.4	20°34.2	0	180°45.0	21°07.1	0	180°39.6	21°36.6
1	195°54.5	19°19.7	1	195°52.5	19°58.7	1	195°49.3	20°34.7	1	195°45.0	21°07.5	1	195°39.5	21°37.0
2	210°54.5	19°20.3	2	210°52.5	19°59.2	2	210°49.3	20°35.2	2	210°44.9	21°07.9	2	210°39.4	21°37.4
3	225°54.4	19°20.8	3	225°52.5	19°59.8	3	225°49.2	20°35.6	3	225°44.8	21°08.4	3	225°39.3	21°37.8
4	240°54.4	19°21.4	4	240°52.4	20°00.3	4	240°49.2	20°36.1	4	240°44.8	21°08.8	4	240°39.3	21°38.2
5	255°54.4	19°21.9	5	255°52.4	20°00.8	5	255°49.1	20°36.6	5	255°44.7	21°09.2	5	255°39.2	21°38.6
6	270°54.4	19°22.5	6	270°52.4	20°01.3	6	270°49.1	20°37.1	6	270°44.6	21°09.6	6	270°39.1	21°38.9
7	285°54.4	19°23.1	7	285°52.3	20°01.8	7	285°49.0	20°37.5	7	285°44.6	21°10.1	7	285°39.0	21°39.3
8	300°54.3	19°23.6	8	300°52.3	20°02.4	8	300°49.0	20°38.0	8	300°44.5	21°10.5	8	300°38.9	21°39.7
9	315°54.3	19°24.2	9	315°52.2	20°02.9	9	315°48.9	20°38.5	9	315°44.4	21°10.9	9	315°38.8	21°40.1
10	330°54.3	19°24.7	10	330°52.2	20°03.4	10	330°48.9	20°39.0	10	330°44.3	21°11.4	10	330°38.8	21°40.5
11	345°54.3	19°25.3	11	345°52.2	20°03.9	11	345°48.8	20°39.4	11	345°44.3	21°11.8	11	345°38.7	21°40.8
12	0°54.3	19°25.8	12	0°52.1	20°04.4	12	0°48.8	20°39.9	12	0°44.2	21°12.2	12	0°38.6	21°41.2
13	15°54.2	19°26.4	13	15°52.1	20°04.9	13	15°48.7	20°40.4	13	15°44.1	21°12.6	13	15°38.5	21°41.6
14	30°54.2	19°27.0	14	30°52.1	20°05.4	14	30°48.6	20°40.9	14	30°44.1	21°13.1	14	30°38.4	21°42.0
15	45°54.2	19°27.5	15	45°52.0	20°06.0	15	45°48.6	20°41.3	15	45°44.0	21°13.5	15	45°38.3	21°42.4
16	60°54.2	19°28.1	16	60°52.0	20°06.5	16	60°48.5	20°41.8	16	60°43.9	21°13.9	16	60°38.2	21°42.7
17	75°54.2	19°28.6	17	75°51.9	20°07.0	17	75°48.5	20°42.3	17	75°43.8	21°14.3	17	75°38.2	21°43.1
18	90°54.1	19°29.2	18	90°51.9	20°07.5	18	90°48.4	20°42.7	18	90°43.8	21°14.8	18	90°38.1	21°43.5
19	105°54.1	19°29.7	19	105°51.9	20°08.0	19	105°48.4	20°43.2	19	105°43.7	21°15.2	19	105°38.0	21°43.9
20	120°54.1	19°30.3	20	120°51.8	20°08.5	20	120°48.3	20°43.7	20	120°43.6	21°15.6	20	120°37.9	21°44.2
21	135°54.1	19°30.8	21	135°51.8	20°09.0	21	135°48.2	20°44.1	21	135°43.6	21°16.0	21	135°37.8	21°44.6
22	150°54.0	19°31.4	22	150°51.7	20°09.5	22	150°48.2	20°44.6	22	150°43.5	21°16.4	22	150°37.7	21°45.0
23	165°54.0	19°31.9	23	165°51.7	20°10.0	23	165°48.1	20°45.1	23	165°43.4	21°16.9	23	165°37.6	21°45.4
	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°54.0	19°32.5	0	180°51.7	20°10.6	0	180°48.1	20°45.5	0	180°43.3	21°17.3	0	180°37.6	21°45.7
1	195°54.0	19°33.0	1	195°51.6	20°11.1	1	195°48.0	20°46.0	1	195°43.3	21°17.7	1	195°37.5	21°46.1
2	210°54.0	19°33.6	2	210°51.6	20°11.6	2	210°48.0	20°46.4	2	210°43.2	21°18.1	2	210°37.4	21°46.5
3	225°53.9	19°34.1	3	225°51.5	20°12.1	3	225°47.9	20°46.9	3	225°43.1	21°18.5	3	225°37.3	21°46.8
4	240°53.9	19°34.7	4	240°51.5	20°12.6	4	240°47.8	20°47.4	4	240°43.0	21°18.9	4	240°37.2	21°47.2
5	255°53.9	19°35.2	5	255°51.4	20°13.1	5	255°47.8	20°47.8	5	255°43.0	21°19.4	5	255°37.1	21°47.6
6	270°53.9	19°35.8	6	270°51.4	20°13.6	6	270°47.7	20°48.3	6	270°42.9	21°19.8	6	270°37.0	21°48.0
7	285°53.8	19°36.3	7	285°51.4	20°14.1	7	285°47.7	20°48.7	7	285°42.8	21°20.2	7	285°36.9	21°48.3
8	300°53.8	19°36.9	8	300°51.3	20°14.6	8	300°47.6	20°49.2	8	300°42.7	21°20.6	8	300°36.8	21°48.7
9	315°53.8	19°37.4	9	315°51.3	20°15.1	9	315°47.5	20°49.7	9	315°42.7	21°21.0	9	315°36.8	21°49.1
10	330°53.8	19°38.0	10	330°51.2	20°15.6	10	330°47.5	20°50.1	10	330°42.6	21°21.4	10	330°36.7	21°49.4
11	345°53.7	19°38.5	11	345°51.2	20°16.1	11	345°47.4	20°50.6	11	345°42.5	21°21.8	11	345°36.6	21°49.8
12	0°53.7	19°39.0	12	0°51.1	20°16.6	12	0°47.4	20°51.0	12	0°42.4	21°22.3	12	0°36.5	21°50.1
13	15°53.7	19°39.6	13	15°51.1	20°17.1	13	15°47.3	20°51.5	13	15°42.4	21°22.7	13	15°36.4	21°50.5
14	30°53.6	19°40.1	14	30°51.1	20°17.6	14	30°47.2	20°51.9	14	30°42.3	21°23.1	14	30°36.3	21°50.9
15	45°53.6	19°40.7	15	45°51.0	20°18.1	15	45°47.2	20°52.4	15	45°42.2	21°23.5	15	45°36.2	21°51.2
16	60°53.6	19°41.2	16	60°51.0	20°18.6	16	60°47.1	20°52.9	16	60°42.1	21°23.9	16	60°36.1	21°51.6
17	75°53.6	19°41.7	17	75°50.9	20°19.1	17	75°47.1	20°53.3	17	75°42.1	21°24.3	17	75°36.0	21°52.0
18	90°53.5	19°42.3	18	90°50.9	20°19.6	18	90°47.0	20°53.8	18	90°42.0	21°24.7	18	90°36.0	21°52.3
19	105°53.5	19°42.8	19	105°50.8	20°20.1	19	105°46.9	20°54.2	19	105°41.9	21°25.1	19	105°35.9	21°52.7
20	120°53.5	19°43.4	20	120°50.8	20°20.6	20	120°46.9	20°54.7	20	120°41.8	21°25.5	20	120°35.8	21°53.0
21	135°53.4	19°43.9	21	135°50.7	20°21.1	21	135°46.8	20°55.1	21	135°41.7	21°25.9	21	135°35.7	21°53.4
22	150°53.4	19°44.4	22	150°50.7	20°21.6	22	150°46.7	20°55.6	22	150°41.7	21°26.3	22	150°35.6	21°53.7
23	165°53.4	19°45.0	23	165°50.6	20°22.1	23	165°46.7	20°56.0	23	165°41.6	21°26.7	23	165°35.5	21°54.1
	SD.=15.8</													

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	180°35.4	21°54.5	0	180°28.4	22°18.3	0	180°20.7	22°38.7	0	180°12.2	22°55.5	0	180°03.3	23°08.7
1	195°35.3	21°54.8	1	195°28.3	22°18.7	1	195°20.6	22°39.0	1	195°12.1	22°55.7	1	195°03.1	23°08.8
2	210°35.2	21°55.2	2	210°28.2	22°19.0	2	210°20.4	22°39.2	2	210°12.0	22°55.9	2	210°03.0	23°09.0
3	225°35.1	21°55.5	3	225°28.1	22°19.3	3	225°20.3	22°39.5	3	225°11.9	22°56.1	3	225°02.9	23°09.1
4	240°35.0	21°55.9	4	240°28.0	22°19.6	4	240°20.2	22°39.7	4	240°11.8	22°56.3	4	240°02.7	23°09.3
5	255°35.0	21°56.2	5	255°27.9	22°19.9	5	255°20.1	22°40.0	5	255°11.6	22°56.5	5	255°02.6	23°09.5
6	270°34.9	21°56.6	6	270°27.8	22°20.2	6	270°20.0	22°40.3	6	270°11.5	22°56.8	6	270°02.5	23°09.6
7	285°34.8	21°56.9	7	285°27.7	22°20.5	7	285°19.9	22°40.5	7	285°11.4	22°57.0	7	285°02.4	23°09.8
8	300°34.7	21°57.3	8	300°27.6	22°20.8	8	300°19.8	22°40.8	8	300°11.3	22°57.2	8	300°02.2	23°09.9
9	315°34.6	21°57.6	9	315°27.5	22°21.1	9	315°19.6	22°41.0	9	315°11.1	22°57.4	9	315°02.1	23°10.1
10	330°34.5	21°58.0	10	330°27.4	22°21.4	10	330°19.5	22°41.3	10	330°11.0	22°57.6	10	330°02.0	23°10.2
11	345°34.4	21°58.3	11	345°27.3	22°21.7	11	345°19.4	22°41.5	11	345°10.9	22°57.8	11	345°01.8	23°10.4
12	0°34.3	21°58.7	12	0°27.2	22°22.0	12	0°19.3	22°41.8	12	0°10.8	22°58.0	12	0°01.7	23°10.5
13	15°34.2	21°59.0	13	15°27.1	22°22.3	13	15°19.2	22°42.0	13	15°10.7	22°58.2	13	15°01.6	23°10.7
14	30°34.1	21°59.4	14	30°27.0	22°22.6	14	30°19.1	22°42.3	14	30°10.5	22°58.4	14	30°01.5	23°10.8
15	45°34.0	21°59.7	15	45°26.9	22°22.9	15	45°19.0	22°42.5	15	45°10.4	22°58.6	15	45°01.3	23°11.0
16	60°33.9	22°00.1	16	60°26.8	22°23.2	16	60°18.8	22°42.8	16	60°10.3	22°58.8	16	60°01.2	23°11.1
17	75°33.8	22°00.4	17	75°26.7	22°23.5	17	75°18.7	22°43.0	17	75°10.2	22°59.0	17	75°01.1	23°11.3
18	90°33.7	22°00.8	18	90°26.6	22°23.8	18	90°18.6	22°43.3	18	90°10.0	22°59.1	18	90°00.9	23°11.4
19	105°33.6	22°01.1	19	105°26.4	22°24.1	19	105°18.5	22°43.5	19	105°09.9	22°59.3	19	105°00.8	23°11.5
20	120°33.6	22°01.4	20	120°26.3	22°24.4	20	120°18.4	22°43.7	20	120°09.8	22°59.5	20	120°00.7	23°11.7
21	135°33.5	22°01.8	21	135°26.2	22°24.7	21	135°18.3	22°44.0	21	135°09.7	22°59.7	21	135°00.6	23°11.8
22	150°33.4	22°02.1	22	150°26.1	22°25.0	22	150°18.2	22°44.2	22	150°09.5	22°59.9	22	150°00.4	23°12.0
23	165°33.3	22°02.5	23	165°26.0	22°25.2	23	165°18.0	22°44.5	23	165°09.4	23°00.1	23	165°00.3	23°12.1
	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°33.2	22°02.8	0	180°25.9	22°25.5	0	180°17.9	22°44.7	0	180°09.3	23°00.3	0	180°00.2	23°12.3
1	195°33.1	22°03.2	1	195°25.8	22°25.8	1	195°17.8	22°45.0	1	195°09.2	23°00.5	1	195°00.0	23°12.4
2	210°33.0	22°03.5	2	210°25.7	22°26.1	2	210°17.7	22°45.2	2	210°09.1	23°00.7	2	209°59.9	23°12.5
3	225°32.9	22°03.8	3	225°25.6	22°26.4	3	225°17.6	22°45.4	3	225°08.9	23°00.9	3	224°59.8	23°12.7
4	240°32.8	22°04.2	4	240°25.5	22°26.7	4	240°17.5	22°45.7	4	240°08.8	23°01.1	4	239°59.6	23°12.8
5	255°32.7	22°04.5	5	255°25.4	22°27.0	5	255°17.3	22°45.9	5	255°08.7	23°01.3	5	254°59.5	23°12.9
6	270°32.6	22°04.8	6	270°25.3	22°27.3	6	270°17.2	22°46.2	6	270°08.6	23°01.4	6	269°59.4	23°13.1
7	285°32.5	22°05.2	7	285°25.2	22°27.6	7	285°17.1	22°46.4	7	285°08.4	23°01.6	7	284°59.3	23°13.2
8	300°32.4	22°05.5	8	300°25.1	22°27.8	8	300°17.0	22°46.6	8	300°08.3	23°01.8	8	299°59.1	23°13.4
9	315°32.3	22°05.8	9	315°25.0	22°28.1	9	315°16.9	22°46.9	9	315°08.2	23°02.0	9	314°59.0	23°13.5
10	330°32.2	22°06.2	10	330°24.8	22°28.4	10	330°16.8	22°47.1	10	330°08.1	23°02.2	10	329°58.9	23°13.6
11	345°32.1	22°06.5	11	345°24.7	22°28.7	11	345°16.6	22°47.3	11	345°07.9	23°02.4	11	344°58.7	23°13.8
12	0°32.0	22°06.8	12	0°24.6	22°29.0	12	0°16.5	22°47.6	12	0°07.8	23°02.6	12	359°58.6	23°13.9
13	15°31.9	22°07.2	13	15°24.5	22°29.3	13	15°16.4	22°47.8	13	15°07.7	23°02.7	13	14°58.5	23°14.0
14	30°31.8	22°07.5	14	30°24.4	22°29.5	14	30°16.3	22°48.0	14	30°07.6	23°02.9	14	29°58.3	23°14.1
15	45°31.7	22°07.8	15	45°24.3	22°29.8	15	45°16.2	22°48.3	15	45°07.4	23°03.1	15	44°58.2	23°14.3
16	60°31.6	22°08.2	16	60°24.2	22°30.1	16	60°16.1	22°48.5	16	60°07.3	23°03.3	16	59°58.1	23°14.4
17	75°31.5	22°08.5	17	75°24.1	22°30.4	17	75°15.9	22°48.7	17	75°07.2	23°03.5	17	74°58.0	23°14.5
18	90°31.4	22°08.8	18	90°24.0	22°30.7	18	90°15.8	22°49.0	18	90°07.1	23°03.6	18	89°57.8	23°14.7
19	105°31.3	22°09.1	19	105°23.9	22°30.9	19	105°15.7	22°49.2	19	105°06.9	23°03.8	19	104°57.7	23°14.8
20	120°31.2	22°09.5	20	120°23.8	22°31.2	20	120°15.6	22°49.4	20	120°06.8	23°04.0	20	119°57.6	23°14.9
21	135°31.1	22°09.8	21	135°23.7	22°31.5	21	135°15.5	22°49.6	21	135°06.7	23°04.2	21	134°57.4	23°15.0
22	150°31.0	22°10.1	22	150°23.5	22°31.8	22	150°15.3	22°49.9	22	150°06.6	23°04.3	22	149°57.3	23°15.2
23	165°30.9	22°10.5	23	165°23.4	22°32.1	23	165°15.2	22°50.1	23	165°06.4	23°04.5	23	164°57.2	23°15.3
	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°30.8	22°10.8	0	180°23.3	22°32.3	0	180°15.1	22°50.3	0	180°06.3	23°04.7	0	179°57.0	23°15.4
1	195°30.7	22°11.1	1	195°23.2	22°32.6	1	195°15.0	22°50.5	1	195°06.2	23°04.9	1	194°56.9	23°15.5
2	210°30.6	22°11.4	2	210°23.1	22°32.9	2	210°14.9	22°50.8	2	210°06.1	23°05.0	2	209°56.8	23°15.7
3	225°30.5	22°11.7	3	225°23.0	22°33.1	3	225°14.8	22°51.0	3	225°05.9	23°05.2	3	224°56.6	23°15.8
4	240°30.4	22°12.1	4	240°22.9	22°33.4	4	240°14.6	22°51.2	4	240°05.8	23°05.4	4	239°56.5	23°15.9
5	255°30.3	22°12.4	5	255°22.8	22°33.7	5	255°14.5	22°51.4	5	255°05.7	23°05.6	5	254°56.4	23°16.0
6	270°30.2	22°12.7	6	270°22.7	22°34.0	6	270°14.4	22°51.7	6	270°05.5	23°05.7	6	269°56.2	23°16.1
7	285°30.1	22°13.0	7	285°22.6	22°34.2	7	285°14.3	22°51.9	7	285°05.4	23°05.9	7	284°56.1	23°16.3
8	300°30.0	22°13.3	8	300°22.4	22°34.5	8	300°14.2	22°52.1	8	300°05.3	23°06.1	8	299°56.0	23°16.4
9	315°29.9	22°13.7	9	315°22.3	22°34.8	9	315°14.0	22°52.3	9	315°05.2	23°06.2	9	314°55.8	23°16.5
10	330°29.8	22°14.0	10	330°22.2	22°35.0	10	330°13.9	22°52.5	10	330°05.0	23°06.4	10	329°55.7	23°16.6
11	345°29.7	22°14.3	11	345°22.1	22°35.3	11	345°13.8	22°52.7	11	345°04.9	23°06.6	11	344°55.6	23°16.7
12	0°29.6	22°14.6	12	0°22.0	22°35.6	12	0°13.7	22°53.0	12	0°04.8	23°06.7	12	359°55.5	23°16.8
13	15°29.5	22°14.9	13	15°21.9	22°35.8	13	15°13.6	22°53.2	13	15°04.7	23°06.9	13	14°55.3	23°17.0
14	30°29.4	22°15.2	14	30°21.8	22°36.1	14	30°13.4	22°53.4	14	30°04.5	23°07.1	14	29°55.2	23°17.1
15	45°29.3	22°15.6	15	45°21.7	22°36.4	15	45°13.3	22°53.6	15	45°04.4	23°07.2	15	44°55.1	23°17.2
16	60°29.2	22°15.9	16	60°21.6	22°36.6	16	60°13.2	22°53.8	16	60°04.3	23°07.4	16	59°54.9	23°17.3
17	75°29.1	22°16.2	17	75°21.4	22°36.9	17	75°13.1	22°54.0	17	75°04.2	23°07.6	17	74°54.8	23°17.4
18	90°29.0	22°16.5	18	90°21.3	22°37.2	18	90°13.0	22°54.3	18	90°04.0	23°07.7	18	89°54.7	23°17.5
19	105°28.9	22°16.8	19	105°21.2	22°37.4	19	105°12.8	22°54.5	19	105°03.9	23°07.9	19	104°54.5	23°17.6
20	120°28.8	22°17.1	20	120°21.1	22°37.7	20	120°12.7	22°54.7	20	120°03.8	23°08.0	20	119°54.4	23°17.7
21	135°28.7	22°17.4	21	135°21.0	22°37.9	21	135°12.6	22°54.9	21	135°03.6	23°08.2	21	134°54.3	23°17.9
22	150°28.6	22°17.7	22	150°20.9	22°38.2	22	150°12.5	22°55.1	22	150°03.5	23°08.4	22	149°54.1	23°18.0
23	165°28.5	22°18.0	23	165°20.8	22°38.5	23	165°12.4	22°55.3	23	165°03.4	23°08.5	23	164°54.0	23°18.1
	SD.=1													

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	179°53.9	23°18.2	0	179°44.2	23°24.0	0	179°34.3	23°26.1	0	179°24.5	23°24.4	0	179°14.9	23°19.1
1	194°53.7	23°18.3	1	194°44.0	23°24.0	1	194°34.2	23°26.1	1	194°24.4	23°24.4	1	194°14.8	23°19.0
2	209°53.6	23°18.4	2	209°43.9	23°24.1	2	209°34.1	23°26.1	2	209°24.2	23°24.3	2	209°14.7	23°18.9
3	224°53.5	23°18.5	3	224°43.8	23°24.1	3	224°33.9	23°26.1	3	224°24.1	23°24.3	3	224°14.5	23°18.8
4	239°53.3	23°18.6	4	239°43.6	23°24.2	4	239°33.8	23°26.1	4	239°24.0	23°24.2	4	239°14.4	23°18.7
5	254°53.2	23°18.7	5	254°43.5	23°24.2	5	254°33.6	23°26.1	5	254°23.8	23°24.2	5	254°14.3	23°18.6
6	269°53.1	23°18.8	6	269°43.3	23°24.3	6	269°33.5	23°26.1	6	269°23.7	23°24.1	6	269°14.1	23°18.5
7	284°52.9	23°18.9	7	284°43.2	23°24.3	7	284°33.4	23°26.1	7	284°23.6	23°24.1	7	284°14.0	23°18.4
8	299°52.8	23°19.0	8	299°43.1	23°24.4	8	299°33.2	23°26.1	8	299°23.4	23°24.0	8	299°13.9	23°18.3
9	314°52.7	23°19.1	9	314°42.9	23°24.4	9	314°33.1	23°26.1	9	314°23.3	23°24.0	9	314°13.8	23°18.2
10	329°52.5	23°19.2	10	329°42.8	23°24.5	10	329°33.0	23°26.1	10	329°23.2	23°23.9	10	329°13.6	23°18.1
11	344°52.4	23°19.3	11	344°42.7	23°24.5	11	344°32.8	23°26.1	11	344°23.0	23°23.9	11	344°13.5	23°17.9
12	359°52.3	23°19.4	12	359°42.5	23°24.6	12	359°32.7	23°26.0	12	359°22.9	23°23.8	12	359°13.4	23°17.8
13	14°52.1	23°19.5	13	14°42.4	23°24.6	13	14°32.5	23°26.0	13	14°22.8	23°23.7	13	14°13.2	23°17.7
14	29°52.0	23°19.6	14	29°42.3	23°24.7	14	29°32.4	23°26.0	14	29°22.6	23°23.7	14	29°13.1	23°17.6
15	44°51.9	23°19.7	15	44°42.1	23°24.7	15	44°32.3	23°26.0	15	44°22.5	23°23.6	15	44°13.0	23°17.5
16	59°51.7	23°19.8	16	59°42.0	23°24.8	16	59°32.1	23°26.0	16	59°22.4	23°23.6	16	59°12.8	23°17.4
17	74°51.6	23°19.9	17	74°41.9	23°24.8	17	74°32.0	23°26.0	17	74°22.2	23°23.5	17	74°12.7	23°17.3
18	89°51.5	23°20.0	18	89°41.7	23°24.8	18	89°31.9	23°26.0	18	89°22.1	23°23.4	18	89°12.6	23°17.2
19	104°51.3	23°20.1	19	104°41.6	23°24.9	19	104°31.7	23°26.0	19	104°22.0	23°23.4	19	104°12.5	23°17.1
20	119°51.2	23°20.2	20	119°41.4	23°24.9	20	119°31.6	23°26.0	20	119°21.8	23°23.3	20	119°12.3	23°17.0
21	134°51.1	23°20.2	21	134°41.3	23°25.0	21	134°31.5	23°26.0	21	134°21.7	23°23.3	21	134°12.2	23°16.8
22	149°50.9	23°20.3	22	149°41.2	23°25.0	22	149°31.3	23°26.0	22	149°21.6	23°23.2	22	149°12.1	23°16.7
23	164°50.8	23°20.4	23	164°41.0	23°25.0	23	164°31.2	23°25.9	23	164°21.4	23°23.1	23	164°11.9	23°16.6
	SD.=15.7	d=0.1		SD.=15.7	d=0.1		SD.=15.7	d=0.0		SD.=15.7	d=-0.0		SD.=15.7	d=-0.1

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	179°50.7	23°20.5	0	179°40.9	23°25.1	0	179°31.0	23°25.9	0	179°21.3	23°23.1	0	179°11.8	23°16.5
1	194°50.5	23°20.6	1	194°40.8	23°25.1	1	194°30.9	23°25.9	1	194°21.2	23°23.0	1	194°11.7	23°16.4
2	209°50.4	23°20.7	2	209°40.6	23°25.2	2	209°30.8	23°25.9	2	209°21.0	23°22.9	2	209°11.6	23°16.3
3	224°50.3	23°20.8	3	224°40.5	23°25.2	3	224°30.6	23°25.9	3	224°20.9	23°22.9	3	224°11.4	23°16.1
4	239°50.1	23°20.9	4	239°40.3	23°25.2	4	239°30.5	23°25.9	4	239°20.7	23°22.8	4	239°11.3	23°16.0
5	254°50.0	23°21.0	5	254°40.2	23°25.3	5	254°30.4	23°25.8	5	254°20.6	23°22.7	5	254°11.2	23°15.9
6	269°49.8	23°21.0	6	269°40.1	23°25.3	6	269°30.2	23°25.8	6	269°20.5	23°22.7	6	269°11.0	23°15.8
7	284°49.7	23°21.1	7	284°39.9	23°25.3	7	284°30.1	23°25.8	7	284°20.3	23°22.6	7	284°10.9	23°15.7
8	299°49.6	23°21.2	8	299°39.8	23°25.4	8	299°30.0	23°25.8	8	299°20.2	23°22.5	8	299°10.8	23°15.5
9	314°49.4	23°21.3	9	314°39.7	23°25.4	9	314°29.8	23°25.8	9	314°20.1	23°22.4	9	314°10.7	23°15.4
10	329°49.3	23°21.4	10	329°39.5	23°25.4	10	329°29.7	23°25.8	10	329°19.9	23°22.4	10	329°10.5	23°15.3
11	344°49.2	23°21.5	11	344°39.4	23°25.5	11	344°29.5	23°25.7	11	344°19.8	23°22.3	11	344°10.4	23°15.2
12	359°49.0	23°21.5	12	359°39.3	23°25.5	12	359°29.4	23°25.7	12	359°19.7	23°22.2	12	359°10.3	23°15.0
13	14°48.9	23°21.6	13	14°39.1	23°25.5	13	14°29.3	23°25.7	13	14°19.5	23°22.1	13	14°10.1	23°14.9
14	29°48.8	23°21.7	14	29°39.0	23°25.5	14	29°29.1	23°25.7	14	29°19.4	23°22.1	14	29°10.0	23°14.8
15	44°48.6	23°21.8	15	44°38.8	23°25.6	15	44°29.0	23°25.6	15	44°19.3	23°22.0	15	44°09.9	23°14.7
16	59°48.5	23°21.9	16	59°38.7	23°25.6	16	59°28.9	23°25.6	16	59°19.1	23°21.9	16	59°09.8	23°14.5
17	74°48.4	23°21.9	17	74°38.6	23°25.6	17	74°28.7	23°25.6	17	74°19.0	23°21.8	17	74°09.6	23°14.4
18	89°48.2	23°22.0	18	89°38.4	23°25.6	18	89°28.6	23°25.6	18	89°18.9	23°21.8	18	89°09.5	23°14.3
19	104°48.1	23°22.1	19	104°38.3	23°25.7	19	104°28.5	23°25.5	19	104°18.7	23°21.7	19	104°09.4	23°14.1
20	119°48.0	23°22.2	20	119°38.2	23°25.7	20	119°28.3	23°25.5	20	119°18.6	23°21.6	20	119°09.3	23°14.0
21	134°47.8	23°22.2	21	134°38.0	23°25.7	21	134°28.2	23°25.5	21	134°18.5	23°21.5	21	134°09.1	23°13.9
22	149°47.7	23°22.3	22	149°37.9	23°25.7	22	149°28.0	23°25.4	22	149°18.4	23°21.4	22	149°09.0	23°13.7
23	164°47.6	23°22.4	23	164°37.7	23°25.8	23	164°27.9	23°25.4	23	164°18.2	23°21.4	23	164°08.9	23°13.6
	SD.=15.7	d=0.1		SD.=15.7	d=0.0		SD.=15.7	d=0.0		SD.=15.7	d=-0.1		SD.=15.7	d=-0.1

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	179°47.4	23°22.5	0	179°37.6	23°25.8	0	179°27.8	23°25.4	0	179°18.1	23°21.3	0	179°08.7	23°13.5
1	194°47.3	23°22.5	1	194°37.5	23°25.8	1	194°27.6	23°25.4	1	194°18.0	23°21.2	1	194°08.6	23°13.3
2	209°47.2	23°22.6	2	209°37.3	23°25.8	2	209°27.5	23°25.3	2	209°17.8	23°21.1	2	209°08.5	23°13.2
3	224°47.0	23°22.7	3	224°37.2	23°25.8	3	224°27.4	23°25.3	3	224°17.7	23°21.0	3	224°08.4	23°13.1
4	239°46.9	23°22.7	4	239°37.1	23°25.9	4	239°27.2	23°25.3	4	239°17.6	23°20.9	4	239°08.2	23°12.9
5	254°46.7	23°22.8	5	254°36.9	23°25.9	5	254°27.1	23°25.2	5	254°17.4	23°20.9	5	254°08.1	23°12.8
6	269°46.6	23°22.9	6	269°36.8	23°25.9	6	269°27.0	23°25.2	6	269°17.3	23°20.8	6	269°08.0	23°12.7
7	284°46.5	23°22.9	7	284°36.7	23°25.9	7	284°26.8	23°25.1	7	284°17.2	23°20.7	7	284°07.9	23°12.5
8	299°46.3	23°23.0	8	299°36.5	23°25.9	8	299°26.7	23°25.1	8	299°17.0	23°20.6	8	299°07.7	23°12.4
9	314°46.2	23°23.1	9	314°36.4	23°25.9	9	314°26.5	23°25.1	9	314°16.9	23°20.5	9	314°07.6	23°12.2
10	329°46.1	23°23.1	10	329°36.2	23°25.9	10	329°26.4	23°25.0	10	329°16.8	23°20.4	10	329°07.5	23°12.1
11	344°45.9	23°23.2	11	344°36.1	23°26.0	11	344°26.3	23°25.0	11	344°16.6	23°20.3	11	344°07.4	23°12.0
12	359°45.8	23°23.3	12	359°36.0	23°26.0	12	359°26.1	23°25.0	12	359°16.5	23°20.2	12	359°07.2	23°11.8
13	14°45.7	23°23.3	13	14°35.8	23°26.0	13	14°26.0	23°24.9	13	14°16.4	23°20.1	13	14°07.1	23°11.7
14	29°45.5	23°23.4	14	29°35.7	23°26.0	14	29°25.9	23°24.9	14	29°16.2	23°20.1	14	29°07.0	23°11.5
15	44°45.4	23°23.5	15	44°35.6	23°26.0	15	44°25.7	23°24.8	15	44°16.1	23°20.0	15	44°06.9	23°11.4
16	59°45.3	23°23.5	16	59°35.4	23°26.0	16	59°25.6	23°24.8	16	59°16.0	23°19.9	16	59°06.7	23°11.3
17	74°45.1	23°23.6	17	74°35.3	23°26.0	17	74°25.5	23°24.7	17	74°15.8	23°19.8	17	74°06.6	23°11.1
18	89°45.0	23°23.6	18	89°35.1	23°26.0	18	89°25.3	23°24.7	18	89°15.7	23°19.7	18	89°06.5	23°11.0
19	104°44.8	23°23.7	19	104°35.0	23°26.0	19	104°25.2	23°24.7	19	104°15.6	23°19.6	19	104°06.4	23°10.8
20	119°44.7	23°23.8	20	119°34.9	23°26.0	20	119°25.1	23°24.6	20	119°15.4	23°19.5	20	119°06.2	23°10.7
21	134°44.6	23°23.8	21	134°34.7	23°26.0	21	134°24.9	23°24.6	21	134°15.3	23°19.4	21	134°06.1	23°10.5
22	149°44.4	23°23.9	22	149°34.6	23°26.1	22	149°24.8	23°24.5	22	149°15.2	23°19.3	22	149°06.0	23°10.4
23	164°44.3	23°23.9	23	164°34.5	23°26.1	2								

30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	179°05.7	23°10.1	0	178°57.1	22°57.4	0	178°49.2	22°41.1	0	178°42.2	22°21.3	0	178°36.0	21°58.0
1	194°05.6	23°09.9	1	193°57.0	22°57.2	1	193°49.1	22°40.9	1	193°42.1	22°21.0	1	193°36.0	21°57.7
2	209°05.5	23°09.8	2	208°56.9	22°57.0	2	208°49.0	22°40.6	2	208°42.0	22°20.7	2	208°35.9	21°57.3
3	224°05.4	23°09.6	3	223°56.8	22°56.8	3	223°48.9	22°40.4	3	223°41.9	22°20.4	3	223°35.8	21°57.0
4	239°05.2	23°09.5	4	238°56.7	22°56.6	4	238°48.8	22°40.1	4	238°41.8	22°20.1	4	238°35.7	21°56.6
5	254°05.1	23°09.3	5	253°56.6	22°56.4	5	253°48.7	22°39.9	5	253°41.7	22°19.8	5	253°35.7	21°56.3
6	269°05.0	23°09.1	6	268°56.5	22°56.2	6	268°48.6	22°39.6	6	268°41.6	22°19.5	6	268°35.6	21°55.9
7	284°04.9	23°09.0	7	283°56.3	22°56.0	7	283°48.5	22°39.3	7	283°41.5	22°19.2	7	283°35.5	21°55.6
8	299°04.8	23°08.8	8	298°56.2	22°55.8	8	298°48.4	22°39.1	8	298°41.4	22°18.9	8	298°35.4	21°55.2
9	314°04.6	23°08.7	9	313°56.1	22°55.6	9	313°48.3	22°38.8	9	313°41.4	22°18.6	9	313°35.3	21°54.9
10	329°04.5	23°08.5	10	328°56.0	22°55.3	10	328°48.2	22°38.6	10	328°41.3	22°18.3	10	328°35.3	21°54.5
11	344°04.4	23°08.4	11	343°55.9	22°55.1	11	343°48.1	22°38.3	11	343°41.2	22°18.0	11	343°35.2	21°54.2
12	359°04.3	23°08.2	12	358°55.8	22°54.9	12	358°48.0	22°38.1	12	358°41.1	22°17.7	12	358°35.1	21°53.8
13	14°04.1	23°08.0	13	13°55.7	22°54.7	13	13°47.9	22°37.8	13	13°41.0	22°17.3	13	13°35.0	21°53.4
14	29°04.0	23°07.9	14	28°55.5	22°54.5	14	28°47.8	22°37.5	14	28°40.9	22°17.0	14	28°35.0	21°53.1
15	44°03.9	23°07.7	15	43°55.4	22°54.3	15	43°47.7	22°37.3	15	43°40.8	22°16.7	15	43°34.9	21°52.7
16	59°03.8	23°07.6	16	58°55.3	22°54.1	16	58°47.6	22°37.0	16	58°40.7	22°16.4	16	58°34.8	21°52.4
17	74°03.7	23°07.4	17	73°55.2	22°53.9	17	73°47.5	22°36.8	17	73°40.6	22°16.1	17	73°34.7	21°52.0
18	89°03.5	23°07.2	18	88°55.1	22°53.7	18	88°47.4	22°36.5	18	88°40.6	22°15.8	18	88°34.7	21°51.7
19	104°03.4	23°07.1	19	103°55.0	22°53.4	19	103°47.3	22°36.2	19	103°40.5	22°15.5	19	103°34.6	21°51.3
20	119°03.3	23°06.9	20	118°54.9	22°53.2	20	118°47.2	22°36.0	20	118°40.4	22°15.2	20	118°34.5	21°50.9
21	134°03.2	23°06.7	21	133°54.8	22°53.0	21	133°47.1	22°35.7	21	133°40.3	22°14.9	21	133°34.4	21°50.6
22	149°03.0	23°06.6	22	148°54.6	22°52.8	22	148°47.0	22°35.4	22	148°40.2	22°14.5	22	148°34.4	21°50.2
23	164°02.9	23°06.4	23	163°54.5	22°52.6	23	163°46.9	22°35.2	23	163°40.1	22°14.2	23	163°34.3	21°49.9
	SD.=15.7	d=-0.2		SD.=15.7	d=-0.2		SD.=15.7	d=-0.3		SD.=15.7	d=-0.3		SD.=15.7	d=-0.3

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	179°02.8	23°06.2	0	178°54.4	22°52.4	0	178°46.8	22°34.9	0	178°40.0	22°13.9	0	178°34.2	21°49.5
1	194°02.7	23°06.1	1	193°54.3	22°52.1	1	193°46.7	22°34.6	1	193°39.9	22°13.6	1	193°34.1	21°49.1
2	209°02.6	23°05.9	2	208°54.2	22°51.9	2	208°46.6	22°34.4	2	208°39.8	22°13.3	2	208°34.1	21°48.8
3	224°02.4	23°05.7	3	223°54.1	22°51.7	3	223°46.5	22°34.1	3	223°39.8	22°13.0	3	223°34.0	21°48.4
4	239°02.3	23°05.6	4	238°54.0	22°51.5	4	238°46.4	22°33.8	4	238°39.7	22°12.6	4	238°33.9	21°48.0
5	254°02.2	23°05.4	5	253°53.9	22°51.3	5	253°46.3	22°33.6	5	253°39.6	22°12.3	5	253°33.9	21°47.7
6	269°02.1	23°05.2	6	268°53.8	22°51.0	6	268°46.2	22°33.3	6	268°39.5	22°12.0	6	268°33.8	21°47.3
7	284°02.0	23°05.1	7	283°53.6	22°50.8	7	283°46.1	22°33.0	7	283°39.4	22°11.7	7	283°33.7	21°46.9
8	299°01.8	23°04.9	8	298°53.5	22°50.6	8	298°46.0	22°32.7	8	298°39.3	22°11.4	8	298°33.6	21°46.6
9	314°01.7	23°04.7	9	313°53.4	22°50.4	9	313°45.9	22°32.5	9	313°39.2	22°11.1	9	313°33.6	21°46.2
10	329°01.6	23°04.5	10	328°53.3	22°50.2	10	328°45.8	22°32.2	10	328°39.2	22°10.7	10	328°33.5	21°45.8
11	344°01.5	23°04.4	11	343°53.2	22°49.9	11	343°45.7	22°31.9	11	343°39.1	22°10.4	11	343°33.4	21°45.5
12	359°01.4	23°04.2	12	358°53.1	22°49.7	12	358°45.6	22°31.6	12	358°39.0	22°10.1	12	358°33.3	21°45.1
13	14°01.2	23°04.0	13	13°53.0	22°49.5	13	13°45.5	22°31.4	13	13°38.9	22°09.8	13	13°33.3	21°44.7
14	29°01.1	23°03.8	14	28°52.9	22°49.2	14	28°45.4	22°31.1	14	28°38.8	22°09.4	14	28°33.2	21°44.4
15	44°01.0	23°03.7	15	43°52.8	22°49.0	15	43°45.3	22°30.8	15	43°38.7	22°09.1	15	43°33.1	21°44.0
16	59°00.9	23°03.5	16	58°52.7	22°48.8	16	58°45.2	22°30.5	16	58°38.6	22°08.8	16	58°33.1	21°43.6
17	74°00.8	23°03.3	17	73°52.5	22°48.6	17	73°45.1	22°30.3	17	73°38.6	22°08.5	17	73°33.0	21°43.2
18	89°00.6	23°03.1	18	88°52.4	22°48.3	18	88°45.0	22°30.0	18	88°38.5	22°08.1	18	88°32.9	21°42.9
19	104°00.5	23°02.9	19	103°52.3	22°48.1	19	103°44.9	22°29.7	19	103°38.4	22°07.8	19	103°32.9	21°42.5
20	119°00.4	23°02.8	20	118°52.2	22°47.9	20	118°44.8	22°29.4	20	118°38.3	22°07.5	20	118°32.8	21°42.1
21	134°00.3	23°02.6	21	133°52.1	22°47.6	21	133°44.7	22°29.1	21	133°38.2	22°07.1	21	133°32.7	21°41.7
22	149°00.2	23°02.4	22	148°52.0	22°47.4	22	148°44.6	22°28.9	22	148°38.1	22°06.8	22	148°32.6	21°41.4
23	164°00.1	23°02.2	23	163°51.9	22°47.2	23	163°44.5	22°28.6	23	163°38.1	22°06.5	23	163°32.6	21°41.0
	SD.=15.7	d=-0.2		SD.=15.7	d=-0.2		SD.=15.7	d=-0.3		SD.=15.7	d=-0.3		SD.=15.7	d=-0.4

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	178°59.9	23°02.0	0	178°51.8	22°46.9	0	178°44.4	22°28.3	0	178°38.0	22°06.2	0	178°32.5	21°40.6
1	193°59.8	23°01.8	1	193°51.7	22°46.7	1	193°44.3	22°28.0	1	193°37.9	22°05.8	1	193°32.4	21°40.2
2	208°59.7	23°01.6	2	208°51.6	22°46.5	2	208°44.2	22°27.7	2	208°37.8	22°05.5	2	208°32.4	21°39.8
3	223°59.6	23°01.5	3	223°51.5	22°46.2	3	223°44.1	22°27.4	3	223°37.7	22°05.2	3	223°32.3	21°39.5
4	238°59.5	23°01.3	4	238°51.4	22°46.0	4	238°44.1	22°27.2	4	238°37.6	22°04.8	4	238°32.2	21°39.1
5	253°59.3	23°01.1	5	253°51.3	22°45.8	5	253°44.0	22°26.9	5	253°37.6	22°04.5	5	253°32.2	21°38.7
6	268°59.2	23°00.9	6	268°51.1	22°45.5	6	268°43.9	22°26.6	6	268°37.5	22°04.2	6	268°32.1	21°38.3
7	283°59.1	23°00.7	7	283°51.0	22°45.3	7	283°43.8	22°26.3	7	283°37.4	22°03.8	7	283°32.0	21°37.9
8	298°59.0	23°00.5	8	298°50.9	22°45.0	8	298°43.7	22°26.0	8	298°37.3	22°03.5	8	298°32.0	21°37.6
9	313°58.9	23°00.3	9	313°50.8	22°44.8	9	313°43.6	22°25.7	9	313°37.2	22°03.1	9	313°31.9	21°37.2
10	328°58.8	23°00.1	10	328°50.7	22°44.6	10	328°43.5	22°25.4	10	328°37.2	22°02.8	10	328°31.8	21°36.8
11	343°58.6	22°59.9	11	343°50.6	22°44.3	11	343°43.4	22°25.1	11	343°37.1	22°02.5	11	343°31.8	21°36.4
12	358°58.5	22°59.8	12	358°50.5	22°44.1	12	358°43.3	22°24.8	12	358°37.0	22°02.1	12	358°31.7	21°36.0
13	13°58.4	22°59.6	13	13°50.4	22°43.8	13	13°43.2	22°24.6	13	13°36.9	22°01.8	13	13°31.6	21°35.6
14	28°58.3	22°59.4	14	28°50.3	22°43.6	14	28°43.1	22°24.3	14	28°36.8	22°01.5	14	28°31.6	21°35.2
15	43°58.2	22°59.2	15	43°50.2	22°43.3	15	43°43.0	22°24.0	15	43°36.8	22°01.1	15	43°31.5	21°34.9
16	58°58.1	22°59.0	16	58°50.1	22°43.1	16	58°42.9	22°23.7	16	58°36.7	22°00.8	16	58°31.4	21°34.5
17	73°57.9	22°58.8	17	73°50.0	22°42.9	17	73°42.8	22°23.4	17	73°36.6	22°00.4	17	73°31.4	21°34.1
18	88°57.8	22°58.6	18	88°49.9	22°42.6	18	88°42.7	22°23.1	18	88°36.5	22°00.1	18	88°31.3	21°33.7
19	103°57.7	22°58.4	19	103°49.8	22°42.4	19	103°42.6	22°22.8	19	103°36.4	21°59.7	19	103°31.2	21°33.3
20	118°57.6	22°58.2	20	118°49.7	22°42.1	20	118°42.5	22°22.5	20	118°36.4	21°59.4	20	118°31.2	21°32.9
21	133°57.5	22°58.0	21	133°49.6	22°41.9	21	133°42.5	22°22.2	21	133°36.3	21°59.1	21	133°31.1	21°32.5
22	148°57.4	22°57.8	22	148°49.5	22°41.6	22	148°42.4	22°21.9	22	148°36.2	21°58.7	22	148°31.0	21°32.1
23	163°57.3	22°57.6	23	163°49.3	22°41.4	23	163°42.3	22°21.6	23	163°36.1	21°58.4	23	163°31.0	

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	178°30.9	21°31.3	0	178°26.9	21°01.4	0	178°24.0	20°28.2	0	178°22.4	19°51.9	0	178°22.1	19°12.7
1	193°30.9	21°30.9	1	193°26.8	21°00.9	1	193°24.0	20°27.7	1	193°22.4	19°51.4	1	193°22.1	19°12.1
2	208°30.8	21°30.5	2	208°26.8	21°00.5	2	208°24.0	20°27.2	2	208°22.4	19°50.9	2	208°22.1	19°11.5
3	223°30.7	21°30.2	3	223°26.7	21°00.0	3	223°23.9	20°26.7	3	223°22.3	19°50.3	3	223°22.1	19°11.0
4	238°30.7	21°29.8	4	238°26.7	20°59.6	4	238°23.9	20°26.2	4	238°22.3	19°49.8	4	238°22.1	19°10.4
5	253°30.6	21°29.4	5	253°26.6	20°59.2	5	253°23.9	20°25.8	5	253°22.3	19°49.3	5	253°22.1	19°09.8
6	268°30.5	21°29.0	6	268°26.6	20°58.7	6	268°23.8	20°25.3	6	268°22.3	19°48.8	6	268°22.1	19°09.3
7	283°30.5	21°28.6	7	283°26.6	20°58.3	7	283°23.8	20°24.8	7	283°22.3	19°48.2	7	283°22.1	19°08.7
8	298°30.4	21°28.2	8	298°26.5	20°57.8	8	298°23.8	20°24.3	8	298°22.3	19°47.7	8	298°22.1	19°08.1
9	313°30.4	21°27.8	9	313°26.5	20°57.4	9	313°23.7	20°23.8	9	313°22.3	19°47.2	9	313°22.2	19°07.6
10	328°30.3	21°27.4	10	328°26.4	20°56.9	10	328°23.7	20°23.3	10	328°22.3	19°46.6	10	328°22.2	19°07.0
11	343°30.2	21°27.0	11	343°26.4	20°56.5	11	343°23.7	20°22.8	11	343°22.3	19°46.1	11	343°22.2	19°06.4
12	358°30.2	21°26.6	12	358°26.3	20°56.1	12	358°23.7	20°22.4	12	358°22.2	19°45.6	12	358°22.2	19°05.9
13	13°30.1	21°26.2	13	13°26.3	20°55.6	13	13°23.6	20°21.9	13	13°22.2	19°45.0	13	13°22.2	19°05.3
14	28°30.0	21°25.8	14	28°26.2	20°55.2	14	28°23.6	20°21.4	14	28°22.2	19°44.5	14	28°22.2	19°04.7
15	43°30.0	21°25.4	15	43°26.2	20°54.7	15	43°23.6	20°20.9	15	43°22.2	19°44.0	15	43°22.2	19°04.1
16	58°29.9	21°25.0	16	58°26.1	20°54.3	16	58°23.5	20°20.4	16	58°22.2	19°43.4	16	58°22.2	19°03.6
17	73°29.9	21°24.6	17	73°26.1	20°53.8	17	73°23.5	20°19.9	17	73°22.2	19°42.9	17	73°22.2	19°03.0
18	88°29.8	21°24.2	18	88°26.1	20°53.4	18	88°23.5	20°19.4	18	88°22.2	19°42.4	18	88°22.2	19°02.4
19	103°29.7	21°23.7	19	103°26.0	20°52.9	19	103°23.5	20°18.9	19	103°22.2	19°41.8	19	103°22.2	19°01.8
20	118°29.7	21°23.3	20	118°26.0	20°52.5	20	118°23.4	20°18.4	20	118°22.2	19°41.3	20	118°22.3	19°01.3
21	133°29.6	21°22.9	21	133°25.9	20°52.0	21	133°23.4	20°17.9	21	133°22.2	19°40.8	21	133°22.3	19°00.7
22	148°29.6	21°22.5	22	148°25.9	20°51.6	22	148°23.4	20°17.4	22	148°22.2	19°40.2	22	148°22.3	19°00.1
23	163°29.5	21°22.1	23	163°25.8	20°51.1	23	163°23.4	20°16.9	23	163°22.1	19°39.7	23	163°22.3	19°00.5
	SD.=15.7	d=-0.4		SD.=15.7	d=-0.4		SD.=15.7	d=-0.5		SD.=15.7	d=-0.5		SD.=15.7	d=-0.6

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	178°29.4	21°21.7	0	178°25.8	20°50.7	0	178°23.3	20°16.4	0	178°22.1	19°39.2	0	178°22.3	18°59.0
1	193°29.4	21°21.3	1	193°25.8	20°50.2	1	193°23.3	20°15.9	1	193°22.1	19°38.6	1	193°22.3	18°58.4
2	208°29.3	21°20.9	2	208°25.7	20°49.7	2	208°23.3	20°15.4	2	208°22.1	19°38.1	2	208°22.3	18°57.8
3	223°29.3	21°20.5	3	223°25.7	20°49.3	3	223°23.3	20°14.9	3	223°22.1	19°37.5	3	223°22.3	18°57.2
4	238°29.2	21°20.1	4	238°25.6	20°48.8	4	238°23.2	20°14.4	4	238°22.1	19°37.0	4	238°22.3	18°56.6
5	253°29.2	21°19.7	5	253°25.6	20°48.4	5	253°23.2	20°13.9	5	253°22.1	19°36.5	5	253°22.4	18°56.1
6	268°29.1	21°19.2	6	268°25.5	20°47.9	6	268°23.2	20°13.4	6	268°22.1	19°35.9	6	268°22.4	18°55.5
7	283°29.0	21°18.8	7	283°25.5	20°47.5	7	283°23.2	20°12.9	7	283°22.1	19°35.4	7	283°22.4	18°54.9
8	298°29.0	21°18.4	8	298°25.5	20°47.0	8	298°23.1	20°12.4	8	298°22.1	19°34.8	8	298°22.4	18°54.3
9	313°28.9	21°18.0	9	313°25.4	20°46.5	9	313°23.1	20°11.9	9	313°22.1	19°34.3	9	313°22.4	18°53.7
10	328°28.9	21°17.6	10	328°25.4	20°46.1	10	328°23.1	20°11.4	10	328°22.1	19°33.7	10	328°22.4	18°53.1
11	343°28.8	21°17.2	11	343°25.3	20°45.6	11	343°23.1	20°10.9	11	343°22.1	19°33.2	11	343°22.4	18°52.6
12	358°28.8	21°16.8	12	358°25.3	20°45.2	12	358°23.0	20°10.4	12	358°22.1	19°32.7	12	358°22.5	18°52.0
13	13°28.7	21°16.3	13	13°25.3	20°44.7	13	13°23.0	20°09.9	13	13°22.1	19°32.1	13	13°22.5	18°51.4
14	28°28.6	21°15.9	14	28°25.2	20°44.2	14	28°23.0	20°09.4	14	28°22.1	19°31.6	14	28°22.5	18°50.8
15	43°28.6	21°15.5	15	43°25.2	20°43.8	15	43°23.0	20°08.9	15	43°22.1	19°31.0	15	43°22.5	18°50.2
16	58°28.5	21°15.1	16	58°25.1	20°43.3	16	58°23.0	20°08.4	16	58°22.1	19°30.5	16	58°22.5	18°49.6
17	73°28.5	21°14.7	17	73°25.1	20°42.9	17	73°22.9	20°07.9	17	73°22.1	19°29.9	17	73°22.5	18°49.0
18	88°28.4	21°14.2	18	88°25.1	20°42.4	18	88°22.9	20°07.4	18	88°22.0	19°29.4	18	88°22.6	18°48.5
19	103°28.4	21°13.8	19	103°25.0	20°41.9	19	103°22.9	20°06.9	19	103°22.0	19°28.8	19	103°22.6	18°47.9
20	118°28.3	21°13.4	20	118°25.0	20°41.5	20	118°22.9	20°06.4	20	118°22.0	19°28.3	20	118°22.6	18°47.3
21	133°28.3	21°13.0	21	133°24.9	20°41.0	21	133°22.8	20°05.9	21	133°22.0	19°27.7	21	133°22.6	18°46.7
22	148°28.2	21°12.6	22	148°24.9	20°40.5	22	148°22.8	20°05.4	22	148°22.0	19°27.2	22	148°22.6	18°46.1
23	163°28.2	21°12.1	23	163°24.9	20°40.1	23	163°22.8	20°04.9	23	163°22.0	19°26.6	23	163°22.6	18°45.5
	SD.=15.7	d=-0.4		SD.=15.7	d=-0.5		SD.=15.7	d=-0.5		SD.=15.7	d=-0.5		SD.=15.8	d=-0.6

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	178°28.1	21°11.7	0	178°24.8	20°39.6	0	178°22.8	20°04.3	0	178°22.0	19°26.1	0	178°22.7	18°44.9
1	193°28.0	21°11.3	1	193°24.8	20°39.1	1	193°22.8	20°03.8	1	193°22.0	19°25.5	1	193°22.7	18°44.3
2	208°28.0	21°10.9	2	208°24.8	20°38.7	2	208°22.7	20°03.3	2	208°22.0	19°25.0	2	208°22.7	18°43.7
3	223°27.9	21°10.4	3	223°24.7	20°38.2	3	223°22.7	20°02.8	3	223°22.0	19°24.4	3	223°22.7	18°43.1
4	238°27.9	21°10.0	4	238°24.7	20°37.7	4	238°22.7	20°02.3	4	238°22.0	19°23.9	4	238°22.7	18°42.6
5	253°27.8	21°09.6	5	253°24.7	20°37.2	5	253°22.7	20°01.8	5	253°22.0	19°23.3	5	253°22.8	18°42.0
6	268°27.8	21°09.2	6	268°24.6	20°36.8	6	268°22.7	20°01.3	6	268°22.0	19°22.8	6	268°22.8	18°41.4
7	283°27.7	21°08.7	7	283°24.6	20°36.3	7	283°22.7	20°00.8	7	283°22.0	19°22.2	7	283°22.8	18°40.8
8	298°27.7	21°08.3	8	298°24.5	20°35.8	8	298°22.6	20°00.2	8	298°22.0	19°21.6	8	298°22.8	18°40.2
9	313°27.6	21°07.9	9	313°24.5	20°35.4	9	313°22.6	19°59.7	9	313°22.0	19°21.1	9	313°22.8	18°39.6
10	328°27.6	21°07.4	10	328°24.5	20°34.9	10	328°22.6	19°59.2	10	328°22.0	19°20.5	10	328°22.9	18°39.0
11	343°27.5	21°07.0	11	343°24.4	20°34.4	11	343°22.6	19°58.7	11	343°22.0	19°20.0	11	343°22.9	18°38.4
12	358°27.5	21°06.6	12	358°24.4	20°33.9	12	358°22.6	19°58.2	12	358°22.0	19°19.4	12	358°22.9	18°37.8
13	13°27.4	21°06.2	13	13°24.4	20°33.5	13	13°22.6	19°57.7	13	13°22.0	19°18.9	13	13°22.9	18°37.2
14	28°27.4	21°05.7	14	28°24.3	20°33.0	14	28°22.5	19°57.1	14	28°22.1	19°18.3	14	28°22.9	18°36.6
15	43°27.3	21°05.3	15	43°24.3	20°32.5	15	43°22.5	19°56.6	15	43°22.1	19°17.7	15	43°23.0	18°36.0
16	58°27.3	21°04.9	16	58°24.3	20°32.0	16	58°22.5	19°56.1	16	58°22.1	19°17.2	16	58°23.0	18°35.4
17	73°27.2	21°04.4	17	73°24.2	20°31.5	17	73°22.5	19°55.6	17	73°22.1	19°16.6	17	73°23.0	18°34.8
18	88°27.2	21°04.0	18	88°24.2	20°31.1	18	88°22.5	19°55.1	18	88°22.1	19°16.1	18	88°23.0	18°34.2
19	103°27.1	21°03.5	19	103°24.2	20°30.6	19	103°22.5	19°54.5	19	103°22.1	19°15.5	19	103°23.1	18°33.6
20	118°27.1	21°03.1	20	118°24.1	20°30.1	20	118°22.4	19°54.0	20	118°22.1	19°14.9	20	118°23.1	18°33.0
21	133°27.0	21°02.7	21	133°24.1	20°29.6	21	133°22.4	19°53.5	21	133°22.1	19°14.4	21	133°23.1	18°32.4
22	148°27.0	21°02.2	22	148°24.1	20°29.1	22	148°22.4	19°53.0	22	148°22.1	19°13.8	22	148°23.1	18°31.8
23	163°26.9	21°01.8	23	163°24.0	20°28.7	23	163°22.4	19°52.4	23	163°22.1	19°13.2	23	163°23.2	

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	178°23.2	18°30.6	0	178°25.7	17°45.8	0	178°29.6	16°58.3	0	178°34.8	16°08.5	0	178°41.4	15°16.3
1	193°23.2	18°30.0	1	193°25.7	17°45.1	1	193°29.6	16°57.7	1	193°34.9	16°07.8	1	193°41.5	15°15.5
2	208°23.2	18°29.4	2	208°25.8	17°44.5	2	208°29.7	16°57.0	2	208°35.0	16°07.0	2	208°41.6	15°14.8
3	223°23.3	18°28.8	3	223°25.8	17°43.8	3	223°29.8	16°56.3	3	223°35.1	16°06.3	3	223°41.7	15°14.0
4	238°23.3	18°28.2	4	238°25.9	17°43.2	4	238°29.8	16°55.6	4	238°35.2	16°05.6	4	238°41.8	15°13.3
5	253°23.3	18°27.6	5	253°25.9	17°42.5	5	253°29.9	16°55.0	5	253°35.2	16°04.9	5	253°41.9	15°12.5
6	268°23.3	18°26.9	6	268°25.9	17°41.9	6	268°30.0	16°54.3	6	268°35.3	16°04.2	6	268°42.0	15°11.8
7	283°23.4	18°26.3	7	283°26.0	17°41.3	7	283°30.0	16°53.6	7	283°35.4	16°03.5	7	283°42.1	15°11.1
8	298°23.4	18°25.7	8	298°26.0	17°40.6	8	298°30.1	16°52.9	8	298°35.5	16°02.8	8	298°42.2	15°10.3
9	313°23.4	18°25.1	9	313°26.1	17°40.0	9	313°30.1	16°52.2	9	313°35.6	16°02.1	9	313°42.3	15°09.6
10	328°23.4	18°24.5	10	328°26.1	17°39.3	10	328°30.2	16°51.6	10	328°35.7	16°01.3	10	328°42.4	15°08.8
11	343°23.5	18°23.9	11	343°26.2	17°38.7	11	343°30.3	16°50.9	11	343°35.7	16°00.6	11	343°42.5	15°08.1
12	358°23.5	18°23.3	12	358°26.2	17°38.0	12	358°30.3	16°50.2	12	358°35.8	15°59.9	12	358°42.6	15°07.3
13	13°23.5	18°22.7	13	13°26.3	17°37.4	13	13°30.4	16°49.5	13	13°35.9	15°59.2	13	13°42.7	15°06.6
14	28°23.6	18°22.1	14	28°26.3	17°36.7	14	28°30.5	16°48.8	14	28°36.0	15°58.5	14	28°42.8	15°05.8
15	43°23.6	18°21.5	15	43°26.4	17°36.1	15	43°30.5	16°48.1	15	43°36.1	15°57.8	15	43°42.9	15°05.1
16	58°23.6	18°20.8	16	58°26.4	17°35.4	16	58°30.6	16°47.5	16	58°36.2	15°57.1	16	58°43.0	15°04.3
17	73°23.6	18°20.2	17	73°26.5	17°34.8	17	73°30.7	16°46.8	17	73°36.3	15°56.3	17	73°43.1	15°03.6
18	88°23.7	18°19.6	18	88°26.5	17°34.1	18	88°30.8	16°46.1	18	88°36.3	15°55.6	18	88°43.2	15°02.9
19	103°23.7	18°19.0	19	103°26.6	17°33.5	19	103°30.8	16°45.4	19	103°36.4	15°54.9	19	103°43.3	15°02.1
20	118°23.7	18°18.4	20	118°26.6	17°32.8	20	118°30.9	16°44.7	20	118°36.5	15°54.2	20	118°43.4	15°01.4
21	133°23.8	18°17.8	21	133°26.7	17°32.2	21	133°31.0	16°44.0	21	133°36.6	15°53.5	21	133°43.6	15°00.6
22	148°23.8	18°17.2	22	148°26.7	17°31.5	22	148°31.0	16°43.4	22	148°36.7	15°52.8	22	148°43.7	14°59.9
23	163°23.8	18°16.6	23	163°26.8	17°30.9	23	163°31.1	16°42.7	23	163°36.8	15°52.0	23	163°43.8	14°59.1
	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°23.9	18°15.9	0	178°26.8	17°30.2	0	178°31.2	16°42.0	0	178°36.9	15°51.3	0	178°43.9	14°58.4
1	193°23.9	18°15.3	1	193°26.9	17°29.6	1	193°31.2	16°41.3	1	193°37.0	15°50.6	1	193°44.0	14°57.6
2	208°23.9	18°14.7	2	208°26.9	17°28.9	2	208°31.3	16°40.6	2	208°37.0	15°49.9	2	208°44.1	14°56.9
3	223°23.9	18°14.1	3	223°27.0	17°28.3	3	223°31.4	16°39.9	3	223°37.1	15°49.2	3	223°44.2	14°56.1
4	238°24.0	18°13.5	4	238°27.0	17°27.6	4	238°31.4	16°39.2	4	238°37.2	15°48.4	4	238°44.3	14°55.4
5	253°24.0	18°12.8	5	253°27.1	17°27.0	5	253°31.5	16°38.5	5	253°37.3	15°47.7	5	253°44.4	14°54.6
6	268°24.0	18°12.2	6	268°27.1	17°26.3	6	268°31.6	16°37.9	6	268°37.4	15°47.0	6	268°44.5	14°53.8
7	283°24.1	18°11.6	7	283°27.2	17°25.7	7	283°31.7	16°37.2	7	283°37.5	15°46.3	7	283°44.6	14°53.1
8	298°24.1	18°11.0	8	298°27.2	17°25.0	8	298°31.7	16°36.5	8	298°37.6	15°45.5	8	298°44.7	14°52.3
9	313°24.1	18°10.4	9	313°27.3	17°24.3	9	313°31.8	16°35.8	9	313°37.7	15°44.8	9	313°44.8	14°51.6
10	328°24.2	18°09.7	10	328°27.3	17°23.7	10	328°31.9	16°35.1	10	328°37.8	15°44.1	10	328°44.9	14°50.8
11	343°24.2	18°09.1	11	343°27.4	17°23.0	11	343°32.0	16°34.4	11	343°37.9	15°43.4	11	343°45.1	14°50.1
12	358°24.2	18°08.5	12	358°27.4	17°22.4	12	358°32.0	16°33.7	12	358°38.0	15°42.6	12	358°45.2	14°49.3
13	13°24.3	18°07.9	13	13°27.5	17°21.7	13	13°32.1	16°33.0	13	13°38.0	15°41.9	13	13°45.3	14°48.6
14	28°24.3	18°07.3	14	28°27.6	17°21.0	14	28°32.2	16°32.3	14	28°38.1	15°41.2	14	28°45.4	14°47.8
15	43°24.4	18°06.6	15	43°27.6	17°20.4	15	43°32.2	16°31.6	15	43°38.2	15°40.5	15	43°45.5	14°47.0
16	58°24.4	18°06.0	16	58°27.7	17°19.7	16	58°32.3	16°30.9	16	58°38.3	15°39.7	16	58°45.6	14°46.3
17	73°24.4	18°05.4	17	73°27.7	17°19.1	17	73°32.4	16°30.2	17	73°38.4	15°39.0	17	73°45.7	14°45.5
18	88°24.5	18°04.8	18	88°27.8	17°18.4	18	88°32.5	16°29.5	18	88°38.5	15°38.3	18	88°45.8	14°44.8
19	103°24.5	18°04.1	19	103°27.8	17°17.7	19	103°32.5	16°28.8	19	103°38.6	15°37.6	19	103°45.9	14°44.0
20	118°24.5	18°03.5	20	118°27.9	17°17.1	20	118°32.6	16°28.1	20	118°38.7	15°36.8	20	118°46.0	14°43.3
21	133°24.6	18°02.9	21	133°27.9	17°16.4	21	133°32.7	16°27.4	21	133°38.8	15°36.1	21	133°46.1	14°42.5
22	148°24.6	18°02.2	22	148°28.0	17°15.8	22	148°32.8	16°26.8	22	148°38.9	15°35.4	22	148°46.3	14°41.7
23	163°24.6	18°01.6	23	163°28.1	17°15.1	23	163°32.8	16°26.1	23	163°39.0	15°34.6	23	163°46.4	14°41.0
	SD.=15.8	d=-0.6		SD.=15.8	d=-0.7		SD.=15.8	d=-0.7		SD.=15.8	d=-0.7		SD.=15.8	d=-0.8

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	178°24.7	18°01.0	0	178°28.1	17°14.4	0	178°32.9	16°25.4	0	178°39.1	15°33.9	0	178°46.5	14°40.2
1	193°24.7	18°00.4	1	193°28.2	17°13.8	1	193°33.0	16°24.7	1	193°39.2	15°33.2	1	193°46.6	14°39.5
2	208°24.8	17°59.7	2	208°28.2	17°13.1	2	208°33.1	16°24.0	2	208°39.3	15°32.4	2	208°46.7	14°38.7
3	223°24.8	17°59.1	3	223°28.3	17°12.4	3	223°33.2	16°23.3	3	223°39.3	15°31.7	3	223°46.8	14°37.9
4	238°24.8	17°58.5	4	238°28.3	17°11.8	4	238°33.2	16°22.6	4	238°39.4	15°31.0	4	238°46.9	14°37.2
5	253°24.9	17°57.8	5	253°28.4	17°11.1	5	253°33.3	16°21.9	5	253°39.5	15°30.3	5	253°47.0	14°36.4
6	268°24.9	17°57.2	6	268°28.5	17°10.4	6	268°33.4	16°21.2	6	268°39.6	15°29.5	6	268°47.2	14°35.6
7	283°25.0	17°56.6	7	283°28.5	17°09.8	7	283°33.5	16°20.5	7	283°39.7	15°28.8	7	283°47.3	14°34.9
8	298°25.0	17°55.9	8	298°28.6	17°09.1	8	298°33.5	16°19.8	8	298°39.8	15°28.1	8	298°47.4	14°34.1
9	313°25.0	17°55.3	9	313°28.6	17°08.4	9	313°33.6	16°19.1	9	313°39.9	15°27.3	9	313°47.5	14°33.4
10	328°25.1	17°54.7	10	328°28.7	17°07.8	10	328°33.7	16°18.3	10	328°40.0	15°26.6	10	328°47.6	14°32.6
11	343°25.1	17°54.0	11	343°28.8	17°07.1	11	343°33.8	16°17.6	11	343°40.1	15°25.8	11	343°47.7	14°31.8
12	358°25.2	17°53.4	12	358°28.8	17°06.4	12	358°33.9	16°16.9	12	358°40.2	15°25.1	12	358°47.8	14°31.1
13	13°25.2	17°52.8	13	13°28.9	17°05.7	13	13°33.9	16°16.2	13	13°40.3	15°24.4	13	13°47.9	14°30.3
14	28°25.2	17°52.1	14	28°28.9	17°05.1	14	28°34.0	16°15.5	14	28°40.4	15°23.6	14	28°48.1	14°29.5
15	43°25.3	17°51.5	15	43°29.0	17°04.4	15	43°34.1	16°14.8	15	43°40.5	15°22.9	15	43°48.2	14°28.8
16	58°25.3	17°50.9	16	58°29.1	17°03.7	16	58°34.2	16°14.1	16	58°40.6	15°22.2	16	58°48.3	14°28.0
17	73°25.4	17°50.2	17	73°29.1	17°03.1	17	73°34.3	16°13.4	17	73°40.7	15°21.4	17	73°48.4	14°27.2
18	88°25.4	17°49.6	18	88°29.2	17°02.4	18	88°34.3	16°12.7	18	88°40.8	15°20.7	18	88°48.5	14°26.5
19	103°25.5	17°49.0	19	103°29.2	17°01.7	19	103°34.4	16°12.0	19	103°40.9	15°20.0	19	103°48.6	14°25.7
20	118°25.5	17°48.3	20	118°29.3	17°01.0	20	118°34.5	16°11.3	20	118°41.0	15°19.2	20	118°48.8	14°24.9
21	133°25.5	17°47.7	21	133°29.4	17°00.4	21	133°34.6	16°10.6	21	133°41.1	15°18.5	21	133°48.9	14°24.2
22	148°25.6	17°47.0	22	148°29.4	16°59.7	22	148°34.7	16°09.9	22	148°41.2	15°17.7	22	148°49.0	14°23.4
23	163°25.6	17°46.4	23	163°29.5	16°59.0	23	163°34.7	16°09.2	23					

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	178°49.2	14°21.8	0	178°58.2	13°25.4	0	179°08.3	12°27.0	0	179°19.5	11°26.8	0	179°31.6	10°25.0
1	193°49.3	14°21.1	1	193°58.3	13°24.6	1	194°08.5	12°26.1	1	194°19.6	11°25.9	1	194°31.8	10°24.1
2	208°49.5	14°20.3	2	208°58.5	13°23.8	2	209°08.6	12°25.3	2	209°19.8	11°25.1	2	209°32.0	10°23.3
3	223°49.6	14°19.5	3	223°58.6	13°23.0	3	224°08.8	12°24.5	3	224°20.0	11°24.3	3	224°32.2	10°22.4
4	238°49.7	14°18.8	4	238°58.7	13°22.2	4	239°08.9	12°23.7	4	239°20.1	11°23.4	4	239°32.3	10°21.5
5	253°49.8	14°18.0	5	253°58.9	13°21.4	5	254°09.1	12°22.8	5	254°20.3	11°22.6	5	254°32.5	10°20.6
6	268°49.9	14°17.2	6	268°59.0	13°20.6	6	269°09.2	12°22.0	6	269°20.5	11°21.7	6	269°32.7	10°19.8
7	283°50.0	14°16.4	7	283°59.2	13°19.8	7	284°09.4	12°21.2	7	284°20.6	11°20.9	7	284°32.9	10°18.9
8	298°50.2	14°15.7	8	298°59.3	13°19.0	8	299°09.5	12°20.4	8	299°20.8	11°20.0	8	299°33.0	10°18.0
9	313°50.3	14°14.9	9	313°59.4	13°18.2	9	314°09.7	12°19.5	9	314°20.9	11°19.2	9	314°33.2	10°17.2
10	328°50.4	14°14.1	10	328°59.6	13°17.4	10	329°09.8	12°18.7	10	329°21.1	11°18.3	10	329°33.4	10°16.3
11	343°50.5	14°13.3	11	343°59.7	13°16.6	11	344°10.0	12°17.9	11	344°21.3	11°17.5	11	344°33.6	10°15.4
12	358°50.6	14°12.6	12	358°59.8	13°15.8	12	359°10.1	12°17.1	12	359°21.4	11°16.6	12	359°33.7	10°14.5
13	13°50.8	14°11.8	13	13°60.0	13°15.0	13	14°10.3	12°16.2	13	14°21.6	11°15.8	13	14°33.9	10°13.7
14	28°50.9	14°11.0	14	29°00.1	13°14.2	14	29°10.4	12°15.4	14	29°21.8	11°14.9	14	29°34.1	10°12.8
15	43°51.0	14°10.2	15	44°00.2	13°13.4	15	44°10.6	12°14.6	15	44°21.9	11°14.0	15	44°34.3	10°11.9
16	58°51.1	14°09.5	16	59°00.4	13°12.6	16	59°10.7	12°13.7	16	59°22.1	11°13.2	16	59°34.5	10°11.1
17	73°51.2	14°08.7	17	74°00.5	13°11.7	17	74°10.9	12°12.9	17	74°22.3	11°12.3	17	74°34.6	10°10.2
18	88°51.4	14°07.9	18	89°00.6	13°10.9	18	89°11.0	12°12.1	18	89°22.4	11°11.5	18	89°34.8	10°09.3
19	103°51.5	14°07.1	19	104°00.8	13°10.1	19	104°11.2	12°11.3	19	104°22.6	11°10.6	19	104°35.0	10°08.4
20	118°51.6	14°06.4	20	119°00.9	13°09.3	20	119°11.3	12°10.4	20	119°22.8	11°09.8	20	119°35.2	10°07.6
21	133°51.7	14°05.6	21	134°01.1	13°08.5	21	134°11.5	12°09.6	21	134°22.9	11°08.9	21	134°35.4	10°06.7
22	148°51.8	14°04.8	22	149°01.2	13°07.7	22	149°11.6	12°08.8	22	149°23.1	11°08.1	22	149°35.5	10°05.8
23	163°52.0	14°04.0	23	164°01.3	13°06.9	23	164°11.8	12°07.9	23	164°23.3	11°07.2	23	164°35.7	10°04.9
	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°52.1	14°03.2	0	179°01.5	13°06.1	0	179°11.9	12°07.1	0	179°23.4	11°06.4	0	179°35.9	10°04.1
1	193°52.2	14°02.5	1	194°01.6	13°05.3	1	194°12.1	12°06.3	1	194°23.6	11°05.5	1	194°36.1	10°03.2
2	208°52.3	14°01.7	2	209°01.7	13°04.5	2	209°12.2	12°05.4	2	209°23.8	11°04.7	2	209°36.3	10°02.3
3	223°52.5	14°00.9	3	224°01.9	13°03.7	3	224°12.4	12°04.6	3	224°23.9	11°03.8	3	224°36.4	10°01.4
4	238°52.6	14°00.1	4	239°02.0	13°02.9	4	239°12.5	12°03.8	4	239°24.1	11°02.9	4	239°36.6	10°00.5
5	253°52.7	13°59.3	5	254°02.2	13°02.1	5	254°12.7	12°02.9	5	254°24.3	11°02.1	5	254°36.8	9°59.7
6	268°52.8	13°58.6	6	269°02.3	13°01.3	6	269°12.8	12°02.1	6	269°24.4	11°01.2	6	269°37.0	9°58.8
7	283°53.0	13°57.8	7	284°02.4	13°00.5	7	284°13.0	12°01.3	7	284°24.6	11°00.4	7	284°37.2	9°57.9
8	298°53.1	13°57.0	8	299°02.6	12°59.6	8	299°13.2	12°00.4	8	299°24.8	11°59.5	8	299°37.3	9°57.0
9	313°53.2	13°56.2	9	314°02.7	12°58.8	9	314°13.3	11°59.6	9	314°24.9	11°58.7	9	314°37.5	9°56.2
10	328°53.3	13°55.4	10	329°02.9	12°58.0	10	329°13.5	11°58.8	10	329°25.1	11°57.8	10	329°37.7	9°55.3
11	343°53.5	13°54.6	11	344°03.0	12°57.2	11	344°13.6	11°57.9	11	344°25.3	11°56.9	11	344°37.9	9°54.4
12	358°53.6	13°53.9	12	359°03.1	12°56.4	12	359°13.8	11°57.1	12	359°25.4	11°56.1	12	359°38.1	9°53.5
13	13°53.7	13°53.1	13	14°03.3	12°55.6	13	14°13.9	11°56.3	13	14°25.6	11°55.2	13	14°38.2	9°52.6
14	28°53.8	13°52.3	14	29°03.4	12°54.8	14	29°14.1	11°55.4	14	29°25.8	11°54.4	14	29°38.4	9°51.8
15	43°54.0	13°51.5	15	44°03.6	12°54.0	15	44°14.2	11°54.6	15	44°25.9	11°53.5	15	44°38.6	9°50.9
16	58°54.1	13°50.7	16	59°03.7	12°53.2	16	59°14.4	11°53.7	16	59°26.1	11°52.7	16	59°38.8	9°50.0
17	73°54.2	13°49.9	17	74°03.8	12°52.3	17	74°14.5	11°52.9	17	74°26.3	11°51.8	17	74°39.0	9°49.1
18	88°54.3	13°49.1	18	89°04.0	12°51.5	18	89°14.7	11°52.1	18	89°26.5	11°50.9	18	89°39.2	9°48.2
19	103°54.5	13°48.4	19	104°04.1	12°50.7	19	104°14.9	11°51.2	19	104°26.6	11°50.1	19	104°39.3	9°47.4
20	118°54.6	13°47.6	20	119°04.3	12°49.9	20	119°15.0	11°50.4	20	119°26.8	11°49.2	20	119°39.5	9°46.5
21	133°54.7	13°46.8	21	134°04.4	12°49.1	21	134°15.2	11°49.6	21	134°27.0	11°48.3	21	134°39.7	9°45.6
22	148°54.8	13°46.0	22	149°04.5	12°48.3	22	149°15.3	11°48.7	22	149°27.1	11°47.5	22	149°39.9	9°44.7
23	163°55.0	13°45.2	23	164°04.7	12°47.5	23	164°15.5	11°47.9	23	164°27.3	11°46.6	23	164°40.1	9°43.8
	SD.=15.8	d=-0.8		SD.=15.8	d=-0.8		SD.=15.8	d=-0.8		SD.=15.8	d=-0.9		SD.=15.8	d=-0.9

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	178°55.1	13°44.4	0	179°04.8	12°46.6	0	179°15.6	11°47.0	0	179°27.5	10°45.8	0	179°40.3	9°43.0
1	193°55.2	13°43.6	1	194°05.0	12°45.8	1	194°15.8	11°46.2	1	194°27.6	10°44.9	1	194°40.4	9°42.1
2	208°55.3	13°42.8	2	209°05.1	12°45.0	2	209°16.0	11°45.4	2	209°27.8	10°44.0	2	209°40.6	9°41.2
3	223°55.5	13°42.0	3	224°05.3	12°44.2	3	224°16.1	11°44.5	3	224°28.0	10°43.2	3	224°40.8	9°40.3
4	238°55.6	13°41.3	4	239°05.4	12°43.4	4	239°16.3	11°43.7	4	239°28.2	10°42.3	4	239°41.0	9°39.4
5	253°55.7	13°40.5	5	254°05.5	12°42.6	5	254°16.4	11°42.8	5	254°28.3	10°41.4	5	254°41.2	9°38.5
6	268°55.9	13°39.7	6	269°05.7	12°41.7	6	269°16.6	11°42.0	6	269°28.5	10°40.6	6	269°41.4	9°37.7
7	283°56.0	13°38.9	7	284°05.8	12°40.9	7	284°16.8	11°41.2	7	284°28.7	10°39.7	7	284°41.5	9°36.8
8	298°56.1	13°38.1	8	299°06.0	12°40.1	8	299°16.9	11°40.3	8	299°28.8	10°38.9	8	299°41.7	9°35.9
9	313°56.2	13°37.3	9	314°06.1	12°39.3	9	314°17.1	11°39.5	9	314°29.0	10°38.0	9	314°41.9	9°35.0
10	328°56.4	13°36.5	10	329°06.3	12°38.5	10	329°17.2	11°38.6	10	329°29.2	10°37.1	10	329°42.1	9°34.1
11	343°56.5	13°35.7	11	344°06.4	12°37.6	11	344°17.4	11°37.8	11	344°29.4	10°36.3	11	344°42.3	9°33.2
12	358°56.6	13°34.9	12	359°06.6	12°36.8	12	359°17.5	11°36.9	12	359°29.5	10°35.4	12	359°42.5	9°32.4
13	13°56.8	13°34.1	13	14°06.7	12°36.0	13	14°17.7	11°36.1	13	14°29.7	10°34.5	13	14°42.7	9°31.5
14	28°56.9	13°33.3	14	29°06.9	12°35.2	14	29°17.9	11°35.3	14	29°29.9	10°33.7	14	29°42.8	9°30.6
15	43°57.0	13°32.5	15	44°07.0	12°34.4	15	44°18.0	11°34.4	15	44°30.1	10°32.8	15	44°43.0	9°29.7
16	58°57.2	13°31.7	16	59°07.1	12°33.5	16	59°18.2	11°33.6	16	59°30.2	10°31.9	16	59°43.2	9°28.8
17	73°57.3	13°30.9	17	74°07.3	12°32.7	17	74°18.3	11°32.7	17	74°30.4	10°31.1	17	74°43.4	9°27.9
18	88°57.4	13°30.2	18	89°07.4	12°31.9	18	89°18.5	11°31.9	18	89°30.6	10°30.2	18	89°43.6	9°27.0
19	103°57.6	13°29.4	19	104°07.6	12°31.1	19	104°18.7	11°31.0	19	104°30.8	10°29.3	19	104°43.8	9°26.1
20	118°57.7	13°28.6	20	119°07.7	12°30.3	20	119°18.8	11°30.2	20	119°30.9	10°28.5	20	119°44.0	9°25.3
21	133°57.8	13°27.8	21	134°07.9	12°29.4	21	134°19.0	11°29.3	21	134°31.1	10°27.6	21	134°44.1	9°24.4
22	148°58.0	13°27.0	22	149°08.0	12°28.6	22	149°19.2	11°28.5	22	149°31.3	10°26.7	22	149°44.3	9°23.5
23	163°58.1	13°26.2	23	164°08.2	12°27.8	23	164°19.3	11°27.6	23	164°31.5	10°25.9	23	164°44.5	9°22.6
	SD.=15.8	d=-0.8	</											

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	179°44.7	9°21.7	0	179°58.6	8°17.1	0	180°13.2	7°11.3	0	180°28.4	6°04.5	0	180°44.0	4°56.7
1	194°44.9	9°20.8	1	194°58.8	8°16.2	1	195°13.4	7°10.4	1	195°28.6	6°03.5	1	195°44.2	4°55.8
2	209°45.1	9°19.9	2	209°59.0	8°15.3	2	210°13.6	7°09.4	2	210°28.8	6°02.6	2	210°44.4	4°54.8
3	224°45.3	9°19.0	3	224°59.2	8°14.4	3	225°13.8	7°08.5	3	225°29.0	6°01.6	3	225°44.6	4°53.9
4	239°45.5	9°18.2	4	239°59.4	8°13.5	4	240°14.0	7°07.6	4	240°29.2	6°00.7	4	240°44.8	4°52.9
5	254°45.6	9°17.3	5	254°59.6	8°12.6	5	255°14.2	7°06.7	5	255°29.4	5°59.8	5	255°45.1	4°52.0
6	269°45.8	9°16.4	6	269°59.8	8°11.7	6	270°14.4	7°05.8	6	270°29.7	5°58.8	6	270°45.3	4°51.0
7	284°46.0	9°15.5	7	284°60.0	8°10.7	7	285°14.6	7°04.8	7	285°29.9	5°57.9	7	285°45.5	4°50.1
8	299°46.2	9°14.6	8	300°00.2	8°09.8	8	300°14.9	7°03.9	8	300°30.1	5°57.0	8	300°45.7	4°49.1
9	314°46.4	9°13.7	9	315°00.4	8°08.9	9	315°15.1	7°03.0	9	315°30.3	5°56.0	9	315°45.9	4°48.2
10	329°46.6	9°12.8	10	330°00.6	8°08.0	10	330°15.3	7°02.1	10	330°30.5	5°55.1	10	330°46.1	4°47.2
11	344°46.8	9°11.9	11	345°00.8	8°07.1	11	345°15.5	7°01.1	11	345°30.7	5°54.2	11	345°46.4	4°46.3
12	359°47.0	9°11.0	12	0°01.0	8°06.2	12	0°15.7	7°00.2	12	0°30.9	5°53.2	12	0°46.6	4°45.3
13	14°47.2	9°10.1	13	15°01.2	8°05.3	13	15°15.9	6°59.3	13	15°31.2	5°52.3	13	15°46.8	4°44.4
14	29°47.3	9°09.2	14	30°01.4	8°04.4	14	30°16.1	6°58.4	14	30°31.4	5°51.3	14	30°47.0	4°43.4
15	44°47.5	9°08.4	15	45°01.6	8°03.5	15	45°16.3	6°57.4	15	45°31.6	5°50.4	15	45°47.2	4°42.5
16	59°47.7	9°07.5	16	60°01.8	8°02.6	16	60°16.5	6°56.5	16	60°31.8	5°49.5	16	60°47.5	4°41.5
17	74°47.9	9°06.6	17	75°02.0	8°01.7	17	75°16.7	6°55.6	17	75°32.0	5°48.5	17	75°47.7	4°40.6
18	89°48.1	9°05.7	18	90°02.2	8°00.7	18	90°16.9	6°54.7	18	90°32.2	5°47.6	18	90°47.9	4°39.6
19	104°48.3	9°04.8	19	105°02.4	7°59.8	19	105°17.2	6°53.7	19	105°32.4	5°46.7	19	105°48.1	4°38.7
20	119°48.5	9°03.9	20	120°02.6	7°58.9	20	120°17.4	6°52.8	20	120°32.7	5°45.7	20	120°48.3	4°37.7
21	134°48.7	9°03.0	21	135°02.8	7°58.0	21	135°17.6	6°51.9	21	135°32.9	5°44.8	21	135°48.6	4°36.8
22	149°48.9	9°02.1	22	150°03.0	7°57.1	22	150°17.8	6°51.0	22	150°33.1	5°43.8	22	150°48.8	4°35.8
23	164°49.1	9°01.2	23	165°03.2	7°56.2	23	165°18.0	6°50.2	23	165°33.3	5°42.9	23	165°49.0	4°34.9
	SD.=15.8	d=-0.9		SD.=15.8	d=-0.9		SD.=15.9	d=-0.9		SD.=15.9	d=-0.9		SD.=15.9	d=-0.9

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	179°49.3	9°00.3	0	180°03.4	7°55.3	0	180°18.2	6°49.1	0	180°33.5	5°42.0	0	180°49.2	4°33.9
1	194°49.4	8°59.4	1	195°03.6	7°54.4	1	195°18.4	6°48.2	1	195°33.7	5°41.0	1	195°49.4	4°33.0
2	209°49.6	8°58.5	2	210°03.8	7°53.5	2	210°18.6	6°47.3	2	210°34.0	5°40.1	2	210°49.7	4°32.0
3	224°49.8	8°57.6	3	225°04.0	7°52.5	3	225°18.8	6°46.3	3	225°34.2	5°39.1	3	225°49.9	4°31.1
4	239°50.0	8°56.7	4	240°04.2	7°51.6	4	240°19.0	6°45.4	4	240°34.4	5°38.2	4	240°50.1	4°30.1
5	254°50.2	8°55.8	5	255°04.4	7°50.7	5	255°19.2	6°44.5	5	255°34.6	5°37.3	5	255°50.3	4°29.2
6	269°50.4	8°54.9	6	270°04.6	7°49.8	6	270°19.5	6°43.6	6	270°34.8	5°36.3	6	270°50.5	4°28.2
7	284°50.6	8°54.0	7	285°04.8	7°48.9	7	285°19.7	6°42.6	7	285°35.0	5°35.4	7	285°50.8	4°27.3
8	299°50.8	8°53.1	8	300°05.0	7°48.0	8	300°19.9	6°41.7	8	300°35.3	5°34.4	8	300°51.0	4°26.3
9	314°51.0	8°52.2	9	315°05.2	7°47.1	9	315°20.1	6°40.8	9	315°35.5	5°33.5	9	315°51.2	4°25.4
10	329°51.2	8°51.4	10	330°05.4	7°46.2	10	330°20.3	6°39.8	10	330°35.7	5°32.6	10	330°51.4	4°24.4
11	344°51.4	8°50.5	11	345°05.6	7°45.2	11	345°20.5	6°38.9	11	345°35.9	5°31.6	11	345°51.6	4°23.5
12	359°51.6	8°49.6	12	0°05.8	7°44.3	12	0°20.7	6°38.0	12	0°36.1	5°30.7	12	0°51.9	4°22.5
13	14°51.8	8°48.7	13	15°06.0	7°43.4	13	15°20.9	6°37.1	13	15°36.3	5°29.7	13	15°52.1	4°21.6
14	29°51.9	8°47.8	14	30°06.2	7°42.5	14	30°21.1	6°36.1	14	30°36.6	5°28.8	14	30°52.3	4°20.6
15	44°52.1	8°46.9	15	45°06.4	7°41.6	15	45°21.4	6°35.2	15	45°36.8	5°27.9	15	45°52.5	4°19.7
16	59°52.3	8°46.0	16	60°06.6	7°40.7	16	60°21.6	6°34.3	16	60°37.0	5°26.9	16	60°52.7	4°18.7
17	74°52.5	8°45.1	17	75°06.8	7°39.8	17	75°21.8	6°33.3	17	75°37.2	5°26.0	17	75°53.0	4°17.8
18	89°52.7	8°44.2	18	90°07.0	7°38.8	18	90°22.0	6°32.4	18	90°37.4	5°25.0	18	90°53.2	4°16.8
19	104°52.9	8°43.3	19	105°07.2	7°37.9	19	105°22.2	6°31.5	19	105°37.6	5°24.1	19	105°53.4	4°15.9
20	119°53.1	8°42.4	20	120°07.4	7°37.0	20	120°22.4	6°30.6	20	120°37.9	5°23.1	20	120°53.6	4°14.9
21	134°53.3	8°41.5	21	135°07.6	7°36.1	21	135°22.6	6°29.6	21	135°38.1	5°22.2	21	135°53.9	4°14.0
22	149°53.5	8°40.6	22	150°07.9	7°35.2	22	150°22.8	6°28.7	22	150°38.3	5°21.3	22	150°54.1	4°13.0
23	164°53.7	8°39.7	23	165°08.1	7°34.3	23	165°23.0	6°27.8	23	165°38.5	5°20.3	23	165°54.3	4°12.1
	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

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	179°53.9	8°38.8	0	180°08.3	7°33.3	0	180°23.3	6°26.8	0	180°38.7	5°19.4	0	180°54.5	4°11.1
1	194°54.1	8°37.9	1	195°08.5	7°32.4	1	195°23.5	6°25.9	1	195°38.9	5°18.4	1	195°54.7	4°10.1
2	209°54.3	8°37.0	2	210°08.7	7°31.5	2	210°23.7	6°25.0	2	210°39.2	5°17.5	2	210°55.0	4°09.2
3	224°54.5	8°36.1	3	225°08.9	7°30.6	3	225°23.9	6°24.0	3	225°39.4	5°16.5	3	225°55.2	4°08.2
4	239°54.7	8°35.2	4	240°09.1	7°29.7	4	240°24.1	6°23.1	4	240°39.6	5°15.6	4	240°55.4	4°07.3
5	254°54.9	8°34.3	5	255°09.3	7°28.8	5	255°24.3	6°22.2	5	255°39.8	5°14.7	5	255°55.6	4°06.3
6	269°55.1	8°33.4	6	270°09.5	7°27.8	6	270°24.5	6°21.3	6	270°40.0	5°13.7	6	270°55.8	4°05.4
7	284°55.3	8°32.5	7	285°09.7	7°26.9	7	285°24.7	6°20.3	7	285°40.2	5°12.8	7	285°56.1	4°04.4
8	299°55.4	8°31.6	8	300°09.9	7°26.0	8	300°25.0	6°19.4	8	300°40.5	5°11.8	8	300°56.3	4°03.5
9	314°55.6	8°30.7	9	315°10.1	7°25.1	9	315°25.2	6°18.5	9	315°40.7	5°10.9	9	315°56.5	4°02.5
10	329°55.8	8°29.8	10	330°10.3	7°24.2	10	330°25.4	6°17.5	10	330°40.9	5°09.9	10	330°56.7	4°01.6
11	344°56.0	8°28.9	11	345°10.5	7°23.3	11	345°25.6	6°16.6	11	345°41.1	5°09.0	11	345°56.9	4°00.6
12	359°56.2	8°27.9	12	0°10.7	7°22.3	12	0°25.8	6°15.7	12	0°41.3	5°08.1	12	0°57.2	3°59.7
13	14°56.4	8°27.0	13	15°10.9	7°21.4	13	15°26.0	6°14.7	13	15°41.6	5°07.1	13	15°57.4	3°58.7
14	29°56.6	8°26.1	14	30°11.1	7°20.5	14	30°26.2	6°13.8	14	30°41.8	5°06.2	14	30°57.6	3°57.7
15	44°56.8	8°25.2	15	45°11.3	7°19.6	15	45°26.4	6°12.9	15	45°42.0	5°05.2	15	45°57.8	3°56.8
16	59°57.0	8°24.3	16	60°11.5	7°18.7	16	60°26.7	6°11.9	16	60°42.2	5°04.3	16	60°58.1	3°55.8
17	74°57.2	8°23.4	17	75°11.8	7°17.7	17	75°26.9	6°11.0	17	75°42.4	5°03.3	17	75°58.3	3°54.9
18	89°57.4	8°22.5	18	90°12.0	7°16.8	18	90°27.1	6°10.1	18	90°42.6	5°02.4	18	90°58.5	3°53.9
19	104°57.6	8°21.6	19	105°12.2	7°15.9	19	105°27.3	6°09.1	19	105°42.9	5°01.4	19	105°58.7	3°53.0
20	119°57.8	8°20.7	20	120°12.4	7°15.0	20	120°27.5	6°08.2	20	120°43.1	5°00.5	20	120°58.9	3°52.0
21	134°58.0	8°19.8	21	135°12.6	7°14.1	21	135°27.7	6°07.3	21	135°43.3	4°59.5	21	135°59.2	3°51.1
22	149°58.2	8°18.9	22	150°12.8	7°13.1	22	150°27.9	6°06.3	22	150°43.5	4°58.6	22	150°59.4	3°50.1
23	164°58.4	8°18.0	23	165°13.0	7°12.2	23	165°28.2	6°05.4	23	165°43.7	4°57.6	23	165°59.6	3°49.1
	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°59.8	3°48.2	0	181°15.8	2°39.0	0	181°31.8	1°29.4	0	181°47.7	0°19.5	0	182°03.4	-0°50.6
1	196°00.0	3°47.2	1	196°16.0	2°38.1	1	196°32.0	1°28.5	1	196°47.9	0°18.5	1	197°03.6	-0°51.6
2	211°00.3	3°46.3	2	211°16.3	2°37.1	2	211°32.3	1°27.5	2	211°48.2	0°17.6	2	212°03.8	-0°52.5
3	226°00.5	3°45.3	3	226°16.5	2°36.2	3	226°32.5	1°26.5	3	226°48.4	0°16.6	3	227°04.1	-0°53.5
4	241°00.7	3°44.4	4	241°16.7	2°35.2	4	241°32.7	1°25.6	4	241°48.6	0°15.6	4	242°04.3	-0°54.5
5	256°00.9	3°43.4	5	256°16.9	2°34.2	5	256°32.9	1°24.6	5	256°48.8	0°14.6	5	257°04.5	-0°55.5
6	271°01.2	3°42.4	6	271°17.2	2°33.3	6	271°33.2	1°23.6	6	271°49.0	0°13.7	6	272°04.7	-0°56.4
7	286°01.4	3°41.5	7	286°17.4	2°32.3	7	286°33.4	1°22.6	7	286°49.3	0°12.7	7	287°04.9	-0°57.4
8	301°01.6	3°40.5	8	301°17.6	2°31.3	8	301°33.6	1°21.7	8	301°49.5	0°11.7	8	302°05.1	-0°58.4
9	316°01.8	3°39.6	9	316°17.8	2°30.4	9	316°33.8	1°20.7	9	316°49.7	0°10.7	9	317°05.3	-0°59.4
10	331°02.0	3°38.6	10	331°18.0	2°29.4	10	331°34.0	1°19.7	10	331°49.9	0°09.8	10	332°05.6	-1°00.3
11	346°02.3	3°37.7	11	346°18.3	2°28.4	11	346°34.3	1°18.8	11	346°50.1	0°08.8	11	347°05.8	-1°01.3
12	1°02.5	3°36.7	12	1°18.5	2°27.5	12	1°34.5	1°17.8	12	1°50.4	0°07.8	12	2°06.0	-1°02.3
13	16°02.7	3°35.7	13	16°18.7	2°26.5	13	16°34.7	1°16.8	13	16°50.6	0°06.9	13	17°06.2	-1°03.2
14	31°02.9	3°34.8	14	31°18.9	2°25.5	14	31°34.9	1°15.9	14	31°50.8	0°05.9	14	32°06.4	-1°04.2
15	46°03.2	3°33.8	15	46°19.2	2°24.6	15	46°35.2	1°14.9	15	46°51.0	0°04.9	15	47°06.6	-1°05.2
16	61°03.4	3°32.9	16	61°19.4	2°23.6	16	61°35.4	1°13.9	16	61°51.2	0°03.9	16	62°06.9	-1°06.2
17	76°03.6	3°31.9	17	76°19.6	2°22.6	17	76°35.6	1°12.9	17	76°51.5	0°03.0	17	77°07.1	-1°07.1
18	91°03.8	3°31.0	18	91°19.8	2°21.7	18	91°35.8	1°12.0	18	91°51.7	0°02.0	18	92°07.3	-1°08.1
19	106°04.0	3°30.0	19	106°20.1	2°20.7	19	106°36.0	1°11.0	19	106°51.9	0°01.0	19	107°07.5	-1°09.1
20	121°04.3	3°29.0	20	121°20.3	2°19.7	20	121°36.3	1°10.0	20	121°52.1	0°00.0	20	122°07.7	-1°10.1
21	136°04.5	3°28.1	21	136°20.5	2°18.8	21	136°36.5	1°09.1	21	136°52.3	-0°00.9	21	137°07.9	-1°11.0
22	151°04.7	3°27.1	22	151°20.7	2°17.8	22	151°36.7	1°08.1	22	151°52.5	-0°01.9	22	152°08.1	-1°12.0
23	166°04.9	3°26.2	23	166°20.9	2°16.9	23	166°36.9	1°07.1	23	166°52.8	-0°02.9	23	167°08.4	-1°13.0
	SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	181°05.2	3°25.2	0	181°21.2	2°15.9	0	181°37.1	1°06.1	0	181°53.0	-0°03.9	0	182°08.6	-1°14.0
1	196°05.4	3°24.2	1	196°21.4	2°14.9	1	196°37.4	1°05.2	1	196°53.2	-0°04.8	1	197°08.8	-1°14.9
2	211°05.6	3°23.3	2	211°21.6	2°14.0	2	211°37.6	1°04.2	2	211°53.4	-0°05.8	2	212°09.0	-1°15.9
3	226°05.8	3°22.3	3	226°21.8	2°13.0	3	226°37.8	1°03.2	3	226°53.6	-0°06.8	3	227°09.2	-1°16.9
4	241°06.0	3°21.4	4	241°22.1	2°12.0	4	241°38.0	1°02.3	4	241°53.9	-0°07.7	4	242°09.4	-1°17.9
5	256°06.3	3°20.4	5	256°22.3	2°11.1	5	256°38.2	1°01.3	5	256°54.1	-0°08.7	5	257°09.6	-1°18.8
6	271°06.5	3°19.4	6	271°22.5	2°10.1	6	271°38.5	1°00.3	6	271°54.3	-0°09.6	6	272°09.8	-1°19.8
7	286°06.7	3°18.5	7	286°22.7	2°09.1	7	286°38.7	0°59.4	7	286°54.5	-0°10.7	7	287°10.1	-1°20.8
8	301°06.9	3°17.5	8	301°22.9	2°08.2	8	301°38.9	0°58.4	8	301°54.7	-0°11.6	8	302°10.3	-1°21.7
9	316°07.1	3°16.6	9	316°23.2	2°07.2	9	316°39.1	0°57.4	9	316°54.9	-0°12.6	9	317°10.5	-1°22.7
10	331°07.4	3°15.6	10	331°23.4	2°06.2	10	331°39.4	0°56.4	10	331°55.2	-0°13.6	10	332°10.7	-1°23.7
11	346°07.6	3°14.6	11	346°23.6	2°05.3	11	346°39.6	0°55.5	11	346°55.4	-0°14.6	11	347°10.9	-1°24.7
12	1°07.8	3°13.7	12	1°23.8	2°04.3	12	1°39.8	0°54.5	12	1°55.6	-0°15.5	12	2°11.1	-1°25.6
13	16°08.0	3°12.7	13	16°24.1	2°03.3	13	16°40.0	0°53.5	13	16°55.8	-0°16.5	13	17°11.3	-1°26.6
14	31°08.3	3°11.8	14	31°24.3	2°02.4	14	31°40.2	0°52.6	14	31°56.0	-0°17.5	14	32°11.6	-1°27.6
15	46°08.5	3°10.8	15	46°24.5	2°01.4	15	46°40.5	0°51.6	15	46°56.3	-0°18.5	15	47°11.8	-1°28.6
16	61°08.7	3°09.8	16	61°24.7	2°00.4	16	61°40.7	0°50.6	16	61°56.5	-0°19.4	16	62°12.0	-1°29.5
17	76°08.9	3°08.9	17	76°24.9	1°59.5	17	76°40.9	0°49.6	17	76°56.7	-0°20.4	17	77°12.2	-1°30.5
18	91°09.1	3°07.9	18	91°25.2	1°58.5	18	91°41.1	0°48.7	18	91°56.9	-0°21.4	18	92°12.4	-1°31.5
19	106°09.4	3°07.0	19	106°25.4	1°57.5	19	106°41.3	0°47.7	19	106°57.1	-0°22.3	19	107°12.6	-1°32.5
20	121°09.6	3°06.0	20	121°25.6	1°56.5	20	121°41.6	0°46.7	20	121°57.3	-0°23.3	20	122°12.8	-1°33.4
21	136°09.8	3°05.0	21	136°25.8	1°55.6	21	136°41.8	0°45.8	21	136°57.6	-0°24.3	21	137°13.0	-1°34.4
22	151°10.0	3°04.1	22	151°26.1	1°54.6	22	151°42.0	0°44.8	22	151°57.8	-0°25.3	22	152°13.3	-1°35.4
23	166°10.3	3°03.1	23	166°26.3	1°53.6	23	166°42.2	0°43.8	23	166°58.0	-0°26.2	23	167°13.5	-1°36.3
	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°10.5	3°02.2	0	181°26.5	1°52.7	0	181°42.4	0°42.8	0	181°58.2	-0°27.2	0	182°13.7	-1°37.3
1	196°10.7	3°01.2	1	196°26.7	1°51.7	1	196°42.7	0°41.9	1	196°58.4	-0°28.2	1	197°13.9	-1°38.3
2	211°10.9	3°00.2	2	211°26.9	1°50.7	2	211°42.9	0°40.9	2	211°58.6	-0°29.2	2	212°14.1	-1°39.3
3	226°11.2	2°59.3	3	226°27.2	1°49.8	3	226°43.1	0°39.9	3	226°58.9	-0°30.1	3	227°14.3	-1°40.2
4	241°11.4	2°58.3	4	241°27.4	1°48.8	4	241°43.3	0°38.9	4	241°59.1	-0°31.1	4	242°14.5	-1°41.2
5	256°11.6	2°57.3	5	256°27.6	1°47.8	5	256°43.5	0°38.0	5	256°59.3	-0°32.1	5	257°14.7	-1°42.2
6	271°11.8	2°56.4	6	271°27.8	1°46.9	6	271°43.8	0°37.0	6	271°59.5	-0°33.1	6	272°15.0	-1°43.2
7	286°12.0	2°55.4	7	286°28.1	1°45.9	7	286°44.0	0°36.0	7	286°59.7	-0°34.0	7	287°15.2	-1°44.1
8	301°12.3	2°54.5	8	301°28.3	1°44.9	8	301°44.2	0°35.1	8	301°59.9	-0°35.0	8	302°15.4	-1°45.1
9	316°12.5	2°53.5	9	316°28.5	1°44.0	9	316°44.4	0°34.1	9	317°00.2	-0°36.0	9	317°15.6	-1°46.1
10	331°12.7	2°52.5	10	331°28.7	1°43.0	10	331°44.6	0°33.1	10	332°00.4	-0°37.0	10	332°15.8	-1°47.1
11	346°12.9	2°51.6	11	346°28.9	1°42.0	11	346°44.9	0°32.1	11	347°00.6	-0°37.9	11	347°16.0	-1°48.0
12	1°13.2	2°50.6	12	1°29.2	1°41.1	12	1°45.1	0°31.2	12	2°00.8	-0°38.9	12	2°16.2	-1°49.0
13	16°13.4	2°49.6	13	16°29.4	1°40.1	13	16°45.3	0°30.2	13	17°01.0	-0°39.9	13	17°16.4	-1°50.0
14	31°13.6	2°48.7	14	31°29.6	1°39.1	14	31°45.5	0°29.2	14	32°01.2	-0°40.8	14	32°16.6	-1°50.9
15	46°13.8	2°47.7	15	46°29.8	1°38.2	15	46°45.7	0°28.3	15	47°01.5	-0°41.8	15	47°16.9	-1°51.9
16	61°14.0	2°46.8	16	61°30.1	1°37.2	16	61°46.0	0°27.3	16	62°01.7	-0°42.8	16	62°17.1	-1°52.9
17	76°14.3	2°45.8	17	76°30.3	1°36.2	17	76°46.2	0°26.3	17	77°01.9	-0°43.8	17	77°17.3	-1°53.9
18	91°14.5	2°44.8	18	91°30.5	1°35.2	18	91°46.4	0°25.3	18	92°02.1	-0°44.7	18	92°17.5	-1°54.8
19	106°14.7	2°43.9	19	106°30.7	1°34.3	19	106°46.6	0°24.4	19	107°02.3	-0°45.7	19	107°17.7	-1°55.8
20	121°14.9	2°42.9	20	121°30.9	1°33.3	20	121°46.8	0°23.4	20	122°02.5	-0°46.7	20	122°17.9	-1°56.8
21	136°15.2	2°41.9	21	136°31.2	1°32.3	21	136°47.1	0°22.4	21	137°02.8	-0°47.7	21	137°18.1	-1°57.8
22	151°15.4	2°41.0	22	151°31.4	1°31.4	22	151°47.3	0°21.4	22	152°03.0	-0°48.6	22	152°18.3	-1°58.7
23	166°15.6	2°40.0	23	166°31.6	1°30.4	23	166°47.5	0°20.5	23	167°03.2	-0°49.6	23	167°18.5	-1°59.7
	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°18.8	-2°00.7	0	182°33.6	-3°10.6	0	182°47.9	-4°20.2	0	183°01.4	-5°29.3	0	183°13.9	-6°37.8
1	197°19.0	-2°01.6	1	197°33.8	-3°11.6	1	197°48.1	-4°21.2	1	198°01.6	-5°30.3	1	198°14.1	-6°38.8
2	212°19.2	-2°02.6	2	212°34.0	-3°12.5	2	212°48.3	-4°22.1	2	213°01.7	-5°31.2	2	213°14.3	-6°39.7
3	227°19.4	-2°03.6	3	227°34.2	-3°13.5	3	227°48.5	-4°23.1	3	228°01.9	-5°32.2	3	228°14.4	-6°40.7
4	242°19.6	-2°04.6	4	242°34.4	-3°14.5	4	242°48.7	-4°24.1	4	243°02.1	-5°33.2	4	243°14.6	-6°41.6
5	257°19.8	-2°05.5	5	257°34.6	-3°15.4	5	257°48.8	-4°25.0	5	258°02.3	-5°34.1	5	258°14.8	-6°42.6
6	272°20.0	-2°06.5	6	272°34.8	-3°16.4	6	272°49.0	-4°26.0	6	273°02.5	-5°35.1	6	273°14.9	-6°43.5
7	287°20.2	-2°07.5	7	287°35.0	-3°17.4	7	287°49.2	-4°26.9	7	288°02.6	-5°36.0	7	288°15.1	-6°44.4
8	302°20.4	-2°08.5	8	302°35.2	-3°18.4	8	302°49.4	-4°27.9	8	303°02.8	-5°37.0	8	303°15.3	-6°45.4
9	317°20.6	-2°09.4	9	317°35.4	-3°19.3	9	317°49.6	-4°28.9	9	318°03.0	-5°37.9	9	318°15.4	-6°46.3
10	332°20.8	-2°10.4	10	332°35.6	-3°20.3	10	332°49.8	-4°29.8	10	333°03.2	-5°38.9	10	333°15.6	-6°47.3
11	347°21.1	-2°11.4	11	347°35.8	-3°21.3	11	347°50.0	-4°30.8	11	348°03.4	-5°39.8	11	348°15.8	-6°48.2
12	2°21.3	-2°12.3	12	2°36.0	-3°22.2	12	2°50.2	-4°31.8	12	3°03.5	-5°40.8	12	3°15.9	-6°49.2
13	17°21.5	-2°13.3	13	17°36.2	-3°23.2	13	17°50.4	-4°32.7	13	18°03.7	-5°41.7	13	18°16.1	-6°50.1
14	32°21.7	-2°14.3	14	32°36.4	-3°24.2	14	32°50.6	-4°33.7	14	33°03.9	-5°42.7	14	33°16.3	-6°51.1
15	47°21.9	-2°15.3	15	47°36.6	-3°25.1	15	47°50.8	-4°34.6	15	48°04.1	-5°43.7	15	48°16.4	-6°52.0
16	62°22.1	-2°16.2	16	62°36.8	-3°26.1	16	62°50.9	-4°35.6	16	63°04.2	-5°44.6	16	63°16.6	-6°53.0
17	77°22.3	-2°17.2	17	77°37.0	-3°27.1	17	77°51.1	-4°36.6	17	78°04.4	-5°45.6	17	78°16.7	-6°53.9
18	92°22.5	-2°18.2	18	92°37.2	-3°28.0	18	92°51.3	-4°37.5	18	93°04.6	-5°46.5	18	93°16.9	-6°54.8
19	107°22.7	-2°19.1	19	107°37.5	-3°29.0	19	107°51.5	-4°38.5	19	108°04.8	-5°47.5	19	108°17.1	-6°55.8
20	122°22.9	-2°20.1	20	122°37.7	-3°30.0	20	122°51.7	-4°39.5	20	123°05.0	-5°48.4	20	123°17.2	-6°56.7
21	137°23.1	-2°21.1	21	137°37.9	-3°30.9	21	137°51.9	-4°40.4	21	138°05.1	-5°49.4	21	138°17.4	-6°57.7
22	152°23.4	-2°22.1	22	152°38.1	-3°31.9	22	152°52.1	-4°41.4	22	153°05.3	-5°50.3	22	153°17.6	-6°58.6
23	167°23.6	-2°23.0	23	167°38.3	-3°32.9	23	167°52.3	-4°42.3	23	168°05.5	-5°51.3	23	168°17.7	-6°59.6
	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°23.8	-2°24.0	0	182°38.5	-3°33.8	0	182°52.5	-4°43.3	0	183°05.7	-5°52.2	0	183°17.9	-7°00.5
1	197°24.0	-2°25.0	1	197°38.6	-3°34.8	1	197°52.7	-4°44.3	1	198°05.8	-5°53.2	1	198°18.0	-7°01.4
2	212°24.2	-2°26.0	2	212°38.8	-3°35.8	2	212°52.8	-4°45.2	2	213°06.0	-5°54.1	2	213°18.2	-7°02.4
3	227°24.4	-2°26.9	3	227°39.0	-3°36.7	3	227°53.0	-4°46.2	3	228°06.2	-5°55.1	3	228°18.4	-7°03.3
4	242°24.6	-2°27.9	4	242°39.2	-3°37.7	4	242°53.2	-4°47.2	4	243°06.4	-5°56.1	4	243°18.5	-7°04.3
5	257°24.8	-2°28.9	5	257°39.4	-3°38.7	5	257°53.4	-4°48.1	5	258°06.5	-5°57.0	5	258°18.7	-7°05.2
6	272°25.0	-2°29.8	6	272°39.6	-3°39.6	6	272°53.6	-4°49.1	6	273°06.7	-5°58.0	6	273°18.9	-7°06.1
7	287°25.2	-2°30.8	7	287°39.8	-3°40.6	7	287°53.8	-4°50.0	7	288°06.9	-5°58.9	7	288°19.0	-7°07.1
8	302°25.4	-2°31.8	8	302°40.0	-3°41.6	8	302°54.0	-4°51.0	8	303°07.1	-5°59.9	8	303°19.2	-7°08.0
9	317°25.6	-2°32.8	9	317°40.2	-3°42.6	9	317°54.2	-4°52.0	9	318°07.3	-6°00.8	9	318°19.3	-7°09.0
10	332°25.8	-2°33.7	10	332°40.4	-3°43.5	10	332°54.4	-4°52.9	10	333°07.4	-6°01.8	10	333°19.5	-7°09.9
11	347°26.0	-2°34.7	11	347°40.6	-3°44.5	11	347°54.5	-4°53.9	11	348°07.6	-6°02.7	11	348°19.7	-7°10.9
12	2°26.3	-2°35.7	12	2°40.8	-3°45.5	12	2°54.7	-4°54.8	12	3°07.8	-6°03.7	12	3°19.8	-7°11.8
13	17°26.5	-2°36.6	13	17°41.0	-3°46.4	13	17°54.9	-4°55.8	13	18°07.9	-6°04.6	13	18°20.0	-7°12.7
14	32°26.7	-2°37.6	14	32°41.2	-3°47.4	14	32°55.1	-4°56.8	14	33°08.1	-6°05.6	14	33°20.1	-7°13.7
15	47°26.9	-2°38.6	15	47°41.4	-3°48.4	15	47°55.3	-4°57.7	15	48°08.3	-6°06.5	15	48°20.3	-7°14.6
16	62°27.1	-2°39.6	16	62°41.6	-3°49.3	16	62°55.5	-4°58.7	16	63°08.5	-6°07.5	16	63°20.4	-7°15.6
17	77°27.3	-2°40.5	17	77°41.8	-3°50.3	17	77°55.7	-4°59.6	17	78°08.6	-6°08.4	17	78°20.6	-7°16.5
18	92°27.5	-2°41.5	18	92°42.0	-3°51.3	18	92°55.9	-5°00.6	18	93°08.8	-6°09.4	18	93°20.8	-7°17.4
19	107°27.7	-2°42.5	19	107°42.2	-3°52.2	19	107°56.0	-5°01.6	19	108°09.0	-6°10.3	19	108°20.9	-7°18.4
20	122°27.9	-2°43.4	20	122°42.4	-3°53.2	20	122°56.2	-5°02.5	20	123°09.2	-6°11.3	20	123°21.1	-7°19.3
21	137°28.1	-2°44.4	21	137°42.6	-3°54.1	21	137°56.4	-5°03.5	21	138°09.3	-6°12.2	21	138°21.2	-7°20.3
22	152°28.3	-2°45.4	22	152°42.8	-3°55.1	22	152°56.6	-5°04.4	22	153°09.5	-6°13.2	22	153°21.4	-7°21.2
23	167°28.5	-2°46.3	23	167°43.0	-3°56.1	23	167°56.8	-5°05.4	23	168°09.7	-6°14.1	23	168°21.6	-7°22.1
	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°28.7	-2°47.3	0	182°43.2	-3°57.0	0	182°57.0	-5°06.3	0	183°09.9	-6°15.1	0	183°21.7	-7°23.1
1	197°28.9	-2°48.3	1	197°43.4	-3°58.0	1	197°57.2	-5°07.3	1	198°10.0	-6°16.0	1	198°21.9	-7°24.0
2	212°29.1	-2°49.3	2	212°43.6	-3°59.0	2	212°57.3	-5°08.3	2	213°10.2	-6°17.0	2	213°22.0	-7°24.9
3	227°29.3	-2°50.2	3	227°43.8	-3°59.9	3	227°57.5	-5°09.2	3	228°10.4	-6°17.9	3	228°22.2	-7°25.9
4	242°29.5	-2°51.2	4	242°44.0	-4°00.9	4	242°57.7	-5°10.2	4	243°10.5	-6°18.9	4	243°22.3	-7°26.8
5	257°29.8	-2°52.2	5	257°44.2	-4°01.9	5	257°57.9	-5°11.1	5	258°10.7	-6°19.8	5	258°22.5	-7°27.8
6	272°30.0	-2°53.1	6	272°44.4	-4°02.8	6	272°58.1	-5°12.1	6	273°10.9	-6°20.8	6	273°22.6	-7°28.7
7	287°30.2	-2°54.1	7	287°44.6	-4°03.8	7	287°58.3	-5°13.1	7	288°11.1	-6°21.7	7	288°22.8	-7°29.6
8	302°30.4	-2°55.1	8	302°44.8	-4°04.8	8	302°58.4	-5°14.0	8	303°11.2	-6°22.7	8	303°23.0	-7°30.6
9	317°30.6	-2°56.1	9	317°45.0	-4°05.7	9	317°58.6	-5°15.0	9	318°11.4	-6°23.6	9	318°23.1	-7°31.5
10	332°30.8	-2°57.0	10	332°45.2	-4°06.7	10	332°58.8	-5°15.9	10	333°11.6	-6°24.6	10	333°23.3	-7°32.4
11	347°31.0	-2°58.0	11	347°45.4	-4°07.7	11	347°59.0	-5°16.9	11	348°11.7	-6°25.5	11	348°23.4	-7°33.4
12	2°31.2	-2°59.0	12	2°45.6	-4°08.6	12	2°59.2	-5°17.8	12	3°11.9	-6°26.5	12	3°23.6	-7°34.3
13	17°31.4	-2°59.9	13	17°45.7	-4°09.6	13	17°59.4	-5°18.8	13	18°12.1	-6°27.4	13	18°23.7	-7°35.3
14	32°31.6	-3°00.9	14	32°45.9	-4°10.6	14	32°59.5	-5°19.8	14	33°12.2	-6°28.4	14	33°23.9	-7°36.2
15	47°31.8	-3°01.9	15	47°46.1	-4°11.5	15	47°59.7	-5°20.7	15	48°12.4	-6°29.3	15	48°24.0	-7°37.1
16	62°32.0	-3°02.8	16	62°46.3	-4°12.5	16	62°59.9	-5°21.7	16	63°12.6	-6°30.3	16	63°24.2	-7°38.1
17	77°32.2	-3°03.8	17	77°46.5	-4°13.5	17	78°00.1	-5°22.6	17	78°12.8	-6°31.2	17	78°24.3	-7°39.0
18	92°32.4	-3°04.8	18	92°46.7	-4°14.4	18	93°00.3	-5°23.6	18	93°12.9	-6°32.1	18	93°24.5	-7°39.9
19	107°32.6	-3°05.8	19	107°46.9	-4°15.4	19	108°00.5	-5°24.5	19	108°13.1	-6°33.1	19	108°24.6	-7°40.9
20	122°32.8	-3°06.7	20	122°47.1	-4°16.3	20	123°00.6	-5°25.5	20	123°13.3	-6°34.0	20	123°24.8	-7°41.8
21	137°33.0	-3°07.7	21	137°47.3	-4°17.3	21	138°00.8	-5°26.5	21	138°13.4	-6°35.0	21	138°25.0	-7°42.7
22	152°33.2	-3°08.7	22	152°47.5	-4°18.3	22	153°01.0	-5°27.4	22	153°13.6	-6°35.9	22	153°25.1	-7°43.7
23	167°33.4	-3°09.6	23	167°47.7	-4°19.2	23	168°01.2	-5°28.4	23	168°13.8	-6°36.9	23	168°25.3	-7°44.6
	SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-0.9		SD.=16.0	d=-0.9

13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	183°25.4	-7°45.5	0	183°35.7	-8°52.3	0	183°44.6	-9°58.0	0	183°52.1	-11°02.3	0	183°58.1	-12°05.1
1	198°25.6	-7°46.5	1	198°35.8	-8°53.2	1	198°44.7	-9°58.9	1	198°52.2	-11°03.2	1	198°58.2	-12°06.0
2	213°25.7	-7°47.4	2	213°35.9	-8°54.2	2	213°44.8	-9°59.8	2	213°52.3	-11°04.1	2	213°58.3	-12°06.9
3	228°25.9	-7°48.3	3	228°36.1	-8°55.1	3	228°44.9	-10°00.7	3	228°52.4	-11°04.9	3	228°58.4	-12°07.7
4	243°26.0	-7°49.3	4	243°36.2	-8°56.0	4	243°45.1	-10°01.6	4	243°52.5	-11°05.8	4	243°58.4	-12°08.6
5	258°26.2	-7°50.2	5	258°36.3	-8°56.9	5	258°45.2	-10°02.5	5	258°52.6	-11°06.7	5	258°58.5	-12°09.5
6	273°26.3	-7°51.1	6	273°36.5	-8°57.8	6	273°45.3	-10°03.4	6	273°52.7	-11°07.6	6	273°58.6	-12°10.3
7	288°26.5	-7°52.1	7	288°36.6	-8°58.7	7	288°45.4	-10°04.3	7	288°52.8	-11°08.5	7	288°58.7	-12°11.2
8	303°26.6	-7°53.0	8	303°36.7	-8°59.7	8	303°45.5	-10°05.2	8	303°52.9	-11°09.4	8	303°58.7	-12°12.0
9	318°26.8	-7°53.9	9	318°36.9	-9°00.6	9	318°45.6	-10°06.1	9	318°53.0	-11°10.2	9	318°58.8	-12°12.9
10	333°26.9	-7°54.9	10	333°37.0	-9°01.5	10	333°45.7	-10°07.0	10	333°53.1	-11°11.1	10	333°58.9	-12°13.7
11	348°27.1	-7°55.8	11	348°37.1	-9°02.4	11	348°45.8	-10°07.9	11	348°53.1	-11°12.0	11	348°58.9	-12°14.6
12	3°27.2	-7°56.7	12	3°37.3	-9°03.3	12	3°46.0	-10°08.8	12	3°53.2	-11°12.9	12	3°59.0	-12°15.5
13	18°27.4	-7°57.7	13	18°37.4	-9°04.3	13	18°46.1	-10°09.7	13	18°53.3	-11°13.8	13	18°59.1	-12°16.3
14	33°27.5	-7°58.6	14	33°37.5	-9°05.2	14	33°46.2	-10°10.6	14	33°53.4	-11°14.6	14	33°59.1	-12°17.2
15	48°27.6	-7°59.5	15	48°37.6	-9°06.1	15	48°46.3	-10°11.5	15	48°53.5	-11°15.5	15	48°59.2	-12°18.0
16	63°27.8	-8°00.5	16	63°37.8	-9°07.0	16	63°46.4	-10°12.4	16	63°53.6	-11°16.4	16	63°59.3	-12°18.9
17	78°27.9	-8°01.4	17	78°37.9	-9°07.9	17	78°46.5	-10°13.3	17	78°53.7	-11°17.3	17	78°59.3	-12°19.7
18	93°28.1	-8°02.3	18	93°38.0	-9°08.8	18	93°46.6	-10°14.2	18	93°53.8	-11°18.2	18	93°59.4	-12°20.6
19	108°28.2	-8°03.3	19	108°38.2	-9°09.8	19	108°46.7	-10°15.1	19	108°53.9	-11°19.0	19	108°59.5	-12°21.5
20	123°28.4	-8°04.2	20	123°38.3	-9°10.7	20	123°46.8	-10°16.0	20	123°54.0	-11°19.9	20	123°59.5	-12°22.3
21	138°28.5	-8°05.1	21	138°38.4	-9°11.6	21	138°46.9	-10°16.9	21	138°54.0	-11°20.8	21	138°59.6	-12°23.2
22	153°28.7	-8°06.1	22	153°38.5	-9°12.5	22	153°47.1	-10°17.8	22	153°54.1	-11°21.7	22	153°59.7	-12°24.0
23	168°28.8	-8°07.0	23	168°38.7	-9°13.4	23	168°47.2	-10°18.7	23	168°54.2	-11°22.5	23	168°59.7	-12°24.9
	SD.=16.0	d=-0.9		SD.=16.0	d=-0.9		SD.=16.1	d=-0.9		SD.=16.1	d=-0.9		SD.=16.1	d=-0.9
14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	183°29.0	-8°07.9	0	183°38.8	-9°14.3	0	183°47.3	-10°19.6	0	183°54.3	-11°23.4	0	183°59.8	-12°25.7
1	198°29.1	-8°08.8	1	198°38.9	-9°15.2	1	198°47.4	-10°20.5	1	198°54.4	-11°24.3	1	198°59.9	-12°26.6
2	213°29.3	-8°09.8	2	213°39.1	-9°16.2	2	213°47.5	-10°21.3	2	213°54.5	-11°25.2	2	213°59.9	-12°27.4
3	228°29.4	-8°10.7	3	228°39.2	-9°17.1	3	228°47.6	-10°22.2	3	228°54.6	-11°26.0	3	229°00.0	-12°28.3
4	243°29.5	-8°11.6	4	243°39.3	-9°18.0	4	243°47.7	-10°23.1	4	243°54.6	-11°26.9	4	244°00.1	-12°29.1
5	258°29.7	-8°12.6	5	258°39.4	-9°18.9	5	258°47.8	-10°24.0	5	258°54.7	-11°27.8	5	259°00.1	-12°30.0
6	273°29.8	-8°13.5	6	273°39.6	-9°19.8	6	273°47.9	-10°24.9	6	273°54.8	-11°28.7	6	274°00.2	-12°30.9
7	288°30.0	-8°14.4	7	288°39.7	-9°20.7	7	288°48.0	-10°25.8	7	288°54.9	-11°29.5	7	289°00.3	-12°31.7
8	303°30.1	-8°15.3	8	303°39.8	-9°21.6	8	303°48.1	-10°26.7	8	303°55.0	-11°30.4	8	304°00.3	-12°32.6
9	318°30.3	-8°16.3	9	318°39.9	-9°22.5	9	318°48.2	-10°27.6	9	318°55.1	-11°31.3	9	319°00.4	-12°33.4
10	333°30.4	-8°17.2	10	333°40.1	-9°23.5	10	333°48.3	-10°28.5	10	333°55.2	-11°32.2	10	334°00.4	-12°34.3
11	348°30.6	-8°18.1	11	348°40.2	-9°24.4	11	348°48.4	-10°29.4	11	348°55.2	-11°33.0	11	349°00.5	-12°35.1
12	3°30.7	-8°19.1	12	3°40.3	-9°25.3	12	3°48.5	-10°30.3	12	3°55.3	-11°33.9	12	4°00.6	-12°36.0
13	18°30.8	-8°20.0	13	18°40.4	-9°26.2	13	18°48.7	-10°31.2	13	18°55.4	-11°34.8	13	19°00.6	-12°36.8
14	33°31.0	-8°20.9	14	33°40.6	-9°27.1	14	33°48.8	-10°32.1	14	33°55.5	-11°35.7	14	34°00.7	-12°37.7
15	48°31.1	-8°21.8	15	48°40.7	-9°28.0	15	48°48.9	-10°33.0	15	48°55.6	-11°36.5	15	49°00.8	-12°38.5
16	63°31.3	-8°22.8	16	63°40.8	-9°28.9	16	63°49.0	-10°33.9	16	63°55.7	-11°37.4	16	64°00.8	-12°39.4
17	78°31.4	-8°23.7	17	78°40.9	-9°29.8	17	78°49.1	-10°34.8	17	78°55.7	-11°38.3	17	79°00.9	-12°40.2
18	93°31.5	-8°24.6	18	93°41.0	-9°30.8	18	93°49.2	-10°35.7	18	93°55.8	-11°39.1	18	94°00.9	-12°41.0
19	108°31.7	-8°25.5	19	108°41.2	-9°31.7	19	108°49.3	-10°36.5	19	108°55.9	-11°40.0	19	109°01.0	-12°41.9
20	123°31.8	-8°26.5	20	123°41.3	-9°32.6	20	123°49.4	-10°37.4	20	123°56.0	-11°40.9	20	124°01.1	-12°42.7
21	138°32.0	-8°27.4	21	138°41.4	-9°33.5	21	138°49.5	-10°38.3	21	138°56.1	-11°41.8	21	139°01.1	-12°43.6
22	153°32.1	-8°28.3	22	153°41.5	-9°34.4	22	153°49.6	-10°39.2	22	153°56.2	-11°42.6	22	154°01.2	-12°44.4
23	168°32.2	-8°29.2	23	168°41.7	-9°35.3	23	168°49.7	-10°40.1	23	168°56.2	-11°43.5	23	169°01.2	-12°45.3
	SD.=16.0	d=-0.9		SD.=16.0	d=-0.9		SD.=16.1	d=-0.9		SD.=16.1	d=-0.9		SD.=16.1	d=-0.9
15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	183°32.4	-8°30.2	0	183°41.8	-9°36.2	0	183°49.8	-10°41.0	0	183°56.3	-11°44.4	0	184°01.3	-12°46.1
1	198°32.5	-8°31.1	1	198°41.9	-9°37.1	1	198°49.9	-10°41.9	1	198°56.4	-11°45.2	1	199°01.3	-12°47.0
2	213°32.7	-8°32.0	2	213°42.0	-9°38.0	2	213°50.0	-10°42.8	2	213°56.5	-11°46.1	2	214°01.4	-12°47.8
3	228°32.8	-8°32.9	3	228°42.1	-9°38.9	3	228°50.1	-10°43.7	3	228°56.6	-11°47.0	3	229°01.5	-12°48.7
4	243°32.9	-8°33.9	4	243°42.3	-9°39.8	4	243°50.2	-10°44.6	4	243°56.6	-11°47.8	4	244°01.5	-12°49.5
5	258°33.1	-8°34.8	5	258°42.4	-9°40.8	5	258°50.3	-10°45.5	5	258°56.7	-11°48.7	5	259°01.6	-12°50.4
6	273°33.2	-8°35.7	6	273°42.5	-9°41.7	6	273°50.4	-10°46.3	6	273°56.8	-11°49.6	6	274°01.6	-12°51.2
7	288°33.4	-8°36.6	7	288°42.6	-9°42.6	7	288°50.5	-10°47.2	7	288°56.9	-11°50.4	7	289°01.7	-12°52.0
8	303°33.5	-8°37.6	8	303°42.7	-9°43.5	8	303°50.6	-10°48.1	8	303°56.9	-11°51.3	8	304°01.7	-12°52.9
9	318°33.6	-8°38.5	9	318°42.9	-9°44.4	9	318°50.7	-10°49.0	9	318°57.0	-11°52.2	9	319°01.8	-12°53.7
10	333°33.8	-8°39.4	10	333°43.0	-9°45.3	10	333°50.8	-10°49.9	10	333°57.1	-11°53.0	10	334°01.9	-12°54.6
11	348°33.9	-8°40.3	11	348°43.1	-9°46.2	11	348°50.9	-10°50.8	11	348°57.2	-11°53.9	11	349°01.9	-12°55.4
12	3°34.0	-8°41.3	12	3°43.2	-9°47.1	12	3°51.0	-10°51.7	12	3°57.3	-11°54.8	12	4°02.0	-12°56.3
13	18°34.2	-8°42.2	13	18°43.3	-9°48.0	13	18°51.1	-10°52.6	13	18°57.3	-11°55.6	13	19°02.0	-12°57.1
14	33°34.3	-8°43.1	14	33°43.4	-9°48.9	14	33°51.2	-10°53.4	14	33°57.4	-11°56.5	14	34°02.1	-12°57.9
15	48°34.5	-8°44.0	15	48°43.6	-9°49.8	15	48°51.3	-10°54.3	15	48°57.5	-11°57.4	15	49°02.1	-12°58.8
16	63°34.6	-8°44.9	16	63°43.7	-9°50.7	16	63°51.4	-10°55.2	16	63°57.6	-11°58.2	16	64°02.2	-12°59.6
17	78°34.7	-8°45.9	17											

28	GHA	Dec	31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec
0	184°02.6	-13°06.3	0	184°05.4	-14°05.7	0	184°06.4	-15°02.9	0	184°05.7	-15°58.0	0	184°03.0	-16°50.7
1	199°02.6	-13°07.2	1	199°05.4	-14°06.5	1	199°06.4	-15°03.7	1	199°05.6	-15°58.8	1	199°02.9	-16°51.4
2	214°02.7	-13°08.0	2	214°05.4	-14°07.3	2	214°06.4	-15°04.5	2	214°05.6	-15°59.5	2	214°02.9	-16°52.1
3	229°02.7	-13°08.8	3	229°05.5	-14°08.1	3	229°06.4	-15°05.3	3	229°05.6	-16°00.3	3	229°02.8	-16°52.8
4	244°02.8	-13°09.7	4	244°05.5	-14°08.9	4	244°06.4	-15°06.1	4	244°05.6	-16°01.0	4	244°02.8	-16°53.6
5	259°02.8	-13°10.5	5	259°05.5	-14°09.7	5	259°06.4	-15°06.8	5	259°05.5	-16°01.7	5	259°02.7	-16°54.3
6	274°02.9	-13°11.3	6	274°05.5	-14°10.5	6	274°06.4	-15°07.6	6	274°05.5	-16°02.5	6	274°02.7	-16°55.0
7	289°02.9	-13°12.2	7	289°05.6	-14°11.3	7	289°06.4	-15°08.4	7	289°05.5	-16°03.2	7	289°02.6	-16°55.7
8	304°03.0	-13°13.0	8	304°05.6	-14°12.1	8	304°06.4	-15°09.2	8	304°05.4	-16°04.0	8	304°02.6	-16°56.4
9	319°03.0	-13°13.8	9	319°05.6	-14°12.9	9	319°06.4	-15°09.9	9	319°05.4	-16°04.7	9	319°02.5	-16°57.1
10	334°03.1	-13°14.7	10	334°05.6	-14°13.7	10	334°06.4	-15°10.7	10	334°05.4	-16°05.5	10	334°02.5	-16°57.8
11	349°03.1	-13°15.5	11	349°05.7	-14°14.5	11	349°06.4	-15°11.5	11	349°05.4	-16°06.2	11	349°02.4	-16°58.5
12	4°03.2	-13°16.3	12	4°05.7	-14°15.3	12	4°06.4	-15°12.3	12	4°05.3	-16°07.0	12	4°02.4	-16°59.2
13	19°03.2	-13°17.2	13	19°05.7	-14°16.2	13	19°06.4	-15°13.1	13	19°05.3	-16°07.7	13	19°02.3	-16°59.9
14	34°03.3	-13°18.0	14	34°05.7	-14°17.0	14	34°06.4	-15°13.8	14	34°05.3	-16°08.4	14	34°02.2	-17°00.7
15	49°03.3	-13°18.8	15	49°05.7	-14°17.8	15	49°06.4	-15°14.6	15	49°05.3	-16°09.2	15	49°02.2	-17°01.4
16	64°03.4	-13°19.7	16	64°05.8	-14°18.6	16	64°06.4	-15°15.4	16	64°05.2	-16°09.9	16	64°02.1	-17°02.1
17	79°03.4	-13°20.5	17	79°05.8	-14°19.4	17	79°06.4	-15°16.1	17	79°05.2	-16°10.7	17	79°02.1	-17°02.8
18	94°03.4	-13°21.3	18	94°05.8	-14°20.2	18	94°06.4	-15°16.9	18	94°05.2	-16°11.4	18	94°02.0	-17°03.5
19	109°03.5	-13°22.2	19	109°05.8	-14°21.0	19	109°06.4	-15°17.7	19	109°05.1	-16°12.2	19	109°02.0	-17°04.2
20	124°03.5	-13°23.0	20	124°05.8	-14°21.8	20	124°06.4	-15°18.5	20	124°05.1	-16°12.9	20	124°01.9	-17°04.9
21	139°03.6	-13°23.8	21	139°05.9	-14°22.6	21	139°06.4	-15°19.2	21	139°05.1	-16°13.6	21	139°01.8	-17°05.6
22	154°03.6	-13°24.7	22	154°05.9	-14°23.4	22	154°06.4	-15°20.0	22	154°05.0	-16°14.4	22	154°01.8	-17°06.3
23	169°03.7	-13°25.5	23	169°05.9	-14°24.2	23	169°06.4	-15°20.8	23	169°05.0	-16°15.1	23	169°01.7	-17°07.0
	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

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	184°03.7	-13°26.3	0	184°05.9	-14°25.0	0	184°06.4	-15°21.5	0	184°05.0	-16°15.8	0	184°01.7	-17°07.7
1	199°03.8	-13°27.1	1	199°05.9	-14°25.8	1	199°06.4	-15°22.3	1	199°04.9	-16°16.6	1	199°01.6	-17°08.4
2	214°03.8	-13°28.0	2	214°06.0	-14°26.6	2	214°06.4	-15°23.1	2	214°04.9	-16°17.3	2	214°01.5	-17°09.1
3	229°03.8	-13°28.8	3	229°06.0	-14°27.4	3	229°06.4	-15°23.9	3	229°04.9	-16°18.1	3	229°01.5	-17°09.8
4	244°03.9	-13°29.6	4	244°06.0	-14°28.2	4	244°06.3	-15°24.6	4	244°04.8	-16°18.8	4	244°01.4	-17°10.5
5	259°03.9	-13°30.5	5	259°06.0	-14°29.0	5	259°06.3	-15°25.4	5	259°04.8	-16°19.5	5	259°01.4	-17°11.2
6	274°04.0	-13°31.3	6	274°06.0	-14°29.8	6	274°06.3	-15°26.2	6	274°04.8	-16°20.3	6	274°01.3	-17°11.9
7	289°04.0	-13°32.1	7	289°06.0	-14°30.6	7	289°06.3	-15°26.9	7	289°04.7	-16°21.0	7	289°01.2	-17°12.6
8	304°04.0	-13°32.9	8	304°06.1	-14°31.4	8	304°06.3	-15°27.7	8	304°04.7	-16°21.7	8	304°01.2	-17°13.3
9	319°04.1	-13°33.8	9	319°06.1	-14°32.2	9	319°06.3	-15°28.5	9	319°04.7	-16°22.5	9	319°01.1	-17°14.0
10	334°04.1	-13°34.6	10	334°06.1	-14°33.0	10	334°06.3	-15°29.2	10	334°04.6	-16°23.2	10	334°01.1	-17°14.7
11	349°04.2	-13°35.4	11	349°06.1	-14°33.8	11	349°06.3	-15°30.0	11	349°04.6	-16°23.9	11	349°01.0	-17°15.4
12	4°04.2	-13°36.2	12	4°06.1	-14°34.6	12	4°06.3	-15°30.8	12	4°04.6	-16°24.7	12	4°00.9	-17°16.1
13	19°04.2	-13°37.1	13	19°06.1	-14°35.4	13	19°06.3	-15°31.5	13	19°04.5	-16°25.4	13	19°00.9	-17°16.8
14	34°04.3	-13°37.9	14	34°06.2	-14°36.2	14	34°06.2	-15°32.3	14	34°04.5	-16°26.1	14	34°00.8	-17°17.5
15	49°04.3	-13°38.7	15	49°06.2	-14°36.9	15	49°06.2	-15°33.1	15	49°04.4	-16°26.9	15	49°00.7	-17°18.2
16	64°04.3	-13°39.5	16	64°06.2	-14°37.7	16	64°06.2	-15°33.8	16	64°04.4	-16°27.6	16	64°00.7	-17°18.9
17	79°04.4	-13°40.3	17	79°06.2	-14°38.5	17	79°06.2	-15°34.6	17	79°04.4	-16°28.3	17	79°00.6	-17°19.6
18	94°04.4	-13°41.2	18	94°06.2	-14°39.3	18	94°06.2	-15°35.3	18	94°04.3	-16°29.0	18	94°00.5	-17°20.3
19	109°04.5	-13°42.0	19	109°06.2	-14°40.1	19	109°06.2	-15°36.1	19	109°04.3	-16°29.8	19	109°00.5	-17°21.0
20	124°04.5	-13°42.8	20	124°06.2	-14°40.9	20	124°06.2	-15°36.9	20	124°04.3	-16°30.5	20	124°00.4	-17°21.7
21	139°04.5	-13°43.6	21	139°06.2	-14°41.7	21	139°06.2	-15°37.6	21	139°04.2	-16°31.2	21	139°00.3	-17°22.3
22	154°04.6	-13°44.5	22	154°06.3	-14°42.5	22	154°06.1	-15°38.4	22	154°04.2	-16°32.0	22	154°00.3	-17°23.0
23	169°04.6	-13°45.3	23	169°06.3	-14°43.3	23	169°06.1	-15°39.1	23	169°04.1	-16°32.7	23	169°00.2	-17°23.7
	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.=16.2	d=-0.7

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	184°04.6	-13°46.1	0	184°06.3	-14°44.1	0	184°06.1	-15°39.9	0	184°04.1	-16°33.4	0	184°00.1	-17°24.4
1	199°04.7	-13°46.9	1	199°06.3	-14°44.9	1	199°06.1	-15°40.7	1	199°04.0	-16°34.1	1	199°00.1	-17°25.1
2	214°04.7	-13°47.7	2	214°06.3	-14°45.7	2	214°06.1	-15°41.4	2	214°04.0	-16°34.9	2	213°60.0	-17°25.8
3	229°04.7	-13°48.6	3	229°06.3	-14°46.5	3	229°06.1	-15°42.2	3	229°04.0	-16°35.6	3	228°59.9	-17°26.5
4	244°04.8	-13°49.4	4	244°06.3	-14°47.2	4	244°06.1	-15°42.9	4	244°03.9	-16°36.3	4	243°59.9	-17°27.2
5	259°04.8	-13°50.2	5	259°06.3	-14°48.0	5	259°06.0	-15°43.7	5	259°03.9	-16°37.0	5	258°59.8	-17°27.9
6	274°04.8	-13°51.0	6	274°06.3	-14°48.8	6	274°06.0	-15°44.5	6	274°03.8	-16°37.8	6	273°59.7	-17°28.5
7	289°04.9	-13°51.8	7	289°06.3	-14°49.6	7	289°06.0	-15°45.2	7	289°03.8	-16°38.5	7	288°59.6	-17°29.2
8	304°04.9	-13°52.6	8	304°06.3	-14°50.4	8	304°06.0	-15°46.0	8	304°03.7	-16°39.2	8	303°59.6	-17°29.9
9	319°04.9	-13°53.5	9	319°06.4	-14°51.2	9	319°06.0	-15°46.7	9	319°03.7	-16°39.9	9	318°59.5	-17°30.6
10	334°05.0	-13°54.3	10	334°06.4	-14°52.0	10	334°05.9	-15°47.5	10	334°03.7	-16°40.7	10	333°59.4	-17°31.3
11	349°05.0	-13°55.1	11	349°06.4	-14°52.8	11	349°05.9	-15°48.2	11	349°03.6	-16°41.4	11	348°59.4	-17°32.0
12	4°05.0	-13°55.9	12	4°06.4	-14°53.5	12	4°05.9	-15°49.0	12	4°03.6	-16°42.1	12	3°59.3	-17°32.7
13	19°05.1	-13°56.7	13	19°06.4	-14°54.3	13	19°05.9	-15°49.7	13	19°03.5	-16°42.8	13	18°59.2	-17°33.3
14	34°05.1	-13°57.5	14	34°06.4	-14°55.1	14	34°05.9	-15°50.5	14	34°03.5	-16°43.5	14	33°59.1	-17°34.0
15	49°05.1	-13°58.3	15	49°06.4	-14°55.9	15	49°05.8	-15°51.3	15	49°03.4	-16°44.3	15	48°59.1	-17°34.7
16	64°05.2	-13°59.2	16	64°06.4	-14°56.7	16	64°05.8	-15°52.0	16	64°03.4	-16°45.0	16	63°59.0	-17°35.4
17	79°05.2	-13°60.0	17	79°06.4	-14°57.5	17	79°05.8	-15°52.8	17	79°03.3	-16°45.7	17	78°58.9	-17°36.1
18	94°05.2	-14°00.8	18	94°06.4	-14°58.2	18	94°05.8	-15°53.5	18	94°03.3	-16°46.4	18	93°58.8	-17°36.8
19	109°05.2	-14°01.6	19	109°06.4	-14°59.0	19	109°05.8	-15°54.3	19	109°03.2	-16°47.1	19	108°58.8	-17°37.4
20	124°05.3	-14°02.4	20	124°06.4	-14°59.8	20	124°05.7	-15°55.0	20	124°03.2	-16°47.8	20	123°58.7	-17°38.1
21	139°05.3	-14°03.2	21	139°06.4	-15°00.6	21	139°05.7	-15°55.8	21	139°03.1	-16°48.6	21	138°58.6	-17°38.8
22	154°05.3	-14°04.0	22	154°06.4	-15°01.4	22	154°05.7	-15°56.5	22	154°03.1	-16°49.3	22	153°58.5	-17°39.5
23	169°05.3	-14°04.8	23	169°06.4	-15°02.2	23	169°05.7	-15°57.3	23	169°03.0	-16°50.0	23	168°58.5	-17°40.2
	SD.=16.1													

12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec
0	183°58.4	-17°40.8	0	183°51.8	-18°28.2	0	183°43.3	-19°12.7	0	183°33.0	-19°54.1	0	183°20.8	-20°32.2
1	198°58.3	-17°41.5	1	198°51.7	-18°28.9	1	198°43.2	-19°13.3	1	198°32.8	-19°54.6	1	198°20.6	-20°32.7
2	213°58.2	-17°42.2	2	213°51.6	-18°29.5	2	213°43.1	-19°13.9	2	213°32.7	-19°55.2	2	213°20.5	-20°33.2
3	228°58.1	-17°42.9	3	228°51.5	-18°30.1	3	228°42.9	-19°14.5	3	228°32.5	-19°55.7	3	228°20.3	-20°33.7
4	243°58.1	-17°43.5	4	243°51.4	-18°30.8	4	243°42.8	-19°15.1	4	243°32.3	-19°56.3	4	243°20.1	-20°34.2
5	258°58.0	-17°44.2	5	258°51.3	-18°31.4	5	258°42.7	-19°15.7	5	258°32.2	-19°56.8	5	258°19.9	-20°34.7
6	273°57.9	-17°44.9	6	273°51.2	-18°32.0	6	273°42.5	-19°16.3	6	273°32.0	-19°57.4	6	273°19.7	-20°35.2
7	288°57.8	-17°45.6	7	288°51.1	-18°32.7	7	288°42.4	-19°16.9	7	288°31.9	-19°57.9	7	288°19.6	-20°35.7
8	303°57.7	-17°46.2	8	303°51.0	-18°33.3	8	303°42.3	-19°17.4	8	303°31.7	-19°58.5	8	303°19.4	-20°36.2
9	318°57.7	-17°46.9	9	318°50.9	-18°33.9	9	318°42.1	-19°18.0	9	318°31.5	-19°59.0	9	318°19.2	-20°36.7
10	333°57.6	-17°47.6	10	333°50.7	-18°34.6	10	333°42.0	-19°18.6	10	333°31.4	-19°59.6	10	333°19.0	-20°37.2
11	348°57.5	-17°48.3	11	348°50.6	-18°35.2	11	348°41.9	-19°19.2	11	348°31.2	-20°00.1	11	348°18.8	-20°37.7
12	3°57.4	-17°48.9	12	3°50.5	-18°35.8	12	3°41.7	-19°19.8	12	3°31.1	-20°00.6	12	3°18.6	-20°38.2
13	18°57.3	-17°49.6	13	18°50.4	-18°36.5	13	18°41.6	-19°20.4	13	18°30.9	-20°01.2	13	18°18.4	-20°38.7
14	33°57.3	-17°50.3	14	33°50.3	-18°37.1	14	33°41.5	-19°21.0	14	33°30.7	-20°01.7	14	33°18.3	-20°39.2
15	48°57.2	-17°50.9	15	48°50.2	-18°37.7	15	48°41.3	-19°21.6	15	48°30.6	-20°02.3	15	48°18.1	-20°39.7
16	63°57.1	-17°51.6	16	63°50.1	-18°38.4	16	63°41.2	-19°22.2	16	63°30.4	-20°02.8	16	63°17.9	-20°40.2
17	78°57.0	-17°52.3	17	78°50.0	-18°39.0	17	78°41.0	-19°22.7	17	78°30.3	-20°03.4	17	78°17.7	-20°40.7
18	93°56.9	-17°52.9	18	93°49.9	-18°39.6	18	93°40.9	-19°23.3	18	93°30.1	-20°03.9	18	93°17.5	-20°41.2
19	108°56.8	-17°53.6	19	108°49.8	-18°40.2	19	108°40.8	-19°23.9	19	108°29.9	-20°04.4	19	108°17.3	-20°41.7
20	123°56.7	-17°54.3	20	123°49.6	-18°40.9	20	123°40.6	-19°24.5	20	123°29.8	-20°05.0	20	123°17.1	-20°42.2
21	138°56.7	-17°54.9	21	138°49.5	-18°41.5	21	138°40.5	-19°25.1	21	138°29.6	-20°05.5	21	138°17.0	-20°42.7
22	153°56.6	-17°55.6	22	153°49.4	-18°42.1	22	153°40.4	-19°25.7	22	153°29.4	-20°06.1	22	153°16.8	-20°43.1
23	168°56.5	-17°56.3	23	168°49.3	-18°42.8	23	168°40.2	-19°26.3	23	168°29.3	-20°06.6	23	168°16.6	-20°43.6
	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°56.4	-17°56.9	0	183°49.2	-18°43.4	0	183°40.1	-19°26.8	0	183°29.1	-20°07.1	0	183°16.4	-20°44.1
1	198°56.3	-17°57.6	1	198°49.1	-18°44.0	1	198°39.9	-19°27.4	1	198°28.9	-20°07.7	1	198°16.2	-20°44.6
2	213°56.2	-17°58.3	2	213°49.0	-18°44.6	2	213°39.8	-19°28.0	2	213°28.8	-20°08.2	2	213°16.0	-20°45.1
3	228°56.1	-17°58.9	3	228°48.9	-18°45.2	3	228°39.7	-19°28.6	3	228°28.6	-20°08.7	3	228°15.8	-20°45.6
4	243°56.1	-17°59.6	4	243°48.7	-18°45.9	4	243°39.5	-19°29.2	4	243°28.5	-20°09.3	4	243°15.6	-20°46.1
5	258°56.0	-18°00.3	5	258°48.6	-18°46.5	5	258°39.4	-19°29.7	5	258°28.3	-20°09.8	5	258°15.4	-20°46.6
6	273°55.9	-18°00.9	6	273°48.5	-18°47.1	6	273°39.2	-19°30.3	6	273°28.1	-20°10.4	6	273°15.3	-20°47.1
7	288°55.8	-18°01.6	7	288°48.4	-18°47.7	7	288°39.1	-19°30.9	7	288°28.0	-20°10.9	7	288°15.1	-20°47.5
8	303°55.7	-18°02.2	8	303°48.3	-18°48.4	8	303°38.9	-19°31.5	8	303°27.8	-20°11.4	8	303°14.9	-20°48.0
9	318°55.6	-18°02.9	9	318°48.2	-18°49.0	9	318°38.8	-19°32.0	9	318°27.6	-20°11.9	9	318°14.7	-20°48.5
10	333°55.5	-18°03.6	10	333°48.0	-18°49.6	10	333°38.7	-19°32.6	10	333°27.5	-20°12.5	10	333°14.5	-20°49.0
11	348°55.4	-18°04.2	11	348°47.9	-18°50.2	11	348°38.5	-19°33.2	11	348°27.3	-20°13.0	11	348°14.3	-20°49.5
12	3°55.3	-18°04.9	12	3°47.8	-18°50.8	12	3°38.4	-19°33.8	12	3°27.1	-20°13.5	12	3°14.1	-20°50.0
13	18°55.2	-18°05.5	13	18°47.7	-18°51.4	13	18°38.2	-19°34.3	13	18°26.9	-20°14.1	13	18°13.9	-20°50.4
14	33°55.2	-18°06.2	14	33°47.6	-18°52.1	14	33°38.1	-19°34.9	14	33°26.8	-20°14.6	14	33°13.7	-20°50.9
15	48°55.1	-18°06.9	15	48°47.4	-18°52.7	15	48°37.9	-19°35.5	15	48°26.6	-20°15.1	15	48°13.5	-20°51.4
16	63°55.0	-18°07.5	16	63°47.3	-18°53.3	16	63°37.8	-19°36.1	16	63°26.4	-20°15.7	16	63°13.3	-20°51.9
17	78°54.9	-18°08.2	17	78°47.2	-18°53.9	17	78°37.7	-19°36.6	17	78°26.3	-20°16.2	17	78°13.1	-20°52.4
18	93°54.8	-18°08.8	18	93°47.1	-18°54.5	18	93°37.5	-19°37.2	18	93°26.1	-20°16.7	18	93°13.0	-20°52.8
19	108°54.7	-18°09.5	19	108°47.0	-18°55.1	19	108°37.4	-19°37.8	19	108°25.9	-20°17.2	19	108°12.8	-20°53.3
20	123°54.6	-18°10.1	20	123°46.8	-18°55.8	20	123°37.2	-19°38.4	20	123°25.8	-20°17.8	20	123°12.6	-20°53.8
21	138°54.5	-18°10.8	21	138°46.7	-18°56.4	21	138°37.1	-19°38.9	21	138°25.6	-20°18.3	21	138°12.4	-20°54.3
22	153°54.4	-18°11.4	22	153°46.6	-18°57.0	22	153°36.9	-19°39.5	22	153°25.4	-20°18.8	22	153°12.2	-20°54.7
23	168°54.3	-18°12.1	23	168°46.5	-18°57.6	23	168°36.8	-19°40.1	23	168°25.2	-20°19.3	23	168°12.0	-20°55.2
	SD.=16.2	d=-0.7		SD.=16.2	d=-0.6		SD.=16.2	d=-0.6		SD.=16.2	d=-0.5		SD.=16.2	d=-0.5
14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	183°54.2	-18°12.7	0	183°46.4	-18°58.2	0	183°36.6	-19°40.6	0	183°25.1	-20°19.8	0	183°11.8	-20°55.7
1	198°54.1	-18°13.4	1	198°46.2	-18°58.8	1	198°36.5	-19°41.2	1	198°24.9	-20°20.4	1	198°11.6	-20°56.2
2	213°54.0	-18°14.0	2	213°46.1	-18°59.4	2	213°36.3	-19°41.8	2	213°24.7	-20°20.9	2	213°11.4	-20°56.6
3	228°53.9	-18°14.7	3	228°46.0	-19°00.0	3	228°36.2	-19°42.3	3	228°24.5	-20°21.4	3	228°11.2	-20°57.1
4	243°53.8	-18°15.3	4	243°45.9	-19°00.6	4	243°36.0	-19°42.9	4	243°24.4	-20°21.9	4	243°11.0	-20°57.6
5	258°53.7	-18°16.0	5	258°45.7	-19°01.2	5	258°35.9	-19°43.5	5	258°24.2	-20°22.4	5	258°10.8	-20°58.0
6	273°53.6	-18°16.6	6	273°45.6	-19°01.9	6	273°35.7	-19°44.0	6	273°24.0	-20°23.0	6	273°10.6	-20°58.5
7	288°53.5	-18°17.3	7	288°45.5	-19°02.5	7	288°35.6	-19°44.6	7	288°23.8	-20°23.5	7	288°10.4	-20°59.0
8	303°53.4	-18°17.9	8	303°45.4	-19°03.1	8	303°35.4	-19°45.1	8	303°23.7	-20°24.0	8	303°10.2	-20°59.5
9	318°53.3	-18°18.6	9	318°45.2	-19°03.7	9	318°35.3	-19°45.7	9	318°23.5	-20°24.5	9	318°10.0	-20°59.9
10	333°53.2	-18°19.2	10	333°45.1	-19°04.3	10	333°35.1	-19°46.3	10	333°23.3	-20°25.0	10	333°09.8	-21°00.4
11	348°53.1	-18°19.9	11	348°45.0	-19°04.9	11	348°35.0	-19°46.8	11	348°23.1	-20°25.5	11	348°09.6	-21°00.9
12	3°53.0	-18°20.5	12	3°44.9	-19°05.5	12	3°34.8	-19°47.4	12	3°23.0	-20°26.1	12	3°09.4	-21°01.3
13	18°52.9	-18°21.2	13	18°44.7	-19°06.1	13	18°34.7	-19°48.0	13	18°22.8	-20°26.6	13	18°09.2	-21°01.8
14	33°52.8	-18°21.8	14	33°44.6	-19°06.7	14	33°34.5	-19°48.5	14	33°22.6	-20°27.1	14	33°09.0	-21°02.3
15	48°52.7	-18°22.5	15	48°44.5	-19°07.3	15	48°34.4	-19°49.1	15	48°22.4	-20°27.6	15	48°08.8	-21°02.7
16	63°52.6	-18°23.1	16	63°44.4	-19°07.9	16	63°34.2	-19°49.6	16	63°22.3	-20°28.1	16	63°08.6	-21°03.2
17	78°52.5	-18°23.7	17	78°44.2	-19°08.5	17	78°34.1	-19°50.2	17	78°22.1	-20°28.6	17	78°08.4	-21°03.6
18	93°52.4	-18°24.4	18	93°44.1	-19°09.1	18	93°33.9	-19°50.7	18	93°21.9	-20°29.1	18	93°08.2	-21°04.1
19	108°52.3	-18°25.0	19	108°44.0	-19°09.7	19	108°33.7	-19°51.3	19	108°21.7	-20°29.6	19	108°08.0	-21°04.6
20	123°52.2	-18°25.7	20	123°43.8	-19°10.3	20	123°33.6	-19°51.9	20	123°21.5	-20°30.1	20	123°07.8	-21°05.0
21	138°52.1	-18°26.3	21	138°43.7	-19°10.9	21	138°33.4	-19°52.4	21	138°21.4	-20°30.7	21	138°07.6	-21°05.5
22	153°52.0	-18°26.9	22	153°43.6	-19									

27	GHA	Dec	30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec
0	183°07.0	-21°06.9	0	182°51.6	-21°38.0	0	182°34.7	-22°05.4	0	182°16.5	-22°28.9	0	181°57.0	-22°48.5
1	198°06.8	-21°07.3	1	197°51.3	-21°38.4	1	197°34.4	-22°05.7	1	197°16.2	-22°29.2	1	196°56.7	-22°48.8
2	213°06.6	-21°07.8	2	212°51.1	-21°38.8	2	212°34.2	-22°06.1	2	212°15.9	-22°29.5	2	211°56.5	-22°49.0
3	228°06.4	-21°08.2	3	227°50.9	-21°39.2	3	227°34.0	-22°06.4	3	227°15.7	-22°29.8	3	226°56.2	-22°49.3
4	243°06.2	-21°08.7	4	242°50.7	-21°39.6	4	242°33.7	-22°06.8	4	242°15.4	-22°30.1	4	241°55.9	-22°49.5
5	258°06.0	-21°09.1	5	257°50.4	-21°40.0	5	257°33.5	-22°07.1	5	257°15.1	-22°30.4	5	256°55.6	-22°49.7
6	273°05.8	-21°09.6	6	272°50.2	-21°40.4	6	272°33.2	-22°07.5	6	272°14.9	-22°30.7	6	271°55.3	-22°50.0
7	288°05.6	-21°10.0	7	287°50.0	-21°40.8	7	287°33.0	-22°07.8	7	287°14.6	-22°31.0	7	286°55.1	-22°50.2
8	303°05.4	-21°10.5	8	302°49.8	-21°41.2	8	302°32.7	-22°08.2	8	302°14.4	-22°31.3	8	301°54.8	-22°50.5
9	318°05.1	-21°10.9	9	317°49.5	-21°41.6	9	317°32.5	-22°08.5	9	317°14.1	-22°31.6	9	316°54.5	-22°50.7
10	333°04.9	-21°11.4	10	332°49.3	-21°42.0	10	332°32.2	-22°08.9	10	332°13.8	-22°31.9	10	331°54.2	-22°50.9
11	348°04.7	-21°11.8	11	347°49.1	-21°42.4	11	347°32.0	-22°09.2	11	347°13.6	-22°32.2	11	346°53.9	-22°51.2
12	3°04.5	-21°12.3	12	2°48.9	-21°42.8	12	2°31.7	-22°09.5	12	2°13.3	-22°32.5	12	1°53.7	-22°51.4
13	18°04.3	-21°12.7	13	17°48.6	-21°43.2	13	17°31.5	-22°09.9	13	17°13.0	-22°32.7	13	16°53.4	-22°51.6
14	33°04.1	-21°13.2	14	32°48.4	-21°43.6	14	32°31.2	-22°10.2	14	32°12.8	-22°33.0	14	31°53.1	-22°51.9
15	48°03.9	-21°13.6	15	47°48.2	-21°44.0	15	47°31.0	-22°10.6	15	47°12.5	-22°33.3	15	46°52.8	-22°52.1
16	63°03.7	-21°14.1	16	62°47.9	-21°44.4	16	62°30.7	-22°10.9	16	62°12.2	-22°33.6	16	61°52.5	-22°52.3
17	78°03.5	-21°14.5	17	77°47.7	-21°44.8	17	77°30.5	-22°11.3	17	77°12.0	-22°33.9	17	76°52.3	-22°52.6
18	93°03.3	-21°15.0	18	92°47.5	-21°45.2	18	92°30.3	-22°11.6	18	92°11.7	-22°34.2	18	91°52.0	-22°52.8
19	108°03.1	-21°15.4	19	107°47.3	-21°45.6	19	107°30.0	-22°11.9	19	107°11.4	-22°34.5	19	106°51.7	-22°53.0
20	123°02.9	-21°15.9	20	122°47.0	-21°45.9	20	122°29.8	-22°12.3	20	122°11.2	-22°34.8	20	121°51.4	-22°53.3
21	138°02.6	-21°16.3	21	137°46.8	-21°46.3	21	137°29.5	-22°12.6	21	137°10.9	-22°35.0	21	136°51.1	-22°53.5
22	153°02.4	-21°16.8	22	152°46.6	-21°46.7	22	152°29.3	-22°13.0	22	152°10.6	-22°35.3	22	151°50.9	-22°53.7
23	168°02.2	-21°17.2	23	167°46.3	-21°47.1	23	167°29.0	-22°13.3	23	167°10.4	-22°35.6	23	166°50.6	-22°53.9
	SD.=16.2	d=-0.5		SD.=16.2	d=-0.4		SD.=16.2	d=-0.4		SD.=16.2	d=-0.3		SD.=16.2	d=-0.2

28	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	183°02.0	-21°17.6	0	182°46.1	-21°47.5	0	182°28.8	-22°13.6	0	182°10.1	-22°35.9	0	181°50.3	-22°54.2
1	198°01.8	-21°18.1	1	197°45.9	-21°47.9	1	197°28.5	-22°14.0	1	197°09.8	-22°36.2	1	196°50.0	-22°54.4
2	213°01.6	-21°18.5	2	212°45.6	-21°48.3	2	212°28.3	-22°14.3	2	212°09.6	-22°36.4	2	211°49.7	-22°54.6
3	228°01.4	-21°19.0	3	227°45.4	-21°48.7	3	227°28.0	-22°14.6	3	227°09.3	-22°36.7	3	226°49.4	-22°54.8
4	243°01.2	-21°19.4	4	242°45.2	-21°49.1	4	242°27.8	-22°15.0	4	242°09.0	-22°37.0	4	241°49.2	-22°55.1
5	258°01.0	-21°19.8	5	257°44.9	-21°49.4	5	257°27.5	-22°15.3	5	257°08.8	-22°37.3	5	256°48.9	-22°55.3
6	273°00.7	-21°20.3	6	272°44.7	-21°49.8	6	272°27.2	-22°15.6	6	272°08.5	-22°37.6	6	271°48.6	-22°55.5
7	288°00.5	-21°20.7	7	287°44.5	-21°50.2	7	287°27.0	-22°16.0	7	287°08.2	-22°37.8	7	286°48.3	-22°55.7
8	303°00.3	-21°21.1	8	302°44.2	-21°50.6	8	302°26.7	-22°16.3	8	302°08.0	-22°38.1	8	301°48.0	-22°56.0
9	318°00.1	-21°21.6	9	317°44.0	-21°51.0	9	317°26.5	-22°16.6	9	317°07.7	-22°38.4	9	316°47.7	-22°56.2
10	332°59.9	-21°22.0	10	332°43.8	-21°51.4	10	332°26.2	-22°17.0	10	332°07.4	-22°38.7	10	331°47.5	-22°56.4
11	347°59.7	-21°22.4	11	347°43.5	-21°51.7	11	347°26.0	-22°17.3	11	347°07.1	-22°38.9	11	346°47.2	-22°56.6
12	2°59.5	-21°22.9	12	2°43.3	-21°52.1	12	2°25.7	-22°17.6	12	2°06.9	-22°39.2	12	1°46.9	-22°56.8
13	17°59.3	-21°23.3	13	17°43.1	-21°52.5	13	17°25.5	-22°17.9	13	17°06.6	-22°39.5	13	16°46.6	-22°57.0
14	32°59.0	-21°23.7	14	32°42.8	-21°52.9	14	32°25.2	-22°18.3	14	32°06.3	-22°39.8	14	31°46.3	-22°57.3
15	47°58.8	-21°24.2	15	47°42.6	-21°53.3	15	47°25.0	-22°18.6	15	47°06.1	-22°40.0	15	46°46.0	-22°57.5
16	62°58.6	-21°24.6	16	62°42.4	-21°53.6	16	62°24.7	-22°18.9	16	62°05.8	-22°40.3	16	61°45.7	-22°57.7
17	77°58.4	-21°25.0	17	77°42.1	-21°54.0	17	77°24.5	-22°19.2	17	77°05.5	-22°40.6	17	76°45.5	-22°57.9
18	92°58.2	-21°25.4	18	92°41.9	-21°54.4	18	92°24.2	-22°19.6	18	92°05.3	-22°40.8	18	91°45.2	-22°58.1
19	107°58.0	-21°25.9	19	107°41.7	-21°54.8	19	107°24.0	-22°19.9	19	107°05.0	-22°41.1	19	106°44.9	-22°58.3
20	122°57.7	-21°26.3	20	122°41.4	-21°55.2	20	122°23.7	-22°20.2	20	122°04.7	-22°41.4	20	121°44.6	-22°58.5
21	137°57.5	-21°26.7	21	137°41.2	-21°55.5	21	137°23.4	-22°20.5	21	137°04.4	-22°41.6	21	136°44.3	-22°58.7
22	152°57.3	-21°27.2	22	152°40.9	-21°55.9	22	152°23.2	-22°20.8	22	152°04.2	-22°41.9	22	151°44.0	-22°58.9
23	167°57.1	-21°27.6	23	167°40.7	-21°56.3	23	167°22.9	-22°21.2	23	167°03.9	-22°42.2	23	166°43.7	-22°59.2
	SD.=16.2	d=-0.4		SD.=16.2	d=-0.4		SD.=16.2	d=-0.3		SD.=16.2	d=-0.3		SD.=16.2	d=-0.2

29	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	182°56.9	-21°28.0	0	182°40.5	-21°56.6	0	182°22.7	-22°21.5	0	182°03.6	-22°42.4	0	181°43.5	-22°59.4
1	197°56.7	-21°28.4	1	197°40.2	-21°57.0	1	197°22.4	-22°21.8	1	197°03.3	-22°42.7	1	196°43.2	-22°59.6
2	212°56.4	-21°28.8	2	212°40.0	-21°57.4	2	212°22.2	-22°22.1	2	212°03.1	-22°43.0	2	211°42.9	-22°59.8
3	227°56.2	-21°29.3	3	227°39.8	-21°57.8	3	227°21.9	-22°22.4	3	227°02.8	-22°43.2	3	226°42.6	-22°60.0
4	242°56.0	-21°29.7	4	242°39.5	-21°58.1	4	242°21.6	-22°22.8	4	242°02.5	-22°43.5	4	241°42.3	-22°60.2
5	257°55.8	-21°30.1	5	257°39.3	-21°58.5	5	257°21.4	-22°23.1	5	257°02.3	-22°43.7	5	256°42.0	-22°60.4
6	272°55.6	-21°30.5	6	272°39.0	-21°58.9	6	272°21.1	-22°23.4	6	272°02.0	-22°44.0	6	271°41.7	-22°60.6
7	287°55.3	-21°31.0	7	287°38.8	-21°59.2	7	287°20.9	-22°23.7	7	287°01.7	-22°44.3	7	286°41.4	-22°60.8
8	302°55.1	-21°31.4	8	302°38.6	-21°59.6	8	302°20.6	-22°24.0	8	302°01.4	-22°44.5	8	301°41.2	-22°61.0
9	317°54.9	-21°31.8	9	317°38.3	-21°60.0	9	317°20.4	-22°24.3	9	317°01.2	-22°44.8	9	316°40.9	-22°61.2
10	332°54.7	-21°32.2	10	332°38.1	-22°00.3	10	332°20.1	-22°24.6	10	332°00.9	-22°45.0	10	331°40.6	-22°61.4
11	347°54.5	-21°32.6	11	347°37.8	-22°00.7	11	347°19.8	-22°24.9	11	347°00.6	-22°45.3	11	346°40.3	-22°61.6
12	2°54.2	-21°33.0	12	2°37.6	-22°01.0	12	2°19.6	-22°25.3	12	2°00.3	-22°45.5	12	1°40.0	-22°61.8
13	17°54.0	-21°33.4	13	17°37.4	-22°01.4	13	17°19.3	-22°25.6	13	17°00.1	-22°45.8	13	16°39.7	-22°62.0
14	32°53.8	-21°33.9	14	32°37.1	-22°01.8	14	32°19.1	-22°25.9	14	31°59.8	-22°46.0	14	31°39.4	-22°62.2
15	47°53.6	-21°34.3	15	47°36.9	-22°02.1	15	47°18.8	-22°26.2	15	46°59.5	-22°46.3	15	46°39.1	-22°62.4
16	62°53.4	-21°34.7	16	62°36.6	-22°02.5	16	62°18.5	-22°26.5	16	61°59.2	-22°46.5	16	61°38.8	-22°62.6
17	77°53.1	-21°35.1	17	77°36.4	-22°02.9	17	77°18.3	-22°26.8	17	76°59.0	-22°46.8	17	76°38.6	-22°62.8
18	92°52.9	-21°35.5	18	92°36.1	-22°03.2	18	92°18.0	-22°27.1	18	91°58.7	-22°47.0	18	91°38.3	-22°63.0
19	107°52.7	-21°35.9	19	107°35.9	-22°03.6	19	107°17.8	-22°27.4	19	106°58.4	-22°47.3	19	106°38.0	-22°63.2
20	122°52.5	-21°36.3	20	122°35.7	-22°03.9	20	122°17.5	-22°27.7	20	121°58.1	-22°47.5	20	121°37.7	-22°63.3
21	137°52.2	-21°36.7	21	137°35.4	-22°04.3	21	137°17.2	-22°28.0	21	136°57.8	-22°47.8	21	136°37.4	-22°63.5
22	152°52.0	-21°37.1	22	152°35.2	-22°04.6	22	152°17.0	-22°28.3	22	151°57.6	-22°48.0	22	151°37.1	-22°63.7
23	167°51.8	-21°37.6	23	167°34.9	-22°05.0	23	167°16.7	-22°28.6	23	166°57.3	-22°48.3	23	166°36.8	-22°63.9
	SD.=16.2													

12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec
0	181°36.5	-23°04.1	0	181°15.2	-23°15.6	0	180°53.2	-23°22.9	0	180°30.9	-23°26.0	0	180°08.5	-23°24.8
1	196°36.2	-23°04.3	1	196°14.9	-23°15.7	1	195°52.9	-23°23.0	1	195°30.6	-23°26.0	1	195°08.2	-23°24.8
2	211°35.9	-23°04.5	2	211°14.6	-23°15.8	2	210°52.6	-23°23.0	2	210°30.3	-23°26.0	2	210°07.9	-23°24.7
3	226°35.7	-23°04.7	3	226°14.3	-23°16.0	3	225°52.3	-23°23.1	3	225°30.0	-23°26.0	3	225°07.6	-23°24.7
4	241°35.4	-23°04.9	4	241°14.0	-23°16.1	4	240°52.0	-23°23.2	4	240°29.7	-23°26.0	4	240°07.3	-23°24.6
5	256°35.1	-23°05.0	5	256°13.7	-23°16.2	5	255°51.7	-23°23.2	5	255°29.4	-23°26.0	5	255°07.0	-23°24.6
6	271°34.8	-23°05.2	6	271°13.4	-23°16.3	6	270°51.4	-23°23.3	6	270°29.1	-23°26.0	6	270°06.7	-23°24.5
7	286°34.5	-23°05.4	7	286°13.1	-23°16.5	7	285°51.1	-23°23.4	7	285°28.8	-23°26.0	7	285°06.3	-23°24.5
8	301°34.2	-23°05.6	8	301°12.8	-23°16.6	8	300°50.8	-23°23.4	8	300°28.5	-23°26.1	8	300°06.0	-23°24.4
9	316°33.9	-23°05.8	9	316°12.5	-23°16.7	9	315°50.5	-23°23.5	9	315°28.1	-23°26.1	9	315°05.7	-23°24.4
10	331°33.6	-23°05.9	10	331°12.2	-23°16.8	10	330°50.2	-23°23.6	10	330°27.8	-23°26.1	10	330°05.4	-23°24.3
11	346°33.3	-23°06.1	11	346°11.9	-23°17.0	11	345°49.9	-23°23.6	11	345°27.5	-23°26.1	11	345°05.1	-23°24.3
12	1°33.0	-23°06.3	12	1°11.6	-23°17.1	12	0°49.5	-23°23.7	12	0°27.2	-23°26.1	12	0°04.8	-23°24.2
13	16°32.7	-23°06.5	13	16°11.3	-23°17.2	13	15°49.2	-23°23.8	13	15°26.9	-23°26.1	13	15°04.5	-23°24.2
14	31°32.4	-23°06.7	14	31°11.0	-23°17.3	14	30°48.9	-23°23.8	14	30°26.6	-23°26.1	14	30°04.2	-23°24.1
15	46°32.1	-23°06.8	15	46°10.7	-23°17.4	15	45°48.6	-23°23.9	15	45°26.3	-23°26.1	15	45°03.9	-23°24.1
16	61°31.9	-23°07.0	16	61°10.4	-23°17.6	16	60°48.3	-23°23.9	16	60°26.0	-23°26.1	16	60°03.5	-23°24.0
17	76°31.6	-23°07.2	17	76°10.1	-23°17.7	17	75°48.0	-23°24.0	17	75°25.6	-23°26.1	17	75°03.2	-23°23.9
18	91°31.3	-23°07.4	18	91°09.8	-23°17.8	18	90°47.7	-23°24.1	18	90°25.3	-23°26.1	18	90°02.9	-23°23.9
19	106°31.0	-23°07.5	19	106°09.5	-23°17.9	19	105°47.4	-23°24.1	19	105°25.0	-23°26.1	19	105°02.6	-23°23.8
20	121°30.7	-23°07.7	20	121°09.1	-23°18.0	20	120°47.1	-23°24.2	20	120°24.7	-23°26.1	20	120°02.3	-23°23.8
21	136°30.4	-23°07.9	21	136°08.8	-23°18.1	21	135°46.8	-23°24.2	21	135°24.4	-23°26.1	21	135°02.0	-23°23.7
22	151°30.1	-23°08.1	22	151°08.5	-23°18.3	22	150°46.5	-23°24.3	22	150°24.1	-23°26.1	22	150°01.7	-23°23.6
23	166°29.8	-23°08.2	23	166°08.2	-23°18.4	23	165°46.2	-23°24.3	23	165°23.8	-23°26.1	23	165°01.4	-23°23.6
	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°29.5	-23°08.4	0	181°07.9	-23°18.5	0	180°45.8	-23°24.4	0	180°23.5	-23°26.1	0	180°01.1	-23°23.5
1	196°29.2	-23°08.6	1	196°07.6	-23°18.6	1	195°45.5	-23°24.4	1	195°23.2	-23°26.1	1	195°00.8	-23°23.4
2	211°28.9	-23°08.7	2	211°07.3	-23°18.7	2	210°45.2	-23°24.5	2	210°22.8	-23°26.1	2	210°00.4	-23°23.4
3	226°28.6	-23°08.9	3	226°07.0	-23°18.8	3	225°44.9	-23°24.5	3	225°22.5	-23°26.0	3	225°00.1	-23°23.3
4	241°28.3	-23°09.1	4	241°06.7	-23°18.9	4	240°44.6	-23°24.6	4	240°22.2	-23°26.0	4	239°59.8	-23°23.2
5	256°28.0	-23°09.2	5	256°06.4	-23°19.0	5	255°44.3	-23°24.6	5	255°21.9	-23°26.0	5	254°59.5	-23°23.2
6	271°27.7	-23°09.4	6	271°06.1	-23°19.1	6	270°44.0	-23°24.7	6	270°21.6	-23°26.0	6	269°59.2	-23°23.1
7	286°27.4	-23°09.6	7	286°05.8	-23°19.2	7	285°43.7	-23°24.7	7	285°21.3	-23°26.0	7	284°58.9	-23°23.0
8	301°27.1	-23°09.7	8	301°05.5	-23°19.3	8	300°43.4	-23°24.8	8	300°21.0	-23°26.0	8	299°58.6	-23°23.0
9	316°26.8	-23°09.9	9	316°05.2	-23°19.4	9	315°43.1	-23°24.8	9	315°20.7	-23°26.0	9	314°58.3	-23°22.9
10	331°26.5	-23°10.0	10	331°04.9	-23°19.6	10	330°42.7	-23°24.9	10	330°20.4	-23°26.0	10	329°58.0	-23°22.8
11	346°26.2	-23°10.2	11	346°04.6	-23°19.7	11	345°42.4	-23°24.9	11	345°20.0	-23°25.9	11	344°57.7	-23°22.7
12	1°26.0	-23°10.4	12	1°04.3	-23°19.8	12	0°42.1	-23°25.0	12	0°19.7	-23°25.9	12	359°57.3	-23°22.7
13	16°25.7	-23°10.5	13	16°04.0	-23°19.9	13	15°41.8	-23°25.0	13	15°19.4	-23°25.9	13	14°57.0	-23°22.6
14	31°25.4	-23°10.7	14	31°03.7	-23°20.0	14	30°41.5	-23°25.0	14	30°19.1	-23°25.9	14	29°56.7	-23°22.5
15	46°25.1	-23°10.8	15	46°03.4	-23°20.1	15	45°41.2	-23°25.1	15	45°18.8	-23°25.9	15	44°56.4	-23°22.4
16	61°24.8	-23°11.0	16	61°03.1	-23°20.2	16	60°40.9	-23°25.1	16	60°18.5	-23°25.9	16	59°56.1	-23°22.4
17	76°24.5	-23°11.1	17	76°02.8	-23°20.3	17	75°40.6	-23°25.2	17	75°18.2	-23°25.8	17	74°55.8	-23°22.3
18	91°24.2	-23°11.3	18	91°02.5	-23°20.4	18	90°40.3	-23°25.2	18	90°17.9	-23°25.8	18	89°55.5	-23°22.2
19	106°23.9	-23°11.5	19	106°02.1	-23°20.4	19	105°40.0	-23°25.2	19	105°17.5	-23°25.8	19	104°55.2	-23°22.1
20	121°23.6	-23°11.6	20	121°01.8	-23°20.5	20	120°39.6	-23°25.3	20	120°17.2	-23°25.8	20	119°54.9	-23°22.0
21	136°23.3	-23°11.8	21	136°01.5	-23°20.6	21	135°39.3	-23°25.3	21	135°16.9	-23°25.8	21	134°54.6	-23°22.0
22	151°23.0	-23°11.9	22	151°01.2	-23°20.7	22	150°39.0	-23°25.3	22	150°16.6	-23°25.7	22	149°54.3	-23°21.9
23	166°22.7	-23°12.1	23	166°00.9	-23°20.8	23	165°38.7	-23°25.4	23	165°16.3	-23°25.7	23	164°53.9	-23°21.8
	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°22.4	-23°12.2	0	181°00.6	-23°20.9	0	180°38.4	-23°25.4	0	180°16.0	-23°25.7	0	179°53.6	-23°21.7
1	196°22.1	-23°12.4	1	196°00.3	-23°21.0	1	195°38.1	-23°25.4	1	195°15.7	-23°25.7	1	194°53.3	-23°21.6
2	211°21.8	-23°12.5	2	211°00.0	-23°21.1	2	210°37.8	-23°25.5	2	210°15.4	-23°25.6	2	209°53.0	-23°21.5
3	226°21.5	-23°12.7	3	225°59.7	-23°21.2	3	225°37.5	-23°25.5	3	225°15.1	-23°25.6	3	224°52.7	-23°21.5
4	241°21.2	-23°12.8	4	240°59.4	-23°21.3	4	240°37.2	-23°25.5	4	240°14.7	-23°25.6	4	239°52.4	-23°21.4
5	256°20.9	-23°13.0	5	255°59.1	-23°21.4	5	255°36.8	-23°25.6	5	255°14.4	-23°25.5	5	254°52.1	-23°21.3
6	271°20.6	-23°13.1	6	270°58.8	-23°21.5	6	270°36.5	-23°25.6	6	270°14.1	-23°25.5	6	269°51.8	-23°21.2
7	286°20.3	-23°13.2	7	285°58.5	-23°21.5	7	285°36.2	-23°25.6	7	285°13.8	-23°25.5	7	284°51.5	-23°21.1
8	301°20.0	-23°13.4	8	300°58.2	-23°21.6	8	300°35.9	-23°25.7	8	300°13.5	-23°25.5	8	299°51.2	-23°21.0
9	316°19.7	-23°13.5	9	315°57.9	-23°21.7	9	315°35.6	-23°25.7	9	315°13.2	-23°25.4	9	314°50.9	-23°20.9
10	331°19.4	-23°13.7	10	330°57.6	-23°21.8	10	330°35.3	-23°25.7	10	330°12.9	-23°25.4	10	329°50.6	-23°20.8
11	346°19.1	-23°13.8	11	345°57.2	-23°21.9	11	345°35.0	-23°25.7	11	345°12.6	-23°25.4	11	344°50.2	-23°20.7
12	1°18.8	-23°14.0	12	0°56.9	-23°22.0	12	0°34.7	-23°25.8	12	0°12.3	-23°25.3	12	359°49.9	-23°20.6
13	16°18.5	-23°14.1	13	15°56.6	-23°22.0	13	15°34.4	-23°25.8	13	15°11.9	-23°25.3	13	14°49.6	-23°20.6
14	31°18.2	-23°14.2	14	30°56.3	-23°22.1	14	30°34.1	-23°25.8	14	30°11.6	-23°25.2	14	29°49.3	-23°20.5
15	46°17.9	-23°14.4	15	45°56.0	-23°22.2	15	45°33.7	-23°25.8	15	45°11.3	-23°25.2	15	44°49.0	-23°20.4
16	61°17.6	-23°14.5	16	60°55.7	-23°22.3	16	60°33.4	-23°25.8	16	60°11.0	-23°25.2	16	59°48.7	-23°20.3
17	76°17.3	-23°14.6	17	75°55.4	-23°22.4	17	75°33.1	-23°25.9	17	75°10.7	-23°25.1	17	74°48.4	-23°20.2
18	91°17.0	-23°14.8	18	90°55.1	-23°22.4	18	90°32.8	-23°25.9	18	90°10.4	-23°25.1	18	89°48.1	-23°20.1
19	106°16.7	-23°14.9	19	105°54.8	-23°22.5	19	105°32.5	-23°25.9	19	105°10.1	-23°25.0	19	104°47.8	-23°20.0
20	121°16.4	-23°15.1	20	120°54.5	-23°22.6	20	120°32.2	-23°25.9	20	120°09.8	-23°25.0	20	119°47.5	-23°19.9
21	136°16.1	-23°15.2	21	135°54.2	-23°22.7	21	135°31.9	-23°25.9	21	135°09.5	-23°25.0	21	134°47.2	-23°19.8
22	151°15.8	-23°15.3	22	150°53.9	-23°22.7	22	150°31.6	-23°25.9	22	150°09.1	-23°24.9	22	149°46.9	-23°19.7
23	166°15.5	-23°15.4	23	165°53.6	-23°22.8	23	165°31.3	-23°26.0	23	165°08.8	-23°24.9	23	164°46.5	-23°19.6
	SD.=16													

27	GHA	Dec	30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec
0	179°46.2	-23°19.5	0	179°24.3	-23°09.9	0	179°03.0	-22°56.1	0	178°42.5	-22°38.2	0	178°22.8	-22°16.3
1	194°45.9	-23°19.4	1	194°24.0	-23°09.7	1	194°02.7	-22°55.9	1	193°42.2	-22°37.9	1	193°22.6	-22°16.0
2	209°45.6	-23°19.2	2	209°23.7	-23°09.5	2	209°02.4	-22°55.7	2	208°41.9	-22°37.7	2	208°22.3	-22°15.7
3	224°45.3	-23°19.1	3	224°23.4	-23°09.4	3	224°02.1	-22°55.4	3	223°41.6	-22°37.4	3	223°22.0	-22°15.3
4	239°45.0	-23°19.0	4	239°23.1	-23°09.2	4	239°01.8	-22°55.2	4	238°41.3	-22°37.1	4	238°21.8	-22°15.0
5	254°44.7	-23°18.9	5	254°22.8	-23°09.0	5	254°01.6	-22°55.0	5	253°41.1	-22°36.8	5	253°21.5	-22°14.7
6	269°44.4	-23°18.8	6	269°22.5	-23°08.9	6	269°01.3	-22°54.8	6	268°40.8	-22°36.6	6	268°21.2	-22°14.3
7	284°44.1	-23°18.7	7	284°22.2	-23°08.7	7	284°01.0	-22°54.5	7	283°40.5	-22°36.3	7	283°21.0	-22°14.0
8	299°43.8	-23°18.6	8	299°21.9	-23°08.5	8	299°00.7	-22°54.3	8	298°40.2	-22°36.0	8	298°20.7	-22°13.6
9	314°43.5	-23°18.5	9	314°21.6	-23°08.4	9	314°00.4	-22°54.1	9	313°39.9	-22°35.7	9	313°20.4	-22°13.3
10	329°43.2	-23°18.4	10	329°21.3	-23°08.2	10	329°00.1	-22°53.9	10	328°39.7	-22°35.4	10	328°20.2	-22°13.0
11	344°42.9	-23°18.3	11	344°21.0	-23°08.0	11	343°59.8	-22°53.6	11	343°39.4	-22°35.1	11	343°19.9	-22°12.6
12	359°42.6	-23°18.1	12	359°20.7	-23°07.9	12	358°59.5	-22°53.4	12	358°39.1	-22°34.9	12	358°19.7	-22°12.3
13	14°42.3	-23°18.0	13	14°20.4	-23°07.7	13	13°59.2	-22°53.2	13	13°38.8	-22°34.6	13	13°19.4	-22°11.9
14	29°41.9	-23°17.9	14	29°20.1	-23°07.5	14	28°59.0	-22°52.9	14	28°38.6	-22°34.3	14	28°19.1	-22°11.6
15	44°41.6	-23°17.8	15	44°19.8	-23°07.3	15	43°58.7	-22°52.7	15	43°38.3	-22°34.0	15	43°18.9	-22°11.3
16	59°41.3	-23°17.7	16	59°19.5	-23°07.2	16	58°58.4	-22°52.5	16	58°38.0	-22°33.7	16	58°18.6	-22°10.9
17	74°41.0	-23°17.6	17	74°19.2	-23°07.0	17	73°58.1	-22°52.2	17	73°37.7	-22°33.4	17	73°18.3	-22°10.6
18	89°40.7	-23°17.5	18	89°18.9	-23°06.8	18	88°57.8	-22°52.0	18	88°37.5	-22°33.1	18	88°18.1	-22°10.2
19	104°40.4	-23°17.3	19	104°18.6	-23°06.6	19	103°57.5	-22°51.8	19	103°37.2	-22°32.8	19	103°17.8	-22°09.9
20	119°40.1	-23°17.2	20	119°18.3	-23°06.5	20	118°57.2	-22°51.5	20	118°36.9	-22°32.5	20	118°17.6	-22°09.5
21	134°39.8	-23°17.1	21	134°18.0	-23°06.3	21	133°56.9	-22°51.3	21	133°36.6	-22°32.2	21	133°17.3	-22°09.2
22	149°39.5	-23°17.0	22	149°17.7	-23°06.1	22	148°56.6	-22°51.1	22	148°36.4	-22°32.0	22	148°17.0	-22°08.8
23	164°39.2	-23°16.8	23	164°17.5	-23°05.9	23	163°56.4	-22°50.8	23	163°36.1	-22°31.7	23	163°16.8	-22°08.5
	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°38.9	-23°16.7	0	179°17.2	-23°05.7	0	178°56.1	-22°50.6	0	178°35.8	-22°31.4	0	178°16.5	-22°08.1
1	194°38.6	-23°16.6	1	194°16.9	-23°05.6	1	193°55.8	-22°50.4	1	193°35.5	-22°31.1	1	193°16.3	-22°07.8
2	209°38.3	-23°16.5	2	209°16.6	-23°05.4	2	208°55.5	-22°50.1	2	208°35.3	-22°30.8	2	208°16.0	-22°07.4
3	224°38.0	-23°16.3	3	224°16.3	-23°05.2	3	223°55.2	-22°49.9	3	223°35.0	-22°30.5	3	223°15.7	-22°07.1
4	239°37.7	-23°16.2	4	239°16.0	-23°05.0	4	238°54.9	-22°49.6	4	238°34.7	-22°30.2	4	238°15.5	-22°06.7
5	254°37.4	-23°16.1	5	254°15.7	-23°04.8	5	253°54.6	-22°49.4	5	253°34.4	-22°29.9	5	253°15.2	-22°06.4
6	269°37.1	-23°16.0	6	269°15.4	-23°04.6	6	268°54.3	-22°49.1	6	268°34.2	-22°29.6	6	268°15.0	-22°06.0
7	284°36.8	-23°15.8	7	284°15.1	-23°04.4	7	283°54.1	-22°48.9	7	283°33.9	-22°29.3	7	283°14.7	-22°05.7
8	299°36.4	-23°15.7	8	299°14.8	-23°04.3	8	298°53.8	-22°48.7	8	298°33.6	-22°29.0	8	298°14.4	-22°05.3
9	314°36.1	-23°15.6	9	314°14.5	-23°04.1	9	313°53.5	-22°48.4	9	313°33.3	-22°28.7	9	313°14.2	-22°05.0
10	329°35.8	-23°15.4	10	329°14.2	-23°03.9	10	328°53.2	-22°48.2	10	328°33.1	-22°28.4	10	328°13.9	-22°04.6
11	344°35.5	-23°15.3	11	344°13.9	-23°03.7	11	343°52.9	-22°47.9	11	343°32.8	-22°28.1	11	343°13.7	-22°04.2
12	359°35.2	-23°15.2	12	359°13.6	-23°03.5	12	358°52.6	-22°47.7	12	358°32.5	-22°27.8	12	358°13.4	-22°03.9
13	14°34.9	-23°15.0	13	14°13.3	-23°03.3	13	13°52.3	-22°47.4	13	13°32.2	-22°27.5	13	13°13.2	-22°03.5
14	29°34.6	-23°14.9	14	29°13.0	-23°03.1	14	28°52.1	-22°47.2	14	28°32.0	-22°27.2	14	28°12.9	-22°03.2
15	44°34.3	-23°14.8	15	44°12.7	-23°02.9	15	43°51.8	-22°46.9	15	43°31.7	-22°26.9	15	43°12.6	-22°02.8
16	59°34.0	-23°14.6	16	59°12.4	-23°02.7	16	58°51.5	-22°46.7	16	58°31.4	-22°26.5	16	58°12.4	-22°02.4
17	74°33.7	-23°14.5	17	74°12.1	-23°02.5	17	73°51.2	-22°46.4	17	73°31.2	-22°26.2	17	73°12.1	-22°02.1
18	89°33.4	-23°14.4	18	89°11.8	-23°02.3	18	88°50.9	-22°46.2	18	88°30.9	-22°25.9	18	88°11.9	-22°01.7
19	104°33.1	-23°14.2	19	104°11.5	-23°02.1	19	103°50.6	-22°45.9	19	103°30.6	-22°25.6	19	103°11.6	-22°01.4
20	119°32.8	-23°14.1	20	119°11.2	-23°01.9	20	118°50.3	-22°45.7	20	118°30.3	-22°25.3	20	118°11.4	-22°01.0
21	134°32.5	-23°14.0	21	134°10.9	-23°01.7	21	133°50.1	-22°45.4	21	133°30.1	-22°25.0	21	133°11.1	-22°00.6
22	149°32.2	-23°13.8	22	149°10.6	-23°01.5	22	148°49.8	-22°45.1	22	148°29.8	-22°24.7	22	148°10.9	-22°00.3
23	164°31.9	-23°13.7	23	164°10.3	-23°01.3	23	163°49.5	-22°44.9	23	163°29.5	-22°24.4	23	163°10.6	-21°59.9
	SD.=16.3	d=0.1		SD.=16.3	d=0.2		SD.=16.3	d=0.2		SD.=16.3	d=0.3		SD.=16.3	d=0.4

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	179°31.6	-23°13.5	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
1	194°31.3	-23°13.4	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
2	209°31.0	-23°13.2	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
3	224°30.7	-23°13.1	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
4	239°30.4	-23°12.9	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
5	254°30.1	-23°12.8	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
6	269°29.8	-23°12.7	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
7	284°29.5	-23°12.5	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
8	299°29.2	-23°12.4	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
9	314°28.9	-23°12.2	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
10	329°28.6	-23°12.1	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
11	344°28.3	-23°11.9	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
12	359°28.0	-23°11.8	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
13	14°27.6	-23°11.6	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
14	29°27.3	-23°11.4	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
15	44°27.0	-23°11.3	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
16	59°26.7	-23°11.1	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
17	74°26.4	-23°11.0	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
18	89°26.1	-23°10.8	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
19	104°25.8	-23°10.7	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
20	119°25.5	-23°10.5	20	119°04.2	-22°57.0	20	118°43.6	-22°39.3	20	118°23.9	-22°17.6	20	118°05.0	-21°52.0
21	134°25.2	-23°10.3	21	134°03.9	-22°56.8	21	133°43.3	-22°39.0	21	133°23.6	-22°17.3	21	133°05.3	-21°51.6
22	149°24.9	-23°10.2	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
23	164°24.6	-23°10.0	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	