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# The Nautical Almanac for the Sun 2016

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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**

<b>In Northern Latitudes</b>	<b>In Southern Latitudes</b>
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°13.9	-23°03.5	0	178°52.8	-22°47.7	0	178°32.6	-22°27.8	0	178°13.4	-22°04.0	0	177°55.4	-21°36.2
1	194°13.6	-23°03.4	1	193°52.5	-22°47.5	1	193°32.3	-22°27.5	1	193°13.1	-22°03.6	1	192°55.2	-21°35.8
2	209°13.3	-23°03.2	2	208°52.3	-22°47.2	2	208°32.1	-22°27.2	2	208°12.9	-22°03.2	2	207°54.9	-21°35.4
3	224°13.0	-23°03.0	3	223°52.0	-22°47.0	3	223°31.8	-22°26.9	3	223°12.6	-22°02.9	3	222°54.7	-21°35.0
4	239°12.7	-23°02.8	4	238°51.7	-22°46.7	4	238°31.5	-22°26.6	4	238°12.4	-22°02.5	4	237°54.5	-21°34.5
5	254°12.4	-23°02.6	5	253°51.4	-22°46.5	5	253°31.2	-22°26.3	5	253°12.1	-22°02.2	5	252°54.2	-21°34.1
6	269°12.1	-23°02.4	6	268°51.1	-22°46.2	6	268°31.0	-22°26.0	6	268°11.9	-22°01.8	6	267°54.0	-21°33.7
7	284°11.8	-23°02.2	7	283°50.8	-22°46.0	7	283°30.7	-22°25.7	7	283°11.6	-22°01.4	7	282°53.7	-21°33.3
8	299°11.5	-23°02.0	8	298°50.5	-22°45.7	8	298°30.4	-22°25.4	8	298°11.3	-22°01.1	8	297°53.5	-21°32.9
9	314°11.2	-23°01.8	9	313°50.3	-22°45.5	9	313°30.1	-22°25.1	9	313°11.1	-22°00.7	9	312°53.3	-21°32.5
10	329°10.9	-23°01.6	10	328°50.0	-22°45.2	10	328°29.9	-22°24.8	10	328°10.8	-22°00.3	10	327°53.0	-21°32.0
11	344°10.6	-23°01.4	11	343°49.7	-22°45.0	11	343°29.6	-22°24.4	11	343°10.6	-21°60.0	11	342°52.8	-21°31.6
12	359°10.3	-23°01.2	12	358°49.4	-22°44.7	12	358°29.3	-22°24.1	12	358°10.3	-21°59.6	12	357°52.6	-21°31.2
13	14°10.0	-23°01.0	13	13°49.1	-22°44.4	13	13°29.1	-22°23.8	13	13°10.1	-21°59.2	13	12°52.3	-21°30.8
14	29°09.7	-23°00.8	14	28°48.8	-22°44.2	14	28°28.8	-22°23.5	14	28°09.8	-21°58.9	14	27°52.1	-21°30.4
15	44°09.4	-23°00.6	15	43°48.5	-22°43.9	15	43°28.5	-22°23.2	15	43°09.5	-21°58.5	15	42°51.8	-21°29.9
16	59°09.1	-23°00.4	16	58°48.3	-22°43.7	16	58°28.2	-22°22.9	16	58°09.3	-21°58.1	16	57°51.6	-21°29.5
17	74°08.9	-23°00.2	17	73°48.0	-22°43.4	17	73°28.0	-22°22.6	17	73°09.0	-21°57.8	17	72°51.4	-21°29.1
18	89°08.6	-22°60.0	18	88°47.7	-22°43.1	18	88°27.7	-22°22.2	18	88°08.8	-21°57.4	18	87°51.1	-21°28.7
19	104°08.3	-22°59.8	19	103°47.4	-22°42.9	19	103°27.4	-22°21.9	19	103°08.5	-21°57.0	19	102°50.9	-21°28.2
20	119°08.0	-22°59.6	20	118°47.1	-22°42.6	20	118°27.2	-22°21.6	20	118°08.3	-21°56.6	20	117°50.7	-21°27.8
21	134°07.7	-22°59.4	21	133°46.8	-22°42.3	21	133°26.9	-22°21.3	21	133°08.0	-21°56.3	21	132°50.4	-21°27.4
22	149°07.4	-22°59.1	22	148°46.6	-22°42.1	22	148°26.6	-22°21.0	22	148°07.8	-21°55.9	22	147°50.2	-21°27.0
23	164°07.1	-22°58.9	23	163°46.3	-22°41.8	23	163°26.3	-22°20.6	23	163°07.5	-21°55.5	23	162°50.0	-21°26.5
	SD.=16.3	d=0.2		SD.=16.3	d=0.2		SD.=16.3	d=0.3		SD.=16.3	d=0.4		SD.=16.3	d=0.4

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	179°06.8	-22°58.7	0	178°46.0	-22°41.5	0	178°26.1	-22°20.3	0	178°07.3	-21°55.1	0	177°49.7	-21°26.1
1	194°06.5	-22°58.5	1	193°45.7	-22°41.3	1	193°25.8	-22°20.0	1	193°07.0	-21°54.8	1	192°49.5	-21°25.7
2	209°06.2	-22°58.3	2	208°45.4	-22°41.0	2	208°25.5	-22°19.7	2	208°06.8	-21°54.4	2	207°49.3	-21°25.2
3	224°05.9	-22°58.1	3	223°45.1	-22°40.7	3	223°25.3	-22°19.3	3	223°06.5	-21°54.0	3	222°49.0	-21°24.8
4	239°05.6	-22°57.9	4	238°44.9	-22°40.5	4	238°25.0	-22°19.0	4	238°06.3	-21°53.6	4	237°48.8	-21°24.4
5	254°05.3	-22°57.7	5	253°44.6	-22°40.2	5	253°24.7	-22°18.7	5	253°06.0	-21°53.2	5	252°48.6	-21°23.9
6	269°05.0	-22°57.5	6	268°44.3	-22°39.9	6	268°24.5	-22°18.4	6	268°05.7	-21°52.9	6	267°48.3	-21°23.5
7	284°04.7	-22°57.2	7	283°44.0	-22°39.7	7	283°24.2	-22°18.0	7	283°05.5	-21°52.5	7	282°48.1	-21°23.1
8	299°04.4	-22°57.0	8	298°43.7	-22°39.4	8	298°23.9	-22°17.7	8	298°05.2	-21°52.1	8	297°47.9	-21°22.6
9	314°04.1	-22°56.8	9	313°43.4	-22°39.1	9	313°23.7	-22°17.4	9	313°05.0	-21°51.7	9	312°47.6	-21°22.2
10	329°03.9	-22°56.6	10	328°43.2	-22°38.8	10	328°23.4	-22°17.1	10	328°04.7	-21°51.3	10	327°47.4	-21°21.8
11	344°03.6	-22°56.4	11	343°42.9	-22°38.6	11	343°23.1	-22°16.7	11	343°04.5	-21°50.9	11	342°47.2	-21°21.3
12	359°03.3	-22°56.2	12	358°42.6	-22°38.3	12	358°22.9	-22°16.4	12	358°04.2	-21°50.6	12	357°47.0	-21°20.9
13	14°03.0	-22°55.9	13	13°42.3	-22°38.0	13	13°22.6	-22°16.1	13	13°04.0	-21°50.2	13	12°46.7	-21°20.5
14	29°02.7	-22°55.7	14	28°42.0	-22°37.7	14	28°22.3	-22°15.7	14	28°03.7	-21°49.8	14	27°46.5	-21°20.0
15	44°02.4	-22°55.5	15	43°41.8	-22°37.5	15	43°22.1	-22°15.4	15	43°03.5	-21°49.4	15	42°46.3	-21°19.6
16	59°02.1	-22°55.3	16	58°41.5	-22°37.2	16	58°21.8	-22°15.1	16	58°03.2	-21°49.0	16	57°46.0	-21°19.1
17	74°01.8	-22°55.0	17	73°41.2	-22°36.9	17	73°21.5	-22°14.7	17	73°03.0	-21°48.6	17	72°45.8	-21°18.7
18	89°01.5	-22°54.8	18	88°40.9	-22°36.6	18	88°21.3	-22°14.4	18	88°02.8	-21°48.2	18	87°45.6	-21°18.3
19	104°01.2	-22°54.6	19	103°40.6	-22°36.3	19	103°21.0	-22°14.1	19	103°02.5	-21°47.8	19	102°45.3	-21°17.8
20	119°00.9	-22°54.4	20	118°40.4	-22°36.1	20	118°20.7	-22°13.7	20	118°02.3	-21°47.4	20	117°45.1	-21°17.4
21	134°00.6	-22°54.1	21	133°40.1	-22°35.8	21	133°20.5	-22°13.4	21	133°02.0	-21°47.1	21	132°44.9	-21°16.9
22	149°00.4	-22°53.9	22	148°39.8	-22°35.5	22	148°20.2	-22°13.0	22	148°01.8	-21°46.7	22	147°44.7	-21°16.5
23	164°00.1	-22°53.7	23	163°39.5	-22°35.2	23	163°19.9	-22°12.7	23	163°01.5	-21°46.3	23	162°44.4	-21°16.0
	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°59.8	-22°53.5	0	178°39.2	-22°34.9	0	178°19.7	-22°12.4	0	178°01.3	-21°45.9	0	177°44.2	-21°15.6
1	193°59.5	-22°53.2	1	193°39.0	-22°34.6	1	193°19.4	-22°12.0	1	193°01.0	-21°45.5	1	192°44.0	-21°15.1
2	208°59.2	-22°53.0	2	208°38.7	-22°34.3	2	208°19.1	-22°11.7	2	208°00.8	-21°45.1	2	207°43.8	-21°14.7
3	223°58.9	-22°52.8	3	223°38.4	-22°34.1	3	223°18.9	-22°11.3	3	223°00.5	-21°44.7	3	222°43.5	-21°14.3
4	238°58.6	-22°52.5	4	238°38.1	-22°33.8	4	238°18.6	-22°11.0	4	238°00.3	-21°44.3	4	237°43.3	-21°13.8
5	253°58.3	-22°52.3	5	253°37.9	-22°33.5	5	253°18.4	-22°10.6	5	253°00.0	-21°43.9	5	252°43.1	-21°13.4
6	268°58.0	-22°52.1	6	268°37.6	-22°33.2	6	268°18.1	-22°10.3	6	267°59.8	-21°43.5	6	267°42.9	-21°12.9
7	283°57.7	-22°51.8	7	283°37.3	-22°32.9	7	283°17.8	-22°10.0	7	282°59.5	-21°43.1	7	282°42.6	-21°12.5
8	298°57.4	-22°51.6	8	298°37.0	-22°32.6	8	298°17.6	-22°09.6	8	297°59.3	-21°42.7	8	297°42.4	-21°12.0
9	313°57.2	-22°51.4	9	313°36.7	-22°32.3	9	313°17.3	-22°09.3	9	312°59.1	-21°42.3	9	312°42.2	-21°11.6
10	328°56.9	-22°51.1	10	328°36.5	-22°32.0	10	328°17.0	-22°08.9	10	327°58.8	-21°41.9	10	327°42.0	-21°11.1
11	343°56.6	-22°50.9	11	343°36.2	-22°31.7	11	343°16.8	-22°08.6	11	342°58.6	-21°41.5	11	342°41.7	-21°10.6
12	358°56.3	-22°50.7	12	358°35.9	-22°31.4	12	358°16.5	-22°08.2	12	357°58.3	-21°41.1	12	357°41.5	-21°10.2
13	13°56.0	-22°50.4	13	13°35.6	-22°31.1	13	13°16.3	-22°07.9	13	12°58.1	-21°40.7	13	12°41.3	-21°09.7
14	28°55.7	-22°50.2	14	28°35.4	-22°30.8	14	28°16.0	-22°07.5	14	27°57.8	-21°40.3	14	27°41.1	-21°09.3
15	43°55.4	-22°49.9	15	43°35.1	-22°30.5	15	43°15.7	-22°07.2	15	42°57.6	-21°39.9	15	42°40.8	-21°08.8
16	58°55.1	-22°49.7	16	58°34.8	-22°30.2	16	58°15.5	-22°06.8	16	57°57.4	-21°39.5	16	57°40.6	-21°08.4
17	73°54.8	-22°49.4	17	73°34.5	-22°29.9	17	73°15.2	-22°06.5	17	72°57.1	-21°39.1	17	72°40.4	-21°07.9
18	88°54.6	-22°49.2	18	88°34.3	-22°29.6	18	88°15.0	-22°06.1	18	87°56.9	-21°38.7	18	87°40.2	-21°07.4
19	103°54.3	-22°49.0	19	103°34.0	-22°29.3	19	103°14.7	-22°05.7	19	102°56.6	-21°38.3	19	102°40.0	-21°07.0
20	118°54.0	-22°48.7	20	118°33.7	-22°29.0	20	118°14.4	-22°05.4	20	117°56.4	-21°37.8	20	117°39.7	-21°06.5
21	133°53.7	-22°48.5	21	133°33.4	-22°28.7	21	133°14.2	-22°05.0	21	132°56.1	-21°37.4	21	132°39.5	-21°06.1
22	148°53.4	-22°48.2	22	148°33.2	-22°28.4	22	148°13.9	-22°04.7	22	147°55.9	-21°37.0	22	147°39.3	-21°05.6
23	163°53.1	-22°48.0	23	163°32.9	-22°28.1	23	163°13.7	-22°04.3	23	162°55.7	-21°36.6	23	162°39.1	

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	177°38.9	-21°04.7	0	177°23.9	-20°29.5	0	177°10.5	-19°50.9	0	176°58.9	-19°09.0	0	176°49.1	-18°23.8
1	192°38.6	-21°04.2	1	192°23.7	-20°29.0	1	192°10.3	-19°50.3	1	191°58.8	-19°08.4	1	191°49.0	-18°23.2
2	207°38.4	-21°03.8	2	207°23.5	-20°28.5	2	207°10.2	-19°49.8	2	206°58.6	-19°07.7	2	206°48.8	-18°22.5
3	222°38.2	-21°03.3	3	222°23.3	-20°28.0	3	222°10.0	-19°49.2	3	221°58.5	-19°07.1	3	221°48.7	-18°21.9
4	237°38.0	-21°02.8	4	237°23.1	-20°27.5	4	237°09.8	-19°48.7	4	236°58.3	-19°06.5	4	236°48.6	-18°21.2
5	252°37.8	-21°02.4	5	252°22.9	-20°27.0	5	252°09.7	-19°48.1	5	251°58.2	-19°05.9	5	251°48.5	-18°20.6
6	267°37.5	-21°01.9	6	267°22.7	-20°26.4	6	267°09.5	-19°47.5	6	266°58.0	-19°05.3	6	266°48.3	-18°19.9
7	282°37.3	-21°01.4	7	282°22.5	-20°25.9	7	282°09.3	-19°47.0	7	281°57.9	-19°04.7	7	281°48.2	-18°19.3
8	297°37.1	-21°01.0	8	297°22.3	-20°25.4	8	297°09.1	-19°46.4	8	296°57.7	-19°04.1	8	296°48.1	-18°18.6
9	312°36.9	-21°00.5	9	312°22.1	-20°24.9	9	312°09.0	-19°45.8	9	311°57.6	-19°03.5	9	311°48.0	-18°18.0
10	327°36.7	-21°00.0	10	327°21.9	-20°24.4	10	327°08.8	-19°45.3	10	326°57.4	-19°02.9	10	326°47.8	-18°17.3
11	342°36.5	-20°59.5	11	342°21.7	-20°23.9	11	342°08.6	-19°44.7	11	341°57.3	-19°02.3	11	341°47.7	-18°16.7
12	357°36.2	-20°59.1	12	357°21.5	-20°23.3	12	357°08.5	-19°44.1	12	356°57.2	-19°01.7	12	356°47.6	-18°16.0
13	12°36.0	-20°58.6	13	12°21.3	-20°22.8	13	12°08.3	-19°43.6	13	11°57.0	-19°01.0	13	11°47.5	-18°15.4
14	27°35.8	-20°58.1	14	27°21.1	-20°22.3	14	27°08.1	-19°43.0	14	26°56.9	-19°00.4	14	26°47.4	-18°14.7
15	42°35.6	-20°57.7	15	42°20.9	-20°21.8	15	42°08.0	-19°42.4	15	41°56.7	-18°59.8	15	41°47.2	-18°14.1
16	57°35.4	-20°57.2	16	57°20.7	-20°21.2	16	57°07.8	-19°41.9	16	56°56.6	-18°59.2	16	56°47.1	-18°13.4
17	72°35.2	-20°56.7	17	72°20.6	-20°20.7	17	72°07.6	-19°41.3	17	71°56.4	-18°58.6	17	71°47.0	-18°12.7
18	87°35.0	-20°56.2	18	87°20.4	-20°20.2	18	87°07.5	-19°40.7	18	86°56.3	-18°58.0	18	86°46.9	-18°12.1
19	102°34.7	-20°55.8	19	102°20.2	-20°19.7	19	102°07.3	-19°40.2	19	101°56.1	-18°57.4	19	101°46.8	-18°11.4
20	117°34.5	-20°55.3	20	117°20.0	-20°19.1	20	117°07.1	-19°39.6	20	116°56.0	-18°56.7	20	116°46.7	-18°10.8
21	132°34.3	-20°54.8	21	132°19.8	-20°18.6	21	132°07.0	-19°39.0	21	131°55.9	-18°56.1	21	131°46.5	-18°10.1
22	147°34.1	-20°54.3	22	147°19.6	-20°18.1	22	147°06.8	-19°38.4	22	146°55.7	-18°55.5	22	146°46.4	-18°09.4
23	162°33.9	-20°53.8	23	162°19.4	-20°17.6	23	162°06.6	-19°37.9	23	161°55.6	-18°54.9	23	161°46.3	-18°08.8
	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=0.6

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	177°33.7	-20°53.4	0	177°19.2	-20°17.0	0	177°06.5	-19°37.3	0	176°55.4	-18°54.3	0	176°46.2	-18°08.1
1	192°33.5	-20°52.9	1	192°19.0	-20°16.5	1	192°06.3	-19°36.7	1	191°55.3	-18°53.6	1	191°46.1	-18°07.5
2	207°33.3	-20°52.4	2	207°18.8	-20°16.0	2	207°06.1	-19°36.1	2	206°55.2	-18°53.0	2	206°46.0	-18°06.8
3	222°33.0	-20°51.9	3	222°18.7	-20°15.4	3	222°06.0	-19°35.6	3	221°55.0	-18°52.4	3	221°45.8	-18°06.1
4	237°32.8	-20°51.4	4	237°18.5	-20°14.9	4	237°05.8	-19°35.0	4	236°54.9	-18°51.8	4	236°45.7	-18°05.5
5	252°32.6	-20°51.0	5	252°18.3	-20°14.4	5	252°05.6	-19°34.4	5	251°54.7	-18°51.2	5	251°45.6	-18°04.8
6	267°32.4	-20°50.5	6	267°18.1	-20°13.9	6	267°05.5	-19°33.8	6	266°54.6	-18°50.6	6	266°45.5	-18°04.1
7	282°32.2	-20°50.0	7	282°17.9	-20°13.3	7	282°05.3	-19°33.2	7	281°54.5	-18°49.9	7	281°45.4	-18°03.5
8	297°32.0	-20°49.5	8	297°17.7	-20°12.8	8	297°05.1	-19°32.7	8	296°54.3	-18°49.3	8	296°45.3	-18°02.8
9	312°31.8	-20°49.0	9	312°17.5	-20°12.3	9	312°05.0	-19°32.1	9	311°54.2	-18°48.7	9	311°45.2	-18°02.1
10	327°31.6	-20°48.5	10	327°17.3	-20°11.7	10	327°04.8	-19°31.5	10	326°54.0	-18°48.0	10	326°45.0	-18°01.5
11	342°31.4	-20°48.0	11	342°17.2	-20°11.2	11	342°04.7	-19°30.9	11	341°53.9	-18°47.4	11	341°44.9	-18°00.8
12	357°31.2	-20°47.6	12	357°17.0	-20°10.6	12	357°04.5	-19°30.3	12	356°53.8	-18°46.8	12	356°44.8	-18°00.1
13	12°30.9	-20°47.1	13	12°16.8	-20°10.1	13	12°04.3	-19°29.8	13	11°53.6	-18°46.2	13	11°44.7	-17°59.5
14	27°30.7	-20°46.6	14	27°16.6	-20°09.6	14	27°04.2	-19°29.2	14	26°53.5	-18°45.5	14	26°44.6	-17°58.8
15	42°30.5	-20°46.1	15	42°16.4	-20°09.0	15	42°04.0	-19°28.6	15	41°53.4	-18°44.9	15	41°44.5	-17°58.1
16	57°30.3	-20°45.6	16	57°16.2	-20°08.5	16	57°03.9	-19°28.0	16	56°53.2	-18°44.3	16	56°44.4	-17°57.5
17	72°30.1	-20°45.1	17	72°16.1	-20°08.0	17	72°03.7	-19°27.4	17	71°53.1	-18°43.6	17	71°44.3	-17°56.8
18	87°29.9	-20°44.6	18	87°15.9	-20°07.4	18	87°03.5	-19°26.8	18	86°53.0	-18°43.0	18	86°44.2	-17°56.1
19	102°29.7	-20°44.1	19	102°15.7	-20°06.9	19	102°03.4	-19°26.2	19	101°52.8	-18°42.4	19	101°44.0	-17°55.5
20	117°29.5	-20°43.6	20	117°15.5	-20°06.3	20	117°03.2	-19°25.7	20	116°52.7	-18°41.8	20	116°43.9	-17°54.8
21	132°29.3	-20°43.1	21	132°15.3	-20°05.8	21	132°03.1	-19°25.1	21	131°52.6	-18°41.1	21	131°43.8	-17°54.1
22	147°29.1	-20°42.6	22	147°15.1	-20°05.2	22	147°02.9	-19°24.5	22	146°52.4	-18°40.5	22	146°43.7	-17°53.4
23	162°28.9	-20°42.1	23	162°15.0	-20°04.7	23	162°02.7	-19°23.9	23	161°52.3	-18°39.9	23	161°43.6	-17°52.8
	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

18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	177°28.7	-20°41.6	0	177°14.8	-20°04.2	0	177°02.6	-19°23.3	0	176°52.2	-18°39.2	0	176°43.5	-17°52.1
1	192°28.5	-20°41.1	1	192°14.6	-20°03.6	1	192°02.4	-19°22.7	1	191°52.0	-18°38.6	1	191°43.4	-17°51.4
2	207°28.3	-20°40.6	2	207°14.4	-20°03.1	2	207°02.3	-19°22.1	2	206°51.9	-18°38.0	2	206°43.3	-17°50.7
3	222°28.1	-20°40.2	3	222°14.2	-20°02.5	3	222°02.1	-19°21.5	3	221°51.8	-18°37.3	3	221°43.2	-17°50.1
4	237°27.9	-20°39.7	4	237°14.1	-20°02.0	4	237°02.0	-19°20.9	4	236°51.6	-18°36.7	4	236°43.1	-17°49.4
5	252°27.7	-20°39.2	5	252°13.9	-20°01.4	5	252°01.8	-19°20.3	5	251°51.5	-18°36.0	5	251°43.0	-17°48.7
6	267°27.5	-20°38.7	6	267°13.7	-20°00.9	6	267°01.7	-19°19.7	6	266°51.4	-18°35.4	6	266°42.9	-17°48.0
7	282°27.3	-20°38.2	7	282°13.5	-20°00.3	7	282°01.5	-19°19.2	7	281°51.2	-18°34.8	7	281°42.8	-17°47.3
8	297°27.0	-20°37.7	8	297°13.3	-19°59.8	8	297°01.3	-19°18.6	8	296°51.1	-18°34.1	8	296°42.7	-17°46.6
9	312°26.8	-20°37.1	9	312°13.2	-19°59.2	9	312°01.2	-19°18.0	9	311°51.0	-18°33.5	9	311°42.6	-17°46.0
10	327°26.6	-20°36.6	10	327°13.0	-19°58.7	10	327°01.0	-19°17.4	10	326°50.8	-18°32.9	10	326°42.4	-17°45.3
11	342°26.4	-20°36.1	11	342°12.8	-19°58.1	11	342°00.9	-19°16.8	11	341°50.7	-18°32.2	11	341°42.3	-17°44.6
12	357°26.2	-20°35.6	12	357°12.6	-19°57.6	12	357°00.7	-19°16.2	12	356°50.6	-18°31.6	12	356°42.2	-17°43.9
13	12°26.0	-20°35.1	13	12°12.4	-19°57.0	13	12°00.6	-19°15.6	13	11°50.5	-18°30.9	13	11°42.1	-17°43.3
14	27°25.8	-20°34.6	14	27°12.3	-19°56.5	14	27°00.4	-19°15.0	14	26°50.3	-18°30.3	14	26°42.0	-17°42.6
15	42°25.6	-20°34.1	15	42°12.1	-19°55.9	15	42°00.3	-19°14.4	15	41°50.2	-18°29.6	15	41°41.9	-17°41.9
16	57°25.4	-20°33.6	16	57°11.9	-19°55.4	16	57°00.1	-19°13.8	16	56°50.1	-18°29.0	16	56°41.8	-17°41.2
17	72°25.2	-20°33.1	17	72°11.7	-19°54.8	17	71°60.0	-19°13.2	17	71°50.0	-18°28.4	17	71°41.7	-17°40.5
18	87°25.0	-20°32.6	18	87°11.6	-19°54.3	18	86°59.8	-19°12.6	18	86°49.8	-18°27.7	18	86°41.6	-17°39.8
19	102°24.8	-20°32.1	19	102°11.4	-19°53.7	19	101°59.7	-19°12.0	19	101°49.7	-18°27.1	19	101°41.5	-17°39.2
20	117°24.6	-20°31.6	20	117°11.2	-19°53.1	20	116°59.5	-19°11.4	20	116°49.6	-18°26.4	20	116°41.4	-17°38.5
21	132°24.4	-20°31.1	21	132°11.0	-19°52.6	21	131°59.4	-19°10.8	21	131°49.4	-18°25.8	21	131°41.3	-17°37.8
22	147°24.2	-20°30.6	22	147°10.9	-19°52.0	22	146°59.2	-19°10.2	22	146°49.3	-18°25.1	22	146°41.2	-17°37.1
23	162°24.1	-20°30.0	23	162°10.7	-19°51.5	23	161°59.1	-19°09.6	23	161°49.2	-18°24.5	23	161°41.1	

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	176°41.0	-17°35.7	0	176°34.8	-16°44.8	0	176°30.3	-15°51.2	0	176°27.6	-14°55.2	0	176°26.7	-13°56.9
1	191°40.9	-17°35.0	1	191°34.7	-16°44.1	1	191°30.2	-15°50.4	1	191°27.6	-14°54.4	1	191°26.7	-13°56.0
2	206°40.8	-17°34.3	2	206°34.6	-16°43.3	2	206°30.2	-15°49.7	2	206°27.6	-14°53.6	2	206°26.7	-13°55.2
3	221°40.7	-17°33.7	3	221°34.5	-16°42.6	3	221°30.2	-15°48.9	3	221°27.5	-14°52.8	3	221°26.7	-13°54.4
4	236°40.6	-17°33.0	4	236°34.5	-16°41.9	4	236°30.1	-15°48.1	4	236°27.5	-14°52.0	4	236°26.7	-13°53.6
5	251°40.5	-17°32.3	5	251°34.4	-16°41.1	5	251°30.1	-15°47.4	5	251°27.5	-14°51.2	5	251°26.7	-13°52.7
6	266°40.4	-17°31.6	6	266°34.3	-16°40.4	6	266°30.0	-15°46.6	6	266°27.5	-14°50.4	6	266°26.7	-13°51.9
7	281°40.3	-17°30.9	7	281°34.3	-16°39.7	7	281°30.0	-15°45.9	7	281°27.5	-14°49.6	7	281°26.7	-13°51.1
8	296°40.2	-17°30.2	8	296°34.2	-16°39.0	8	296°29.9	-15°45.1	8	296°27.4	-14°48.8	8	296°26.7	-13°50.3
9	311°40.1	-17°29.5	9	311°34.1	-16°38.2	9	311°29.9	-15°44.3	9	311°27.4	-14°48.0	9	311°26.7	-13°49.4
10	326°40.0	-17°28.8	10	326°34.0	-16°37.5	10	326°29.8	-15°43.6	10	326°27.4	-14°47.2	10	326°26.7	-13°48.6
11	341°39.9	-17°28.1	11	341°34.0	-16°36.8	11	341°29.8	-15°42.8	11	341°27.4	-14°46.4	11	341°26.7	-13°47.8
12	356°39.9	-17°27.4	12	356°33.9	-16°36.0	12	356°29.7	-15°42.0	12	356°27.3	-14°45.6	12	356°26.7	-13°46.9
13	11°39.8	-17°26.7	13	11°33.8	-16°35.3	13	11°29.7	-15°41.3	13	11°27.3	-14°44.8	13	11°26.7	-13°46.1
14	26°39.7	-17°26.0	14	26°33.8	-16°34.6	14	26°29.6	-15°40.5	14	26°27.3	-14°44.0	14	26°26.8	-13°45.3
15	41°39.6	-17°25.3	15	41°33.7	-16°33.8	15	41°29.6	-15°39.7	15	41°27.3	-14°43.2	15	41°26.8	-13°44.5
16	56°39.5	-17°24.6	16	56°33.6	-16°33.1	16	56°29.5	-15°38.9	16	56°27.3	-14°42.4	16	56°26.8	-13°43.6
17	71°39.4	-17°23.9	17	71°33.5	-16°32.4	17	71°29.5	-15°38.2	17	71°27.2	-14°41.6	17	71°26.8	-13°42.8
18	86°39.3	-17°23.2	18	86°33.5	-16°31.6	18	86°29.5	-15°37.4	18	86°27.2	-14°40.8	18	86°26.8	-13°42.0
19	101°39.2	-17°22.5	19	101°33.4	-16°30.9	19	101°29.4	-15°36.6	19	101°27.2	-14°40.0	19	101°26.8	-13°41.1
20	116°39.1	-17°21.8	20	116°33.3	-16°30.2	20	116°29.4	-15°35.9	20	116°27.2	-14°39.2	20	116°26.8	-13°40.3
21	131°39.0	-17°21.1	21	131°33.3	-16°29.4	21	131°29.3	-15°35.1	21	131°27.2	-14°38.4	21	131°26.8	-13°39.5
22	146°38.9	-17°20.4	22	146°33.2	-16°28.7	22	146°29.3	-15°34.3	22	146°27.2	-14°37.6	22	146°26.8	-13°38.6
23	161°38.8	-17°19.7	23	161°33.1	-16°27.9	23	161°29.2	-15°33.6	23	161°27.1	-14°36.8	23	161°26.8	-13°37.8
	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°38.7	-17°19.0	0	176°33.1	-16°27.2	0	176°29.2	-15°32.8	0	176°27.1	-14°36.0	0	176°26.8	-13°37.0
1	191°38.6	-17°18.3	1	191°33.0	-16°26.5	1	191°29.2	-15°32.0	1	191°27.1	-14°35.2	1	191°26.8	-13°36.1
2	206°38.6	-17°17.6	2	206°32.9	-16°25.7	2	206°29.1	-15°31.2	2	206°27.1	-14°34.4	2	206°26.8	-13°35.3
3	221°38.5	-17°16.9	3	221°32.9	-16°25.0	3	221°29.1	-15°30.5	3	221°27.1	-14°33.6	3	221°26.8	-13°34.5
4	236°38.4	-17°16.2	4	236°32.8	-16°24.2	4	236°29.0	-15°29.7	4	236°27.1	-14°32.7	4	236°26.8	-13°33.6
5	251°38.3	-17°15.5	5	251°32.7	-16°23.5	5	251°29.0	-15°28.9	5	251°27.0	-14°31.9	5	251°26.9	-13°32.8
6	266°38.2	-17°14.8	6	266°32.7	-16°22.8	6	266°29.0	-15°28.1	6	266°27.0	-14°31.1	6	266°26.9	-13°32.0
7	281°38.1	-17°14.1	7	281°32.6	-16°22.0	7	281°28.9	-15°27.4	7	281°27.0	-14°30.3	7	281°26.9	-13°31.1
8	296°38.0	-17°13.4	8	296°32.6	-16°21.3	8	296°28.9	-15°26.6	8	296°27.0	-14°29.5	8	296°26.9	-13°30.3
9	311°37.9	-17°12.7	9	311°32.5	-16°20.5	9	311°28.9	-15°25.8	9	311°27.0	-14°28.7	9	311°26.9	-13°29.4
10	326°37.8	-17°12.0	10	326°32.4	-16°19.8	10	326°28.8	-15°25.0	10	326°27.0	-14°27.9	10	326°26.9	-13°28.6
11	341°37.8	-17°11.3	11	341°32.4	-16°19.1	11	341°28.8	-15°24.3	11	341°27.0	-14°27.1	11	341°26.9	-13°27.8
12	356°37.7	-17°10.6	12	356°32.3	-16°18.3	12	356°28.7	-15°23.5	12	356°27.0	-14°26.3	12	356°26.9	-13°26.9
13	11°37.6	-17°09.9	13	11°32.2	-16°17.6	13	11°28.7	-15°22.7	13	11°26.9	-14°25.5	13	11°26.9	-13°26.1
14	26°37.5	-17°09.2	14	26°32.2	-16°16.8	14	26°28.7	-15°21.9	14	26°26.9	-14°24.7	14	26°26.9	-13°25.2
15	41°37.4	-17°08.5	15	41°32.1	-16°16.1	15	41°28.6	-15°21.1	15	41°26.9	-14°23.9	15	41°27.0	-13°24.4
16	56°37.3	-17°07.8	16	56°32.1	-16°15.3	16	56°28.6	-15°20.4	16	56°26.9	-14°23.0	16	56°27.0	-13°23.6
17	71°37.2	-17°07.0	17	71°32.0	-16°14.6	17	71°28.6	-15°19.6	17	71°26.9	-14°22.2	17	71°27.0	-13°22.7
18	86°37.2	-17°06.3	18	86°31.9	-16°13.8	18	86°28.5	-15°18.8	18	86°26.9	-14°21.4	18	86°27.0	-13°21.9
19	101°37.1	-17°05.6	19	101°31.9	-16°13.1	19	101°28.5	-15°18.0	19	101°26.9	-14°20.6	19	101°27.0	-13°21.0
20	116°37.0	-17°04.9	20	116°31.8	-16°12.3	20	116°28.5	-15°17.2	20	116°26.9	-14°19.8	20	116°27.0	-13°20.2
21	131°36.9	-17°04.2	21	131°31.8	-16°11.6	21	131°28.4	-15°16.4	21	131°26.9	-14°19.0	21	131°27.1	-13°19.4
22	146°36.8	-17°03.5	22	146°31.7	-16°10.8	22	146°28.4	-15°15.7	22	146°26.8	-14°18.2	22	146°27.1	-13°18.5
23	161°36.7	-17°02.8	23	161°31.6	-16°10.1	23	161°28.3	-15°14.9	23	161°26.8	-14°17.3	23	161°27.1	-13°17.7
	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

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	176°36.7	-17°02.1	0	176°31.6	-16°09.3	0	176°28.3	-15°14.1	0	176°26.8	-14°16.5	0	176°27.1	-13°16.8
1	191°36.6	-17°01.3	1	191°31.5	-16°08.6	1	191°28.3	-15°13.3	1	191°26.8	-14°15.7	1	191°27.1	-13°16.0
2	206°36.5	-17°00.6	2	206°31.5	-16°07.8	2	206°28.3	-15°12.5	2	206°26.8	-14°14.9	2	206°27.1	-13°15.2
3	221°36.4	-16°59.9	3	221°31.4	-16°07.1	3	221°28.2	-15°11.7	3	221°26.8	-14°14.1	3	221°27.1	-13°14.3
4	236°36.3	-16°59.2	4	236°31.4	-16°06.3	4	236°28.2	-15°11.0	4	236°26.8	-14°13.3	4	236°27.2	-13°13.5
5	251°36.2	-16°58.5	5	251°31.3	-16°05.6	5	251°28.2	-15°10.2	5	251°26.8	-14°12.5	5	251°27.2	-13°12.6
6	266°36.2	-16°57.8	6	266°31.2	-16°04.8	6	266°28.1	-15°09.4	6	266°26.8	-14°11.6	6	266°27.2	-13°11.8
7	281°36.1	-16°57.1	7	281°31.2	-16°04.1	7	281°28.1	-15°08.6	7	281°26.8	-14°10.8	7	281°27.2	-13°10.9
8	296°36.0	-16°56.3	8	296°31.1	-16°03.3	8	296°28.1	-15°07.8	8	296°26.8	-14°10.0	8	296°27.2	-13°10.1
9	311°35.9	-16°55.6	9	311°31.1	-16°02.6	9	311°28.0	-15°07.0	9	311°26.8	-14°09.2	9	311°27.3	-13°09.2
10	326°35.8	-16°54.9	10	326°31.0	-16°01.8	10	326°28.0	-15°06.2	10	326°26.8	-14°08.4	10	326°27.3	-13°08.4
11	341°35.8	-16°54.2	11	341°31.0	-16°01.1	11	341°28.0	-15°05.4	11	341°26.8	-14°07.5	11	341°27.3	-13°07.5
12	356°35.7	-16°53.5	12	356°30.9	-16°00.3	12	356°27.9	-15°04.7	12	356°26.7	-14°06.7	12	356°27.3	-13°06.7
13	11°35.6	-16°52.7	13	11°30.9	-15°59.5	13	11°27.9	-15°03.9	13	11°26.7	-14°05.9	13	11°27.3	-13°05.8
14	26°35.5	-16°52.0	14	26°30.8	-15°58.8	14	26°27.9	-15°03.1	14	26°26.7	-14°05.1	14	26°27.4	-13°05.0
15	41°35.4	-16°51.3	15	41°30.8	-15°58.0	15	41°27.9	-15°02.3	15	41°26.7	-14°04.3	15	41°27.4	-13°04.2
16	56°35.4	-16°50.6	16	56°30.7	-15°57.3	16	56°27.8	-15°01.5	16	56°26.7	-14°03.4	16	56°27.4	-13°03.3
17	71°35.3	-16°49.9	17	71°30.7	-15°56.5	17	71°27.8	-15°00.7	17	71°26.7	-14°02.6	17	71°27.4	-13°02.5
18	86°35.2	-16°49.1	18	86°30.6	-15°55.8	18	86°27.8	-14°59.9	18	86°26.7	-14°01.8	18	86°27.4	-13°01.6
19	101°35.1	-16°48.4	19	101°30.6	-15°55.0	19	101°27.7	-14°59.1	19	101°26.7	-14°01.0	19	101°27.5	-13°00.8
20	116°35.1	-16°47.7	20	116°30.5	-15°54.2	20	116°27.7	-14°58.3	20	116°26.7	-14°00.2	20	116°27.5	-12°59.9
21	131°35.0	-16°47.0	21	131°30.4	-15°53.5	21	131°27.7	-14°57.5	21	131°26.7	-13°59.3	21	131°27.5	-12°59.1
22	146°34.9	-16°46.2	22	146°30.4	-15°52.7	22	146°27.7	-14°56.7	22	146°26.7	-13°58.5	22	146°27.5	-12°58.2
23	161°34.8	-16°45.5	23	161°30.3	-15°52.0	23	161°27.6	-14°56.0	23	161°26.7	-13°57.7	23	161°27.6	

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	176°27.6	-12°56.5	0	176°30.1	-11°54.3	0	176°34.3	-10°50.3	0	176°39.9	-9°44.9	0	176°46.9	-8°38.1
1	191°27.6	-12°55.6	1	191°30.2	-11°53.4	1	191°34.3	-10°49.4	1	191°40.0	-9°44.0	1	191°47.0	-8°37.2
2	206°27.6	-12°54.8	2	206°30.2	-11°52.5	2	206°34.4	-10°48.5	2	206°40.1	-9°43.0	2	206°47.1	-8°36.2
3	221°27.6	-12°53.9	3	221°30.3	-11°51.6	3	221°34.5	-10°47.6	3	221°40.2	-9°42.1	3	221°47.2	-8°35.3
4	236°27.7	-12°53.1	4	236°30.3	-11°50.7	4	236°34.5	-10°46.7	4	236°40.2	-9°41.2	4	236°47.3	-8°34.4
5	251°27.7	-12°52.2	5	251°30.4	-11°49.9	5	251°34.6	-10°45.8	5	251°40.3	-9°40.3	5	251°47.4	-8°33.4
6	266°27.7	-12°51.4	6	266°30.4	-11°49.0	6	266°34.7	-10°44.9	6	266°40.4	-9°39.4	6	266°47.5	-8°32.5
7	281°27.7	-12°50.5	7	281°30.5	-11°48.1	7	281°34.7	-10°44.0	7	281°40.5	-9°38.4	7	281°47.6	-8°31.5
8	296°27.8	-12°49.7	8	296°30.5	-11°47.2	8	296°34.8	-10°43.1	8	296°40.6	-9°37.5	8	296°47.7	-8°30.6
9	311°27.8	-12°48.8	9	311°30.6	-11°46.4	9	311°34.9	-10°42.2	9	311°40.7	-9°36.6	9	311°47.8	-8°29.7
10	326°27.8	-12°48.0	10	326°30.6	-11°45.5	10	326°35.0	-10°41.3	10	326°40.8	-9°35.7	10	326°47.9	-8°28.7
11	341°27.9	-12°47.1	11	341°30.7	-11°44.6	11	341°35.0	-10°40.4	11	341°40.9	-9°34.8	11	341°48.0	-8°27.8
12	356°27.9	-12°46.3	12	356°30.7	-11°43.7	12	356°35.1	-10°39.5	12	356°41.0	-9°33.8	12	356°48.2	-8°26.9
13	11°27.9	-12°45.4	13	11°30.8	-11°42.8	13	11°35.2	-10°38.6	13	11°41.1	-9°32.9	13	11°48.3	-8°25.9
14	26°27.9	-12°44.5	14	26°30.8	-11°42.0	14	26°35.2	-10°37.7	14	26°41.1	-9°32.0	14	26°48.4	-8°25.0
15	41°28.0	-12°43.7	15	41°30.9	-11°41.1	15	41°35.3	-10°36.8	15	41°41.2	-9°31.1	15	41°48.5	-8°24.0
16	56°28.0	-12°42.8	16	56°30.9	-11°40.2	16	56°35.4	-10°35.9	16	56°41.3	-9°30.2	16	56°48.6	-8°23.1
17	71°28.0	-12°42.0	17	71°31.0	-11°39.3	17	71°35.5	-10°35.0	17	71°41.4	-9°29.2	17	71°48.7	-8°22.2
18	86°28.1	-12°41.1	18	86°31.0	-11°38.4	18	86°35.5	-10°34.1	18	86°41.5	-9°28.3	18	86°48.8	-8°21.2
19	101°28.1	-12°40.2	19	101°31.1	-11°37.5	19	101°35.6	-10°33.2	19	101°41.6	-9°27.4	19	101°48.9	-8°20.3
20	116°28.1	-12°39.4	20	116°31.1	-11°36.7	20	116°35.7	-10°32.3	20	116°41.7	-9°26.5	20	116°49.0	-8°19.3
21	131°28.1	-12°38.5	21	131°31.2	-11°35.8	21	131°35.8	-10°31.4	21	131°41.8	-9°25.5	21	131°49.1	-8°18.4
22	146°28.2	-12°37.7	22	146°31.2	-11°34.9	22	146°35.8	-10°30.5	22	146°41.9	-9°24.6	22	146°49.3	-8°17.5
23	161°28.2	-12°36.8	23	161°31.3	-11°34.0	23	161°35.9	-10°29.6	23	161°42.0	-9°23.7	23	161°49.4	-8°16.5
	SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	176°28.2	-12°36.0	0	176°31.3	-11°33.1	0	176°36.0	-10°28.7	0	176°42.1	-9°22.8	0	176°49.5	-8°15.6
1	191°28.3	-12°35.1	1	191°31.4	-11°32.2	1	191°36.1	-10°27.8	1	191°42.2	-9°21.8	1	191°49.6	-8°14.6
2	206°28.3	-12°34.2	2	206°31.4	-11°31.4	2	206°36.1	-10°26.9	2	206°42.3	-9°20.9	2	206°49.7	-8°13.7
3	221°28.3	-12°33.4	3	221°31.5	-11°30.5	3	221°36.2	-10°25.9	3	221°42.4	-9°20.0	3	221°49.8	-8°12.8
4	236°28.4	-12°32.5	4	236°31.5	-11°29.6	4	236°36.3	-10°25.0	4	236°42.5	-9°19.1	4	236°49.9	-8°11.8
5	251°28.4	-12°31.6	5	251°31.6	-11°28.7	5	251°36.4	-10°24.1	5	251°42.5	-9°18.1	5	251°50.0	-8°10.9
6	266°28.4	-12°30.8	6	266°31.7	-11°27.8	6	266°36.4	-10°23.2	6	266°42.6	-9°17.2	6	266°50.2	-8°09.9
7	281°28.5	-12°29.9	7	281°31.7	-11°26.9	7	281°36.5	-10°22.3	7	281°42.7	-9°16.3	7	281°50.3	-8°09.0
8	296°28.5	-12°29.1	8	296°31.8	-11°26.0	8	296°36.6	-10°21.4	8	296°42.8	-9°15.4	8	296°50.4	-8°08.0
9	311°28.5	-12°28.2	9	311°31.8	-11°25.2	9	311°36.7	-10°20.5	9	311°42.9	-9°14.4	9	311°50.5	-8°07.1
10	326°28.6	-12°27.3	10	326°31.9	-11°24.3	10	326°36.7	-10°19.6	10	326°43.0	-9°13.5	10	326°50.6	-8°06.2
11	341°28.6	-12°26.5	11	341°31.9	-11°23.4	11	341°36.8	-10°18.7	11	341°43.1	-9°12.6	11	341°50.7	-8°05.2
12	356°28.6	-12°25.6	12	356°32.0	-11°22.5	12	356°36.9	-10°17.8	12	356°43.2	-9°11.6	12	356°50.8	-8°04.3
13	11°28.7	-12°24.7	13	11°32.1	-11°21.6	13	11°37.0	-10°16.9	13	11°43.3	-9°10.7	13	11°50.9	-8°03.3
14	26°28.7	-12°23.9	14	26°32.1	-11°20.7	14	26°37.1	-10°16.0	14	26°43.4	-9°09.8	14	26°51.1	-8°02.4
15	41°28.7	-12°23.0	15	41°32.2	-11°19.8	15	41°37.1	-10°15.1	15	41°43.5	-9°08.9	15	41°51.2	-8°01.4
16	56°28.8	-12°22.1	16	56°32.2	-11°18.9	16	56°37.2	-10°14.1	16	56°43.6	-9°07.9	16	56°51.3	-8°00.5
17	71°28.8	-12°21.3	17	71°32.3	-11°18.0	17	71°37.3	-10°13.2	17	71°43.7	-9°07.0	17	71°51.4	-7°59.5
18	86°28.9	-12°20.4	18	86°32.3	-11°17.2	18	86°37.4	-10°12.3	18	86°43.8	-9°06.1	18	86°51.5	-7°58.6
19	101°28.9	-12°19.5	19	101°32.4	-11°16.3	19	101°37.5	-10°11.4	19	101°43.9	-9°05.1	19	101°51.6	-7°57.7
20	116°28.9	-12°18.7	20	116°32.5	-11°15.4	20	116°37.5	-10°10.5	20	116°44.0	-9°04.2	20	116°51.8	-7°56.7
21	131°29.0	-12°17.8	21	131°32.5	-11°14.5	21	131°37.6	-10°09.6	21	131°44.1	-9°03.3	21	131°51.9	-7°55.8
22	146°29.0	-12°16.9	22	146°32.6	-11°13.6	22	146°37.7	-10°08.7	22	146°44.2	-9°02.4	22	146°52.0	-7°54.8
23	161°29.0	-12°16.1	23	161°32.6	-11°12.7	23	161°37.8	-10°07.8	23	161°44.3	-9°01.4	23	161°52.1	-7°53.9
	SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.1	d=0.9

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	176°29.1	-12°15.2	0	176°32.7	-11°11.8	0	176°37.9	-10°06.9	0	176°44.4	-9°00.5	0	176°52.2	-7°52.9
1	191°29.1	-12°14.3	1	191°32.8	-11°10.9	1	191°37.9	-10°05.9	1	191°44.5	-8°59.6	1	191°52.3	-7°52.0
2	206°29.2	-12°13.5	2	206°32.8	-11°10.0	2	206°38.0	-10°05.0	2	206°44.6	-8°58.6	2	206°52.4	-7°51.0
3	221°29.2	-12°12.6	3	221°32.9	-11°09.1	3	221°38.1	-10°04.1	3	221°44.7	-8°57.7	3	221°52.6	-7°50.1
4	236°29.2	-12°11.7	4	236°33.0	-11°08.2	4	236°38.2	-10°03.2	4	236°44.8	-8°56.8	4	236°52.7	-7°49.1
5	251°29.3	-12°10.9	5	251°33.0	-11°07.3	5	251°38.3	-10°02.3	5	251°44.9	-8°55.8	5	251°52.8	-7°48.2
6	266°29.3	-12°10.0	6	266°33.1	-11°06.5	6	266°38.4	-10°01.4	6	266°45.0	-8°54.9	6	266°52.9	-7°47.2
7	281°29.4	-12°09.1	7	281°33.1	-11°05.6	7	281°38.4	-10°00.5	7	281°45.1	-8°54.0	7	281°53.0	-7°46.3
8	296°29.4	-12°08.2	8	296°33.2	-11°04.7	8	296°38.5	-9°59.5	8	296°45.2	-8°53.0	8	296°53.2	-7°45.4
9	311°29.5	-12°07.4	9	311°33.3	-11°03.8	9	311°38.6	-9°58.6	9	311°45.3	-8°52.1	9	311°53.3	-7°44.4
10	326°29.5	-12°06.5	10	326°33.3	-11°02.9	10	326°38.7	-9°57.7	10	326°45.4	-8°51.2	10	326°53.4	-7°43.5
11	341°29.5	-12°05.6	11	341°33.4	-11°02.0	11	341°38.8	-9°56.8	11	341°45.5	-8°50.3	11	341°53.5	-7°42.5
12	356°29.6	-12°04.8	12	356°33.5	-11°01.1	12	356°38.9	-9°55.9	12	356°45.6	-8°49.3	12	356°53.6	-7°41.6
13	11°29.6	-12°03.9	13	11°33.5	-11°00.2	13	11°38.9	-9°55.0	13	11°45.7	-8°48.4	13	11°53.8	-7°40.6
14	26°29.7	-12°03.0	14	26°33.6	-10°59.3	14	26°39.0	-9°54.1	14	26°45.8	-8°47.5	14	26°53.9	-7°39.7
15	41°29.7	-12°02.1	15	41°33.7	-10°58.4	15	41°39.1	-9°53.1	15	41°45.9	-8°46.5	15	41°54.0	-7°38.7
16	56°29.8	-12°01.3	16	56°33.7	-10°57.5	16	56°39.2	-9°52.2	16	56°46.0	-8°45.6	16	56°54.1	-7°37.8
17	71°29.8	-12°00.4	17	71°33.8	-10°56.6	17	71°39.3	-9°51.3	17	71°46.1	-8°44.6	17	71°54.2	-7°36.8
18	86°29.8	-11°59.5	18	86°33.9	-10°55.7	18	86°39.4	-9°50.4	18	86°46.2	-8°43.7	18	86°54.4	-7°35.9
19	101°29.9	-11°58.6	19	101°33.9	-10°54.8	19	101°39.5	-9°49.5	19	101°46.3	-8°42.8	19	101°54.5	-7°34.9
20	116°29.9	-11°57.8	20	116°34.0	-10°53.9	20	116°39.5	-9°48.6	20	116°46.5	-8°41.8	20	116°54.6	-7°34.0
21	131°30.0	-11°56.9	21	131°34.1	-10°53.0	21	131°39.6	-9°47.6	21	131°46.6	-8°40.9	21	131°54.7	-7°33.0
22	146°30.0	-11°56.0	22	146°34.1	-10°52.1	22	146°39.7	-9°46.7	22	146°46.7	-8°40.0	22	146°54.8	-7°32.1
23	161°30.1	-11°55.1	23	161°34.2	-10°51.2	23	161°39.8	-9°45.8	23	161°46.8	-8°39.0	23	161°55.0	-7°31.1
	SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9		SD.=16.2	d=0.9			

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	176°55.1	-7°30.2	0	177°04.4	-6°21.2	0	177°14.7	-5°11.5	0	177°25.8	-4°01.2	0	177°37.7	-2°50.4
1	191°55.2	-7°29.2	1	192°04.5	-6°20.3	1	192°14.8	-5°10.6	1	192°25.9	-4°00.2	1	192°37.8	-2°49.4
2	206°55.3	-7°28.3	2	207°04.7	-6°19.3	2	207°14.9	-5°09.6	2	207°26.1	-3°59.2	2	207°38.0	-2°48.4
3	221°55.4	-7°27.3	3	222°04.8	-6°18.4	3	222°15.1	-5°08.6	3	222°26.3	-3°58.2	3	222°38.2	-2°47.4
4	236°55.6	-7°26.4	4	237°04.9	-6°17.4	4	237°15.2	-5°07.6	4	237°26.4	-3°57.3	4	237°38.3	-2°46.4
5	251°55.7	-7°25.4	5	252°05.1	-6°16.4	5	252°15.4	-5°06.7	5	252°26.6	-3°56.3	5	252°38.5	-2°45.5
6	266°55.8	-7°24.5	6	267°05.2	-6°15.5	6	267°15.5	-5°05.7	6	267°26.7	-3°55.3	6	267°38.7	-2°44.5
7	281°55.9	-7°23.5	7	282°05.3	-6°14.5	7	282°15.7	-5°04.7	7	282°26.9	-3°54.3	7	282°38.8	-2°43.5
8	296°56.1	-7°22.6	8	297°05.5	-6°13.5	8	297°15.8	-5°03.7	8	297°27.1	-3°53.3	8	297°39.0	-2°42.5
9	311°56.2	-7°21.6	9	312°05.6	-6°12.6	9	312°16.0	-5°02.8	9	312°27.2	-3°52.3	9	312°39.2	-2°41.5
10	326°56.3	-7°20.6	10	327°05.8	-6°11.6	10	327°16.1	-5°01.8	10	327°27.4	-3°51.4	10	327°39.4	-2°40.5
11	341°56.4	-7°19.7	11	342°05.9	-6°10.6	11	342°16.3	-5°00.8	11	342°27.5	-3°50.4	11	342°39.5	-2°39.5
12	356°56.6	-7°18.7	12	357°06.0	-6°09.7	12	357°16.4	-4°59.8	12	357°27.7	-3°49.4	12	357°39.7	-2°38.6
13	11°56.7	-7°17.8	13	12°06.2	-6°08.7	13	12°16.6	-4°58.9	13	12°27.9	-3°48.4	13	12°39.9	-2°37.6
14	26°56.8	-7°16.8	14	27°06.3	-6°07.7	14	27°16.8	-4°57.9	14	27°28.0	-3°47.4	14	27°40.0	-2°36.6
15	41°56.9	-7°15.9	15	42°06.4	-6°06.8	15	42°16.9	-4°56.9	15	42°28.2	-3°46.5	15	42°40.2	-2°35.6
16	56°57.1	-7°14.9	16	57°06.6	-6°05.8	16	57°17.1	-4°55.9	16	57°28.4	-3°45.5	16	57°40.4	-2°34.6
17	71°57.2	-7°14.0	17	72°06.7	-6°04.9	17	72°17.2	-4°55.0	17	72°28.5	-3°44.5	17	72°40.6	-2°33.6
18	86°57.3	-7°13.0	18	87°06.9	-6°03.9	18	87°17.4	-4°54.0	18	87°28.7	-3°43.5	18	87°40.7	-2°32.6
19	101°57.4	-7°12.1	19	102°07.0	-6°02.9	19	102°17.5	-4°53.0	19	102°28.8	-3°42.5	19	102°40.9	-2°31.7
20	116°57.6	-7°11.1	20	117°07.1	-6°02.0	20	117°17.7	-4°52.0	20	117°29.0	-3°41.5	20	117°41.1	-2°30.7
21	131°57.7	-7°10.2	21	132°07.3	-6°01.0	21	132°17.8	-4°51.1	21	132°29.2	-3°40.6	21	132°41.2	-2°29.7
22	146°57.8	-7°09.2	22	147°07.4	-6°00.0	22	147°18.0	-4°50.1	22	147°29.3	-3°39.6	22	147°41.4	-2°28.7
23	161°57.9	-7°08.2	23	162°07.6	-5°59.1	23	162°18.1	-4°49.1	23	162°29.5	-3°38.6	23	162°41.6	-2°27.7
	SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	176°58.1	-7°07.3	0	177°07.7	-5°58.1	0	177°18.3	-4°48.1	0	177°29.7	-3°37.6	0	177°41.8	-2°26.7
1	191°58.2	-7°06.3	1	192°07.8	-5°57.1	1	192°18.4	-4°47.2	1	192°29.8	-3°36.6	1	192°41.9	-2°25.7
2	206°58.3	-7°05.4	2	207°08.0	-5°56.2	2	207°18.6	-4°46.2	2	207°30.0	-3°35.7	2	207°42.1	-2°24.7
3	221°58.4	-7°04.4	3	222°08.1	-5°55.2	3	222°18.7	-4°45.2	3	222°30.1	-3°34.7	3	222°42.3	-2°23.8
4	236°58.6	-7°03.5	4	237°08.3	-5°54.2	4	237°18.9	-4°44.2	4	237°30.3	-3°33.7	4	237°42.5	-2°22.8
5	251°58.7	-7°02.5	5	252°08.4	-5°53.3	5	252°19.0	-4°43.3	5	252°30.5	-3°32.7	5	252°42.6	-2°21.8
6	266°58.8	-7°01.6	6	267°08.5	-5°52.3	6	267°19.2	-4°42.3	6	267°30.6	-3°31.7	6	267°42.8	-2°20.8
7	281°59.0	-7°00.6	7	282°08.7	-5°51.3	7	282°19.3	-4°41.3	7	282°30.8	-3°30.7	7	282°43.0	-2°19.8
8	296°59.1	-6°59.6	8	297°08.8	-5°50.3	8	297°19.5	-4°40.3	8	297°31.0	-3°29.8	8	297°43.2	-2°18.8
9	311°59.2	-6°58.7	9	312°09.0	-5°49.4	9	312°19.7	-4°39.3	9	312°31.1	-3°28.8	9	312°43.3	-2°17.8
10	326°59.3	-6°57.7	10	327°09.1	-5°48.4	10	327°19.8	-4°38.4	10	327°31.3	-3°27.8	10	327°43.5	-2°16.9
11	341°59.5	-6°56.8	11	342°09.3	-5°47.4	11	342°20.0	-4°37.4	11	342°31.5	-3°26.8	11	342°43.7	-2°15.9
12	356°59.6	-6°55.8	12	357°09.4	-5°46.5	12	357°20.1	-4°36.4	12	357°31.6	-3°25.8	12	357°43.8	-2°14.9
13	11°59.7	-6°54.9	13	12°09.5	-5°45.5	13	12°20.3	-4°35.4	13	12°31.8	-3°24.8	13	12°44.0	-2°13.9
14	26°59.9	-6°53.9	14	27°09.7	-5°44.5	14	27°20.4	-4°34.5	14	27°32.0	-3°23.9	14	27°44.2	-2°12.9
15	41°60.0	-6°52.9	15	42°09.8	-5°43.6	15	42°20.6	-4°33.5	15	42°32.1	-3°22.9	15	42°44.4	-2°11.9
16	57°00.1	-6°52.0	16	57°10.0	-5°42.6	16	57°20.7	-4°32.5	16	57°32.3	-3°21.9	16	57°44.5	-2°10.9
17	72°00.3	-6°51.0	17	72°10.1	-5°41.6	17	72°20.9	-4°31.5	17	72°32.5	-3°20.9	17	72°44.7	-2°09.9
18	87°00.4	-6°50.1	18	87°10.3	-5°40.7	18	87°21.0	-4°30.6	18	87°32.6	-3°19.9	18	87°44.9	-2°09.0
19	102°00.5	-6°49.1	19	102°10.4	-5°39.7	19	102°21.2	-4°29.6	19	102°32.8	-3°18.9	19	102°45.1	-2°08.0
20	117°00.6	-6°48.2	20	117°10.5	-5°38.7	20	117°21.4	-4°28.6	20	117°33.0	-3°18.0	20	117°45.2	-2°07.0
21	132°00.8	-6°47.2	21	132°10.7	-5°37.8	21	132°21.5	-4°27.6	21	132°33.1	-3°17.0	21	132°45.4	-2°06.0
22	147°00.9	-6°46.2	22	147°10.8	-5°36.8	22	147°21.7	-4°26.6	22	147°33.3	-3°16.0	22	147°45.6	-2°05.0
23	162°01.0	-6°45.3	23	162°11.0	-5°35.8	23	162°21.8	-4°25.7	23	162°33.5	-3°15.0	23	162°45.8	-2°04.0
	SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0

03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec	15	GHA	Dec
0	177°01.2	-6°44.3	0	177°11.1	-5°34.8	0	177°22.0	-4°24.7	0	177°33.6	-3°14.0	0	177°45.9	-2°03.0
1	192°01.3	-6°43.4	1	192°11.3	-5°33.9	1	192°22.1	-4°23.7	1	192°33.8	-3°13.0	1	192°46.1	-2°02.0
2	207°01.4	-6°42.4	2	207°11.4	-5°32.9	2	207°22.3	-4°22.7	2	207°34.0	-3°12.1	2	207°46.3	-2°01.1
3	222°01.6	-6°41.4	3	222°11.6	-5°31.9	3	222°22.4	-4°21.7	3	222°34.1	-3°11.1	3	222°46.5	-2°00.1
4	237°01.7	-6°40.5	4	237°11.7	-5°31.0	4	237°22.6	-4°20.8	4	237°34.3	-3°10.1	4	237°46.6	-1°59.1
5	252°01.8	-6°39.5	5	252°11.9	-5°30.0	5	252°22.8	-4°19.8	5	252°34.5	-3°09.1	5	252°46.8	-1°58.1
6	267°02.0	-6°38.6	6	267°12.0	-5°29.0	6	267°22.9	-4°18.8	6	267°34.6	-3°08.1	6	267°47.0	-1°57.1
7	282°02.1	-6°37.6	7	282°12.1	-5°28.0	7	282°23.1	-4°17.8	7	282°34.8	-3°07.1	7	282°47.2	-1°56.1
8	297°02.2	-6°36.6	8	297°12.3	-5°27.1	8	297°23.2	-4°16.9	8	297°35.0	-3°06.1	8	297°47.3	-1°55.1
9	312°02.4	-6°35.7	9	312°12.4	-5°26.1	9	312°23.4	-4°15.9	9	312°35.1	-3°05.2	9	312°47.5	-1°54.1
10	327°02.5	-6°34.7	10	327°12.6	-5°25.1	10	327°23.6	-4°14.9	10	327°35.3	-3°04.2	10	327°47.7	-1°53.2
11	342°02.6	-6°33.8	11	342°12.7	-5°24.2	11	342°23.7	-4°13.9	11	342°35.5	-3°03.2	11	342°47.9	-1°52.2
12	357°02.8	-6°32.8	12	357°12.9	-5°23.2	12	357°23.9	-4°12.9	12	357°35.6	-3°02.2	12	357°48.1	-1°51.2
13	12°02.9	-6°31.8	13	12°13.0	-5°22.2	13	12°24.0	-4°12.0	13	12°35.8	-3°01.2	13	12°48.2	-1°50.2
14	27°03.0	-6°30.9	14	27°13.2	-5°21.2	14	27°24.2	-4°11.0	14	27°36.0	-3°00.2	14	27°48.4	-1°49.2
15	42°03.2	-6°29.9	15	42°13.3	-5°20.3	15	42°24.3	-4°10.0	15	42°36.1	-2°59.3	15	42°48.6	-1°48.2
16	57°03.3	-6°28.9	16	57°13.5	-5°19.3	16	57°24.5	-4°09.0	16	57°36.3	-2°58.3	16	57°48.8	-1°47.2
17	72°03.4	-6°28.0	17	72°13.6	-5°18.3	17	72°24.7	-4°08.0	17	72°36.5	-2°57.3	17	72°48.9	-1°46.2
18	87°03.6	-6°27.0	18	87°13.8	-5°17.4	18	87°24.8	-4°07.1	18	87°36.6	-2°56.3	18	87°49.1	-1°45.3
19	102°03.7	-6°26.1	19	102°13.9	-5°16.4	19	102°25.0	-4°06.1	19	102°36.8	-2°55.3	19	102°49.3	-1°44.3
20	117°03.8	-6°25.2	20	117°14.1	-5°15.4	20	117°25.1	-4°05.2	20	117°37.0	-2°54.3	20	117°49.5	-1°43.3
21	132°04.0	-6°24.1	21	132°14.2	-5°14.4	21	132°25.3	-4°04.1	21	132°37.1	-2°53.3	21	132°49.6	-1°42.3
22	147°04.1	-6°23.2	22	147°14.4	-5°13.5	22	147°25.5	-4°03.1	22	147°37.3	-2°52.4	22	147°49.8	-1°41.3
23	162°04.2	-6°22.2	23	162°14.5	-5°12.5	23	162°25.6	-4°02.2	23	162°37.5	-2°51.4	23	162°50.0	-1°40.3
	SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0



16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	177°50.2	-1°39.3	0	178°03.2	-0°28.2	0	178°16.6	0°42.9	0	178°30.2	1°53.8	0	178°43.9	3°04.3
1	192°50.4	-1°38.3	1	193°03.4	-0°27.2	1	193°16.8	0°43.9	1	193°30.4	1°54.8	1	193°44.1	3°05.3
2	207°50.5	-1°37.3	2	208°03.6	-0°26.2	2	208°17.0	0°44.9	2	208°30.6	1°55.8	2	208°44.2	3°06.2
3	222°50.7	-1°36.4	3	223°03.8	-0°25.2	3	223°17.2	0°45.9	3	223°30.8	1°56.7	3	223°44.4	3°07.2
4	237°50.9	-1°35.4	4	238°04.0	-0°24.2	4	238°17.4	0°46.9	4	238°31.0	1°57.7	4	238°44.6	3°08.2
5	252°51.1	-1°34.4	5	253°04.1	-0°23.2	5	253°17.6	0°47.9	5	253°31.2	1°58.7	5	253°44.8	3°09.2
6	267°51.2	-1°33.4	6	268°04.3	-0°22.2	6	268°17.7	0°48.8	6	268°31.4	1°59.7	6	268°45.0	3°10.1
7	282°51.4	-1°32.4	7	283°04.5	-0°21.3	7	283°17.9	0°49.8	7	283°31.5	2°00.7	7	283°45.2	3°11.1
8	297°51.6	-1°31.4	8	298°04.7	-0°20.3	8	298°18.1	0°50.8	8	298°31.7	2°01.6	8	298°45.4	3°12.1
9	312°51.8	-1°30.4	9	313°04.9	-0°19.3	9	313°18.3	0°51.8	9	313°31.9	2°02.6	9	313°45.6	3°13.1
10	327°52.0	-1°29.4	10	328°05.1	-0°18.3	10	328°18.5	0°52.8	10	328°32.1	2°03.6	10	328°45.8	3°14.0
11	342°52.1	-1°28.5	11	343°05.2	-0°17.3	11	343°18.7	0°53.8	11	343°32.3	2°04.6	11	343°45.9	3°15.0
12	357°52.3	-1°27.5	12	358°05.4	-0°16.3	12	358°18.9	0°54.8	12	358°32.5	2°05.6	12	358°46.1	3°16.0
13	12°52.5	-1°26.5	13	13°05.6	-0°15.3	13	13°19.1	0°55.7	13	13°32.7	2°06.5	13	13°46.3	3°17.0
14	27°52.7	-1°25.5	14	28°05.8	-0°14.3	14	28°19.2	0°56.7	14	28°32.9	2°07.5	14	28°46.5	3°17.9
15	42°52.9	-1°24.5	15	43°06.0	-0°13.3	15	43°19.4	0°57.7	15	43°33.1	2°08.5	15	43°46.7	3°18.9
16	57°53.0	-1°23.5	16	58°06.2	-0°12.4	16	58°19.6	0°58.7	16	58°33.2	2°09.5	16	58°46.9	3°19.9
17	72°53.2	-1°22.5	17	73°06.4	-0°11.4	17	73°19.8	0°59.7	17	73°33.4	2°10.5	17	73°47.1	3°20.9
18	87°53.4	-1°21.5	18	88°06.5	-0°10.4	18	88°20.0	1°00.7	18	88°33.6	2°11.5	18	88°47.3	3°21.8
19	102°53.6	-1°20.5	19	103°06.7	-0°09.4	19	103°20.2	1°01.7	19	103°33.8	2°12.4	19	103°47.5	3°22.8
20	117°53.8	-1°19.6	20	118°06.9	-0°08.4	20	118°20.4	1°02.6	20	118°34.0	2°13.4	20	118°47.6	3°23.8
21	132°53.9	-1°18.6	21	133°07.1	-0°07.4	21	133°20.6	1°03.6	21	133°34.2	2°14.4	21	133°47.8	3°24.7
22	147°54.1	-1°17.6	22	148°07.3	-0°06.4	22	148°20.8	1°04.6	22	148°34.4	2°15.4	22	148°48.0	3°25.7
23	162°54.3	-1°16.6	23	163°07.5	-0°05.4	23	163°20.9	1°05.6	23	163°34.6	2°16.4	23	163°48.2	3°26.7
	SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.0	d=1.0		SD.=16.0	d=1.0

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	177°54.5	-1°15.6	0	178°07.6	-0°04.5	0	178°21.1	1°06.6	0	178°34.8	2°17.3	0	178°48.4	3°27.7
1	192°54.7	-1°14.6	1	193°07.8	-0°03.5	1	193°21.3	1°07.6	1	193°35.0	2°18.3	1	193°48.6	3°28.6
2	207°54.8	-1°13.6	2	208°08.0	-0°02.5	2	208°21.5	1°08.5	2	208°35.1	2°19.3	2	208°48.8	3°29.6
3	222°55.0	-1°12.6	3	223°08.2	-0°01.5	3	223°21.7	1°09.5	3	223°35.3	2°20.3	3	223°49.0	3°30.6
4	237°55.2	-1°11.7	4	238°08.4	-0°00.5	4	238°21.9	1°10.5	4	238°35.5	2°21.3	4	238°49.2	3°31.6
5	252°55.4	-1°10.7	5	253°08.6	0°00.5	5	253°22.1	1°11.5	5	253°35.7	2°22.2	5	253°49.3	3°32.5
6	267°55.6	-1°09.7	6	268°08.8	0°01.5	6	268°22.3	1°12.5	6	268°35.9	2°23.2	6	268°49.5	3°33.5
7	282°55.7	-1°08.7	7	283°08.9	0°02.5	7	283°22.5	1°13.5	7	283°36.1	2°24.2	7	283°49.7	3°34.5
8	297°55.9	-1°07.7	8	298°09.1	0°03.4	8	298°22.6	1°14.5	8	298°36.3	2°25.2	8	298°49.9	3°35.4
9	312°56.1	-1°06.7	9	313°09.3	0°04.4	9	313°22.8	1°15.4	9	313°36.5	2°26.2	9	313°50.1	3°36.4
10	327°56.3	-1°05.7	10	328°09.5	0°05.4	10	328°23.0	1°16.4	10	328°36.7	2°27.1	10	328°50.3	3°37.4
11	342°56.5	-1°04.7	11	343°09.7	0°06.4	11	343°23.2	1°17.4	11	343°36.9	2°28.1	11	343°50.5	3°38.4
12	357°56.6	-1°03.7	12	358°09.9	0°07.4	12	358°23.4	1°18.4	12	358°37.0	2°29.1	12	358°50.7	3°39.3
13	12°56.8	-1°02.8	13	13°10.1	0°08.4	13	13°23.6	1°19.4	13	13°37.2	2°30.1	13	13°50.8	3°40.3
14	27°57.0	-1°01.8	14	28°10.3	0°09.4	14	28°23.8	1°20.4	14	28°37.4	2°31.0	14	28°51.0	3°41.3
15	42°57.2	-1°00.8	15	43°10.4	0°10.4	15	43°24.0	1°21.3	15	43°37.6	2°32.0	15	43°51.2	3°42.3
16	57°57.4	-0°59.8	16	58°10.6	0°11.3	16	58°24.2	1°22.3	16	58°37.8	2°33.0	16	58°51.4	3°43.2
17	72°57.6	-0°58.8	17	73°10.8	0°12.3	17	73°24.3	1°23.3	17	73°38.0	2°34.0	17	73°51.6	3°44.2
18	87°57.7	-0°57.8	18	88°11.0	0°13.3	18	88°24.5	1°24.3	18	88°38.2	2°35.0	18	88°51.8	3°45.2
19	102°57.9	-0°56.8	19	103°11.2	0°14.3	19	103°24.7	1°25.3	19	103°38.4	2°35.9	19	103°52.0	3°46.1
20	117°58.1	-0°55.8	20	118°11.4	0°15.3	20	118°24.9	1°26.3	20	118°38.6	2°36.9	20	118°52.2	3°47.1
21	132°58.3	-0°54.9	21	133°11.6	0°16.3	21	133°25.1	1°27.2	21	133°38.7	2°37.9	21	133°52.3	3°48.1
22	147°58.5	-0°53.9	22	148°11.7	0°17.3	22	148°25.3	1°28.2	22	148°38.9	2°38.9	22	148°52.5	3°49.0
23	162°58.6	-0°52.9	23	163°11.9	0°18.3	23	163°25.5	1°29.2	23	163°39.1	2°39.9	23	163°52.7	3°50.0
	SD.=16.1	d=1.0		SD.=16.1	d=1.0		SD.=16.0	d=1.0		SD.=16.0	d=1.0		SD.=16.0	d=1.0

18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec	30	GHA	Dec
0	177°58.8	-0°51.9	0	178°12.1	0°19.2	0	178°25.7	1°30.2	0	178°39.3	2°40.8	0	178°52.9	3°51.0
1	192°59.0	-0°50.9	1	193°12.3	0°20.2	1	193°25.9	1°31.2	1	193°39.5	2°41.8	1	193°53.1	3°52.0
2	207°59.2	-0°49.9	2	208°12.5	0°21.2	2	208°26.0	1°32.2	2	208°39.7	2°42.8	2	208°53.3	3°52.9
3	222°59.4	-0°48.9	3	223°12.7	0°22.2	3	223°26.2	1°33.2	3	223°39.9	2°43.8	3	223°53.5	3°53.9
4	237°59.6	-0°47.9	4	238°12.9	0°23.2	4	238°26.4	1°34.1	4	238°40.1	2°44.7	4	238°53.7	3°54.9
5	252°59.7	-0°46.9	5	253°13.1	0°24.2	5	253°26.6	1°35.1	5	253°40.3	2°45.7	5	253°53.9	3°55.8
6	267°59.9	-0°46.0	6	268°13.2	0°25.2	6	268°26.8	1°36.1	6	268°40.5	2°46.7	6	268°54.0	3°56.8
7	283°00.1	-0°45.0	7	283°13.4	0°26.2	7	283°27.0	1°37.1	7	283°40.6	2°47.7	7	283°54.2	3°57.8
8	298°00.3	-0°44.0	8	298°13.6	0°27.1	8	298°27.2	1°38.1	8	298°40.8	2°48.7	8	298°54.4	3°58.7
9	313°00.5	-0°43.0	9	313°13.8	0°28.1	9	313°27.4	1°39.1	9	313°41.0	2°49.6	9	313°54.6	3°59.7
10	328°00.6	-0°42.0	10	328°14.0	0°29.1	10	328°27.6	1°40.0	10	328°41.2	2°50.6	10	328°54.8	4°00.7
11	343°00.8	-0°41.0	11	343°14.2	0°30.1	11	343°27.8	1°41.0	11	343°41.4	2°51.6	11	343°55.0	4°01.7
12	358°01.0	-0°40.0	12	358°14.4	0°31.1	12	358°27.9	1°42.0	12	358°41.6	2°52.6	12	358°55.2	4°02.6
13	13°01.2	-0°39.0	13	13°14.5	0°32.1	13	13°28.1	1°43.0	13	13°41.8	2°53.5	13	13°55.4	4°03.6
14	28°01.4	-0°38.1	14	28°14.7	0°33.1	14	28°28.3	1°44.0	14	28°42.0	2°54.5	14	28°55.5	4°04.6
15	43°01.6	-0°37.1	15	43°14.9	0°34.0	15	43°28.5	1°44.9	15	43°42.2	2°55.5	15	43°55.7	4°05.5
16	58°01.7	-0°36.1	16	58°15.1	0°35.0	16	58°28.7	1°45.9	16	58°42.3	2°56.5	16	58°55.9	4°06.5
17	73°01.9	-0°35.1	17	73°15.3	0°36.0	17	73°28.9	1°46.9	17	73°42.5	2°57.4	17	73°56.1	4°07.5
18	88°02.1	-0°34.1	18	88°15.5	0°37.0	18	88°29.1	1°47.9	18	88°42.7	2°58.4	18	88°56.3	4°08.4
19	103°02.3	-0°33.1	19	103°15.7	0°38.0	19	103°29.3	1°48.9	19	103°42.9	2°59.4	19	103°56.5	4°09.4
20	118°02.5	-0°32.1	20	118°15.9	0°39.0	20	118°29.5	1°49.9	20	118°43.1	3°00.4	20	118°56.7	4°10.4
21	133°02.7	-0°31.1	21	133°16.1	0°40.0	21	133°29.6	1°50.8	21	133°43.3	3°01.4	21	133°56.8	4°11.3
22	148°02.8	-0°30.1	22	148°16.2	0°40.9	22	148°29.8	1°51.8	22	148°43.5	3°02.3	22	148°57.0	4°12.3
23	163°03.0	-0°29.2	23	163°16.4	0°41.9	23	163°30.0	1°52.8	23	163°43.7	3°03.3	23	163°57.2	4°13.3
	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

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	178°57.4	4°14.2	0	179°10.7	5°23.5	0	179°23.6	6°32.0	0	179°36.1	7°39.4	0	179°47.9	8°45.7
1	193°57.6	4°15.2	1	194°10.9	5°24.5	1	194°23.8	6°32.9	1	194°36.2	7°40.3	1	194°48.1	8°46.6
2	208°57.8	4°16.2	2	209°11.1	5°25.4	2	209°24.0	6°33.8	2	209°36.4	7°41.2	2	209°48.3	8°47.5
3	223°58.0	4°17.1	3	224°11.2	5°26.4	3	224°24.2	6°34.8	3	224°36.6	7°42.2	3	224°48.4	8°48.4
4	238°58.2	4°18.1	4	239°11.4	5°27.3	4	239°24.3	6°35.7	4	239°36.7	7°43.1	4	239°48.6	8°49.3
5	253°58.3	4°19.1	5	254°11.6	5°28.3	5	254°24.5	6°36.7	5	254°36.9	7°44.0	5	254°48.7	8°50.2
6	268°58.5	4°20.0	6	269°11.8	5°29.3	6	269°24.7	6°37.6	6	269°37.1	7°45.0	6	269°48.9	8°51.1
7	283°58.7	4°21.0	7	284°12.0	5°30.2	7	284°24.9	6°38.6	7	284°37.2	7°45.9	7	284°49.1	8°52.0
8	298°58.9	4°22.0	8	299°12.2	5°31.2	8	299°25.0	6°39.5	8	299°37.4	7°46.8	8	299°49.2	8°52.9
9	313°59.1	4°22.9	9	314°12.3	5°32.1	9	314°25.2	6°40.4	9	314°37.6	7°47.7	9	314°49.4	8°53.9
10	328°59.3	4°23.9	10	329°12.5	5°33.1	10	329°25.4	6°41.4	10	329°37.8	7°48.7	10	329°49.5	8°54.8
11	343°59.5	4°24.9	11	344°12.7	5°34.0	11	344°25.6	6°42.3	11	344°37.9	7°49.6	11	344°49.7	8°55.7
12	358°59.6	4°25.8	12	359°12.9	5°35.0	12	359°25.7	6°43.3	12	359°38.1	7°50.5	12	359°49.9	8°56.6
13	13°59.8	4°26.8	13	14°13.1	5°35.9	13	14°25.9	6°44.2	13	14°38.3	7°51.4	13	14°50.0	8°57.5
14	29°00.0	4°27.8	14	29°13.2	5°36.9	14	29°26.1	6°45.2	14	29°38.4	7°52.4	14	29°50.2	8°58.4
15	44°00.2	4°28.7	15	44°13.4	5°37.9	15	44°26.3	6°46.1	15	44°38.6	7°53.3	15	44°50.3	8°59.3
16	59°00.4	4°29.7	16	59°13.6	5°38.8	16	59°26.4	6°47.0	16	59°38.8	7°54.2	16	59°50.5	9°00.2
17	74°00.6	4°30.7	17	74°13.8	5°39.8	17	74°26.6	6°48.0	17	74°38.9	7°55.1	17	74°50.7	9°01.1
18	89°00.8	4°31.6	18	89°14.0	5°40.7	18	89°26.8	6°48.9	18	89°39.1	7°56.1	18	89°50.8	9°02.0
19	104°00.9	4°32.6	19	104°14.2	5°41.7	19	104°27.0	6°49.9	19	104°39.3	7°57.0	19	104°51.0	9°02.9
20	119°01.1	4°33.6	20	119°14.3	5°42.6	20	119°27.1	6°50.8	20	119°39.4	7°57.9	20	119°51.1	9°03.8
21	134°01.3	4°34.5	21	134°14.5	5°43.6	21	134°27.3	6°51.7	21	134°39.6	7°58.8	21	134°51.3	9°04.7
22	149°01.5	4°35.5	22	149°14.7	5°44.5	22	149°27.5	6°52.7	22	149°39.8	7°59.8	22	149°51.5	9°05.6
23	164°01.7	4°36.5	23	164°14.9	5°45.5	23	164°27.7	6°53.6	23	164°39.9	8°00.7	23	164°51.6	9°06.6
	SD.=16.0	d=1.0		SD.=16.0	d=1.0		SD.=16.0	d=0.9		SD.=16.0	d=0.9		SD.=16.0	d=0.9

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	179°01.9	4°37.4	0	179°15.1	5°46.4	0	179°27.8	6°54.6	0	179°40.1	8°01.6	0	179°51.8	9°07.5
1	194°02.1	4°38.4	1	194°15.2	5°47.4	1	194°28.0	6°55.5	1	194°40.3	8°02.5	1	194°51.9	9°08.4
2	209°02.2	4°39.3	2	209°15.4	5°48.3	2	209°28.2	6°56.4	2	209°40.4	8°03.5	2	209°52.1	9°09.3
3	224°02.4	4°40.3	3	224°15.6	5°49.3	3	224°28.3	6°57.4	3	224°40.6	8°04.4	3	224°52.2	9°10.2
4	239°02.6	4°41.3	4	239°15.8	5°50.2	4	239°28.5	6°58.3	4	239°40.8	8°05.3	4	239°52.4	9°11.1
5	254°02.8	4°42.2	5	254°16.0	5°51.2	5	254°28.7	6°59.2	5	254°40.9	8°06.2	5	254°52.6	9°12.0
6	269°03.0	4°43.2	6	269°16.1	5°52.1	6	269°28.9	7°00.2	6	269°41.1	8°07.2	6	269°52.7	9°12.9
7	284°03.2	4°44.2	7	284°16.3	5°53.1	7	284°29.0	7°01.1	7	284°41.3	8°08.1	7	284°52.9	9°13.8
8	299°03.4	4°45.1	8	299°16.5	5°54.0	8	299°29.2	7°02.1	8	299°41.4	8°09.0	8	299°53.0	9°14.7
9	314°03.5	4°46.1	9	314°16.7	5°55.0	9	314°29.4	7°03.0	9	314°41.6	8°09.9	9	314°53.2	9°15.6
10	329°03.7	4°47.1	10	329°16.9	5°56.0	10	329°29.6	7°03.9	10	329°41.8	8°10.8	10	329°53.3	9°16.5
11	344°03.9	4°48.0	11	344°17.0	5°56.9	11	344°29.7	7°04.9	11	344°41.9	8°11.8	11	344°53.5	9°17.4
12	359°04.1	4°49.0	12	359°17.2	5°57.9	12	359°29.9	7°05.8	12	359°42.1	8°12.7	12	359°53.6	9°18.3
13	14°04.3	4°49.9	13	14°17.4	5°58.8	13	14°30.1	7°06.7	13	14°42.2	8°13.6	13	14°53.8	9°19.2
14	29°04.5	4°50.9	14	29°17.6	5°59.8	14	29°30.3	7°07.7	14	29°42.4	8°14.5	14	29°54.0	9°20.1
15	44°04.6	4°51.9	15	44°17.8	6°00.7	15	44°30.4	7°08.6	15	44°42.6	8°15.4	15	44°54.1	9°21.0
16	59°04.8	4°52.8	16	59°17.9	6°01.7	16	59°30.6	7°09.6	16	59°42.7	8°16.4	16	59°54.3	9°21.9
17	74°05.0	4°53.8	17	74°18.1	6°02.6	17	74°30.8	7°10.5	17	74°42.9	8°17.3	17	74°54.4	9°22.8
18	89°05.2	4°54.7	18	89°18.3	6°03.6	18	89°30.9	7°11.4	18	89°43.1	8°18.2	18	89°54.6	9°23.7
19	104°05.4	4°55.7	19	104°18.5	6°04.5	19	104°31.1	7°12.4	19	104°43.2	8°19.1	19	104°54.7	9°24.6
20	119°05.6	4°56.7	20	119°18.6	6°05.5	20	119°31.3	7°13.3	20	119°43.4	8°20.0	20	119°54.9	9°25.5
21	134°05.8	4°57.6	21	134°18.8	6°06.4	21	134°31.5	7°14.2	21	134°43.6	8°21.0	21	134°55.0	9°26.4
22	149°05.9	4°58.6	22	149°19.0	6°07.4	22	149°31.6	7°15.2	22	149°43.7	8°21.9	22	149°55.2	9°27.3
23	164°06.1	4°59.6	23	164°19.2	6°08.3	23	164°31.8	7°16.1	23	164°43.9	8°22.8	23	164°55.4	9°28.2
	SD.=16.0	d=1.0		SD.=16.0	d=1.0		SD.=16.0	d=0.9		SD.=16.0	d=0.9		SD.=15.9	d=0.9

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	179°06.3	5°00.5	0	179°19.4	6°09.2	0	179°32.0	7°17.0	0	179°44.1	8°23.7	0	179°55.5	9°29.1
1	194°06.5	5°01.5	1	194°19.5	6°10.2	1	194°32.1	7°18.0	1	194°44.2	8°24.6	1	194°55.7	9°30.0
2	209°06.7	5°02.4	2	209°19.7	6°11.1	2	209°32.3	7°18.9	2	209°44.4	8°25.5	2	209°55.8	9°30.9
3	224°06.9	5°03.4	3	224°19.9	6°12.1	3	224°32.5	7°19.8	3	224°44.5	8°26.5	3	224°56.0	9°31.8
4	239°07.0	5°04.4	4	239°20.1	6°13.0	4	239°32.7	7°20.8	4	239°44.7	8°27.4	4	239°56.1	9°32.7
5	254°07.2	5°05.3	5	254°20.3	6°14.0	5	254°32.8	7°21.7	5	254°44.9	8°28.3	5	254°56.3	9°33.6
6	269°07.4	5°06.3	6	269°20.4	6°14.9	6	269°33.0	7°22.6	6	269°45.0	8°29.2	6	269°56.4	9°34.5
7	284°07.6	5°07.2	7	284°20.6	6°15.9	7	284°33.2	7°23.6	7	284°45.2	8°30.1	7	284°56.6	9°35.4
8	299°07.8	5°08.2	8	299°20.8	6°16.8	8	299°33.3	7°24.5	8	299°45.4	8°31.0	8	299°56.7	9°36.3
9	314°08.0	5°09.2	9	314°21.0	6°17.8	9	314°33.5	7°25.4	9	314°45.5	8°32.0	9	314°56.9	9°37.2
10	329°08.1	5°10.1	10	329°21.1	6°18.7	10	329°33.7	7°26.4	10	329°45.7	8°32.9	10	329°57.0	9°38.1
11	344°08.3	5°11.1	11	344°21.3	6°19.7	11	344°33.9	7°27.3	11	344°45.8	8°33.8	11	344°57.2	9°39.0
12	359°08.5	5°12.0	12	359°21.5	6°20.6	12	359°34.0	7°28.2	12	359°46.0	8°34.7	12	359°57.4	9°39.9
13	14°08.7	5°13.0	13	14°21.7	6°21.6	13	14°34.2	7°29.2	13	14°46.2	8°35.6	13	14°57.5	9°40.8
14	29°08.9	5°13.9	14	29°21.9	6°22.5	14	29°34.4	7°30.1	14	29°46.3	8°36.5	14	29°57.7	9°41.7
15	44°09.1	5°14.9	15	44°22.0	6°23.5	15	44°34.5	7°31.0	15	44°46.5	8°37.4	15	44°57.8	9°42.6
16	59°09.2	5°15.9	16	59°22.2	6°24.4	16	59°34.7	7°32.0	16	59°46.7	8°38.4	16	59°58.0	9°43.5
17	74°09.4	5°16.8	17	74°22.4	6°25.3	17	74°34.9	7°32.9	17	74°46.8	8°39.3	17	74°58.1	9°44.3
18	89°09.6	5°17.8	18	89°22.6	6°26.3	18	89°35.0	7°33.8	18	89°47.0	8°40.2	18	89°58.3	9°45.2
19	104°09.8	5°18.7	19	104°22.7	6°27.2	19	104°35.2	7°34.7	19	104°47.1	8°41.1	19	104°58.4	9°46.1
20	119°10.0	5°19.7	20	119°22.9	6°28.2	20	119°35.4	7°35.7	20	119°47.3	8°42.0	20	119°58.6	9°47.0
21	134°10.2	5°20.6	21	134°23.1	6°29.1	21	134°35.6	7°36.6	21	134°47.5	8°42.9	21	134°58.7	9°47.9
22	149°10.3	5°21.6	22	149°23.3	6°30.1	22	149°35.7	7°37.5	22	149°47.6	8°43.8	22	149°58.9	9°48.8
23	164°10.5	5°22.6	23	164°23.4	6°31.0	23	164°35.9	7°38.5	23	164°47.8	8°44.7	23	164°59.0	9°49.7
	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

<b>15</b>	<b>GHA</b>	<b>Dec</b>	<b>18</b>	<b>GHA</b>	<b>Dec</b>	<b>21</b>	<b>GHA</b>	<b>Dec</b>	<b>24</b>	<b>GHA</b>	<b>Dec</b>	<b>27</b>	<b>GHA</b>	<b>Dec</b>
0	179°59.2	9°50.6	0	180°09.6	10°54.1	0	180°19.2	11°55.9	0	180°27.9	12°56.0	0	180°35.4	13°54.1
1	194°59.3	9°51.5	1	195°09.8	10°54.9	1	195°19.4	11°56.7	1	195°28.0	12°56.8	1	195°35.5	13°54.9
2	209°59.5	9°52.4	2	210°09.9	10°55.8	2	210°19.5	11°57.6	2	210°28.1	12°57.6	2	210°35.6	13°55.7
3	224°59.6	9°53.3	3	225°10.1	10°56.7	3	225°19.6	11°58.4	3	225°28.2	12°58.4	3	225°35.7	13°56.5
4	239°59.8	9°54.2	4	240°10.2	10°57.5	4	240°19.7	11°59.3	4	240°28.3	12°59.2	4	240°35.8	13°57.3
5	254°59.9	9°55.1	5	255°10.3	10°58.4	5	255°19.9	12°00.1	5	255°28.4	13°00.1	5	255°35.9	13°58.1
6	270°00.1	9°55.9	6	270°10.5	10°59.3	6	270°20.0	12°01.0	6	270°28.5	13°00.9	6	270°36.0	13°58.9
7	285°00.2	9°56.8	7	285°10.6	11°00.1	7	285°20.1	12°01.8	7	285°28.6	13°01.7	7	285°36.1	13°59.7
8	300°00.4	9°57.7	8	300°10.8	11°01.0	8	300°20.2	12°02.7	8	300°28.8	13°02.5	8	300°36.2	14°00.5
9	315°00.5	9°58.6	9	315°10.9	11°01.9	9	315°20.4	12°03.5	9	315°28.9	13°03.3	9	315°36.3	14°01.2
10	330°00.7	9°59.5	10	330°11.0	11°02.8	10	330°20.5	12°04.3	10	330°29.0	13°04.2	10	330°36.4	14°02.0
11	345°00.8	10°00.4	11	345°11.2	11°03.6	11	345°20.6	12°05.2	11	345°29.1	13°05.0	11	345°36.5	14°02.8
12	0°01.0	10°01.3	12	0°11.3	11°04.5	12	0°20.7	12°06.0	12	0°29.2	13°05.8	12	0°36.5	14°03.6
13	15°01.1	10°02.2	13	15°11.4	11°05.4	13	15°20.9	12°06.9	13	15°29.3	13°06.6	13	15°36.6	14°04.4
14	30°01.3	10°03.1	14	30°11.6	11°06.2	14	30°21.0	12°07.7	14	30°29.4	13°07.4	14	30°36.7	14°05.2
15	45°01.4	10°03.9	15	45°11.7	11°07.1	15	45°21.1	12°08.6	15	45°29.5	13°08.2	15	45°36.8	14°06.0
16	60°01.6	10°04.8	16	60°11.9	11°07.9	16	60°21.2	12°09.4	16	60°29.6	13°09.1	16	60°36.9	14°06.8
17	75°01.7	10°05.7	17	75°12.0	11°08.8	17	75°21.4	12°10.2	17	75°29.7	13°09.9	17	75°37.0	14°07.5
18	90°01.9	10°06.6	18	90°12.1	11°09.7	18	90°21.5	12°11.1	18	90°29.8	13°10.7	18	90°37.1	14°08.3
19	105°02.0	10°07.5	19	105°12.3	11°10.5	19	105°21.6	12°11.9	19	105°30.0	13°11.5	19	105°37.2	14°09.1
20	120°02.2	10°08.4	20	120°12.4	11°11.4	20	120°21.7	12°12.8	20	120°30.1	13°12.3	20	120°37.3	14°09.9
21	135°02.3	10°09.3	21	135°12.5	11°12.3	21	135°21.9	12°13.6	21	135°30.2	13°13.1	21	135°37.4	14°10.7
22	150°02.5	10°10.2	22	150°12.7	11°13.1	22	150°22.0	12°14.4	22	150°30.3	13°13.9	22	150°37.5	14°11.5
23	165°02.6	10°11.0	23	165°12.8	11°14.0	23	165°22.1	12°15.3	23	165°30.4	13°14.8	23	165°37.6	14°12.3
	SD.=15.9	d=0.9		SD.=15.9	d=0.9		SD.=15.9	d=0.8		SD.=15.9	d=0.8		SD.=15.9	d=0.8
<b>16</b>	<b>GHA</b>	<b>Dec</b>	<b>19</b>	<b>GHA</b>	<b>Dec</b>	<b>22</b>	<b>GHA</b>	<b>Dec</b>	<b>25</b>	<b>GHA</b>	<b>Dec</b>	<b>28</b>	<b>GHA</b>	<b>Dec</b>
0	180°02.8	10°11.9	0	180°12.9	11°14.9	0	180°22.2	12°16.1	0	180°30.5	13°15.6	0	180°37.7	14°13.0
1	195°02.9	10°12.8	1	195°13.1	11°15.7	1	195°22.3	12°17.0	1	195°30.6	13°16.4	1	195°37.8	14°13.8
2	210°03.0	10°13.7	2	210°13.2	11°16.6	2	210°22.5	12°17.8	2	210°30.7	13°17.2	2	210°37.8	14°14.6
3	225°03.2	10°14.6	3	225°13.3	11°17.4	3	225°22.6	12°18.6	3	225°30.8	13°18.0	3	225°37.9	14°15.4
4	240°03.3	10°15.5	4	240°13.5	11°18.3	4	240°22.7	12°19.5	4	240°30.9	13°18.8	4	240°38.0	14°16.2
5	255°03.5	10°16.3	5	255°13.6	11°19.2	5	255°22.8	12°20.3	5	255°31.0	13°19.6	5	255°38.1	14°17.0
6	270°03.6	10°17.2	6	270°13.8	11°20.0	6	270°23.0	12°21.1	6	270°31.1	13°20.4	6	270°38.2	14°17.7
7	285°03.8	10°18.1	7	285°13.9	11°20.9	7	285°23.1	12°22.0	7	285°31.2	13°21.2	7	285°38.3	14°18.5
8	300°03.9	10°19.0	8	300°14.0	11°21.8	8	300°23.2	12°22.8	8	300°31.3	13°22.1	8	300°38.4	14°19.3
9	315°04.1	10°19.9	9	315°14.2	11°22.6	9	315°23.3	12°23.7	9	315°31.5	13°22.9	9	315°38.5	14°20.1
10	330°04.2	10°20.8	10	330°14.3	11°23.5	10	330°23.4	12°24.5	10	330°31.6	13°23.7	10	330°38.6	14°20.9
11	345°04.4	10°21.6	11	345°14.4	11°24.3	11	345°23.6	12°25.3	11	345°31.7	13°24.5	11	345°38.7	14°21.6
12	0°04.5	10°22.5	12	0°14.6	11°25.2	12	0°23.7	12°26.2	12	0°31.8	13°25.3	12	0°38.7	14°22.4
13	15°04.7	10°23.4	13	15°14.7	11°26.1	13	15°23.8	12°27.0	13	15°31.9	13°26.1	13	15°38.8	14°23.2
14	30°04.8	10°24.3	14	30°14.8	11°26.9	14	30°23.9	12°27.8	14	30°32.0	13°26.9	14	30°38.9	14°24.0
15	45°04.9	10°25.2	15	45°15.0	11°27.8	15	45°24.0	12°28.7	15	45°32.1	13°27.7	15	45°39.0	14°24.8
16	60°05.1	10°26.0	16	60°15.1	11°28.6	16	60°24.2	12°29.5	16	60°32.2	13°28.5	16	60°39.1	14°25.5
17	75°05.2	10°26.9	17	75°15.2	11°29.5	17	75°24.3	12°30.3	17	75°32.3	13°29.3	17	75°39.2	14°26.3
18	90°05.4	10°27.8	18	90°15.4	11°30.3	18	90°24.4	12°31.2	18	90°32.4	13°30.1	18	90°39.3	14°27.1
19	105°05.5	10°28.7	19	105°15.5	11°31.2	19	105°24.5	12°32.0	19	105°32.5	13°30.9	19	105°39.4	14°27.9
20	120°05.7	10°29.6	20	120°15.6	11°32.1	20	120°24.6	12°32.8	20	120°32.6	13°31.7	20	120°39.4	14°28.6
21	135°05.8	10°30.4	21	135°15.7	11°32.9	21	135°24.7	12°33.7	21	135°32.7	13°32.5	21	135°39.5	14°29.4
22	150°06.0	10°31.3	22	150°15.9	11°33.8	22	150°24.9	12°34.5	22	150°32.8	13°33.3	22	150°39.6	14°30.2
23	165°06.1	10°32.2	23	165°16.0	11°34.6	23	165°25.0	12°35.3	23	165°32.9	13°34.1	23	165°39.7	14°31.0
	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
<b>17</b>	<b>GHA</b>	<b>Dec</b>	<b>20</b>	<b>GHA</b>	<b>Dec</b>	<b>23</b>	<b>GHA</b>	<b>Dec</b>	<b>26</b>	<b>GHA</b>	<b>Dec</b>	<b>29</b>	<b>GHA</b>	<b>Dec</b>
0	180°06.2	10°33.1	0	180°16.1	11°35.5	0	180°25.1	12°36.1	0	180°33.0	13°34.9	0	180°39.8	14°31.7
1	195°06.4	10°34.0	1	195°16.3	11°36.3	1	195°25.2	12°37.0	1	195°33.1	13°35.8	1	195°39.9	14°32.5
2	210°06.5	10°34.8	2	210°16.4	11°37.2	2	210°25.3	12°37.8	2	210°33.2	13°36.6	2	210°40.0	14°33.3
3	225°06.7	10°35.7	3	225°16.5	11°38.0	3	225°25.5	12°38.6	3	225°33.3	13°37.4	3	225°40.0	14°34.1
4	240°06.8	10°36.6	4	240°16.7	11°38.9	4	240°25.6	12°39.5	4	240°33.4	13°38.2	4	240°40.1	14°34.8
5	255°07.0	10°37.5	5	255°16.8	11°39.7	5	255°25.7	12°40.3	5	255°33.5	13°39.0	5	255°40.2	14°35.6
6	270°07.1	10°38.3	6	270°16.9	11°40.6	6	270°25.8	12°41.1	6	270°33.6	13°39.8	6	270°40.3	14°36.4
7	285°07.2	10°39.2	7	285°17.1	11°41.5	7	285°25.9	12°41.9	7	285°33.7	13°40.6	7	285°40.4	14°37.2
8	300°07.4	10°40.1	8	300°17.2	11°42.3	8	300°26.0	12°42.8	8	300°33.8	13°41.4	8	300°40.5	14°37.9
9	315°07.5	10°41.0	9	315°17.3	11°43.2	9	315°26.1	12°43.6	9	315°33.9	13°42.2	9	315°40.5	14°38.7
10	330°07.7	10°41.8	10	330°17.4	11°44.0	10	330°26.3	12°44.4	10	330°34.0	13°43.0	10	330°40.6	14°39.5
11	345°07.8	10°42.7	11	345°17.6	11°44.9	11	345°26.4	12°45.3	11	345°34.1	13°43.8	11	345°40.7	14°40.2
12	0°08.0	10°43.6	12	0°17.7	11°45.7	12	0°26.5	12°46.1	12	0°34.2	13°44.6	12	0°40.8	14°41.0
13	15°08.1	10°44.5	13	15°17.8	11°46.6	13	15°26.6	12°46.9	13	15°34.3	13°45.4	13	15°40.9	14°41.8
14	30°08.2	10°45.3	14	30°18.0	11°47.4	14	30°26.7	12°47.7	14	30°34.4	13°46.2	14	30°41.0	14°42.5
15	45°08.4	10°46.2	15	45°18.1	11°48.3	15	45°26.8	12°48.6	15	45°34.5	13°47.0	15	45°41.0	14°43.3
16	60°08.5	10°47.1	16	60°18.2	11°49.1	16	60°27.0	12°						

30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	180°41.8	14°50.2	0	180°46.9	15°44.1	0	180°50.8	16°35.7	0	180°53.4	17°24.8	0	180°54.7	18°11.2
1	195°41.9	14°51.0	1	195°47.0	15°44.8	1	195°50.8	16°36.4	1	195°53.4	17°25.4	1	195°54.7	18°11.9
2	210°41.9	14°51.7	2	210°47.0	15°45.6	2	210°50.9	16°37.1	2	210°53.4	17°26.1	2	210°54.7	18°12.5
3	225°42.0	14°52.5	3	225°47.1	15°46.3	3	225°50.9	16°37.8	3	225°53.4	17°26.8	3	225°54.7	18°13.1
4	240°42.1	14°53.3	4	240°47.2	15°47.0	4	240°51.0	16°38.5	4	240°53.5	17°27.4	4	240°54.7	18°13.7
5	255°42.2	14°54.0	5	255°47.2	15°47.8	5	255°51.0	16°39.2	5	255°53.5	17°28.1	5	255°54.7	18°14.4
6	270°42.3	14°54.8	6	270°47.3	15°48.5	6	270°51.0	16°39.9	6	270°53.5	17°28.7	6	270°54.7	18°15.0
7	285°42.3	14°55.6	7	285°47.3	15°49.2	7	285°51.1	16°40.6	7	285°53.6	17°29.4	7	285°54.8	18°15.6
8	300°42.4	14°56.3	8	300°47.4	15°50.0	8	300°51.1	16°41.3	8	300°53.6	17°30.1	8	300°54.8	18°16.2
9	315°42.5	14°57.1	9	315°47.5	15°50.7	9	315°51.2	16°42.0	9	315°53.6	17°30.7	9	315°54.8	18°16.8
10	330°42.6	14°57.8	10	330°47.5	15°51.4	10	330°51.2	16°42.7	10	330°53.6	17°31.4	10	330°54.8	18°17.5
11	345°42.6	14°58.6	11	345°47.6	15°52.1	11	345°51.3	16°43.3	11	345°53.7	17°32.0	11	345°54.8	18°18.1
12	0°42.7	14°59.4	12	0°47.6	15°52.9	12	0°51.3	16°44.0	12	0°53.7	17°32.7	12	0°54.8	18°18.7
13	15°42.8	15°00.1	13	15°47.7	15°53.6	13	15°51.3	16°44.7	13	15°53.7	17°33.4	13	15°54.8	18°19.3
14	30°42.9	15°00.9	14	30°47.8	15°54.3	14	30°51.4	16°45.4	14	30°53.7	17°34.0	14	30°54.8	18°19.9
15	45°42.9	15°01.6	15	45°47.8	15°55.1	15	45°51.4	16°46.1	15	45°53.7	17°34.7	15	45°54.8	18°20.6
16	60°43.0	15°02.4	16	60°47.9	15°55.8	16	60°51.5	16°46.8	16	60°53.8	17°35.3	16	60°54.8	18°21.2
17	75°43.1	15°03.1	17	75°47.9	15°56.5	17	75°51.5	16°47.5	17	75°53.8	17°36.0	17	75°54.8	18°21.8
18	90°43.2	15°03.9	18	90°48.0	15°57.2	18	90°51.5	16°48.2	18	90°53.8	17°36.6	18	90°54.8	18°22.4
19	105°43.3	15°04.7	19	105°48.1	15°58.0	19	105°51.6	16°48.9	19	105°53.8	17°37.3	19	105°54.8	18°23.0
20	120°43.3	15°05.4	20	120°48.1	15°58.7	20	120°51.6	16°49.6	20	120°53.9	17°37.9	20	120°54.8	18°23.6
21	135°43.4	15°06.2	21	135°48.2	15°59.4	21	135°51.7	16°50.3	21	135°53.9	17°38.6	21	135°54.8	18°24.3
22	150°43.5	15°06.9	22	150°48.2	16°00.1	22	150°51.7	16°50.9	22	150°53.9	17°39.2	22	150°54.9	18°24.9
23	165°43.6	15°07.7	23	165°48.3	16°00.8	23	165°51.7	16°51.6	23	165°53.9	17°39.9	23	165°54.9	18°25.5
	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

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	180°43.6	15°08.4	0	180°48.3	16°01.6	0	180°51.8	16°52.3	0	180°53.9	17°40.6	0	180°54.9	18°26.1
1	195°43.7	15°09.2	1	195°48.4	16°02.3	1	195°51.8	16°53.0	1	195°54.0	17°41.2	1	195°54.9	18°26.7
2	210°43.8	15°09.9	2	210°48.5	16°03.0	2	210°51.9	16°53.7	2	210°54.0	17°41.9	2	210°54.9	18°27.3
3	225°43.9	15°10.7	3	225°48.5	16°03.7	3	225°51.9	16°54.4	3	225°54.0	17°42.5	3	225°54.9	18°27.9
4	240°43.9	15°11.4	4	240°48.6	16°04.5	4	240°51.9	16°55.1	4	240°54.0	17°43.2	4	240°54.9	18°28.6
5	255°44.0	15°12.2	5	255°48.6	16°05.2	5	255°52.0	16°55.8	5	255°54.1	17°43.8	5	255°54.9	18°29.2
6	270°44.1	15°12.9	6	270°48.7	16°05.9	6	270°52.0	16°56.4	6	270°54.1	17°44.5	6	270°54.9	18°29.8
7	285°44.1	15°13.7	7	285°48.7	16°06.6	7	285°52.0	16°57.1	7	285°54.1	17°45.1	7	285°54.9	18°30.4
8	300°44.2	15°14.4	8	300°48.8	16°07.3	8	300°52.1	16°57.8	8	300°54.1	17°45.7	8	300°54.9	18°31.0
9	315°44.3	15°15.2	9	315°48.8	16°08.0	9	315°52.1	16°58.5	9	315°54.1	17°46.4	9	315°54.9	18°31.6
10	330°44.4	15°15.9	10	330°48.9	16°08.8	10	330°52.2	16°59.2	10	330°54.1	17°47.0	10	330°54.9	18°32.2
11	345°44.4	15°16.7	11	345°49.0	16°09.5	11	345°52.2	16°59.9	11	345°54.2	17°47.7	11	345°54.9	18°32.8
12	0°44.5	15°17.4	12	0°49.0	16°10.2	12	0°52.2	17°00.5	12	0°54.2	17°48.3	12	0°54.9	18°33.4
13	15°44.6	15°18.2	13	15°49.1	16°10.9	13	15°52.3	17°01.2	13	15°54.2	17°49.0	13	15°54.9	18°34.0
14	30°44.6	15°18.9	14	30°49.1	16°11.6	14	30°52.3	17°01.9	14	30°54.2	17°49.6	14	30°54.9	18°34.6
15	45°44.7	15°19.7	15	45°49.2	16°12.3	15	45°52.3	17°02.6	15	45°54.2	17°50.3	15	45°54.9	18°35.2
16	60°44.8	15°20.4	16	60°49.2	16°13.1	16	60°52.4	17°03.3	16	60°54.3	17°50.9	16	60°54.9	18°35.9
17	75°44.9	15°21.2	17	75°49.3	16°13.8	17	75°52.4	17°03.9	17	75°54.3	17°51.6	17	75°54.9	18°36.5
18	90°44.9	15°21.9	18	90°49.3	16°14.5	18	90°52.4	17°04.6	18	90°54.3	17°52.2	18	90°54.9	18°37.1
19	105°45.0	15°22.7	19	105°49.4	16°15.2	19	105°52.5	17°05.3	19	105°54.3	17°52.8	19	105°54.9	18°37.7
20	120°45.1	15°23.4	20	120°49.4	16°15.9	20	120°52.5	17°06.0	20	120°54.3	17°53.5	20	120°54.9	18°38.3
21	135°45.1	15°24.2	21	135°49.5	16°16.6	21	135°52.5	17°06.7	21	135°54.3	17°54.1	21	135°54.9	18°38.9
22	150°45.2	15°24.9	22	150°49.5	16°17.3	22	150°52.6	17°07.3	22	150°54.4	17°54.8	22	150°54.9	18°39.5
23	165°45.3	15°25.7	23	165°49.6	16°18.1	23	165°52.6	17°08.0	23	165°54.4	17°55.4	23	165°54.9	18°40.1
	SD.=15.9	d=0.8		SD.=15.9	d=0.7		SD.=15.8	d=0.7		SD.=15.8	d=0.7		SD.=15.8	d=0.6

02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec	14	GHA	Dec
0	180°45.3	15°26.4	0	180°49.6	16°18.8	0	180°52.6	17°08.7	0	180°54.4	17°56.0	0	180°54.9	18°40.7
1	195°45.4	15°27.1	1	195°49.7	16°19.5	1	195°52.7	17°09.4	1	195°54.4	17°56.7	1	195°54.9	18°41.3
2	210°45.5	15°27.9	2	210°49.7	16°20.2	2	210°52.7	17°10.0	2	210°54.4	17°57.3	2	210°54.9	18°41.9
3	225°45.5	15°28.6	3	225°49.8	16°20.9	3	225°52.7	17°10.7	3	225°54.4	17°58.0	3	225°54.9	18°42.5
4	240°45.6	15°29.4	4	240°49.8	16°21.6	4	240°52.8	17°11.4	4	240°54.5	17°58.6	4	240°54.9	18°43.1
5	255°45.7	15°30.1	5	255°49.9	16°22.3	5	255°52.8	17°12.1	5	255°54.5	17°59.2	5	255°54.9	18°43.7
6	270°45.7	15°30.9	6	270°49.9	16°23.0	6	270°52.8	17°12.7	6	270°54.5	17°59.9	6	270°54.9	18°44.3
7	285°45.8	15°31.6	7	285°50.0	16°23.7	7	285°52.9	17°13.4	7	285°54.5	18°00.5	7	285°54.9	18°44.9
8	300°45.9	15°32.3	8	300°50.0	16°24.4	8	300°52.9	17°14.1	8	300°54.5	18°01.1	8	300°54.9	18°45.5
9	315°45.9	15°33.1	9	315°50.1	16°25.1	9	315°52.9	17°14.8	9	315°54.5	18°01.8	9	315°54.9	18°46.1
10	330°46.0	15°33.8	10	330°50.1	16°25.8	10	330°53.0	17°15.4	10	330°54.5	18°02.4	10	330°54.9	18°46.7
11	345°46.1	15°34.6	11	345°50.2	16°26.6	11	345°53.0	17°16.1	11	345°54.5	18°03.0	11	345°54.9	18°47.2
12	0°46.1	15°35.3	12	0°50.2	16°27.3	12	0°53.0	17°16.8	12	0°54.6	18°03.7	12	0°54.9	18°47.8
13	15°46.2	15°36.0	13	15°50.3	16°28.0	13	15°53.1	17°17.4	13	15°54.6	18°04.3	13	15°54.8	18°48.4
14	30°46.3	15°36.8	14	30°50.3	16°28.7	14	30°53.1	17°18.1	14	30°54.6	18°04.9	14	30°54.8	18°49.0
15	45°46.3	15°37.5	15	45°50.4	16°29.4	15	45°53.1	17°18.8	15	45°54.6	18°05.6	15	45°54.8	18°49.6
16	60°46.4	15°38.2	16	60°50.4	16°30.1	16	60°53.1	17°19.4	16	60°54.6	18°06.2	16	60°54.8	18°50.2
17	75°46.5	15°39.0	17	75°50.5	16°30.8	17	75°53.2	17°20.1	17	75°54.6	18°06.8	17	75°54.8	18°50.8
18	90°46.5	15°39.7	18	90°50.5	16°31.5	18	90°53.2	17°20.8	18	90°54.6	18°07.5	18	90°54.8	18°51.4
19	105°46.6	15°40.4	19	105°50.6	16°32.2	19	105°53.2	17°21.4	19	105°54.6	18°08.1	19	105°54.8	18°52.0
20	120°46.7	15°41.2	20	120°50.6	16°32.9	20	120°53.3	17°22.1	20	120°54.7	18°08.7	20	120°54.8	18°52.6
21	135°46.7	15°41.9	21	135°50.6	16°33.6	21	135°53.3	17°22.8	21	135°54.7	18°09.3	21	135°54.8	18°53.2
22	150°46.8	15°42.7	22	150°50.7	16°34.3	22	150°53.3	17°23.4	22	150°54.7	18°10.0	22	150°54.8	18°53.8
23	165°46.9	15°43.4	23	165°50.7	16°35.0	23	165°53.3	17°24.1	23	165°54.7	18°10.6	23	165°54.8	18°54.3
	SD.=15.9</													

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	180°54.8	18°54.9	0	180°53.6	19°35.7	0	180°51.3	20°13.5	0	180°47.7	20°48.2	0	180°43.0	21°19.7
1	195°54.8	18°55.5	1	195°53.6	19°36.3	1	195°51.2	20°14.0	1	195°47.7	20°48.7	1	195°43.0	21°20.1
2	210°54.8	18°56.1	2	210°53.6	19°36.8	2	210°51.2	20°14.5	2	210°47.6	20°49.2	2	210°42.9	21°20.5
3	225°54.8	18°56.7	3	225°53.6	19°37.4	3	225°51.1	20°15.1	3	225°47.6	20°49.6	3	225°42.8	21°20.9
4	240°54.7	18°57.3	4	240°53.5	19°37.9	4	240°51.1	20°15.6	4	240°47.5	20°50.1	4	240°42.7	21°21.4
5	255°54.7	18°57.9	5	255°53.5	19°38.5	5	255°51.1	20°16.1	5	255°47.4	20°50.5	5	255°42.7	21°21.8
6	270°54.7	18°58.4	6	270°53.5	19°39.0	6	270°51.0	20°16.6	6	270°47.4	20°51.0	6	270°42.6	21°22.2
7	285°54.7	18°59.0	7	285°53.5	19°39.5	7	285°51.0	20°17.1	7	285°47.3	20°51.4	7	285°42.5	21°22.6
8	300°54.7	18°59.6	8	300°53.4	19°40.1	8	300°50.9	20°17.6	8	300°47.3	20°51.9	8	300°42.4	21°23.0
9	315°54.7	19°00.2	9	315°53.4	19°40.6	9	315°50.9	20°18.1	9	315°47.2	20°52.3	9	315°42.4	21°23.4
10	330°54.7	19°00.8	10	330°53.4	19°41.2	10	330°50.8	20°18.6	10	330°47.1	20°52.8	10	330°42.3	21°23.8
11	345°54.7	19°01.4	11	345°53.3	19°41.7	11	345°50.8	20°19.0	11	345°47.1	20°53.3	11	345°42.2	21°24.2
12	0°54.7	19°01.9	12	0°53.3	19°42.3	12	0°50.8	20°19.5	12	0°47.0	20°53.7	12	0°42.1	21°24.6
13	15°54.7	19°02.5	13	15°53.3	19°42.8	13	15°50.7	20°20.0	13	15°47.0	20°54.2	13	15°42.1	21°25.0
14	30°54.7	19°03.1	14	30°53.3	19°43.3	14	30°50.7	20°20.5	14	30°46.9	20°54.6	14	30°42.0	21°25.4
15	45°54.6	19°03.7	15	45°53.2	19°43.9	15	45°50.6	20°21.0	15	45°46.8	20°55.1	15	45°41.9	21°25.8
16	60°54.6	19°04.3	16	60°53.2	19°44.4	16	60°50.6	20°21.5	16	60°46.8	20°55.5	16	60°41.8	21°26.3
17	75°54.6	19°04.8	17	75°53.2	19°44.9	17	75°50.5	20°22.0	17	75°46.7	20°56.0	17	75°41.8	21°26.7
18	90°54.6	19°05.4	18	90°53.2	19°45.5	18	90°50.5	20°22.5	18	90°46.7	20°56.4	18	90°41.7	21°27.1
19	105°54.6	19°06.0	19	105°53.1	19°46.0	19	105°50.4	20°23.0	19	105°46.6	20°56.9	19	105°41.6	21°27.5
20	120°54.6	19°06.6	20	120°53.1	19°46.5	20	120°50.4	20°23.5	20	120°46.5	20°57.3	20	120°41.5	21°27.9
21	135°54.6	19°07.1	21	135°53.1	19°47.1	21	135°50.4	20°24.0	21	135°46.5	20°57.7	21	135°41.5	21°28.3
22	150°54.6	19°07.7	22	150°53.0	19°47.6	22	150°50.3	20°24.5	22	150°46.4	20°58.2	22	150°41.4	21°28.7
23	165°54.5	19°08.3	23	165°53.0	19°48.1	23	165°50.3	20°25.0	23	165°46.3	20°58.6	23	165°41.3	21°29.1
	SD.=15.8	d=0.6		SD.=15.8	d=0.5		SD.=15.8	d=0.5		SD.=15.8	d=0.5		SD.=15.8	d=0.4

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	180°54.5	19°08.9	0	180°53.0	19°48.7	0	180°50.2	20°25.5	0	180°46.3	20°59.1	0	180°41.2	21°29.5
1	195°54.5	19°09.4	1	195°52.9	19°49.2	1	195°50.2	20°25.9	1	195°46.2	20°59.5	1	195°41.1	21°29.9
2	210°54.5	19°10.0	2	210°52.9	19°49.7	2	210°50.1	20°26.4	2	210°46.2	20°60.0	2	210°41.1	21°30.3
3	225°54.5	19°10.6	3	225°52.9	19°50.3	3	225°50.1	20°26.9	3	225°46.1	21°00.4	3	225°41.0	21°30.7
4	240°54.5	19°11.1	4	240°52.9	19°50.8	4	240°50.0	20°27.4	4	240°46.0	21°00.9	4	240°40.9	21°31.1
5	255°54.5	19°11.7	5	255°52.8	19°51.3	5	255°50.0	20°27.9	5	255°46.0	21°01.3	5	255°40.8	21°31.5
6	270°54.4	19°12.3	6	270°52.8	19°51.9	6	270°49.9	20°28.4	6	270°45.9	21°01.7	6	270°40.8	21°31.8
7	285°54.4	19°12.9	7	285°52.8	19°52.4	7	285°49.9	20°28.9	7	285°45.8	21°02.2	7	285°40.7	21°32.2
8	300°54.4	19°13.4	8	300°52.7	19°52.9	8	300°49.8	20°29.4	8	300°45.8	21°02.6	8	300°40.6	21°32.6
9	315°54.4	19°14.0	9	315°52.7	19°53.4	9	315°49.8	20°29.8	9	315°45.7	21°03.1	9	315°40.5	21°33.0
10	330°54.4	19°14.6	10	330°52.7	19°54.0	10	330°49.7	20°30.3	10	330°45.6	21°03.5	10	330°40.4	21°33.4
11	345°54.4	19°15.1	11	345°52.6	19°54.5	11	345°49.7	20°30.8	11	345°45.6	21°03.9	11	345°40.4	21°33.8
12	0°54.4	19°15.7	12	0°52.6	19°55.0	12	0°49.6	20°31.3	12	0°45.5	21°04.4	12	0°40.3	21°34.2
13	15°54.3	19°16.3	13	15°52.6	19°55.5	13	15°49.6	20°31.8	13	15°45.5	21°04.8	13	15°40.2	21°34.6
14	30°54.3	19°16.8	14	30°52.5	19°56.1	14	30°49.5	20°32.2	14	30°45.4	21°05.3	14	30°40.1	21°35.0
15	45°54.3	19°17.4	15	45°52.5	19°56.6	15	45°49.5	20°32.7	15	45°45.3	21°05.7	15	45°40.0	21°35.4
16	60°54.3	19°18.0	16	60°52.5	19°57.1	16	60°49.4	20°33.2	16	60°45.3	21°06.1	16	60°40.0	21°35.8
17	75°54.3	19°18.5	17	75°52.4	19°57.6	17	75°49.4	20°33.7	17	75°45.2	21°06.6	17	75°39.9	21°36.2
18	90°54.3	19°19.1	18	90°52.4	19°58.2	18	90°49.3	20°34.2	18	90°45.1	21°07.0	18	90°39.8	21°36.5
19	105°54.2	19°19.7	19	105°52.4	19°58.7	19	105°49.3	20°34.6	19	105°45.1	21°07.4	19	105°39.7	21°36.9
20	120°54.2	19°20.2	20	120°52.3	19°59.2	20	120°49.2	20°35.1	20	120°45.0	21°07.9	20	120°39.6	21°37.3
21	135°54.2	19°20.8	21	135°52.3	19°59.7	21	135°49.2	20°35.6	21	135°44.9	21°08.3	21	135°39.5	21°37.7
22	150°54.2	19°21.3	22	150°52.3	20°00.2	22	150°49.1	20°36.1	22	150°44.9	21°08.7	22	150°39.5	21°38.1
23	165°54.2	19°21.9	23	165°52.2	20°00.8	23	165°49.1	20°36.5	23	165°44.8	21°09.1	23	165°39.4	21°38.5
	SD.=15.8	d=0.6		SD.=15.8	d=0.5		SD.=15.8	d=0.5		SD.=15.8	d=0.4		SD.=15.8	d=0.4

17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec	29	GHA	Dec
0	180°54.1	19°22.5	0	180°52.2	20°01.3	0	180°49.0	20°37.0	0	180°44.7	21°09.6	0	180°39.3	21°38.9
1	195°54.1	19°23.0	1	195°52.2	20°01.8	1	195°49.0	20°37.5	1	195°44.7	21°10.0	1	195°39.2	21°39.2
2	210°54.1	19°23.6	2	210°52.1	20°02.3	2	210°48.9	20°38.0	2	210°44.6	21°10.4	2	210°39.1	21°39.6
3	225°54.1	19°24.1	3	225°52.1	20°02.8	3	225°48.9	20°38.4	3	225°44.5	21°10.9	3	225°39.0	21°40.0
4	240°54.1	19°24.7	4	240°52.0	20°03.4	4	240°48.8	20°38.9	4	240°44.4	21°11.3	4	240°39.0	21°40.4
5	255°54.1	19°25.3	5	255°52.0	20°03.9	5	255°48.8	20°39.4	5	255°44.4	21°11.7	5	255°38.9	21°40.8
6	270°54.0	19°25.8	6	270°52.0	20°04.4	6	270°48.7	20°39.9	6	270°44.3	21°12.1	6	270°38.8	21°41.1
7	285°54.0	19°26.4	7	285°51.9	20°04.9	7	285°48.7	20°40.3	7	285°44.2	21°12.6	7	285°38.7	21°41.5
8	300°54.0	19°26.9	8	300°51.9	20°05.4	8	300°48.6	20°40.8	8	300°44.2	21°13.0	8	300°38.6	21°41.9
9	315°54.0	19°27.5	9	315°51.9	20°05.9	9	315°48.6	20°41.3	9	315°44.1	21°13.4	9	315°38.5	21°42.3
10	330°54.0	19°28.0	10	330°51.8	20°06.4	10	330°48.5	20°41.7	10	330°44.0	21°13.8	10	330°38.5	21°42.7
11	345°53.9	19°28.6	11	345°51.8	20°06.9	11	345°48.5	20°42.2	11	345°44.0	21°14.3	11	345°38.4	21°43.0
12	0°53.9	19°29.1	12	0°51.7	20°07.5	12	0°48.4	20°42.7	12	0°43.9	21°14.7	12	0°38.3	21°43.4
13	15°53.9	19°29.7	13	15°51.7	20°08.0	13	15°48.3	20°43.1	13	15°43.8	21°15.1	13	15°38.2	21°43.8
14	30°53.9	19°30.2	14	30°51.7	20°08.5	14	30°48.3	20°43.6	14	30°43.8	21°15.5	14	30°38.1	21°44.2
15	45°53.8	19°30.8	15	45°51.6	20°09.0	15	45°48.2	20°44.1	15	45°43.7	21°16.0	15	45°38.0	21°44.5
16	60°53.8	19°31.4	16	60°51.6	20°09.5	16	60°48.2	20°44.5	16	60°43.6	21°16.4	16	60°37.9	21°44.9
17	75°53.8	19°31.9	17	75°51.6	20°10.0	17	75°48.1	20°45.0	17	75°43.5	21°16.8	17	75°37.9	21°45.3
18	90°53.8	19°32.5	18	90°51.5	20°10.5	18	90°48.1	20°45.5	18	90°43.5	21°17.2	18	90°37.8	21°45.6
19	105°53.8	19°33.0	19	105°51.5	20°11.0	19	105°48.0	20°45.9	19	105°43.4	21°17.6	19	105°37.7	21°46.0
20	120°53.7	19°33.5	20	120°51.4	20°11.5	20	120°48.0	20°46.4	20	120°43.3	21°18.0	20	120°37.6	21°46.4
21	135°53.7	19°34.1	21	135°51.4	20°12.0	21	135°47.9	20°46.9	21	135°43.3	21°18.5	21	135°37.5	21°46.8
22	150°53.7	19°34.6	22	150°51.4	20°12.5	22	150°47.8	20°47.3	22	150°43.2	21°18.9	22	150°37.4	21°47.1
23	165°53.7	19°35.2	23	165°51.3	20°13.0	23	165°47.8	20°47.8	23	165°43.1	21°19.3			

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	180°37.3	21°47.9	0	180°30.5	22°12.6	0	180°22.8	22°33.9	0	180°14.4	22°51.6	0	180°05.5	23°05.7
1	195°37.2	21°48.2	1	195°30.4	22°12.9	1	195°22.7	22°34.2	1	195°14.3	22°51.8	1	195°05.3	23°05.9
2	210°37.1	21°48.6	2	210°30.3	22°13.3	2	210°22.6	22°34.4	2	210°14.2	22°52.0	2	210°05.2	23°06.0
3	225°37.0	21°49.0	3	225°30.2	22°13.6	3	225°22.5	22°34.7	3	225°14.1	22°52.3	3	225°05.1	23°06.2
4	240°36.9	21°49.3	4	240°30.1	22°13.9	4	240°22.4	22°35.0	4	240°13.9	22°52.5	4	240°05.0	23°06.4
5	255°36.8	21°49.7	5	255°30.0	22°14.2	5	255°22.2	22°35.2	5	255°13.8	22°52.7	5	255°04.8	23°06.5
6	270°36.7	21°50.1	6	270°29.9	22°14.5	6	270°22.1	22°35.5	6	270°13.7	22°52.9	6	270°04.7	23°06.7
7	285°36.6	21°50.4	7	285°29.8	22°14.8	7	285°22.0	22°35.8	7	285°13.6	22°53.1	7	285°04.6	23°06.9
8	300°36.5	21°50.8	8	300°29.7	22°15.2	8	300°21.9	22°36.0	8	300°13.5	22°53.3	8	300°04.5	23°07.0
9	315°36.5	21°51.1	9	315°29.6	22°15.5	9	315°21.8	22°36.3	9	315°13.3	22°53.6	9	315°04.3	23°07.2
10	330°36.4	21°51.5	10	330°29.5	22°15.8	10	330°21.7	22°36.6	10	330°13.2	22°53.8	10	330°04.2	23°07.4
11	345°36.3	21°51.9	11	345°29.4	22°16.1	11	345°21.6	22°36.8	11	345°13.1	22°54.0	11	345°04.1	23°07.5
12	0°36.2	21°52.2	12	0°29.3	22°16.4	12	0°21.5	22°37.1	12	0°13.0	22°54.2	12	0°03.9	23°07.7
13	15°36.1	21°52.6	13	15°29.1	22°16.7	13	15°21.3	22°37.3	13	15°12.8	22°54.4	13	15°03.8	23°07.9
14	30°36.0	21°52.9	14	30°29.0	22°17.0	14	30°21.2	22°37.6	14	30°12.7	22°54.6	14	30°03.7	23°08.0
15	45°35.9	21°53.3	15	45°28.9	22°17.3	15	45°21.1	22°37.9	15	45°12.6	22°54.8	15	45°03.6	23°08.2
16	60°35.8	21°53.7	16	60°28.8	22°17.6	16	60°21.0	22°38.1	16	60°12.5	22°55.0	16	60°03.4	23°08.3
17	75°35.7	21°54.0	17	75°28.7	22°18.0	17	75°20.9	22°38.4	17	75°12.4	22°55.3	17	75°03.3	23°08.5
18	90°35.6	21°54.4	18	90°28.6	22°18.3	18	90°20.8	22°38.6	18	90°12.2	22°55.5	18	90°03.2	23°08.7
19	105°35.6	21°54.7	19	105°28.5	22°18.6	19	105°20.7	22°38.9	19	105°12.1	22°55.7	19	105°03.0	23°08.8
20	120°35.5	21°55.1	20	120°28.4	22°18.9	20	120°20.5	22°39.2	20	120°12.0	22°55.9	20	120°02.9	23°09.0
21	135°35.4	21°55.4	21	135°28.3	22°19.2	21	135°20.4	22°39.4	21	135°11.9	22°56.1	21	135°02.8	23°09.1
22	150°35.3	21°55.8	22	150°28.2	22°19.5	22	150°20.3	22°39.7	22	150°11.7	22°56.3	22	150°02.7	23°09.3
23	165°35.2	21°56.1	23	165°28.1	22°19.8	23	165°20.2	22°39.9	23	165°11.6	22°56.5	23	165°02.5	23°09.4
	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

31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	180°35.1	21°56.5	0	180°28.0	22°20.1	0	180°20.1	22°40.2	0	180°11.5	22°56.7	0	180°02.4	23°09.6
1	195°35.0	21°56.8	1	195°27.9	22°20.4	1	195°20.0	22°40.4	1	195°11.4	22°56.9	1	195°02.3	23°09.7
2	210°34.9	21°57.2	2	210°27.8	22°20.7	2	210°19.9	22°40.7	2	210°11.2	22°57.1	2	210°02.1	23°09.9
3	225°34.8	21°57.5	3	225°27.7	22°21.0	3	225°19.7	22°40.9	3	225°11.1	22°57.3	3	225°02.0	23°10.0
4	240°34.7	21°57.9	4	240°27.6	22°21.3	4	240°19.6	22°41.2	4	240°11.0	22°57.5	4	240°01.9	23°10.2
5	255°34.6	21°58.2	5	255°27.5	22°21.6	5	255°19.5	22°41.4	5	255°10.9	22°57.7	5	255°01.7	23°10.3
6	270°34.5	21°58.6	6	270°27.4	22°21.9	6	270°19.4	22°41.7	6	270°10.8	22°57.9	6	270°01.6	23°10.5
7	285°34.4	21°58.9	7	285°27.3	22°22.2	7	285°19.3	22°41.9	7	285°10.6	22°58.1	7	285°01.5	23°10.6
8	300°34.4	21°59.3	8	300°27.2	22°22.5	8	300°19.2	22°42.2	8	300°10.5	22°58.3	8	300°01.4	23°10.8
9	315°34.3	21°59.6	9	315°27.1	22°22.8	9	315°19.0	22°42.4	9	315°10.4	22°58.5	9	315°01.2	23°10.9
10	330°34.2	21°60.0	10	330°27.0	22°23.1	10	330°18.9	22°42.7	10	330°10.3	22°58.7	10	330°01.1	23°11.1
11	345°34.1	22°00.3	11	345°26.8	22°23.4	11	345°18.8	22°42.9	11	345°10.1	22°58.9	11	345°01.0	23°11.2
12	0°34.0	22°00.7	12	0°26.7	22°23.7	12	0°18.7	22°43.2	12	0°10.0	22°59.1	12	0°00.8	23°11.4
13	15°33.9	22°01.0	13	15°26.6	22°24.0	13	15°18.6	22°43.4	13	15°09.9	22°59.3	13	15°00.7	23°11.5
14	30°33.8	22°01.4	14	30°26.5	22°24.3	14	30°18.5	22°43.7	14	30°09.8	22°59.5	14	30°00.6	23°11.7
15	45°33.7	22°01.7	15	45°26.4	22°24.6	15	45°18.3	22°43.9	15	45°09.6	22°59.7	15	45°00.5	23°11.8
16	60°33.6	22°02.0	16	60°26.3	22°24.9	16	60°18.2	22°44.2	16	60°09.5	22°59.9	16	60°00.3	23°11.9
17	75°33.5	22°02.4	17	75°26.2	22°25.2	17	75°18.1	22°44.4	17	75°09.4	23°00.1	17	75°00.2	23°12.1
18	90°33.4	22°02.7	18	90°26.1	22°25.4	18	90°18.0	22°44.7	18	90°09.3	23°00.3	18	90°00.1	23°12.2
19	105°33.3	22°03.1	19	105°26.0	22°25.7	19	105°17.9	22°44.9	19	105°09.1	23°00.5	19	104°59.9	23°12.4
20	120°33.2	22°03.4	20	120°25.9	22°26.0	20	120°17.8	22°45.1	20	120°09.0	23°00.6	20	119°59.8	23°12.5
21	135°33.1	22°03.7	21	135°25.8	22°26.3	21	135°17.6	22°45.4	21	135°08.9	23°00.8	21	134°59.7	23°12.7
22	150°33.0	22°04.1	22	150°25.7	22°26.6	22	150°17.5	22°45.6	22	150°08.8	23°01.0	22	149°59.5	23°12.8
23	165°32.9	22°04.4	23	165°25.6	22°26.9	23	165°17.4	22°45.9	23	165°08.6	23°01.2	23	164°59.4	23°12.9
	SD.=15.8	d=0.4		SD.=15.8	d=0.3		SD.=15.8	d=0.3		SD.=15.8	d=0.2		SD.=15.7	d=0.2

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	180°32.8	22°04.7	0	180°25.5	22°27.2	0	180°17.3	22°46.1	0	180°08.5	23°01.4	0	179°59.3	23°13.1
1	195°32.7	22°05.1	1	195°25.3	22°27.5	1	195°17.2	22°46.3	1	195°08.4	23°01.6	1	194°59.1	23°13.2
2	210°32.6	22°05.4	2	210°25.2	22°27.8	2	210°17.1	22°46.6	2	210°08.3	23°01.8	2	209°59.0	23°13.3
3	225°32.5	22°05.8	3	225°25.1	22°28.0	3	225°16.9	22°46.8	3	225°08.1	23°02.0	3	224°58.9	23°13.5
4	240°32.4	22°06.1	4	240°25.0	22°28.3	4	240°16.8	22°47.0	4	240°08.0	23°02.1	4	239°58.8	23°13.6
5	255°32.4	22°06.4	5	255°24.9	22°28.6	5	255°16.7	22°47.3	5	255°07.9	23°02.3	5	254°58.6	23°13.7
6	270°32.3	22°06.8	6	270°24.8	22°28.9	6	270°16.6	22°47.5	6	270°07.8	23°02.5	6	269°58.5	23°13.9
7	285°32.2	22°07.1	7	285°24.7	22°29.2	7	285°16.5	22°47.7	7	285°07.6	23°02.7	7	284°58.4	23°14.0
8	300°32.1	22°07.4	8	300°24.6	22°29.5	8	300°16.3	22°48.0	8	300°07.5	23°02.9	8	299°58.2	23°14.1
9	315°32.0	22°07.7	9	315°24.5	22°29.7	9	315°16.2	22°48.2	9	315°07.4	23°03.1	9	314°58.1	23°14.3
10	330°31.9	22°08.1	10	330°24.4	22°30.0	10	330°16.1	22°48.4	10	330°07.3	23°03.2	10	329°58.0	23°14.4
11	345°31.8	22°08.4	11	345°24.3	22°30.3	11	345°16.0	22°48.7	11	345°07.1	23°03.4	11	344°57.8	23°14.5
12	0°31.7	22°08.7	12	0°24.1	22°30.6	12	0°15.9	22°48.9	12	0°07.0	23°03.6	12	359°57.7	23°14.6
13	15°31.6	22°09.1	13	15°24.0	22°30.9	13	15°15.7	22°49.1	13	15°06.9	23°03.8	13	14°57.6	23°14.8
14	30°31.5	22°09.4	14	30°23.9	22°31.1	14	30°15.6	22°49.4	14	30°06.7	23°04.0	14	29°57.4	23°14.9
15	45°31.4	22°09.7	15	45°23.8	22°31.4	15	45°15.5	22°49.6	15	45°06.6	23°04.1	15	44°57.3	23°15.0
16	60°31.3	22°10.0	16	60°23.7	22°31.7	16	60°15.4	22°49.8	16	60°06.5	23°04.3	16	59°57.2	23°15.2
17	75°31.2	22°10.4	17	75°23.6	22°32.0	17	75°15.3	22°50.0	17	75°06.4	23°04.5	17	74°57.0	23°15.3
18	90°31.1	22°10.7	18	90°23.5	22°32.2	18	90°15.1	22°50.3	18	90°06.2	23°04.7	18	89°56.9	23°15.4
19	105°31.0	22°11.0	19	105°23.4	22°32.5	19	105°15.0	22°50.5	19	105°06.1	23°04.8	19	104°56.8	23°15.5
20	120°30.9	22°11.3	20	120°23.3	22°32.8	20	120°14.9	22°50.7	20	120°06.0	23°05.0	20	119°56.7	23°15.6
21	135°30.8	22°11.7	21	135°23.1	22°33.1	21	135°14.8	22°50.9	21	135°05.9	23°05.2	21	134°56.5	23°15.8
22	150°30.7	22°12.0	22	150°23.0	22°33.3	22	150°14.7	22°51.2	22	150°05.7	23°05.4	22	149°56.4	23°15.9
23	165°30.6	22°12.3	23	165°22.9	22°33.6	23	165°14.5	22°51.4	23	165°05.6	23°05.5	23	164°56.3	23°16.0
	SD.=15.													

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	179°56.1	23°16.1	0	179°46.5	23°22.9	0	179°36.8	23°25.9	0	179°27.1	23°25.2	0	179°17.6	23°20.8
1	194°56.0	23°16.3	1	194°46.4	23°22.9	1	194°36.7	23°25.9	1	194°27.0	23°25.2	1	194°17.5	23°20.7
2	209°55.9	23°16.4	2	209°46.3	23°23.0	2	209°36.5	23°25.9	2	209°26.9	23°25.1	2	209°17.3	23°20.6
3	224°55.7	23°16.5	3	224°46.1	23°23.1	3	224°36.4	23°25.9	3	224°26.7	23°25.1	3	224°17.2	23°20.5
4	239°55.6	23°16.6	4	239°46.0	23°23.1	4	239°36.3	23°26.0	4	239°26.6	23°25.1	4	239°17.1	23°20.4
5	254°55.5	23°16.7	5	254°45.9	23°23.2	5	254°36.1	23°26.0	5	254°26.5	23°25.0	5	254°16.9	23°20.3
6	269°55.3	23°16.8	6	269°45.7	23°23.3	6	269°36.0	23°26.0	6	269°26.3	23°25.0	6	269°16.8	23°20.3
7	284°55.2	23°17.0	7	284°45.6	23°23.3	7	284°35.9	23°26.0	7	284°26.2	23°24.9	7	284°16.7	23°20.2
8	299°55.1	23°17.1	8	299°45.4	23°23.4	8	299°35.7	23°26.0	8	299°26.0	23°24.9	8	299°16.5	23°20.1
9	314°54.9	23°17.2	9	314°45.3	23°23.5	9	314°35.6	23°26.0	9	314°25.9	23°24.9	9	314°16.4	23°20.0
10	329°54.8	23°17.3	10	329°45.2	23°23.5	10	329°35.5	23°26.0	10	329°25.8	23°24.8	10	329°16.3	23°19.9
11	344°54.7	23°17.4	11	344°45.0	23°23.6	11	344°35.3	23°26.0	11	344°25.6	23°24.8	11	344°16.2	23°19.8
12	359°54.5	23°17.5	12	359°44.9	23°23.6	12	359°35.2	23°26.0	12	359°25.5	23°24.7	12	359°16.0	23°19.7
13	14°54.4	23°17.6	13	14°44.8	23°23.7	13	14°35.1	23°26.0	13	14°25.4	23°24.7	13	14°15.9	23°19.6
14	29°54.3	23°17.7	14	29°44.6	23°23.8	14	29°34.9	23°26.1	14	29°25.2	23°24.6	14	29°15.8	23°19.5
15	44°54.1	23°17.8	15	44°44.5	23°23.8	15	44°34.8	23°26.1	15	44°25.1	23°24.6	15	44°15.6	23°19.4
16	59°54.0	23°18.0	16	59°44.4	23°23.9	16	59°34.6	23°26.1	16	59°25.0	23°24.5	16	59°15.5	23°19.3
17	74°53.9	23°18.1	17	74°44.2	23°23.9	17	74°34.5	23°26.1	17	74°24.8	23°24.5	17	74°15.4	23°19.2
18	89°53.7	23°18.2	18	89°44.1	23°24.0	18	89°34.4	23°26.1	18	89°24.7	23°24.4	18	89°15.2	23°19.1
19	104°53.6	23°18.3	19	104°44.0	23°24.0	19	104°34.2	23°26.1	19	104°24.6	23°24.4	19	104°15.1	23°19.0
20	119°53.5	23°18.4	20	119°43.8	23°24.1	20	119°34.1	23°26.1	20	119°24.4	23°24.3	20	119°15.0	23°18.9
21	134°53.3	23°18.5	21	134°43.7	23°24.1	21	134°34.0	23°26.1	21	134°24.3	23°24.3	21	134°14.9	23°18.8
22	149°53.2	23°18.6	22	149°43.6	23°24.2	22	149°33.8	23°26.1	22	149°24.2	23°24.2	22	149°14.7	23°18.7
23	164°53.1	23°18.7	23	164°43.4	23°24.2	23	164°33.7	23°26.1	23	164°24.1	23°24.2	23	164°14.6	23°18.6
	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

15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec	27	GHA	Dec
0	179°52.9	23°18.8	0	179°43.3	23°24.3	0	179°33.6	23°26.1	0	179°23.9	23°24.1	0	179°14.5	23°18.5
1	194°52.8	23°18.9	1	194°43.2	23°24.3	1	194°33.4	23°26.1	1	194°23.8	23°24.1	1	194°14.3	23°18.4
2	209°52.7	23°19.0	2	209°43.0	23°24.4	2	209°33.3	23°26.1	2	209°23.7	23°24.0	2	209°14.2	23°18.3
3	224°52.5	23°19.1	3	224°42.9	23°24.4	3	224°33.2	23°26.1	3	224°23.5	23°24.0	3	224°14.1	23°18.2
4	239°52.4	23°19.2	4	239°42.8	23°24.5	4	239°33.0	23°26.1	4	239°23.4	23°23.9	4	239°14.0	23°18.1
5	254°52.3	23°19.3	5	254°42.6	23°24.5	5	254°32.9	23°26.1	5	254°23.3	23°23.9	5	254°13.8	23°18.0
6	269°52.1	23°19.4	6	269°42.5	23°24.6	6	269°32.8	23°26.1	6	269°23.1	23°23.8	6	269°13.7	23°17.9
7	284°52.0	23°19.5	7	284°42.3	23°24.6	7	284°32.6	23°26.1	7	284°23.0	23°23.8	7	284°13.6	23°17.8
8	299°51.9	23°19.6	8	299°42.2	23°24.7	8	299°32.5	23°26.0	8	299°22.9	23°23.7	8	299°13.4	23°17.6
9	314°51.7	23°19.7	9	314°42.1	23°24.7	9	314°32.4	23°26.0	9	314°22.7	23°23.6	9	314°13.3	23°17.5
10	329°51.6	23°19.8	10	329°41.9	23°24.8	10	329°32.2	23°26.0	10	329°22.6	23°23.6	10	329°13.2	23°17.4
11	344°51.5	23°19.9	11	344°41.8	23°24.8	11	344°32.1	23°26.0	11	344°22.5	23°23.5	11	344°13.1	23°17.3
12	359°51.3	23°20.0	12	359°41.7	23°24.8	12	359°32.0	23°26.0	12	359°22.3	23°23.5	12	359°12.9	23°17.2
13	14°51.2	23°20.1	13	14°41.5	23°24.9	13	14°31.8	23°26.0	13	14°22.2	23°23.4	13	14°12.8	23°17.1
14	29°51.1	23°20.2	14	29°41.4	23°24.9	14	29°31.7	23°26.0	14	29°22.1	23°23.3	14	29°12.7	23°17.0
15	44°50.9	23°20.2	15	44°41.3	23°25.0	15	44°31.5	23°26.0	15	44°21.9	23°23.3	15	44°12.5	23°16.9
16	59°50.8	23°20.3	16	59°41.1	23°25.0	16	59°31.4	23°26.0	16	59°21.8	23°23.2	16	59°12.4	23°16.7
17	74°50.7	23°20.4	17	74°41.0	23°25.0	17	74°31.3	23°26.0	17	74°21.7	23°23.1	17	74°12.3	23°16.6
18	89°50.5	23°20.5	18	89°40.9	23°25.1	18	89°31.1	23°25.9	18	89°21.5	23°23.1	18	89°12.2	23°16.5
19	104°50.4	23°20.6	19	104°40.7	23°25.1	19	104°31.0	23°25.9	19	104°21.4	23°23.0	19	104°12.0	23°16.4
20	119°50.3	23°20.7	20	119°40.6	23°25.2	20	119°30.9	23°25.9	20	119°21.3	23°22.9	20	119°11.9	23°16.3
21	134°50.1	23°20.8	21	134°40.5	23°25.2	21	134°30.7	23°25.9	21	134°21.1	23°22.9	21	134°11.8	23°16.2
22	149°50.0	23°20.9	22	149°40.3	23°25.2	22	149°30.6	23°25.9	22	149°21.0	23°22.8	22	149°11.6	23°16.0
23	164°49.9	23°21.0	23	164°40.2	23°25.3	23	164°30.5	23°25.9	23	164°20.9	23°22.7	23	164°11.5	23°15.9
	SD.=15.7	d=0.1		SD.=15.7	d=0.1		SD.=15.7	d=0.0		SD.=15.7	d=-0.1		SD.=15.7	d=-0.1

16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec	28	GHA	Dec
0	179°49.7	23°21.0	0	179°40.1	23°25.3	0	179°30.3	23°25.8	0	179°20.7	23°22.7	0	179°11.4	23°15.8
1	194°49.6	23°21.1	1	194°39.9	23°25.3	1	194°30.2	23°25.8	1	194°20.6	23°22.6	1	194°11.3	23°15.7
2	209°49.5	23°21.2	2	209°39.8	23°25.4	2	209°30.1	23°25.8	2	209°20.5	23°22.5	2	209°11.1	23°15.6
3	224°49.3	23°21.3	3	224°39.6	23°25.4	3	224°29.9	23°25.8	3	224°20.3	23°22.5	3	224°11.0	23°15.4
4	239°49.2	23°21.4	4	239°39.5	23°25.4	4	239°29.8	23°25.8	4	239°20.2	23°22.4	4	239°10.9	23°15.3
5	254°49.1	23°21.5	5	254°39.4	23°25.5	5	254°29.7	23°25.7	5	254°20.1	23°22.3	5	254°10.8	23°15.2
6	269°48.9	23°21.5	6	269°39.2	23°25.5	6	269°29.5	23°25.7	6	269°19.9	23°22.2	6	269°10.6	23°15.1
7	284°48.8	23°21.6	7	284°39.1	23°25.5	7	284°29.4	23°25.7	7	284°19.8	23°22.2	7	284°10.5	23°14.9
8	299°48.7	23°21.7	8	299°39.0	23°25.5	8	299°29.3	23°25.7	8	299°19.7	23°22.1	8	299°10.4	23°14.8
9	314°48.5	23°21.8	9	314°38.8	23°25.6	9	314°29.1	23°25.7	9	314°19.6	23°22.0	9	314°10.2	23°14.7
10	329°48.4	23°21.9	10	329°38.7	23°25.6	10	329°29.0	23°25.6	10	329°19.4	23°21.9	10	329°10.1	23°14.6
11	344°48.3	23°21.9	11	344°38.6	23°25.6	11	344°28.9	23°25.6	11	344°19.3	23°21.9	11	344°10.0	23°14.4
12	359°48.1	23°22.0	12	359°38.4	23°25.6	12	359°28.7	23°25.6	12	359°19.2	23°21.8	12	359°09.9	23°14.3
13	14°48.0	23°22.1	13	14°38.3	23°25.7	13	14°28.6	23°25.5	13	14°19.0	23°21.7	13	14°09.7	23°14.2
14	29°47.9	23°22.2	14	29°38.2	23°25.7	14	29°28.5	23°25.5	14	29°18.9	23°21.6	14	29°09.6	23°14.0
15	44°47.7	23°22.2	15	44°38.0	23°25.7	15	44°28.3	23°25.5	15	44°18.8	23°21.5	15	44°09.5	23°13.9
16	59°47.6	23°22.3	16	59°37.9	23°25.7	16	59°28.2	23°25.5	16	59°18.6	23°21.5	16	59°09.4	23°13.8
17	74°47.5	23°22.4	17	74°37.8	23°25.8	17	74°28.1	23°25.4	17	74°18.5	23°21.4	17	74°09.2	23°13.6
18	89°47.3	23°22.5	18	89°37.6	23°25.8	18	89°27.9	23°25.4	18	89°18.4	23°21.3	18	89°09.1	23°13.5
19	104°47.2	23°22.5	19	104°37.5	23°25.8	19	104°27.8	23°25.4	19	104°18.2	23°21.2	19	104°09.0	23°13.4
20	119°47.1	23°22.6	20	119°37.3	23°25.8	20	119°27.7	23°25.3	20	119°18.1	23°21.1	20	119°08.9	23°13.2
21	134°46.9	23°22.7	21	134°37.2	23°25.8	21	134°27.5	23°25.3	21	134°18.0	23°21.1	21	134°08.7	23°13.1
22	149°46.8	23°22.7	22	149°37.1	23°25.9	22	149°27.4	23°25.3	22	149°17.9	23°21.0	22	149°08.6	23°13.0
23	164°46.7	23°22.8	23	164°36.9	23°25.9	2								

29	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	179°08.4	23°12.7	0	178°59.6	23°00.9	0	178°51.4	22°45.6	0	178°44.0	22°26.6	0	178°37.5	22°04.2
1	194°08.2	23°12.6	1	193°59.4	23°00.7	1	193°51.3	22°45.3	1	193°43.9	22°26.3	1	193°37.4	22°03.9
2	209°08.1	23°12.4	2	208°59.3	23°00.5	2	208°51.2	22°45.1	2	208°43.8	22°26.0	2	208°37.3	22°03.5
3	224°08.0	23°12.3	3	223°59.2	23°00.4	3	223°51.1	22°44.8	3	223°43.7	22°25.8	3	223°37.3	22°03.2
4	239°07.9	23°12.1	4	238°59.1	23°00.2	4	238°50.9	22°44.6	4	238°43.6	22°25.5	4	238°37.2	22°02.9
5	254°07.7	23°12.0	5	253°59.0	22°60.0	5	253°50.8	22°44.4	5	253°43.5	22°25.2	5	253°37.1	22°02.5
6	269°07.6	23°11.8	6	268°58.9	22°59.8	6	268°50.7	22°44.1	6	268°43.4	22°24.9	6	268°37.0	22°02.2
7	284°07.5	23°11.7	7	283°58.7	22°59.6	7	283°50.6	22°43.9	7	283°43.3	22°24.6	7	283°36.9	22°01.8
8	299°07.4	23°11.6	8	298°58.6	22°59.4	8	298°50.5	22°43.6	8	298°43.2	22°24.3	8	298°36.8	22°01.5
9	314°07.2	23°11.4	9	313°58.5	22°59.2	9	313°50.4	22°43.4	9	313°43.1	22°24.0	9	313°36.8	22°01.2
10	329°07.1	23°11.3	10	328°58.4	22°59.0	10	328°50.3	22°43.1	10	328°43.0	22°23.7	10	328°36.7	22°00.8
11	344°07.0	23°11.1	11	343°58.3	22°58.8	11	343°50.2	22°42.9	11	343°42.9	22°23.4	11	343°36.6	22°00.5
12	359°06.9	23°11.0	12	358°58.2	22°58.6	12	358°50.1	22°42.6	12	358°42.8	22°23.1	12	358°36.5	22°00.1
13	14°06.7	23°10.8	13	13°58.0	22°58.4	13	13°50.0	22°42.4	13	13°42.7	22°22.8	13	13°36.4	21°59.8
14	29°06.6	23°10.7	14	28°57.9	22°58.2	14	28°49.9	22°42.1	14	28°42.6	22°22.5	14	28°36.4	21°59.4
15	44°06.5	23°10.5	15	43°57.8	22°58.0	15	43°49.8	22°41.9	15	43°42.5	22°22.2	15	43°36.3	21°59.1
16	59°06.4	23°10.4	16	58°57.7	22°57.8	16	58°49.7	22°41.6	16	58°42.5	22°21.9	16	58°36.2	21°58.8
17	74°06.2	23°10.2	17	73°57.6	22°57.6	17	73°49.6	22°41.4	17	73°42.4	22°21.6	17	73°36.1	21°58.4
18	89°06.1	23°10.1	18	88°57.5	22°57.4	18	88°49.4	22°41.1	18	88°42.3	22°21.3	18	88°36.0	21°58.1
19	104°06.0	23°09.9	19	103°57.3	22°57.2	19	103°49.3	22°40.9	19	103°42.2	22°21.0	19	103°36.0	21°57.7
20	119°05.9	23°09.8	20	118°57.2	22°57.0	20	118°49.2	22°40.6	20	118°42.1	22°20.7	20	118°35.9	21°57.4
21	134°05.7	23°09.6	21	133°57.1	22°56.8	21	133°49.1	22°40.4	21	133°42.0	22°20.4	21	133°35.8	21°57.0
22	149°05.6	23°09.5	22	148°57.0	22°56.6	22	148°49.0	22°40.1	22	148°41.9	22°20.1	22	148°35.7	21°56.7
23	164°05.5	23°09.3	23	163°56.9	22°56.4	23	163°48.9	22°39.9	23	163°41.8	22°19.8	23	163°35.7	21°56.3
	SD.=15.7	d=-0.1		SD.=15.7	d=-0.2		SD.=15.7	d=-0.2		SD.=15.7	d=-0.3		SD.=15.7	d=-0.3

30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec	12	GHA	Dec
0	179°05.4	23°09.2	0	178°56.8	22°56.2	0	178°48.8	22°39.6	0	178°41.7	22°19.5	0	178°35.6	21°56.0
1	194°05.2	23°09.0	1	193°56.6	22°56.0	1	193°48.7	22°39.4	1	193°41.6	22°19.2	1	193°35.5	21°55.6
2	209°05.1	23°08.9	2	208°56.5	22°55.8	2	208°48.6	22°39.1	2	208°41.5	22°18.9	2	208°35.4	21°55.3
3	224°05.0	23°08.7	3	223°56.4	22°55.6	3	223°48.5	22°38.9	3	223°41.4	22°18.6	3	223°35.3	21°54.9
4	239°04.9	23°08.5	4	238°56.3	22°55.4	4	238°48.4	22°38.6	4	238°41.3	22°18.3	4	238°35.3	21°54.6
5	254°04.8	23°08.4	5	253°56.2	22°55.2	5	253°48.3	22°38.3	5	253°41.2	22°18.0	5	253°35.2	21°54.2
6	269°04.6	23°08.2	6	268°56.1	22°55.0	6	268°48.2	22°38.1	6	268°41.1	22°17.7	6	268°35.1	21°53.9
7	284°04.5	23°08.1	7	283°56.0	22°54.7	7	283°48.1	22°37.8	7	283°41.1	22°17.4	7	283°35.0	21°53.5
8	299°04.4	23°07.9	8	298°55.8	22°54.5	8	298°48.0	22°37.6	8	298°41.0	22°17.1	8	298°35.0	21°53.1
9	314°04.3	23°07.8	9	313°55.7	22°54.3	9	313°47.9	22°37.3	9	313°40.9	22°16.8	9	313°34.9	21°52.8
10	329°04.1	23°07.6	10	328°55.6	22°54.1	10	328°47.8	22°37.1	10	328°40.8	22°16.5	10	328°34.8	21°52.4
11	344°04.0	23°07.4	11	343°55.5	22°53.9	11	343°47.7	22°36.8	11	343°40.7	22°16.2	11	343°34.7	21°52.1
12	359°03.9	23°07.3	12	358°55.4	22°53.7	12	358°47.6	22°36.5	12	358°40.6	22°15.8	12	358°34.7	21°51.7
13	14°03.8	23°07.1	13	13°55.3	22°53.5	13	13°47.5	22°36.3	13	13°40.5	22°15.5	13	13°34.6	21°51.4
14	29°03.6	23°06.9	14	28°55.2	22°53.3	14	28°47.4	22°36.0	14	28°40.4	22°15.2	14	28°34.5	21°51.0
15	44°03.5	23°06.8	15	43°55.0	22°53.0	15	43°47.3	22°35.7	15	43°40.3	22°14.9	15	43°34.4	21°50.6
16	59°03.4	23°06.6	16	58°54.9	22°52.8	16	58°47.2	22°35.5	16	58°40.3	22°14.6	16	58°34.4	21°50.3
17	74°03.3	23°06.4	17	73°54.8	22°52.6	17	73°47.1	22°35.2	17	73°40.2	22°14.3	17	73°34.3	21°49.9
18	89°03.2	23°06.3	18	88°54.7	22°52.4	18	88°47.0	22°34.9	18	88°40.1	22°14.0	18	88°34.2	21°49.5
19	104°03.0	23°06.1	19	103°54.6	22°52.2	19	103°46.9	22°34.7	19	103°40.0	22°13.6	19	103°34.1	21°49.2
20	119°02.9	23°05.9	20	118°54.5	22°52.0	20	118°46.8	22°34.4	20	118°39.9	22°13.3	20	118°34.1	21°48.8
21	134°02.8	23°05.8	21	133°54.4	22°51.7	21	133°46.7	22°34.1	21	133°39.8	22°13.0	21	133°34.0	21°48.5
22	149°02.7	23°05.6	22	148°54.3	22°51.5	22	148°46.5	22°33.9	22	148°39.7	22°12.7	22	148°33.9	21°48.1
23	164°02.6	23°05.4	23	163°54.1	22°51.3	23	163°46.4	22°33.6	23	163°39.6	22°12.4	23	163°33.8	21°47.7
	SD.=15.7	d=-0.2		SD.=15.7	d=-0.2		SD.=15.7	d=-0.3		SD.=15.7	d=-0.3		SD.=15.7	d=-0.4

01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec	13	GHA	Dec
0	179°02.4	23°05.3	0	178°54.0	22°51.1	0	178°46.3	22°33.3	0	178°39.5	22°12.1	0	178°33.8	21°47.4
1	194°02.3	23°05.1	1	193°53.9	22°50.9	1	193°46.2	22°33.1	1	193°39.5	22°11.7	1	193°33.7	21°47.0
2	209°02.2	23°04.9	2	208°53.8	22°50.6	2	208°46.1	22°32.8	2	208°39.4	22°11.4	2	208°33.6	21°46.6
3	224°02.1	23°04.7	3	223°53.7	22°50.4	3	223°46.0	22°32.5	3	223°39.3	22°11.1	3	223°33.5	21°46.3
4	239°02.0	23°04.6	4	238°53.6	22°50.2	4	238°45.9	22°32.2	4	238°39.2	22°10.8	4	238°33.5	21°45.9
5	254°01.8	23°04.4	5	253°53.5	22°50.0	5	253°45.8	22°32.0	5	253°39.1	22°10.5	5	253°33.4	21°45.5
6	269°01.7	23°04.2	6	268°53.4	22°49.7	6	268°45.7	22°31.7	6	268°39.0	22°10.1	6	268°33.3	21°45.2
7	284°01.6	23°04.0	7	283°53.2	22°49.5	7	283°45.6	22°31.4	7	283°38.9	22°09.8	7	283°33.3	21°44.8
8	299°01.5	23°03.9	8	298°53.1	22°49.3	8	298°45.5	22°31.1	8	298°38.9	22°09.5	8	298°33.2	21°44.4
9	314°01.3	23°03.7	9	313°53.0	22°49.0	9	313°45.4	22°30.9	9	313°38.8	22°09.2	9	313°33.1	21°44.0
10	329°01.2	23°03.5	10	328°52.9	22°48.8	10	328°45.3	22°30.6	10	328°38.7	22°08.8	10	328°33.0	21°43.7
11	344°01.1	23°03.3	11	343°52.8	22°48.6	11	343°45.2	22°30.3	11	343°38.6	22°08.5	11	343°33.0	21°43.3
12	359°01.0	23°03.1	12	358°52.7	22°48.4	12	358°45.1	22°30.0	12	358°38.5	22°08.2	12	358°32.9	21°42.9
13	14°00.9	23°03.0	13	13°52.6	22°48.1	13	13°45.1	22°29.7	13	13°38.4	22°07.9	13	13°32.8	21°42.5
14	29°00.8	23°02.8	14	28°52.5	22°47.9	14	28°45.0	22°29.5	14	28°38.3	22°07.5	14	28°32.8	21°42.2
15	44°00.6	23°02.6	15	43°52.4	22°47.7	15	43°44.9	22°29.2	15	43°38.3	22°07.2	15	43°32.7	21°41.8
16	59°00.5	23°02.4	16	58°52.3	22°47.4	16	58°44.8	22°28.9	16	58°38.2	22°06.9	16	58°32.6	21°41.4
17	74°00.4	23°02.2	17	73°52.1	22°47.2	17	73°44.7	22°28.6	17	73°38.1	22°06.5	17	73°32.6	21°41.0
18	89°00.3	23°02.0	18	88°52.0	22°47.0	18	88°44.6	22°28.3	18	88°38.0	22°06.2	18	88°32.5	21°40.7
19	104°00.2	23°01.9	19	103°51.9	22°46.7	19	103°44.5	22°28.0	19	103°37.9	22°05.9	19	103°32.4	21°40.3
20	119°00.0	23°01.7	20	118°51.8	22°46.5	20	118°44.4	22°27.8	20	118°37.8	22°05.5	20	118°32.4	21°39.9
21	133°59.9	23°01.5	21	133°51.7	22°46.3	21	133°44.3	22°27.5	21	133°37.8	22°05.2	21	133°32.3	21°39.5
22	148°59.8	23°01.3	22	148°51.6	22°46.0	22	148°44.2	22°27.2	22	148°37.7	22°04.9	22	148°32.2	21°39.1
23	163°59.7	23°01.1	23	163°51.5	22°45.8	23	163°44.1	22°26.9	23	163°37.6	22°04.5	23	163°32.1	



<b>14</b>	<b>GHA</b>	<b>Dec</b>	<b>17</b>	<b>GHA</b>	<b>Dec</b>	<b>20</b>	<b>GHA</b>	<b>Dec</b>	<b>23</b>	<b>GHA</b>	<b>Dec</b>	<b>26</b>	<b>GHA</b>	<b>Dec</b>
0	178°32.1	21°38.4	0	178°27.8	21°09.2	0	178°24.7	20°36.9	0	178°22.9	20°01.4	0	178°22.4	19°22.9
1	193°32.0	21°38.0	1	193°27.8	21°08.8	1	193°24.7	20°36.4	1	193°22.9	20°00.9	1	193°22.4	19°22.4
2	208°31.9	21°37.6	2	208°27.7	21°08.4	2	208°24.7	20°35.9	2	208°22.9	20°00.4	2	208°22.4	19°21.8
3	223°31.9	21°37.2	3	223°27.7	21°08.0	3	223°24.6	20°35.5	3	223°22.9	19°59.9	3	223°22.4	19°21.2
4	238°31.8	21°36.8	4	238°27.6	21°07.5	4	238°24.6	20°35.0	4	238°22.9	19°59.3	4	238°22.4	19°20.7
5	253°31.7	21°36.5	5	253°27.6	21°07.1	5	253°24.6	20°34.5	5	253°22.9	19°58.8	5	253°22.4	19°20.1
6	268°31.7	21°36.1	6	268°27.5	21°06.7	6	268°24.5	20°34.0	6	268°22.8	19°58.3	6	268°22.4	19°19.6
7	283°31.6	21°35.7	7	283°27.5	21°06.2	7	283°24.5	20°33.6	7	283°22.8	19°57.8	7	283°22.4	19°19.0
8	298°31.5	21°35.3	8	298°27.4	21°05.8	8	298°24.5	20°33.1	8	298°22.8	19°57.3	8	298°22.4	19°18.5
9	313°31.5	21°34.9	9	313°27.4	21°05.4	9	313°24.4	20°32.6	9	313°22.8	19°56.8	9	313°22.4	19°17.9
10	328°31.4	21°34.5	10	328°27.3	21°04.9	10	328°24.4	20°32.1	10	328°22.8	19°56.2	10	328°22.4	19°17.3
11	343°31.4	21°34.1	11	343°27.3	21°04.5	11	343°24.4	20°31.7	11	343°22.8	19°55.7	11	343°22.4	19°16.8
12	358°31.3	21°33.8	12	358°27.2	21°04.1	12	358°24.4	20°31.2	12	358°22.8	19°55.2	12	358°22.4	19°16.2
13	13°31.2	21°33.4	13	13°27.2	21°03.6	13	13°24.3	20°30.7	13	13°22.7	19°54.7	13	13°22.5	19°15.7
14	28°31.2	21°33.0	14	28°27.1	21°03.2	14	28°24.3	20°30.2	14	28°22.7	19°54.1	14	28°22.5	19°15.1
15	43°31.1	21°32.6	15	43°27.1	21°02.8	15	43°24.3	20°29.7	15	43°22.7	19°53.6	15	43°22.5	19°14.5
16	58°31.0	21°32.2	16	58°27.0	21°02.3	16	58°24.2	20°29.3	16	58°22.7	19°53.1	16	58°22.5	19°14.0
17	73°31.0	21°31.8	17	73°27.0	21°01.9	17	73°24.2	20°28.8	17	73°22.7	19°52.6	17	73°22.5	19°13.4
18	88°30.9	21°31.4	18	88°26.9	21°01.4	18	88°24.2	20°28.3	18	88°22.7	19°52.1	18	88°22.5	19°12.8
19	103°30.8	21°31.0	19	103°26.9	21°01.0	19	103°24.1	20°27.8	19	103°22.7	19°51.5	19	103°22.5	19°12.3
20	118°30.8	21°30.6	20	118°26.8	21°00.6	20	118°24.1	20°27.3	20	118°22.7	19°51.0	20	118°22.5	19°11.7
21	133°30.7	21°30.2	21	133°26.8	21°00.1	21	133°24.1	20°26.8	21	133°22.6	19°50.5	21	133°22.5	19°11.1
22	148°30.6	21°29.8	22	148°26.7	20°59.7	22	148°24.1	20°26.4	22	148°22.6	19°50.0	22	148°22.5	19°10.6
23	163°30.6	21°29.4	23	163°26.7	20°59.2	23	163°24.0	20°25.9	23	163°22.6	19°49.4	23	163°22.5	19°10.0
	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
<b>15</b>	<b>GHA</b>	<b>Dec</b>	<b>18</b>	<b>GHA</b>	<b>Dec</b>	<b>21</b>	<b>GHA</b>	<b>Dec</b>	<b>24</b>	<b>GHA</b>	<b>Dec</b>	<b>27</b>	<b>GHA</b>	<b>Dec</b>
0	178°30.5	21°29.0	0	178°26.6	20°58.8	0	178°24.0	20°25.4	0	178°22.6	19°48.9	0	178°22.5	19°09.4
1	193°30.5	21°28.6	1	193°26.6	20°58.4	1	193°24.0	20°24.9	1	193°22.6	19°48.4	1	193°22.5	19°08.9
2	208°30.4	21°28.2	2	208°26.6	20°57.9	2	208°23.9	20°24.4	2	208°22.6	19°47.8	2	208°22.5	19°08.3
3	223°30.3	21°27.8	3	223°26.5	20°57.5	3	223°23.9	20°23.9	3	223°22.6	19°47.3	3	223°22.5	19°07.7
4	238°30.3	21°27.4	4	238°26.5	20°57.0	4	238°23.9	20°23.4	4	238°22.6	19°46.8	4	238°22.6	19°07.2
5	253°30.2	21°27.0	5	253°26.4	20°56.6	5	253°23.9	20°23.0	5	253°22.6	19°46.3	5	253°22.6	19°06.6
6	268°30.2	21°26.6	6	268°26.4	20°56.1	6	268°23.8	20°22.5	6	268°22.6	19°45.7	6	268°22.6	19°06.0
7	283°30.1	21°26.2	7	283°26.3	20°55.7	7	283°23.8	20°22.0	7	283°22.6	19°45.2	7	283°22.6	19°05.4
8	298°30.0	21°25.8	8	298°26.3	20°55.2	8	298°23.8	20°21.5	8	298°22.5	19°44.7	8	298°22.6	19°04.9
9	313°30.0	21°25.4	9	313°26.2	20°54.8	9	313°23.8	20°21.0	9	313°22.5	19°44.1	9	313°22.6	19°04.3
10	328°29.9	21°25.0	10	328°26.2	20°54.4	10	328°23.7	20°20.5	10	328°22.5	19°43.6	10	328°22.6	19°03.7
11	343°29.9	21°24.6	11	343°26.2	20°53.9	11	343°23.7	20°20.0	11	343°22.5	19°43.1	11	343°22.6	19°03.2
12	358°29.8	21°24.2	12	358°26.1	20°53.5	12	358°23.7	20°19.5	12	358°22.5	19°42.5	12	358°22.6	19°02.6
13	13°29.7	21°23.8	13	13°26.1	20°53.0	13	13°23.7	20°19.0	13	13°22.5	19°42.0	13	13°22.6	19°02.0
14	28°29.7	21°23.4	14	28°26.0	20°52.6	14	28°23.6	20°18.5	14	28°22.5	19°41.5	14	28°22.7	19°01.4
15	43°29.6	21°23.0	15	43°26.0	20°52.1	15	43°23.6	20°18.0	15	43°22.5	19°40.9	15	43°22.7	19°00.8
16	58°29.6	21°22.6	16	58°25.9	20°51.7	16	58°23.6	20°17.5	16	58°22.5	19°40.4	16	58°22.7	19°00.3
17	73°29.5	21°22.2	17	73°25.9	20°51.2	17	73°23.6	20°17.1	17	73°22.5	19°39.8	17	73°22.7	18°59.7
18	88°29.4	21°21.8	18	88°25.9	20°50.7	18	88°23.5	20°16.6	18	88°22.5	19°39.3	18	88°22.7	18°59.1
19	103°29.4	21°21.4	19	103°25.8	20°50.3	19	103°23.5	20°16.1	19	103°22.5	19°38.8	19	103°22.7	18°58.5
20	118°29.3	21°21.0	20	118°25.8	20°49.8	20	118°23.5	20°15.6	20	118°22.5	19°38.2	20	118°22.7	18°58.0
21	133°29.3	21°20.6	21	133°25.7	20°49.4	21	133°23.5	20°15.1	21	133°22.5	19°37.7	21	133°22.7	18°57.4
22	148°29.2	21°20.1	22	148°25.7	20°48.9	22	148°23.4	20°14.6	22	148°22.5	19°37.2	22	148°22.8	18°56.8
23	163°29.2	21°19.7	23	163°25.7	20°48.5	23	163°23.4	20°14.1	23	163°22.4	19°36.6	23	163°22.8	18°56.2
	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
<b>16</b>	<b>GHA</b>	<b>Dec</b>	<b>19</b>	<b>GHA</b>	<b>Dec</b>	<b>22</b>	<b>GHA</b>	<b>Dec</b>	<b>25</b>	<b>GHA</b>	<b>Dec</b>	<b>28</b>	<b>GHA</b>	<b>Dec</b>
0	178°29.1	21°19.3	0	178°25.6	20°48.0	0	178°23.4	20°13.6	0	178°22.4	19°36.1	0	178°22.8	18°55.6
1	193°29.0	21°18.9	1	193°25.6	20°47.6	1	193°23.4	20°13.1	1	193°22.4	19°35.5	1	193°22.8	18°55.1
2	208°29.0	21°18.5	2	208°25.5	20°47.1	2	208°23.4	20°12.6	2	208°22.4	19°35.0	2	208°22.8	18°54.5
3	223°28.9	21°18.1	3	223°25.5	20°46.6	3	223°23.3	20°12.1	3	223°22.4	19°34.4	3	223°22.8	18°53.9
4	238°28.9	21°17.7	4	238°25.5	20°46.2	4	238°23.3	20°11.6	4	238°22.4	19°33.9	4	238°22.8	18°53.3
5	253°28.8	21°17.2	5	253°25.4	20°45.7	5	253°23.3	20°11.1	5	253°22.4	19°33.4	5	253°22.9	18°52.7
6	268°28.8	21°16.8	6	268°25.4	20°45.3	6	268°23.3	20°10.6	6	268°22.4	19°32.8	6	268°22.9	18°52.1
7	283°28.7	21°16.4	7	283°25.4	20°44.8	7	283°23.2	20°10.1	7	283°22.4	19°32.3	7	283°22.9	18°51.6
8	298°28.7	21°16.0	8	298°25.3	20°44.3	8	298°23.2	20°09.5	8	298°22.4	19°31.7	8	298°22.9	18°51.0
9	313°28.6	21°15.6	9	313°25.3	20°43.9	9	313°23.2	20°09.0	9	313°22.4	19°31.2	9	313°22.9	18°50.4
10	328°28.5	21°15.2	10	328°25.2	20°43.4	10	328°23.2	20°08.5	10	328°22.4	19°30.6	10	328°22.9	18°49.8
11	343°28.5	21°14.7	11	343°25.2	20°43.0	11	343°23.2	20°08.0	11	343°22.4	19°30.1	11	343°22.9	18°49.2
12	358°28.4	21°14.3	12	358°25.2	20°42.5	12	358°23.1	20°07.5	12	358°22.4	19°29.5	12	358°23.0	18°48.6
13	13°28.4	21°13.9	13	13°25.1	20°42.0	13	13°23.1	20°07.0	13	13°22.4	19°29.0	13	13°23.0	18°48.0
14	28°28.3	21°13.5	14	28°25.1	20°41.6	14	28°23.1	20°06.5	14	28°22.4	19°28.4	14	28°23.0	18°47.4
15	43°28.3	21°13.1	15	43°25.1	20°41.1	15	43°23.1	20°06.0	15	43°22.4	19°27.9	15	43°23.0	18°46.9
16	58°28.2	21°12.6	16	58°25.0</										

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	178°23.2	18°41.5	0	178°25.3	17°57.4	0	178°28.7	17°10.6	0	178°33.5	16°21.3	0	178°39.7	15°29.7
1	193°23.2	18°40.9	1	193°25.3	17°56.7	1	193°28.8	17°09.9	1	193°33.6	16°20.6	1	193°39.8	15°28.9
2	208°23.2	18°40.3	2	208°25.4	17°56.1	2	208°28.8	17°09.3	2	208°33.7	16°19.9	2	208°39.9	15°28.2
3	223°23.2	18°39.7	3	223°25.4	17°55.5	3	223°28.9	17°08.6	3	223°33.8	16°19.2	3	223°40.0	15°27.5
4	238°23.3	18°39.1	4	238°25.4	17°54.8	4	238°28.9	17°07.9	4	238°33.8	16°18.5	4	238°40.1	15°26.7
5	253°23.3	18°38.6	5	253°25.5	17°54.2	5	253°29.0	17°07.2	5	253°33.9	16°17.8	5	253°40.2	15°26.0
6	268°23.3	18°38.0	6	268°25.5	17°53.6	6	268°29.1	17°06.6	6	268°34.0	16°17.1	6	268°40.3	15°25.3
7	283°23.3	18°37.4	7	283°25.6	17°52.9	7	283°29.1	17°05.9	7	283°34.1	16°16.4	7	283°40.4	15°24.5
8	298°23.4	18°36.8	8	298°25.6	17°52.3	8	298°29.2	17°05.2	8	298°34.1	16°15.7	8	298°40.4	15°23.8
9	313°23.4	18°36.2	9	313°25.6	17°51.7	9	313°29.2	17°04.6	9	313°34.2	16°15.0	9	313°40.5	15°23.0
10	328°23.4	18°35.6	10	328°25.7	17°51.0	10	328°29.3	17°03.9	10	328°34.3	16°14.3	10	328°40.6	15°22.3
11	343°23.4	18°35.0	11	343°25.7	17°50.4	11	343°29.4	17°03.2	11	343°34.4	16°13.6	11	343°40.7	15°21.6
12	358°23.4	18°34.4	12	358°25.8	17°49.8	12	358°29.4	17°02.5	12	358°34.5	16°12.9	12	358°40.8	15°20.8
13	13°23.5	18°33.8	13	13°25.8	17°49.1	13	13°29.5	17°01.9	13	13°34.5	16°12.2	13	13°40.9	15°20.1
14	28°23.5	18°33.2	14	28°25.8	17°48.5	14	28°29.5	17°01.2	14	28°34.6	16°11.4	14	28°41.0	15°19.4
15	43°23.5	18°32.6	15	43°25.9	17°47.8	15	43°29.6	17°00.5	15	43°34.7	16°10.7	15	43°41.1	15°18.6
16	58°23.5	18°32.0	16	58°25.9	17°47.2	16	58°29.7	16°59.9	16	58°34.8	16°10.0	16	58°41.2	15°17.9
17	73°23.6	18°31.4	17	73°26.0	17°46.6	17	73°29.7	16°59.2	17	73°34.9	16°09.3	17	73°41.3	15°17.1
18	88°23.6	18°30.7	18	88°26.0	17°45.9	18	88°29.8	16°58.5	18	88°34.9	16°08.6	18	88°41.4	15°16.4
19	103°23.6	18°30.1	19	103°26.1	17°45.3	19	103°29.9	16°57.8	19	103°35.0	16°07.9	19	103°41.5	15°15.7
20	118°23.6	18°29.5	20	118°26.1	17°44.6	20	118°29.9	16°57.1	20	118°35.1	16°07.2	20	118°41.6	15°14.9
21	133°23.7	18°28.9	21	133°26.1	17°44.0	21	133°30.0	16°56.5	21	133°35.2	16°06.5	21	133°41.7	15°14.2
22	148°23.7	18°28.3	22	148°26.2	17°43.4	22	148°30.0	16°55.8	22	148°35.3	16°05.8	22	148°41.8	15°13.4
23	163°23.7	18°27.7	23	163°26.2	17°42.7	23	163°30.1	16°55.1	23	163°35.3	16°05.1	23	163°41.9	15°12.7
	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

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	178°23.7	18°27.1	0	178°26.3	17°42.1	0	178°30.2	16°54.4	0	178°35.4	16°04.3	0	178°42.0	15°11.9
1	193°23.8	18°26.5	1	193°26.3	17°41.4	1	193°30.2	16°53.8	1	193°35.5	16°03.6	1	193°42.1	15°11.2
2	208°23.8	18°25.9	2	208°26.4	17°40.8	2	208°30.3	16°53.1	2	208°35.6	16°02.9	2	208°42.2	15°10.5
3	223°23.8	18°25.3	3	223°26.4	17°40.1	3	223°30.4	16°52.4	3	223°35.7	16°02.2	3	223°42.3	15°09.7
4	238°23.8	18°24.7	4	238°26.5	17°39.5	4	238°30.4	16°51.7	4	238°35.8	16°01.5	4	238°42.4	15°09.0
5	253°23.9	18°24.1	5	253°26.5	17°38.8	5	253°30.5	16°51.0	5	253°35.8	16°00.8	5	253°42.5	15°08.2
6	268°23.9	18°23.5	6	268°26.5	17°38.2	6	268°30.6	16°50.4	6	268°35.9	16°00.1	6	268°42.6	15°07.5
7	283°23.9	18°22.9	7	283°26.6	17°37.6	7	283°30.6	16°49.7	7	283°36.0	15°59.4	7	283°42.7	15°06.7
8	298°24.0	18°22.2	8	298°26.6	17°36.9	8	298°30.7	16°49.0	8	298°36.1	15°58.6	8	298°42.8	15°06.0
9	313°24.0	18°21.6	9	313°26.7	17°36.3	9	313°30.8	16°48.3	9	313°36.2	15°57.9	9	313°43.0	15°05.2
10	328°24.0	18°21.0	10	328°26.7	17°35.6	10	328°30.8	16°47.6	10	328°36.3	15°57.2	10	328°43.1	15°04.5
11	343°24.0	18°20.4	11	343°26.8	17°35.0	11	343°30.9	16°46.9	11	343°36.3	15°56.5	11	343°43.2	15°03.7
12	358°24.1	18°19.8	12	358°26.8	17°34.3	12	358°30.9	16°46.3	12	358°36.4	15°55.8	12	358°43.3	15°03.0
13	13°24.1	18°19.2	13	13°26.9	17°33.7	13	13°31.0	16°45.6	13	13°36.5	15°55.1	13	13°43.4	15°02.2
14	28°24.1	18°18.6	14	28°26.9	17°33.0	14	28°31.1	16°44.9	14	28°36.6	15°54.3	14	28°43.5	15°01.5
15	43°24.2	18°18.0	15	43°27.0	17°32.4	15	43°31.2	16°44.2	15	43°36.7	15°53.6	15	43°43.6	15°00.7
16	58°24.2	18°17.3	16	58°27.0	17°31.7	16	58°31.2	16°43.5	16	58°36.8	15°52.9	16	58°43.7	14°60.0
17	73°24.2	18°16.7	17	73°27.1	17°31.1	17	73°31.3	16°42.8	17	73°36.9	15°52.2	17	73°43.8	14°59.2
18	88°24.2	18°16.1	18	88°27.1	17°30.4	18	88°31.4	16°42.1	18	88°37.0	15°51.5	18	88°43.9	14°58.5
19	103°24.3	18°15.5	19	103°27.2	17°29.7	19	103°31.4	16°41.5	19	103°37.0	15°50.7	19	103°44.0	14°57.7
20	118°24.3	18°14.9	20	118°27.2	17°29.1	20	118°31.5	16°40.8	20	118°37.1	15°50.0	20	118°44.1	14°57.0
21	133°24.3	18°14.3	21	133°27.3	17°28.4	21	133°31.6	16°40.1	21	133°37.2	15°49.3	21	133°44.2	14°56.2
22	148°24.4	18°13.6	22	148°27.3	17°27.8	22	148°31.6	16°39.4	22	148°37.3	15°48.6	22	148°44.3	14°55.5
23	163°24.4	18°13.0	23	163°27.4	17°27.1	23	163°31.7	16°38.7	23	163°37.4	15°47.9	23	163°44.4	14°54.7
	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°24.4	18°12.4	0	178°27.4	17°26.5	0	178°31.8	16°38.0	0	178°37.5	15°47.1	0	178°44.5	14°54.0
1	193°24.5	18°11.8	1	193°27.5	17°25.8	1	193°31.8	16°37.3	1	193°37.6	15°46.4	1	193°44.6	14°53.2
2	208°24.5	18°11.2	2	208°27.5	17°25.2	2	208°31.9	16°36.6	2	208°37.7	15°45.7	2	208°44.7	14°52.5
3	223°24.5	18°10.5	3	223°27.6	17°24.5	3	223°32.0	16°35.9	3	223°37.7	15°45.0	3	223°44.9	14°51.7
4	238°24.6	18°09.9	4	238°27.6	17°23.8	4	238°32.1	16°35.2	4	238°37.8	15°44.2	4	238°45.0	14°51.0
5	253°24.6	18°09.3	5	253°27.7	17°23.2	5	253°32.1	16°34.5	5	253°37.9	15°43.5	5	253°45.1	14°50.2
6	268°24.6	18°08.7	6	268°27.7	17°22.5	6	268°32.2	16°33.9	6	268°38.0	15°42.8	6	268°45.2	14°49.5
7	283°24.7	18°08.0	7	283°27.8	17°21.9	7	283°32.3	16°33.2	7	283°38.1	15°42.1	7	283°45.3	14°48.7
8	298°24.7	18°07.4	8	298°27.8	17°21.2	8	298°32.3	16°32.5	8	298°38.2	15°41.3	8	298°45.4	14°47.9
9	313°24.7	18°06.8	9	313°27.9	17°20.6	9	313°32.4	16°31.8	9	313°38.3	15°40.6	9	313°45.5	14°47.2
10	328°24.8	18°06.2	10	328°27.9	17°19.9	10	328°32.5	16°31.1	10	328°38.4	15°39.9	10	328°45.6	14°46.4
11	343°24.8	18°05.5	11	343°28.0	17°19.2	11	343°32.6	16°30.4	11	343°38.5	15°39.2	11	343°45.7	14°45.7
12	358°24.8	18°04.9	12	358°28.1	17°18.6	12	358°32.6	16°29.7	12	358°38.6	15°38.4	12	358°45.8	14°44.9
13	13°24.9	18°04.3	13	13°28.1	17°17.9	13	13°32.7	16°29.0	13	13°38.7	15°37.7	13	13°45.9	14°44.2
14	28°24.9	18°03.7	14	28°28.2	17°17.2	14	28°32.8	16°28.3	14	28°38.7	15°37.0	14	28°46.1	14°43.4
15	43°24.9	18°03.0	15	43°28.2	17°16.6	15	43°32.8	16°27.6	15	43°38.8	15°36.2	15	43°46.2	14°42.6
16	58°25.0	18°02.4	16	58°28.3	17°15.9	16	58°32.9	16°26.9	16	58°38.9	15°35.5	16	58°46.3	14°41.9
17	73°25.0	18°01.8	17	73°28.3	17°15.3	17	73°33.0	16°26.2	17	73°39.0	15°34.8	17	73°46.4	14°41.1
18	88°25.1	18°01.2	18	88°28.4	17°14.6	18	88°33.1	16°25.5	18	88°39.1	15°34.1	18	88°46.5	14°40.4
19	103°25.1	18°00.5	19	103°28.4	17°13.9	19	103°33.1	16°24.8	19	103°39.2	15°33.3	19	103°46.6	14°39.6
20	118°25.1	17°59.9	20	118°28.5	17°13.3	20	118°33.2	16°24.1	20	118°39.3	15°32.6	20	118°46.7	14°38.8
21	133°25.2	17°59.3	21	133°28.5	17°12.6	21	133°33.3	16°23.4	21	133°39.4	15°31.9	21	133°46.8	14°38.1
22	148°25.2	17°58.6	22	148°28.6	17°11.9	22	148°33.4	16°22.7	22	148°39.5	15°31.1	22	148°46.9	14°37.3
23	163°25.2	17°58.0	23	163°28.7	17°11.3	23	163°33.4	16°22.0	23	163°39.6	15°30.4	23	163°47.1	

13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	178°47.2	14°35.8	0	178°55.9	13°39.8	0	179°05.9	12°41.9	0	179°16.9	11°42.2	0	179°28.9	10°40.9
1	193°47.3	14°35.0	1	193°56.1	13°39.0	1	194°06.0	12°41.1	1	194°17.0	11°41.4	1	194°29.1	10°40.0
2	208°47.4	14°34.3	2	208°56.2	13°38.3	2	209°06.2	12°40.3	2	209°17.2	11°40.6	2	209°29.2	10°39.1
3	223°47.5	14°33.5	3	223°56.3	13°37.5	3	224°06.3	12°39.5	3	224°17.4	11°39.7	3	224°29.4	10°38.3
4	238°47.6	14°32.7	4	238°56.4	13°36.7	4	239°06.4	12°38.7	4	239°17.5	11°38.9	4	239°29.6	10°37.4
5	253°47.7	14°32.0	5	253°56.6	13°35.9	5	254°06.6	12°37.9	5	254°17.7	11°38.0	5	254°29.8	10°36.5
6	268°47.8	14°31.2	6	268°56.7	13°35.1	6	269°06.7	12°37.0	6	269°17.9	11°37.2	6	269°29.9	10°35.7
7	283°48.0	14°30.4	7	283°56.8	13°34.3	7	284°06.9	12°36.2	7	284°18.0	11°36.3	7	284°30.1	10°34.8
8	298°48.1	14°29.7	8	298°57.0	13°33.5	8	299°07.0	12°35.4	8	299°18.2	11°35.5	8	299°30.3	10°33.9
9	313°48.2	14°28.9	9	313°57.1	13°32.7	9	314°07.2	12°34.6	9	314°18.3	11°34.6	9	314°30.4	10°33.1
10	328°48.3	14°28.1	10	328°57.2	13°31.9	10	329°07.3	12°33.8	10	329°18.5	11°33.8	10	329°30.6	10°32.2
11	343°48.4	14°27.4	11	343°57.4	13°31.1	11	344°07.5	12°32.9	11	344°18.7	11°33.0	11	344°30.8	10°31.3
12	358°48.5	14°26.6	12	358°57.5	13°30.3	12	359°07.6	12°32.1	12	359°18.8	11°32.1	12	359°31.0	10°30.5
13	13°48.7	14°25.8	13	13°57.6	13°29.5	13	14°07.8	12°31.3	13	14°19.0	11°31.3	13	14°31.1	10°29.6
14	28°48.8	14°25.1	14	28°57.8	13°28.7	14	29°07.9	12°30.5	14	29°19.1	11°30.4	14	29°31.3	10°28.7
15	43°48.9	14°24.3	15	43°57.9	13°27.9	15	44°08.1	12°29.6	15	44°19.3	11°29.6	15	44°31.5	10°27.9
16	58°49.0	14°23.5	16	58°58.0	13°27.1	16	59°08.2	12°28.8	16	59°19.5	11°28.7	16	59°31.7	10°27.0
17	73°49.1	14°22.8	17	73°58.2	13°26.3	17	74°08.4	12°28.0	17	74°19.6	11°27.9	17	74°31.8	10°26.1
18	88°49.2	14°22.0	18	88°58.3	13°25.5	18	89°08.5	12°27.2	18	89°19.8	11°27.0	18	89°32.0	10°25.3
19	103°49.4	14°21.2	19	103°58.4	13°24.7	19	104°08.7	12°26.4	19	104°20.0	11°26.2	19	104°32.2	10°24.4
20	118°49.5	14°20.4	20	118°58.6	13°23.9	20	119°08.8	12°25.5	20	119°20.1	11°25.3	20	119°32.4	10°23.5
21	133°49.6	14°19.7	21	133°58.7	13°23.1	21	134°09.0	12°24.7	21	134°20.3	11°24.5	21	134°32.6	10°22.7
22	148°49.7	14°18.9	22	148°58.8	13°22.3	22	149°09.1	12°23.9	22	149°20.5	11°23.6	22	149°32.7	10°21.8
23	163°49.8	14°18.1	23	163°59.0	13°21.5	23	164°09.3	12°23.1	23	164°20.6	11°22.8	23	164°32.9	10°20.9
	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

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	178°49.9	14°17.4	0	178°59.1	13°20.7	0	179°09.4	12°22.2	0	179°20.8	11°22.0	0	179°33.1	10°20.0
1	193°50.1	14°16.6	1	193°59.2	13°19.9	1	194°09.6	12°21.4	1	194°20.9	11°21.1	1	194°33.3	10°19.2
2	208°50.2	14°15.8	2	208°59.4	13°19.1	2	209°09.7	12°20.6	2	209°21.1	11°20.3	2	209°33.4	10°18.3
3	223°50.3	14°15.0	3	223°59.5	13°18.3	3	224°09.9	12°19.8	3	224°21.3	11°19.4	3	224°33.6	10°17.4
4	238°50.4	14°14.3	4	238°59.6	13°17.5	4	239°10.0	12°18.9	4	239°21.4	11°18.6	4	239°33.8	10°16.6
5	253°50.5	14°13.5	5	253°59.8	13°16.7	5	254°10.2	12°18.1	5	254°21.6	11°17.7	5	254°34.0	10°15.7
6	268°50.7	14°12.7	6	268°59.9	13°15.9	6	269°10.3	12°17.3	6	269°21.8	11°16.9	6	269°34.1	10°14.8
7	283°50.8	14°11.9	7	284°00.1	13°15.1	7	284°10.5	12°16.4	7	284°21.9	11°16.0	7	284°34.3	10°13.9
8	298°50.9	14°11.2	8	299°00.2	13°14.3	8	299°10.6	12°15.6	8	299°22.1	11°15.2	8	299°34.5	10°13.1
9	313°51.0	14°10.4	9	314°00.3	13°13.5	9	314°10.8	12°14.8	9	314°22.3	11°14.3	9	314°34.7	10°12.2
10	328°51.1	14°09.6	10	329°00.5	13°12.7	10	329°10.9	12°14.0	10	329°22.4	11°13.4	10	329°34.9	10°11.3
11	343°51.3	14°08.8	11	344°00.6	13°11.9	11	344°11.1	12°13.1	11	344°22.6	11°12.6	11	344°35.0	10°10.5
12	358°51.4	14°08.1	12	359°00.7	13°11.1	12	359°11.2	12°12.3	12	359°22.8	11°11.7	12	359°35.2	10°09.6
13	13°51.5	14°07.3	13	14°00.9	13°10.3	13	14°11.4	12°11.5	13	14°22.9	11°10.9	13	14°35.4	10°08.7
14	28°51.6	14°06.5	14	29°01.0	13°09.5	14	29°11.6	12°10.6	14	29°23.1	11°10.0	14	29°35.6	10°07.8
15	43°51.8	14°05.7	15	44°01.2	13°08.7	15	44°11.7	12°09.8	15	44°23.3	11°09.2	15	44°35.8	10°07.0
16	58°51.9	14°05.0	16	59°01.3	13°07.9	16	59°11.9	12°09.0	16	59°23.4	11°08.3	16	59°35.9	10°06.1
17	73°52.0	14°04.2	17	74°01.4	13°07.1	17	74°12.0	12°08.2	17	74°23.6	11°07.5	17	74°36.1	10°05.2
18	88°52.1	14°03.4	18	89°01.6	13°06.3	18	89°12.2	12°07.3	18	89°23.8	11°06.6	18	89°36.3	10°04.3
19	103°52.2	14°02.6	19	104°01.7	13°05.5	19	104°12.3	12°06.5	19	104°23.9	11°05.8	19	104°36.5	10°03.5
20	118°52.4	14°01.8	20	119°01.9	13°04.7	20	119°12.5	12°05.7	20	119°24.1	11°04.9	20	119°36.7	10°02.6
21	133°52.5	14°01.1	21	134°02.0	13°03.9	21	134°12.6	12°04.8	21	134°24.3	11°04.1	21	134°36.8	10°01.7
22	148°52.6	14°00.3	22	149°02.1	13°03.1	22	149°12.8	12°04.0	22	149°24.4	11°03.2	22	149°37.0	10°00.8
23	163°52.7	13°59.5	23	164°02.3	13°02.3	23	164°12.9	12°03.2	23	164°24.6	11°02.3	23	164°37.2	9°59.9
	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°52.9	13°58.7	0	179°02.4	13°01.4	0	179°13.1	12°02.3	0	179°24.8	11°01.5	0	179°37.4	9°59.1
1	193°53.0	13°57.9	1	194°02.6	13°00.6	1	194°13.3	12°01.5	1	194°25.0	11°00.6	1	194°37.6	9°58.2
2	208°53.1	13°57.1	2	209°02.7	12°59.8	2	209°13.4	12°00.7	2	209°25.1	10°59.8	2	209°37.7	9°57.3
3	223°53.2	13°56.4	3	224°02.8	12°59.0	3	224°13.6	11°59.8	3	224°25.3	10°58.9	3	224°37.9	9°56.4
4	238°53.4	13°55.6	4	239°03.0	12°58.2	4	239°13.7	11°59.0	4	239°25.5	10°58.1	4	239°38.1	9°55.6
5	253°53.5	13°54.8	5	254°03.1	12°57.4	5	254°13.9	11°58.2	5	254°25.6	10°57.2	5	254°38.3	9°54.7
6	268°53.6	13°54.0	6	269°03.3	12°56.6	6	269°14.0	11°57.3	6	269°25.8	10°56.3	6	269°38.5	9°53.8
7	283°53.7	13°53.2	7	284°03.4	12°55.8	7	284°14.2	11°56.5	7	284°26.0	10°55.5	7	284°38.6	9°52.9
8	298°53.9	13°52.4	8	299°03.6	12°55.0	8	299°14.3	11°55.7	8	299°26.1	10°54.6	8	299°38.8	9°52.0
9	313°54.0	13°51.7	9	314°03.7	12°54.2	9	314°14.5	11°54.8	9	314°26.3	10°53.8	9	314°39.0	9°51.2
10	328°54.1	13°50.9	10	329°03.8	12°53.3	10	329°14.7	11°54.0	10	329°26.5	10°52.9	10	329°39.2	9°50.3
11	343°54.2	13°50.1	11	344°04.0	12°52.5	11	344°14.8	11°53.1	11	344°26.7	10°52.1	11	344°39.4	9°49.4
12	358°54.4	13°49.3	12	359°04.1	12°51.7	12	359°15.0	11°52.3	12	359°26.8	10°51.2	12	359°39.6	9°48.5
13	13°54.5	13°48.5	13	14°04.3	12°50.9	13	14°15.1	11°51.5	13	14°27.0	10°50.3	13	14°39.7	9°47.6
14	28°54.6	13°47.7	14	29°04.4	12°50.1	14	29°15.3	11°50.6	14	29°27.2	10°49.5	14	29°39.9	9°46.8
15	43°54.8	13°46.9	15	44°04.6	12°49.3	15	44°15.5	11°49.8	15	44°27.3	10°48.6	15	44°40.1	9°45.9
16	58°54.9	13°46.2	16	59°04.7	12°48.5	16	59°15.6	11°49.0	16	59°27.5	10°47.8	16	59°40.3	9°45.0
17	73°55.0	13°45.4	17	74°04.8	12°47.7	17	74°15.8	11°48.1	17	74°27.7	10°46.9	17	74°40.5	9°44.1
18	88°55.1	13°44.6	18	89°05.0	12°46.8	18	89°15.9	11°47.3	18	89°27.9	10°46.0	18	89°40.6	9°43.2
19	103°55.3	13°43.8	19	104°05.1	12°46.0	19	104°16.1	11°46.4	19	104°28.0	10°45.2	19	104°40.8	9°42.4
20	118°55.4	13°43.0	20	119°05.3	12°45.2	20	119°16.2	11°45.6	20	119°28.2	10°44.3	20	119°41.0	9°41.5
21	133°55.5	13°42.2	21	134°05.4	12°44.4	21	134°16.4	11°44.8	21	134°28.4	10°43.4	21	134°41.2	9°40.6
22	148°55.7	13°41.4	22	149°05.6	12°43.6	22	149°16.6	11°43.9	22	149°28.5	10°42.6	22	149°41.4	9°39.7
23	163°55.8	13°40.6	23	164°05.7	12°42.8	23	164°16.7	11°4						

28	GHA	Dec	31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec
0	179°41.8	9°37.9	0	179°55.4	8°33.6	0	180°09.7	7°28.1	0	180°24.6	6°21.5	0	180°40.1	5°13.9
1	194°41.9	9°37.1	1	194°55.6	8°32.7	1	195°09.9	7°27.2	1	195°24.9	6°20.5	1	195°40.3	5°13.0
2	209°42.1	9°36.2	2	209°55.8	8°31.8	2	210°10.1	7°26.3	2	210°25.1	6°19.6	2	210°40.5	5°12.0
3	224°42.3	9°35.3	3	224°56.0	8°30.9	3	225°10.3	7°25.3	3	225°25.3	6°18.7	3	225°40.7	5°11.1
4	239°42.5	9°34.4	4	239°56.2	8°30.0	4	240°10.5	7°24.4	4	240°25.5	6°17.7	4	240°40.9	5°10.1
5	254°42.7	9°33.5	5	254°56.4	8°29.1	5	255°10.7	7°23.5	5	255°25.7	6°16.8	5	255°41.1	5°09.2
6	269°42.9	9°32.6	6	269°56.6	8°28.2	6	270°10.9	7°22.6	6	270°25.9	6°15.9	6	270°41.4	5°08.2
7	284°43.0	9°31.7	7	284°56.8	8°27.3	7	285°11.1	7°21.7	7	285°26.1	6°14.9	7	285°41.6	5°07.3
8	299°43.2	9°30.9	8	299°57.0	8°26.4	8	300°11.4	7°20.7	8	300°26.3	6°14.0	8	300°41.8	5°06.4
9	314°43.4	9°30.0	9	314°57.1	8°25.5	9	315°11.6	7°19.8	9	315°26.5	6°13.1	9	315°42.0	5°05.4
10	329°43.6	9°29.1	10	329°57.3	8°24.6	10	330°11.8	7°18.9	10	330°26.8	6°12.1	10	330°42.2	5°04.5
11	344°43.8	9°28.2	11	344°57.5	8°23.7	11	345°12.0	7°18.0	11	345°27.0	6°11.2	11	345°42.5	5°03.5
12	359°44.0	9°27.3	12	359°57.7	8°22.8	12	0°12.2	7°17.1	12	0°27.2	6°10.3	12	0°42.7	5°02.6
13	14°44.2	9°26.4	13	14°57.9	8°21.9	13	15°12.4	7°16.1	13	15°27.4	6°09.3	13	15°42.9	5°01.6
14	29°44.3	9°25.5	14	29°58.1	8°21.0	14	30°12.6	7°15.2	14	30°27.6	6°08.4	14	30°43.1	5°00.7
15	44°44.5	9°24.6	15	44°58.3	8°20.1	15	45°12.8	7°14.3	15	45°27.8	6°07.5	15	45°43.3	4°59.7
16	59°44.7	9°23.8	16	59°58.5	8°19.2	16	60°13.0	7°13.4	16	60°28.0	6°06.6	16	60°43.5	4°58.8
17	74°44.9	9°22.9	17	74°58.7	8°18.3	17	75°13.2	7°12.5	17	75°28.2	6°05.6	17	75°43.8	4°57.8
18	89°45.1	9°22.0	18	89°58.9	8°17.4	18	90°13.4	7°11.5	18	90°28.5	6°04.7	18	90°44.0	4°56.9
19	104°45.3	9°21.1	19	104°59.1	8°16.5	19	105°13.6	7°10.6	19	105°28.7	6°03.7	19	105°44.2	4°55.9
20	119°45.5	9°20.2	20	119°59.3	8°15.5	20	120°13.8	7°09.7	20	120°28.9	6°02.8	20	120°44.4	4°55.0
21	134°45.7	9°19.3	21	134°59.5	8°14.6	21	135°14.0	7°08.8	21	135°29.1	6°01.9	21	135°44.6	4°54.1
22	149°45.8	9°18.4	22	149°59.7	8°13.7	22	150°14.2	7°07.8	22	150°29.3	6°00.9	22	150°44.9	4°53.1
23	164°46.0	9°17.5	23	164°59.9	8°12.8	23	165°14.4	7°06.9	23	165°29.5	5°60.0	23	165°45.1	4°52.2
	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

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	179°46.2	9°16.6	0	180°00.1	8°11.9	0	180°14.6	7°06.0	0	180°29.7	5°59.0	0	180°45.3	4°51.2
1	194°46.4	9°15.8	1	195°00.3	8°11.0	1	195°14.8	7°05.1	1	195°29.9	5°58.1	1	195°45.5	4°50.3
2	209°46.6	9°14.9	2	210°00.5	8°10.1	2	210°15.0	7°04.2	2	210°30.2	5°57.2	2	210°45.7	4°49.3
3	224°46.8	9°14.0	3	225°00.7	8°09.2	3	225°15.3	7°03.2	3	225°30.4	5°56.3	3	225°45.9	4°48.4
4	239°47.0	9°13.1	4	240°00.9	8°08.3	4	240°15.5	7°02.3	4	240°30.6	5°55.3	4	240°46.2	4°47.4
5	254°47.2	9°12.2	5	255°01.1	8°07.4	5	255°15.7	7°01.4	5	255°30.8	5°54.4	5	255°46.4	4°46.5
6	269°47.3	9°11.3	6	270°01.3	8°06.5	6	270°15.9	7°00.5	6	270°31.0	5°53.4	6	270°46.6	4°45.5
7	284°47.5	9°10.4	7	285°01.5	8°05.6	7	285°16.1	6°59.5	7	285°31.2	5°52.5	7	285°46.8	4°44.6
8	299°47.7	9°09.5	8	300°01.7	8°04.6	8	300°16.3	6°58.6	8	300°31.4	5°51.6	8	300°47.0	4°43.6
9	314°47.9	9°08.6	9	315°01.9	8°03.7	9	315°16.5	6°57.7	9	315°31.7	5°50.6	9	315°47.3	4°42.7
10	329°48.1	9°07.7	10	330°02.1	8°02.8	10	330°16.7	6°56.8	10	330°31.9	5°49.7	10	330°47.5	4°41.7
11	344°48.3	9°06.8	11	345°02.3	8°01.9	11	345°16.9	6°55.8	11	345°32.1	5°48.7	11	345°47.7	4°40.8
12	359°48.5	9°05.9	12	0°02.5	8°01.0	12	0°17.1	6°54.9	12	0°32.3	5°47.8	12	0°47.9	4°39.8
13	14°48.7	9°05.1	13	15°02.7	8°00.1	13	15°17.3	6°54.0	13	15°32.5	5°46.9	13	15°48.1	4°38.9
14	29°48.9	9°04.2	14	30°02.9	7°59.2	14	30°17.5	6°53.1	14	30°32.7	5°45.9	14	30°48.4	4°37.9
15	44°49.0	9°03.3	15	45°03.1	7°58.3	15	45°17.7	6°52.1	15	45°32.9	5°45.0	15	45°48.6	4°37.0
16	59°49.2	9°02.4	16	60°03.3	7°57.4	16	60°17.9	6°51.2	16	60°33.2	5°44.0	16	60°48.8	4°36.0
17	74°49.4	9°01.5	17	75°03.5	7°56.5	17	75°18.2	6°50.3	17	75°33.4	5°43.1	17	75°49.0	4°35.1
18	89°49.6	9°00.6	18	90°03.7	7°55.5	18	90°18.4	6°49.4	18	90°33.6	5°42.2	18	90°49.2	4°34.1
19	104°49.8	8°59.7	19	105°03.9	7°54.6	19	105°18.6	6°48.4	19	105°33.8	5°41.2	19	105°49.5	4°33.2
20	119°50.0	8°58.8	20	120°04.1	7°53.7	20	120°18.8	6°47.5	20	120°34.0	5°40.3	20	120°49.7	4°32.2
21	134°50.2	8°57.9	21	135°04.3	7°52.8	21	135°19.0	6°46.6	21	135°34.2	5°39.3	21	135°49.9	4°31.3
22	149°50.4	8°57.0	22	150°04.5	7°51.9	22	150°19.2	6°45.6	22	150°34.4	5°38.4	22	150°50.1	4°30.3
23	164°50.6	8°56.1	23	165°04.7	7°51.0	23	165°19.4	6°44.7	23	165°34.7	5°37.5	23	165°50.3	4°29.4
	SD.=15.8	d=-0.9		SD.=15.8	d=-0.9		SD.=15.9	d=-0.9		SD.=15.9	d=-0.9		SD.=15.9	d=-0.9

30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	179°50.8	8°55.2	0	180°04.9	7°50.1	0	180°19.6	6°43.8	0	180°34.9	5°36.5	0	180°50.6	4°28.4
1	194°51.0	8°54.3	1	195°05.1	7°49.2	1	195°19.8	6°42.9	1	195°35.1	5°35.6	1	195°50.8	4°27.5
2	209°51.1	8°53.4	2	210°05.3	7°48.2	2	210°20.0	6°41.9	2	210°35.3	5°34.6	2	210°51.0	4°26.5
3	224°51.3	8°52.5	3	225°05.5	7°47.3	3	225°20.2	6°41.0	3	225°35.5	5°33.7	3	225°51.2	4°25.6
4	239°51.5	8°51.6	4	240°05.7	7°46.4	4	240°20.4	6°40.1	4	240°35.7	5°32.8	4	240°51.4	4°24.6
5	254°51.7	8°50.7	5	255°05.9	7°45.5	5	255°20.7	6°39.1	5	255°36.0	5°31.8	5	255°51.7	4°23.7
6	269°51.9	8°49.8	6	270°06.1	7°44.6	6	270°20.9	6°38.2	6	270°36.2	5°30.9	6	270°51.9	4°22.7
7	284°52.1	8°48.9	7	285°06.3	7°43.7	7	285°21.1	6°37.3	7	285°36.4	5°29.9	7	285°52.1	4°21.8
8	299°52.3	8°48.0	8	300°06.5	7°42.8	8	300°21.3	6°36.4	8	300°36.6	5°29.0	8	300°52.3	4°20.8
9	314°52.5	8°47.1	9	315°06.7	7°41.8	9	315°21.5	6°35.4	9	315°36.8	5°28.1	9	315°52.5	4°19.9
10	329°52.7	8°46.2	10	330°06.9	7°40.9	10	330°21.7	6°34.5	10	330°37.0	5°27.1	10	330°52.8	4°18.9
11	344°52.9	8°45.3	11	345°07.1	7°40.0	11	345°21.9	6°33.6	11	345°37.2	5°26.2	11	345°53.0	4°18.0
12	359°53.1	8°44.4	12	0°07.3	7°39.1	12	0°22.1	6°32.6	12	0°37.5	5°25.2	12	0°53.2	4°17.0
13	14°53.3	8°43.5	13	15°07.5	7°38.2	13	15°22.3	6°31.7	13	15°37.7	5°24.3	13	15°53.4	4°16.1
14	29°53.5	8°42.6	14	30°07.7	7°37.3	14	30°22.5	6°30.8	14	30°37.9	5°23.3	14	30°53.6	4°15.1
15	44°53.6	8°41.7	15	45°07.9	7°36.3	15	45°22.8	6°29.9	15	45°38.1	5°22.4	15	45°53.9	4°14.1
16	59°53.8	8°40.8	16	60°08.1	7°35.4	16	60°23.0	6°28.9	16	60°38.3	5°21.5	16	60°54.1	4°13.2
17	74°54.0	8°39.9	17	75°08.3	7°34.5	17	75°23.2	6°28.0	17	75°38.5	5°20.5	17	75°54.3	4°12.2
18	89°54.2	8°39.0	18	90°08.5	7°33.6	18	90°23.4	6°27.1	18	90°38.8	5°19.6	18	90°54.5	4°11.3
19	104°54.4	8°38.1	19	105°08.7	7°32.7	19	105°23.6	6°26.1	19	105°39.0	5°18.6	19	105°54.7	4°10.3
20	119°54.6	8°37.2	20	120°08.9	7°31.8	20	120°23.8	6°25.2	20	120°39.2	5°17.7	20	120°55.0	4°09.4
21	134°54.8	8°36.3	21	135°09.1	7°30.8	21	135°24.0	6°24.3	21	135°39.4	5°16.7	21	135°55.2	4°08.4
22	149°55.0	8°35.4	22	150°09.3	7°29.9	22	150°24.2	6°23.3	22	150°39.6	5°15.8	22	150°55.4	4°07.5
23	164°55.2	8°34.5	23	165°09.5	7°29.0	23	165°24.4	6°22.4	23	165°39.8	5°14.9	23	165°55.6	4°06.5
	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

12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec
0	180°55.9	4°05.6	0	181°11.9	2°56.6	0	181°28.0	1°47.1	0	181°44.1	0°37.3	0	181°59.9	-0°32.8
1	195°56.1	4°04.6	1	196°12.1	2°55.6	1	196°28.2	1°46.1	1	196°44.3	0°36.3	1	197°00.1	-0°33.7
2	210°56.3	4°03.7	2	211°12.3	2°54.7	2	211°28.5	1°45.2	2	211°44.5	0°35.3	2	212°00.3	-0°34.7
3	225°56.5	4°02.7	3	226°12.6	2°53.7	3	226°28.7	1°44.2	3	226°44.7	0°34.4	3	227°00.5	-0°35.7
4	240°56.7	4°01.7	4	241°12.8	2°52.7	4	241°28.9	1°43.2	4	241°45.0	0°33.4	4	242°00.8	-0°36.6
5	255°57.0	4°00.8	5	256°13.0	2°51.8	5	256°29.1	1°42.3	5	256°45.2	0°32.4	5	257°01.0	-0°37.6
6	270°57.2	3°59.8	6	271°13.2	2°50.8	6	271°29.4	1°41.3	6	271°45.4	0°31.5	6	272°01.2	-0°38.6
7	285°57.4	3°58.9	7	286°13.5	2°49.9	7	286°29.6	1°40.3	7	286°45.6	0°30.5	7	287°01.4	-0°39.6
8	300°57.6	3°57.9	8	301°13.7	2°48.9	8	301°29.8	1°39.4	8	301°45.8	0°29.5	8	302°01.6	-0°40.5
9	315°57.8	3°57.0	9	316°13.9	2°47.9	9	316°30.0	1°38.4	9	316°46.1	0°28.5	9	317°01.8	-0°41.5
10	330°58.1	3°56.0	10	331°14.1	2°47.0	10	331°30.3	1°37.4	10	331°46.3	0°27.6	10	332°02.1	-0°42.5
11	345°58.3	3°55.1	11	346°14.4	2°46.0	11	346°30.5	1°36.5	11	346°46.5	0°26.6	11	347°02.3	-0°43.5
12	0°58.5	3°54.1	12	1°14.6	2°45.0	12	1°30.7	1°35.5	12	1°46.7	0°25.6	12	2°02.5	-0°44.4
13	15°58.7	3°53.2	13	16°14.8	2°44.1	13	16°30.9	1°34.5	13	16°46.9	0°24.7	13	17°02.7	-0°45.4
14	30°59.0	3°52.2	14	31°15.0	2°43.1	14	31°31.1	1°33.6	14	31°47.2	0°23.7	14	32°02.9	-0°46.4
15	45°59.2	3°51.2	15	46°15.2	2°42.1	15	46°31.4	1°32.6	15	46°47.4	0°22.7	15	47°03.1	-0°47.4
16	60°59.4	3°50.3	16	61°15.5	2°41.2	16	61°31.6	1°31.6	16	61°47.6	0°21.7	16	62°03.4	-0°48.3
17	75°59.6	3°49.3	17	76°15.7	2°40.2	17	76°31.8	1°30.7	17	76°47.8	0°20.8	17	77°03.6	-0°49.3
18	90°59.8	3°48.4	18	91°15.9	2°39.3	18	91°32.0	1°29.7	18	91°48.1	0°19.8	18	92°03.8	-0°50.3
19	106°00.1	3°47.4	19	106°16.1	2°38.3	19	106°32.3	1°28.7	19	106°48.3	0°18.8	19	107°04.0	-0°51.3
20	121°00.3	3°46.5	20	121°16.4	2°37.3	20	121°32.5	1°27.7	20	121°48.5	0°17.8	20	122°04.2	-0°52.2
21	136°00.5	3°45.5	21	136°16.6	2°36.4	21	136°32.7	1°26.8	21	136°48.7	0°16.9	21	137°04.4	-0°53.2
22	151°00.7	3°44.5	22	151°16.8	2°35.4	22	151°32.9	1°25.8	22	151°48.9	0°15.9	22	152°04.7	-0°54.2
23	166°01.0	3°43.6	23	166°17.0	2°34.4	23	166°33.2	1°24.8	23	166°49.2	0°14.9	23	167°04.9	-0°55.1
	SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0

13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	181°01.2	3°42.6	0	181°17.3	2°33.5	0	181°33.4	1°23.9	0	181°49.4	0°14.0	0	182°05.1	-0°56.1
1	196°01.4	3°41.7	1	196°17.5	2°32.5	1	196°33.6	1°22.9	1	196°49.6	0°13.0	1	197°05.3	-0°57.1
2	211°01.6	3°40.7	2	211°17.7	2°31.5	2	211°33.8	1°21.9	2	211°49.8	0°12.0	2	212°05.5	-0°58.1
3	226°01.8	3°39.8	3	226°17.9	2°30.6	3	226°34.1	1°21.0	3	226°50.0	0°11.0	3	227°05.7	-0°59.0
4	241°02.1	3°38.8	4	241°18.2	2°29.6	4	241°34.3	1°20.0	4	241°50.3	0°10.1	4	242°05.9	-1°00.0
5	256°02.3	3°37.9	5	256°18.4	2°28.7	5	256°34.5	1°19.0	5	256°50.5	0°09.1	5	257°06.2	-1°01.0
6	271°02.5	3°36.9	6	271°18.6	2°27.7	6	271°34.7	1°18.1	6	271°50.7	0°08.1	6	272°06.4	-1°02.0
7	286°02.7	3°35.9	7	286°18.8	2°26.7	7	286°34.9	1°17.1	7	286°50.9	0°07.1	7	287°06.6	-1°02.9
8	301°03.0	3°35.0	8	301°19.1	2°25.8	8	301°35.2	1°16.1	8	301°51.1	0°06.2	8	302°06.8	-1°03.9
9	316°03.2	3°34.0	9	316°19.3	2°24.8	9	316°35.4	1°15.1	9	316°51.4	0°05.2	9	317°07.0	-1°04.9
10	331°03.4	3°33.1	10	331°19.5	2°23.8	10	331°35.6	1°14.2	10	331°51.6	0°04.2	10	332°07.2	-1°05.9
11	346°03.6	3°32.1	11	346°19.7	2°22.9	11	346°35.8	1°13.2	11	346°51.8	0°03.3	11	347°07.4	-1°06.8
12	1°03.9	3°31.1	12	1°20.0	2°21.9	12	1°36.1	1°12.2	12	1°52.0	0°02.3	12	2°07.7	-1°07.8
13	16°04.1	3°30.2	13	16°20.2	2°20.9	13	16°36.3	1°11.3	13	16°52.2	0°01.3	13	17°07.9	-1°08.8
14	31°04.3	3°29.2	14	31°20.4	2°20.0	14	31°36.5	1°10.3	14	31°52.5	0°00.3	14	32°08.1	-1°09.7
15	46°04.5	3°28.3	15	46°20.6	2°19.0	15	46°36.7	1°09.3	15	46°52.7	-0°00.6	15	47°08.3	-1°10.7
16	61°04.7	3°27.3	16	61°20.8	2°18.0	16	61°37.0	1°08.4	16	61°52.9	-0°01.6	16	62°08.5	-1°11.7
17	76°05.0	3°26.4	17	76°21.1	2°17.1	17	76°37.2	1°07.4	17	76°53.1	-0°02.6	17	77°08.7	-1°12.7
18	91°05.2	3°25.4	18	91°21.3	2°16.1	18	91°37.4	1°06.4	18	91°53.3	-0°03.6	18	92°08.9	-1°13.6
19	106°05.4	3°24.4	19	106°21.5	2°15.1	19	106°37.6	1°05.4	19	106°53.6	-0°04.5	19	107°09.2	-1°14.6
20	121°05.6	3°23.5	20	121°21.7	2°14.2	20	121°37.8	1°04.5	20	121°53.8	-0°05.5	20	122°09.4	-1°15.6
21	136°05.9	3°22.5	21	136°22.0	2°13.2	21	136°38.1	1°03.5	21	136°54.0	-0°06.5	21	137°09.6	-1°16.6
22	151°06.1	3°21.6	22	151°22.2	2°12.2	22	151°38.3	1°02.5	22	151°54.2	-0°07.4	22	152°09.8	-1°17.5
23	166°06.3	3°20.6	23	166°22.4	2°11.3	23	166°38.5	1°01.6	23	166°54.4	-0°08.4	23	167°10.0	-1°18.5
	SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0

14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec	26	GHA	Dec
0	181°06.5	3°19.6	0	181°22.6	2°10.3	0	181°38.7	1°00.6	0	181°54.7	-0°09.4	0	182°10.2	-1°19.5
1	196°06.8	3°18.7	1	196°22.9	2°09.4	1	196°39.0	0°59.6	1	196°54.9	-0°10.4	1	197°10.4	-1°20.5
2	211°07.0	3°17.7	2	211°23.1	2°08.4	2	211°39.2	0°58.7	2	211°55.1	-0°11.3	2	212°10.7	-1°21.4
3	226°07.2	3°16.8	3	226°23.3	2°07.4	3	226°39.4	0°57.7	3	226°55.3	-0°12.3	3	227°10.9	-1°22.4
4	241°07.4	3°15.8	4	241°23.5	2°06.5	4	241°39.6	0°56.7	4	241°55.5	-0°13.3	4	242°11.1	-1°23.4
5	256°07.6	3°14.8	5	256°23.8	2°05.5	5	256°39.8	0°55.7	5	256°55.7	-0°14.3	5	257°11.3	-1°24.4
6	271°07.9	3°13.9	6	271°24.0	2°04.5	6	271°40.1	0°54.8	6	271°56.0	-0°15.2	6	272°11.5	-1°25.3
7	286°08.1	3°12.9	7	286°24.2	2°03.6	7	286°40.3	0°53.8	7	286°56.2	-0°16.2	7	287°11.7	-1°26.3
8	301°08.3	3°12.0	8	301°24.4	2°02.6	8	301°40.5	0°52.8	8	301°56.4	-0°17.2	8	302°11.9	-1°27.3
9	316°08.5	3°11.0	9	316°24.7	2°01.6	9	316°40.7	0°51.9	9	316°56.6	-0°18.2	9	317°12.1	-1°28.2
10	331°08.8	3°10.0	10	331°24.9	2°00.7	10	331°41.0	0°50.9	10	331°56.8	-0°19.1	10	332°12.4	-1°29.2
11	346°09.0	3°09.1	11	346°25.1	1°59.7	11	346°41.2	0°49.9	11	346°57.1	-0°20.1	11	347°12.6	-1°30.2
12	1°09.2	3°08.1	12	1°25.3	1°58.7	12	1°41.4	0°48.9	12	1°57.3	-0°21.1	12	2°12.8	-1°31.2
13	16°09.4	3°07.2	13	16°25.6	1°57.8	13	16°41.6	0°48.0	13	16°57.5	-0°22.0	13	17°13.0	-1°32.1
14	31°09.7	3°06.2	14	31°25.8	1°56.8	14	31°41.9	0°47.0	14	31°57.7	-0°23.0	14	32°13.2	-1°33.1
15	46°09.9	3°05.2	15	46°26.0	1°55.8	15	46°42.1	0°46.0	15	46°57.9	-0°24.0	15	47°13.4	-1°34.1
16	61°10.1	3°04.3	16	61°26.2	1°54.9	16	61°42.3	0°45.1	16	61°58.1	-0°25.0	16	62°13.6	-1°35.1
17	76°10.3	3°03.3	17	76°26.4	1°53.9	17	76°42.5	0°44.1	17	76°58.4	-0°25.9	17	77°13.8	-1°36.0
18	91°10.5	3°02.4	18	91°26.7	1°52.9	18	91°42.7	0°43.1	18	91°58.6	-0°26.9	18	92°14.1	-1°37.0
19	106°10.8	3°01.4	19	106°26.9	1°51.9	19	106°43.0	0°42.1	19	106°58.8	-0°27.9	19	107°14.3	-1°38.0
20	121°11.0	3°00.4	20	121°27.1	1°51.0	20	121°43.2	0°41.2	20	121°59.0	-0°28.9	20	122°14.5	-1°39.0
21	136°11.2	2°59.5	21	136°27.3	1°50.0	21	136°43.4	0°40.2	21	136°59.2	-0°29.8	21	137°14.7	-1°39.9
22	151°11.4	2°58.5	22	151°27.6	1°49.0	22	151°43.6	0°39.2	22	151°59.5	-0°30.8	22	152°14.9	-1°40.9
23	166°11.7	2°57.5	23	166°27.8	1°48.1	23	166°43.8	0°38.3	23	166°59.7	-0°31.8	23	167°15.1	-1°41.9
	SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=15.9	d=-1.0		SD.=16.0	d=-1.0

27	GHA	Dec	30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec
0	182°15.3	-1°42.8	0	182°30.3	-2°52.8	0	182°44.6	-4°02.6	0	182°58.2	-5°11.9	0	183°10.9	-6°20.6
1	197°15.5	-1°43.8	1	197°30.5	-2°53.8	1	197°44.8	-4°03.5	1	197°58.4	-5°12.8	1	198°11.1	-6°21.5
2	212°15.7	-1°44.8	2	212°30.7	-2°54.8	2	212°45.0	-4°04.5	2	212°58.5	-5°13.8	2	213°11.2	-6°22.5
3	227°16.0	-1°45.8	3	227°30.9	-2°55.8	3	227°45.2	-4°05.5	3	227°58.7	-5°14.8	3	228°11.4	-6°23.4
4	242°16.2	-1°46.7	4	242°31.1	-2°56.7	4	242°45.4	-4°06.4	4	242°58.9	-5°15.7	4	243°11.6	-6°24.4
5	257°16.4	-1°47.7	5	257°31.3	-2°57.7	5	257°45.6	-4°07.4	5	257°59.1	-5°16.7	5	258°11.8	-6°25.3
6	272°16.6	-1°48.7	6	272°31.5	-2°58.7	6	272°45.7	-4°08.4	6	272°59.3	-5°17.6	6	273°11.9	-6°26.3
7	287°16.8	-1°49.7	7	287°31.7	-2°59.6	7	287°45.9	-4°09.3	7	287°59.4	-5°18.6	7	288°12.1	-6°27.2
8	302°17.0	-1°50.6	8	302°31.9	-3°00.6	8	302°46.1	-4°10.3	8	302°59.6	-5°19.5	8	303°12.3	-6°28.2
9	317°17.2	-1°51.6	9	317°32.1	-3°01.6	9	317°46.3	-4°11.3	9	317°59.8	-5°20.5	9	318°12.4	-6°29.1
10	332°17.4	-1°52.6	10	332°32.3	-3°02.5	10	332°46.5	-4°12.2	10	332°60.0	-5°21.5	10	333°12.6	-6°30.1
11	347°17.6	-1°53.6	11	347°32.5	-3°03.5	11	347°46.7	-4°13.2	11	348°00.2	-5°22.4	11	348°12.8	-6°31.0
12	2°17.9	-1°54.5	12	2°32.7	-3°04.5	12	2°46.9	-4°14.2	12	3°00.4	-5°23.4	12	3°12.9	-6°32.0
13	17°18.1	-1°55.5	13	17°32.9	-3°05.5	13	17°47.1	-4°15.1	13	18°00.5	-5°24.3	13	18°13.1	-6°32.9
14	32°18.3	-1°56.5	14	32°33.1	-3°06.4	14	32°47.3	-4°16.1	14	33°00.7	-5°25.3	14	33°13.3	-6°33.9
15	47°18.5	-1°57.4	15	47°33.3	-3°07.4	15	47°47.5	-4°17.1	15	48°00.9	-5°26.2	15	48°13.4	-6°34.8
16	62°18.7	-1°58.4	16	62°33.5	-3°08.4	16	62°47.7	-4°18.0	16	63°01.1	-5°27.2	16	63°13.6	-6°35.8
17	77°18.9	-1°59.4	17	77°33.7	-3°09.3	17	77°47.9	-4°19.0	17	78°01.3	-5°28.2	17	78°13.8	-6°36.7
18	92°19.1	-2°00.4	18	92°33.9	-3°10.3	18	92°48.1	-4°19.9	18	93°01.4	-5°29.1	18	93°13.9	-6°37.6
19	107°19.3	-2°01.3	19	107°34.1	-3°11.3	19	107°48.2	-4°20.9	19	108°01.6	-5°30.1	19	108°14.1	-6°38.6
20	122°19.5	-2°02.3	20	122°34.3	-3°12.2	20	122°48.4	-4°21.9	20	123°01.8	-5°31.0	20	123°14.3	-6°39.5
21	137°19.7	-2°03.3	21	137°34.5	-3°13.2	21	137°48.6	-4°22.8	21	138°02.0	-5°32.0	21	138°14.4	-6°40.5
22	152°20.0	-2°04.3	22	152°34.7	-3°14.2	22	152°48.8	-4°23.8	22	153°02.2	-5°32.9	22	153°14.6	-6°41.4
23	167°20.2	-2°05.2	23	167°34.9	-3°15.2	23	167°49.0	-4°24.8	23	168°02.3	-5°33.9	23	168°14.8	-6°42.4
	SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-0.9

28	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	182°20.4	-2°06.2	0	182°35.1	-3°16.1	0	182°49.2	-4°25.7	0	183°02.5	-5°34.9	0	183°14.9	-6°43.3
1	197°20.6	-2°07.2	1	197°35.3	-3°17.1	1	197°49.4	-4°26.7	1	198°02.7	-5°35.8	1	198°15.1	-6°44.3
2	212°20.8	-2°08.1	2	212°35.5	-3°18.1	2	212°49.6	-4°27.7	2	213°02.9	-5°36.8	2	213°15.3	-6°45.2
3	227°21.0	-2°09.1	3	227°35.7	-3°19.0	3	227°49.8	-4°28.6	3	228°03.1	-5°37.7	3	228°15.4	-6°46.2
4	242°21.2	-2°10.1	4	242°35.9	-3°20.0	4	242°50.0	-4°29.6	4	243°03.2	-5°38.7	4	243°15.6	-6°47.1
5	257°21.4	-2°11.1	5	257°36.1	-3°21.0	5	257°50.2	-4°30.5	5	258°03.4	-5°39.6	5	258°15.8	-6°48.0
6	272°21.6	-2°12.0	6	272°36.3	-3°21.9	6	272°50.3	-4°31.5	6	273°03.6	-5°40.6	6	273°15.9	-6°49.0
7	287°21.8	-2°13.0	7	287°36.5	-3°22.9	7	287°50.5	-4°32.5	7	288°03.8	-5°41.5	7	288°16.1	-6°49.9
8	302°22.0	-2°14.0	8	302°36.7	-3°23.9	8	302°50.7	-4°33.4	8	303°03.9	-5°42.5	8	303°16.3	-6°50.9
9	317°22.2	-2°15.0	9	317°36.9	-3°24.8	9	317°50.9	-4°34.4	9	318°04.1	-5°43.5	9	318°16.4	-6°51.8
10	332°22.5	-2°15.9	10	332°37.1	-3°25.8	10	332°51.1	-4°35.4	10	333°04.3	-5°44.4	10	333°16.6	-6°52.8
11	347°22.7	-2°16.9	11	347°37.3	-3°26.8	11	347°51.3	-4°36.3	11	348°04.5	-5°45.4	11	348°16.7	-6°53.7
12	2°22.9	-2°17.9	12	2°37.5	-3°27.8	12	2°51.5	-4°37.3	12	3°04.7	-5°46.3	12	3°16.9	-6°54.7
13	17°23.1	-2°18.8	13	17°37.7	-3°28.7	13	17°51.7	-4°38.3	13	18°04.8	-5°47.3	13	18°17.1	-6°55.6
14	32°23.3	-2°19.8	14	32°37.9	-3°29.7	14	32°51.9	-4°39.2	14	33°05.0	-5°48.2	14	33°17.2	-6°56.5
15	47°23.5	-2°20.8	15	47°38.1	-3°30.7	15	47°52.0	-4°40.2	15	48°05.2	-5°49.2	15	48°17.4	-6°57.5
16	62°23.7	-2°21.8	16	62°38.3	-3°31.6	16	62°52.2	-4°41.1	16	63°05.4	-5°50.1	16	63°17.6	-6°58.4
17	77°23.9	-2°22.7	17	77°38.5	-3°32.6	17	77°52.4	-4°42.1	17	78°05.5	-5°51.1	17	78°17.7	-6°59.4
18	92°24.1	-2°23.7	18	92°38.7	-3°33.6	18	92°52.6	-4°43.1	18	93°05.7	-5°52.0	18	93°17.9	-7°00.3
19	107°24.3	-2°24.7	19	107°38.9	-3°34.5	19	107°52.8	-4°44.0	19	108°05.9	-5°53.0	19	108°18.0	-7°01.3
20	122°24.5	-2°25.6	20	122°39.1	-3°35.5	20	122°53.0	-4°45.0	20	123°06.1	-5°53.9	20	123°18.2	-7°02.2
21	137°24.7	-2°26.6	21	137°39.3	-3°36.5	21	137°53.2	-4°45.9	21	138°06.2	-5°54.9	21	138°18.4	-7°03.1
22	152°24.9	-2°27.6	22	152°39.5	-3°37.4	22	152°53.4	-4°46.9	22	153°06.4	-5°55.9	22	153°18.5	-7°04.1
23	167°25.1	-2°28.6	23	167°39.7	-3°38.4	23	167°53.5	-4°47.9	23	168°06.6	-5°56.8	23	168°18.7	-7°05.0
	SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-1.0		SD.=16.0	d=-0.9

29	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec	11	GHA	Dec
0	182°25.3	-2°29.5	0	182°39.9	-3°39.4	0	182°53.7	-4°48.8	0	183°06.8	-5°57.8	0	183°18.9	-7°06.0
1	197°25.6	-2°30.5	1	197°40.1	-3°40.3	1	197°53.9	-4°49.8	1	198°06.9	-5°58.7	1	198°19.0	-7°06.9
2	212°25.8	-2°31.5	2	212°40.3	-3°41.3	2	212°54.1	-4°50.8	2	213°07.1	-5°59.7	2	213°19.2	-7°07.9
3	227°26.0	-2°32.4	3	227°40.5	-3°42.3	3	227°54.3	-4°51.7	3	228°07.3	-6°00.6	3	228°19.3	-7°08.8
4	242°26.2	-2°33.4	4	242°40.7	-3°43.2	4	242°54.5	-4°52.7	4	243°07.5	-6°01.6	4	243°19.5	-7°09.7
5	257°26.4	-2°34.4	5	257°40.9	-3°44.2	5	257°54.7	-4°53.6	5	258°07.6	-6°02.5	5	258°19.7	-7°10.7
6	272°26.6	-2°35.4	6	272°41.1	-3°45.2	6	272°54.8	-4°54.6	6	273°07.8	-6°03.5	6	273°19.8	-7°11.6
7	287°26.8	-2°36.3	7	287°41.3	-3°46.1	7	287°55.0	-4°55.6	7	288°08.0	-6°04.4	7	288°20.0	-7°12.6
8	302°27.0	-2°37.3	8	302°41.5	-3°47.1	8	302°55.2	-4°56.5	8	303°08.2	-6°05.4	8	303°20.1	-7°13.5
9	317°27.2	-2°38.3	9	317°41.7	-3°48.1	9	317°55.4	-4°57.5	9	318°08.3	-6°06.3	9	318°20.3	-7°14.4
10	332°27.4	-2°39.2	10	332°41.9	-3°49.0	10	332°55.6	-4°58.4	10	333°08.5	-6°07.3	10	333°20.5	-7°15.4
11	347°27.6	-2°40.2	11	347°42.1	-3°50.0	11	347°55.8	-4°59.4	11	348°08.7	-6°08.2	11	348°20.6	-7°16.3
12	2°27.8	-2°41.2	12	2°42.2	-3°51.0	12	2°56.0	-5°00.4	12	3°08.8	-6°09.2	12	3°20.8	-7°17.3
13	17°28.0	-2°42.2	13	17°42.4	-3°51.9	13	17°56.1	-5°01.3	13	18°09.0	-6°10.1	13	18°20.9	-7°18.2
14	32°28.2	-2°43.1	14	32°42.6	-3°52.9	14	32°56.3	-5°02.3	14	33°09.2	-6°11.1	14	33°21.1	-7°19.1
15	47°28.4	-2°44.1	15	47°42.8	-3°53.9	15	47°56.5	-5°03.2	15	48°09.4	-6°12.0	15	48°21.2	-7°20.1
16	62°28.6	-2°45.1	16	62°43.0	-3°54.8	16	62°56.7	-5°04.2	16	63°09.5	-6°13.0	16	63°21.4	-7°21.0
17	77°28.8	-2°46.0	17	77°43.2	-3°55.8	17	77°56.9	-5°05.2	17	78°09.7	-6°13.9	17	78°21.6	-7°22.0
18	92°29.0	-2°47.0	18	92°43.4	-3°56.8	18	92°57.1	-5°06.1	18	93°09.9	-6°14.9	18	93°21.7	-7°22.9
19	107°29.2	-2°48.0	19	107°43.6	-3°57.7	19	107°57.3	-5°07.1	19	108°10.0	-6°15.8	19	108°21.9	-7°23.8
20	122°29.5	-2°49.0	20	122°43.8	-3°58.7	20	122°57.4	-5°08.0	20	123°10.2	-6°16.8	20	123°22.0	-7°24.8
21	137°29.7	-2°49.9	21	137°44.0	-3°59.7	21	137°57.6	-5°09.0	21	138°10.4	-6°17.7	21	138°22.2	-7°25.7
22	152°29.9	-2°50.9	22	152°44.2	-4°00.6	22	152°57.8	-5°10.0	22	153°10.6	-6°18.7	22	153°22.3	-7°26.6
23	167°30.1	-2°51.9	23	167°44.4	-4°01.6	23	167°58.0	-5°10.9	23	168°10.7	-6°19.6	23	168°22.5	-7°27.6
	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

12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec
0	183°22.7	-7°28.5	0	183°33.3	-8°35.5	0	183°42.7	-9°41.4	0	183°50.7	-10°46.1	0	183°57.2	-11°49.3
1	198°22.8	-7°29.5	1	198°33.4	-8°36.5	1	198°42.8	-9°42.3	1	198°50.8	-10°47.0	1	198°57.3	-11°50.2
2	213°23.0	-7°30.4	2	213°33.6	-8°37.4	2	213°43.0	-9°43.3	2	213°50.9	-10°47.9	2	213°57.3	-11°51.0
3	228°23.1	-7°31.3	3	228°33.7	-8°38.3	3	228°43.1	-9°44.2	3	228°51.0	-10°48.8	3	228°57.4	-11°51.9
4	243°23.3	-7°32.3	4	243°33.9	-8°39.2	4	243°43.2	-9°45.1	4	243°51.1	-10°49.6	4	243°57.5	-11°52.8
5	258°23.4	-7°33.2	5	258°34.0	-8°40.1	5	258°43.3	-9°46.0	5	258°51.2	-10°50.5	5	258°57.6	-11°53.6
6	273°23.6	-7°34.1	6	273°34.1	-8°41.1	6	273°43.4	-9°46.9	6	273°51.3	-10°51.4	6	273°57.6	-11°54.5
7	288°23.7	-7°35.1	7	288°34.3	-8°42.0	7	288°43.5	-9°47.8	7	288°51.4	-10°52.3	7	288°57.7	-11°55.4
8	303°23.9	-7°36.0	8	303°34.4	-8°42.9	8	303°43.7	-9°48.7	8	303°51.5	-10°53.2	8	303°57.8	-11°56.2
9	318°24.1	-7°37.0	9	318°34.6	-8°43.8	9	318°43.8	-9°49.6	9	318°51.6	-10°54.1	9	318°57.9	-11°57.1
10	333°24.2	-7°37.9	10	333°34.7	-8°44.8	10	333°43.9	-9°50.5	10	333°51.7	-10°55.0	10	333°57.9	-11°58.0
11	348°24.4	-7°38.8	11	348°34.8	-8°45.7	11	348°44.0	-9°51.4	11	348°51.8	-10°55.8	11	348°58.0	-11°58.8
12	3°24.5	-7°39.8	12	3°35.0	-8°46.6	12	3°44.1	-9°52.3	12	3°51.9	-10°56.7	12	3°58.1	-11°59.7
13	18°24.7	-7°40.7	13	18°35.1	-8°47.5	13	18°44.3	-9°53.2	13	18°52.0	-10°57.6	13	18°58.2	-12°00.6
14	33°24.8	-7°41.6	14	33°35.2	-8°48.4	14	33°44.4	-9°54.1	14	33°52.1	-10°58.5	14	33°58.2	-12°01.4
15	48°25.0	-7°42.6	15	48°35.4	-8°49.4	15	48°44.5	-9°55.0	15	48°52.2	-10°59.4	15	48°58.3	-12°02.3
16	63°25.1	-7°43.5	16	63°35.5	-8°50.3	16	63°44.6	-9°55.9	16	63°52.3	-11°00.3	16	63°58.4	-12°03.1
17	78°25.3	-7°44.4	17	78°35.6	-8°51.2	17	78°44.7	-9°56.8	17	78°52.4	-11°01.2	17	78°58.5	-12°04.0
18	93°25.4	-7°45.4	18	93°35.8	-8°52.1	18	93°44.8	-9°57.7	18	93°52.5	-11°02.0	18	93°58.5	-12°04.9
19	108°25.6	-7°46.3	19	108°35.9	-8°53.0	19	108°45.0	-9°58.6	19	108°52.6	-11°02.9	19	108°58.6	-12°05.7
20	123°25.7	-7°47.2	20	123°36.1	-8°54.0	20	123°45.1	-9°59.5	20	123°52.7	-11°03.8	20	123°58.7	-12°06.6
21	138°25.9	-7°48.2	21	138°36.2	-8°54.9	21	138°45.2	-10°00.4	21	138°52.8	-11°04.7	21	138°58.8	-12°07.5
22	153°26.0	-7°49.1	22	153°36.3	-8°55.8	22	153°45.3	-10°01.3	22	153°52.8	-11°05.6	22	153°58.8	-12°08.3
23	168°26.2	-7°50.0	23	168°36.5	-8°56.7	23	168°45.4	-10°02.2	23	168°52.9	-11°06.4	23	168°58.9	-12°09.2
SD.=16.0		d=-0.9	SD.=16.0		d=-0.9	SD.=16.1		d=-0.9	SD.=16.1		d=-0.9	SD.=16.1		d=-0.9

13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	183°26.3	-7°51.0	0	183°36.6	-8°57.6	0	183°45.5	-10°03.1	0	183°53.0	-11°07.3	0	183°59.0	-12°10.0
1	198°26.5	-7°51.9	1	198°36.7	-8°58.5	1	198°45.7	-10°04.0	1	198°53.1	-11°08.2	1	198°59.0	-12°10.9
2	213°26.6	-7°52.8	2	213°36.9	-8°59.5	2	213°45.8	-10°04.9	2	213°53.2	-11°09.1	2	213°59.1	-12°11.8
3	228°26.8	-7°53.8	3	228°37.0	-9°00.4	3	228°45.9	-10°05.8	3	228°53.3	-11°10.0	3	228°59.2	-12°12.6
4	243°26.9	-7°54.7	4	243°37.1	-9°01.3	4	243°46.0	-10°06.7	4	243°53.4	-11°10.9	4	243°59.3	-12°13.5
5	258°27.1	-7°55.6	5	258°37.3	-9°02.2	5	258°46.1	-10°07.6	5	258°53.5	-11°11.7	5	258°59.3	-12°14.3
6	273°27.2	-7°56.6	6	273°37.4	-9°03.1	6	273°46.2	-10°08.5	6	273°53.6	-11°12.6	6	273°59.4	-12°15.2
7	288°27.4	-7°57.5	7	288°37.5	-9°04.0	7	288°46.3	-10°09.4	7	288°53.7	-11°13.5	7	288°59.5	-12°16.0
8	303°27.5	-7°58.4	8	303°37.7	-9°05.0	8	303°46.4	-10°10.3	8	303°53.8	-11°14.4	8	303°59.5	-12°16.9
9	318°27.7	-7°59.4	9	318°37.8	-9°05.9	9	318°46.6	-10°11.2	9	318°53.9	-11°15.3	9	318°59.6	-12°17.8
10	333°27.8	-8°00.3	10	333°37.9	-9°06.8	10	333°46.7	-10°12.1	10	333°54.0	-11°16.1	10	333°59.7	-12°18.6
11	348°28.0	-8°01.2	11	348°38.0	-9°07.7	11	348°46.8	-10°13.0	11	348°54.0	-11°17.0	11	348°59.7	-12°19.5
12	3°28.1	-8°02.2	12	3°38.2	-9°08.6	12	3°46.9	-10°13.9	12	3°54.1	-11°17.9	12	3°59.8	-12°20.3
13	18°28.3	-8°03.1	13	18°38.3	-9°09.5	13	18°47.0	-10°14.8	13	18°54.2	-11°18.8	13	18°59.9	-12°21.2
14	33°28.4	-8°04.0	14	33°38.4	-9°10.5	14	33°47.1	-10°15.7	14	33°54.3	-11°19.6	14	33°59.9	-12°22.0
15	48°28.6	-8°04.9	15	48°38.6	-9°11.4	15	48°47.2	-10°16.6	15	48°54.4	-11°20.5	15	49°00.0	-12°22.9
16	63°28.7	-8°05.9	16	63°38.7	-9°12.3	16	63°47.3	-10°17.5	16	63°54.5	-11°21.4	16	64°00.1	-12°23.8
17	78°28.9	-8°06.8	17	78°38.8	-9°13.2	17	78°47.4	-10°18.4	17	78°54.6	-11°22.3	17	79°00.1	-12°24.6
18	93°29.0	-8°07.7	18	93°39.0	-9°14.1	18	93°47.6	-10°19.3	18	93°54.7	-11°23.2	18	94°00.2	-12°25.5
19	108°29.2	-8°08.7	19	108°39.1	-9°15.0	19	108°47.7	-10°20.2	19	108°54.8	-11°24.0	19	109°00.3	-12°26.3
20	123°29.3	-8°09.6	20	123°39.2	-9°15.9	20	123°47.8	-10°21.1	20	123°54.8	-11°24.9	20	124°00.3	-12°27.2
21	138°29.5	-8°10.5	21	138°39.3	-9°16.9	21	138°47.9	-10°22.0	21	138°54.9	-11°25.8	21	139°00.4	-12°28.0
22	153°29.6	-8°11.5	22	153°39.5	-9°17.8	22	153°48.0	-10°22.9	22	153°55.0	-11°26.7	22	154°00.5	-12°28.9
23	168°29.7	-8°12.4	23	168°39.6	-9°18.7	23	168°48.1	-10°23.8	23	168°55.1	-11°27.5	23	169°00.5	-12°29.7
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°29.9	-8°13.3	0	183°39.7	-9°19.6	0	183°48.2	-10°24.7	0	183°55.2	-11°28.4	0	184°00.6	-12°30.6
1	198°30.0	-8°14.2	1	198°39.9	-9°20.5	1	198°48.3	-10°25.6	1	198°55.3	-11°29.3	1	199°00.6	-12°31.4
2	213°30.2	-8°15.2	2	213°40.0	-9°21.4	2	213°48.4	-10°26.5	2	213°55.4	-11°30.2	2	214°00.7	-12°32.3
3	228°30.3	-8°16.1	3	228°40.1	-9°22.3	3	228°48.5	-10°27.4	3	228°55.5	-11°31.0	3	229°00.8	-12°33.1
4	243°30.5	-8°17.0	4	243°40.2	-9°23.2	4	243°48.6	-10°28.3	4	243°55.5	-11°31.9	4	244°00.8	-12°34.0
5	258°30.6	-8°17.9	5	258°40.4	-9°24.2	5	258°48.7	-10°29.2	5	258°55.6	-11°32.8	5	259°00.9	-12°34.8
6	273°30.8	-8°18.9	6	273°40.5	-9°25.1	6	273°48.8	-10°30.1	6	273°55.7	-11°33.6	6	274°01.0	-12°35.7
7	288°30.9	-8°19.8	7	288°40.6	-9°26.0	7	288°49.0	-10°30.9	7	288°55.8	-11°34.5	7	289°01.0	-12°36.5
8	303°31.0	-8°20.7	8	303°40.7	-9°26.9	8	303°49.1	-10°31.8	8	303°55.9	-11°35.4	8	304°01.1	-12°37.4
9	318°31.2	-8°21.7	9	318°40.9	-9°27.8	9	318°49.2	-10°32.7	9	318°56.0	-11°36.3	9	319°01.1	-12°38.2
10	333°31.3	-8°22.6	10	333°41.0	-9°28.7	10	333°49.3	-10°33.6	10	333°56.0	-11°37.1	10	334°01.2	-12°39.1
11	348°31.5	-8°23.5	11	348°41.1	-9°29.6	11	348°49.4	-10°34.5	11	348°56.1	-11°38.0	11	349°01.3	-12°39.9
12	3°31.6	-8°24.4	12	3°41.2	-9°30.5	12	3°49.5	-10°35.4	12	3°56.2	-11°38.9	12	4°01.3	-12°40.8
13	18°31.8	-8°25.4	13	18°41.4	-9°31.4	13	18°49.6	-10°36.3	13	18°56.3	-11°39.8	13	19°01.4	-12°41.6
14	33°31.9	-8°26.3	14	33°41.5	-9°32.4	14	33°49.7	-10°37.2	14	33°56.4	-11°40.6	14	34°01.4	-12°42.5
15	48°32.0	-8°27.2	15	48°41.6	-9°33.3	15	48°49.8	-10°38.1	15	48°56.5	-11°41.5	15	49°01.5	-12°43.3
16	63°32.2	-8°28.1	16	63°41.7	-9°34.2	16	63°49.9	-10°39.0	16	63°56.5	-11°42.4	16	64°01.6	-12°44.2
17	78°32.3	-8°29.1	17	78°41.9	-9°35.1	17	78°50.0	-10°39.9	17	78°56.6	-11°43.2	17	79°01.6	-12°45.0
18	93°32.5	-8°30.0	18	93°42.0	-9°36.0	18	93°50.1	-10°40.8	18	93°56.7	-11°44.1	18	94°01.7	-12°45.9
19	108°32.6	-8°30.9	19	108°42.1	-9°36.9	19	108°50.2	-10°41.6	19	108°56.8	-11°45.0	19	109°01.7	-12°46.7
20	123°32.8	-8°31.8	20	123°42.2	-9°37.8	20	123°50.3	-10°42.5	20	123°56.9	-11°45.8	20	124°01.8	-12°47.5
21	138°32.9	-8°32.8	21	138°42.3	-9°38.7	21	138°50.4	-10°43.4	21	138°56.9	-11°46.7	21	139°01.8	-12°48.4
22	153°33.0	-8°33.7	22	153°42.5	-9°39.6	22	153°50.5	-10°44.3	22	153°57.0	-11°47.6	22	154°01.9	-12°49.2
23	168°33.2	-8°34.6	23	168°42.6	-9°40.5	23	168°50.6	-10°45.2	23	168°57.1	-11°48.4	23	169°02.0	-12°50.1
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

27	GHA	Dec	30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec
0	184°02.0	-12°50.9	0	184°05.1	-13°50.8	0	184°06.5	-14°48.6	0	184°06.1	-15°44.3	0	184°03.8	-16°37.6
1	199°02.1	-12°51.8	1	199°05.2	-13°51.6	1	199°06.5	-14°49.4	1	199°06.1	-15°45.0	1	199°03.8	-16°38.4
2	214°02.1	-12°52.6	2	214°05.2	-13°52.4	2	214°06.5	-14°50.2	2	214°06.1	-15°45.8	2	214°03.7	-16°39.1
3	229°02.2	-12°53.5	3	229°05.2	-13°53.2	3	229°06.5	-14°51.0	3	229°06.0	-15°46.6	3	229°03.7	-16°39.8
4	244°02.2	-12°54.3	4	244°05.3	-13°54.0	4	244°06.5	-14°51.8	4	244°06.0	-15°47.3	4	244°03.7	-16°40.5
5	259°02.3	-12°55.1	5	259°05.3	-13°54.8	5	259°06.6	-14°52.5	5	259°06.0	-15°48.1	5	259°03.6	-16°41.2
6	274°02.3	-12°56.0	6	274°05.3	-13°55.7	6	274°06.6	-14°53.3	6	274°06.0	-15°48.8	6	274°03.6	-16°42.0
7	289°02.4	-12°56.8	7	289°05.4	-13°56.5	7	289°06.6	-14°54.1	7	289°06.0	-15°49.6	7	289°03.5	-16°42.7
8	304°02.4	-12°57.7	8	304°05.4	-13°57.3	8	304°06.6	-14°54.9	8	304°05.9	-15°50.3	8	304°03.5	-16°43.4
9	319°02.5	-12°58.5	9	319°05.4	-13°58.1	9	319°06.6	-14°55.7	9	319°05.9	-15°51.1	9	319°03.4	-16°44.1
10	334°02.6	-12°59.3	10	334°05.4	-13°58.9	10	334°06.6	-14°56.5	10	334°05.9	-15°51.8	10	334°03.4	-16°44.8
11	349°02.6	-13°00.2	11	349°05.5	-13°59.7	11	349°06.6	-14°57.3	11	349°05.9	-15°52.6	11	349°03.3	-16°45.6
12	4°02.7	-13°01.0	12	4°05.5	-14°00.5	12	4°06.6	-14°58.0	12	4°05.8	-15°53.3	12	4°03.3	-16°46.3
13	19°02.7	-13°01.9	13	19°05.5	-14°01.3	13	19°06.6	-14°58.8	13	19°05.8	-15°54.1	13	19°03.2	-16°47.0
14	34°02.8	-13°02.7	14	34°05.6	-14°02.2	14	34°06.6	-14°59.6	14	34°05.8	-15°54.9	14	34°03.2	-16°47.7
15	49°02.8	-13°03.5	15	49°05.6	-14°03.0	15	49°06.6	-15°00.4	15	49°05.8	-15°55.6	15	49°03.1	-16°48.4
16	64°02.9	-13°04.4	16	64°05.6	-14°03.8	16	64°06.6	-15°01.2	16	64°05.8	-15°56.4	16	64°03.1	-16°49.1
17	79°02.9	-13°05.2	17	79°05.6	-14°04.6	17	79°06.6	-15°02.0	17	79°05.7	-15°57.1	17	79°03.0	-16°49.9
18	94°03.0	-13°06.1	18	94°05.7	-14°05.4	18	94°06.6	-15°02.7	18	94°05.7	-15°57.9	18	94°03.0	-16°50.6
19	109°03.0	-13°06.9	19	109°05.7	-14°06.2	19	109°06.6	-15°03.5	19	109°05.7	-15°58.6	19	109°02.9	-16°51.3
20	124°03.1	-13°07.7	20	124°05.7	-14°07.0	20	124°06.6	-15°04.3	20	124°05.7	-15°59.4	20	124°02.9	-16°52.0
21	139°03.1	-13°08.6	21	139°05.7	-14°07.8	21	139°06.6	-15°05.1	21	139°05.6	-16°00.1	21	139°02.8	-16°52.7
22	154°03.2	-13°09.4	22	154°05.8	-14°08.6	22	154°06.6	-15°05.9	22	154°05.6	-16°00.8	22	154°02.8	-16°53.4
23	169°03.2	-13°10.2	23	169°05.8	-14°09.5	23	169°06.6	-15°06.6	23	169°05.6	-16°01.6	23	169°02.7	-16°54.1
	SD.=16.1	d=-0.8		SD.=16.1	d=-0.8		SD.=16.1	d=-0.8		SD.=16.1	d=-0.8		SD.=16.1	d=-0.7

28	GHA	Dec	31	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec
0	184°03.2	-13°11.1	0	184°05.8	-14°10.3	0	184°06.6	-15°07.4	0	184°05.5	-16°02.3	0	184°02.7	-16°54.9
1	199°03.3	-13°11.9	1	199°05.8	-14°11.1	1	199°06.6	-15°08.2	1	199°05.5	-16°03.1	1	199°02.6	-16°55.6
2	214°03.3	-13°12.7	2	214°05.9	-14°11.9	2	214°06.6	-15°09.0	2	214°05.5	-16°03.8	2	214°02.6	-16°56.3
3	229°03.4	-13°13.6	3	229°05.9	-14°12.7	3	229°06.6	-15°09.7	3	229°05.5	-16°04.6	3	229°02.5	-16°57.0
4	244°03.4	-13°14.4	4	244°05.9	-14°13.5	4	244°06.6	-15°10.5	4	244°05.4	-16°05.3	4	244°02.5	-16°57.7
5	259°03.5	-13°15.2	5	259°05.9	-14°14.3	5	259°06.6	-15°11.3	5	259°05.4	-16°06.1	5	259°02.4	-16°58.4
6	274°03.5	-13°16.1	6	274°05.9	-14°15.1	6	274°06.6	-15°12.1	6	274°05.4	-16°06.8	6	274°02.4	-16°59.1
7	289°03.6	-13°16.9	7	289°06.0	-14°15.9	7	289°06.6	-15°12.9	7	289°05.4	-16°07.6	7	289°02.3	-16°59.8
8	304°03.6	-13°17.7	8	304°06.0	-14°16.7	8	304°06.6	-15°13.6	8	304°05.3	-16°08.3	8	304°02.2	-17°00.5
9	319°03.7	-13°18.6	9	319°06.0	-14°17.5	9	319°06.6	-15°14.4	9	319°05.3	-16°09.0	9	319°02.2	-17°01.2
10	334°03.7	-13°19.4	10	334°06.0	-14°18.3	10	334°06.5	-15°15.2	10	334°05.3	-16°09.8	10	334°02.1	-17°01.9
11	349°03.8	-13°20.2	11	349°06.0	-14°19.1	11	349°06.5	-15°16.0	11	349°05.2	-16°10.5	11	349°02.1	-17°02.7
12	4°03.8	-13°21.1	12	4°06.1	-14°19.9	12	4°06.5	-15°16.7	12	4°05.2	-16°11.3	12	4°02.0	-17°03.4
13	19°03.8	-13°21.9	13	19°06.1	-14°20.7	13	19°06.5	-15°17.5	13	19°05.2	-16°12.0	13	19°02.0	-17°04.1
14	34°03.9	-13°22.7	14	34°06.1	-14°21.5	14	34°06.5	-15°18.3	14	34°05.1	-16°12.7	14	34°01.9	-17°04.8
15	49°03.9	-13°23.6	15	49°06.1	-14°22.3	15	49°06.5	-15°19.0	15	49°05.1	-16°13.5	15	49°01.8	-17°05.5
16	64°04.0	-13°24.4	16	64°06.1	-14°23.1	16	64°06.5	-15°19.8	16	64°05.1	-16°14.2	16	64°01.8	-17°06.2
17	79°04.0	-13°25.2	17	79°06.1	-14°23.9	17	79°06.5	-15°20.6	17	79°05.0	-16°15.0	17	79°01.7	-17°06.9
18	94°04.1	-13°26.1	18	94°06.2	-14°24.7	18	94°06.5	-15°21.4	18	94°05.0	-16°15.7	18	94°01.7	-17°07.6
19	109°04.1	-13°26.9	19	109°06.2	-14°25.6	19	109°06.5	-15°22.1	19	109°05.0	-16°16.4	19	109°01.6	-17°08.3
20	124°04.1	-13°27.7	20	124°06.2	-14°26.4	20	124°06.5	-15°22.9	20	124°04.9	-16°17.2	20	124°01.5	-17°09.0
21	139°04.2	-13°28.5	21	139°06.2	-14°27.2	21	139°06.5	-15°23.7	21	139°04.9	-16°17.9	21	139°01.5	-17°09.7
22	154°04.2	-13°29.4	22	154°06.2	-14°28.0	22	154°06.5	-15°24.4	22	154°04.9	-16°18.7	22	154°01.4	-17°10.4
23	169°04.3	-13°30.2	23	169°06.2	-14°28.8	23	169°06.5	-15°25.2	23	169°04.8	-16°19.4	23	169°01.4	-17°11.1
	SD.=16.1	d=-0.8		SD.=16.1	d=-0.8		SD.=16.1	d=-0.8		SD.=16.1	d=-0.7		SD.=16.1	d=-0.7

29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec	10	GHA	Dec
0	184°04.3	-13°31.0	0	184°06.3	-14°29.5	0	184°06.4	-15°26.0	0	184°04.8	-16°20.1	0	184°01.3	-17°11.8
1	199°04.3	-13°31.8	1	199°06.3	-14°30.3	1	199°06.4	-15°26.7	1	199°04.8	-16°20.9	1	199°01.2	-17°12.5
2	214°04.4	-13°32.7	2	214°06.3	-14°31.1	2	214°06.4	-15°27.5	2	214°04.7	-16°21.6	2	214°01.2	-17°13.2
3	229°04.4	-13°33.5	3	229°06.3	-14°31.9	3	229°06.4	-15°28.3	3	229°04.7	-16°22.3	3	229°01.1	-17°13.9
4	244°04.5	-13°34.3	4	244°06.3	-14°32.7	4	244°06.4	-15°29.0	4	244°04.7	-16°23.1	4	244°01.1	-17°14.6
5	259°04.5	-13°35.1	5	259°06.3	-14°33.5	5	259°06.4	-15°29.8	5	259°04.6	-16°23.8	5	259°01.0	-17°15.3
6	274°04.5	-13°36.0	6	274°06.3	-14°34.3	6	274°06.4	-15°30.6	6	274°04.6	-16°24.5	6	274°00.9	-17°16.0
7	289°04.6	-13°36.8	7	289°06.4	-14°35.1	7	289°06.4	-15°31.3	7	289°04.5	-16°25.3	7	289°00.9	-17°16.7
8	304°04.6	-13°37.6	8	304°06.4	-14°35.9	8	304°06.3	-15°32.1	8	304°04.5	-16°26.0	8	304°00.8	-17°17.4
9	319°04.6	-13°38.4	9	319°06.4	-14°36.7	9	319°06.3	-15°32.9	9	319°04.5	-16°26.7	9	319°00.7	-17°18.1
10	334°04.7	-13°39.3	10	334°06.4	-14°37.5	10	334°06.3	-15°33.6	10	334°04.4	-16°27.5	10	334°00.7	-17°18.8
11	349°04.7	-13°40.1	11	349°06.4	-14°38.3	11	349°06.3	-15°34.4	11	349°04.4	-16°28.2	11	349°00.6	-17°19.5
12	4°04.7	-13°40.9	12	4°06.4	-14°39.1	12	4°06.3	-15°35.2	12	4°04.3	-16°28.9	12	4°00.5	-17°20.1
13	19°04.8	-13°41.7	13	19°06.4	-14°39.9	13	19°06.3	-15°35.9	13	19°04.3	-16°29.6	13	19°00.5	-17°20.8
14	34°04.8	-13°42.6	14	34°06.4	-14°40.7	14	34°06.3	-15°36.7	14	34°04.3	-16°30.4	14	34°00.4	-17°21.5
15	49°04.9	-13°43.4	15	49°06.4	-14°41.5	15	49°06.2	-15°37.5	15	49°04.2	-16°31.1	15	49°00.3	-17°22.2
16	64°04.9	-13°44.2	16	64°06.5	-14°42.3	16	64°06.2	-15°38.2	16	64°04.2	-16°31.8	16	64°00.3	-17°22.9
17	79°04.9	-13°45.0	17	79°06.5	-14°43.1	17	79°06.2	-15°39.0	17	79°04.1	-16°32.6	17	79°00.2	-17°23.6
18	94°05.0	-13°45.8	18	94°06.5	-14°43.9	18	94°06.2	-15°39.7	18	94°04.1	-16°33.3	18	94°00.1	-17°24.3
19	109°05.0	-13°46.7	19	109°06.5	-14°44.7	19	109°06.2	-15°40.5	19	109°04.1	-16°34.0	19	109°00.1	-17°25.0
20	124°05.0	-13°47.5	20	124°06.5	-14°45.4	20	124°06.2	-15°41.3	20	124°04.0	-16°34.7	20	124°00.0	-17°25.7
21	139°05.1	-13°48.3	21	139°06.5	-14°46.2	21	139°06.2	-15°42.0	21	139°04.0	-16°35.5	21	138°59.9	-17°26.4
22	154°05.1	-13°49.1	22	154°06.5	-14°47.0	22	154°06.1	-15°42.8	22	154°03.9	-16°36.2	22	153°59.9	-17°27.1
23	169°05.1	-13°49.9	23	169°06.5	-14°47.8	23	169°06.1	-15°43.5	23	169°03.9	-16°36.9	23	168°59.8	-17°27.7
	SD.=16.1													



<b>11</b>	<b>GHA</b>	<b>Dec</b>	<b>14</b>	<b>GHA</b>	<b>Dec</b>	<b>17</b>	<b>GHA</b>	<b>Dec</b>	<b>20</b>	<b>GHA</b>	<b>Dec</b>	<b>23</b>	<b>GHA</b>	<b>Dec</b>
0	183°59.7	-17°28.4	0	183°53.7	-18°16.5	0	183°45.9	-19°01.7	0	183°36.1	-19°43.9	0	183°24.4	-20°22.8
1	198°59.7	-17°29.1	1	198°53.6	-18°17.2	1	198°45.7	-19°02.3	1	198°35.9	-19°44.4	1	198°24.3	-20°23.3
2	213°59.6	-17°29.8	2	213°53.5	-18°17.8	2	213°45.6	-19°02.9	2	213°35.8	-19°45.0	2	213°24.1	-20°23.8
3	228°59.5	-17°30.5	3	228°53.5	-18°18.5	3	228°45.5	-19°03.5	3	228°35.6	-19°45.6	3	228°23.9	-20°24.4
4	243°59.4	-17°31.2	4	243°53.4	-18°19.1	4	243°45.4	-19°04.1	4	243°35.5	-19°46.1	4	243°23.7	-20°24.9
5	258°59.4	-17°31.9	5	258°53.3	-18°19.7	5	258°45.2	-19°04.7	5	258°35.3	-19°46.7	5	258°23.6	-20°25.4
6	273°59.3	-17°32.5	6	273°53.2	-18°20.4	6	273°45.1	-19°05.3	6	273°35.2	-19°47.2	6	273°23.4	-20°25.9
7	288°59.2	-17°33.2	7	288°53.1	-18°21.0	7	288°45.0	-19°05.9	7	288°35.0	-19°47.8	7	288°23.2	-20°26.4
8	303°59.2	-17°33.9	8	303°53.0	-18°21.7	8	303°44.9	-19°06.6	8	303°34.9	-19°48.4	8	303°23.0	-20°26.9
9	318°59.1	-17°34.6	9	318°52.9	-18°22.3	9	318°44.7	-19°07.2	9	318°34.7	-19°48.9	9	318°22.8	-20°27.4
10	333°59.0	-17°35.3	10	333°52.8	-18°23.0	10	333°44.6	-19°07.8	10	333°34.6	-19°49.5	10	333°22.7	-20°27.9
11	348°58.9	-17°36.0	11	348°52.7	-18°23.6	11	348°44.5	-19°08.4	11	348°34.4	-19°50.0	11	348°22.5	-20°28.5
12	3°58.9	-17°36.6	12	3°52.6	-18°24.3	12	3°44.4	-19°09.0	12	3°34.3	-19°50.6	12	3°22.3	-20°29.0
13	18°58.8	-17°37.3	13	18°52.5	-18°24.9	13	18°44.2	-19°09.6	13	18°34.1	-19°51.1	13	18°22.1	-20°29.5
14	33°58.7	-17°38.0	14	33°52.4	-18°25.5	14	33°44.1	-19°10.2	14	33°34.0	-19°51.7	14	33°22.0	-20°30.0
15	48°58.6	-17°38.7	15	48°52.3	-18°26.2	15	48°44.0	-19°10.8	15	48°33.8	-19°52.2	15	48°21.8	-20°30.5
16	63°58.6	-17°39.4	16	63°52.2	-18°26.8	16	63°43.9	-19°11.4	16	63°33.6	-19°52.8	16	63°21.6	-20°31.0
17	78°58.5	-17°40.0	17	78°52.1	-18°27.5	17	78°43.7	-19°11.9	17	78°33.5	-19°53.4	17	78°21.4	-20°31.5
18	93°58.4	-17°40.7	18	93°51.9	-18°28.1	18	93°43.6	-19°12.5	18	93°33.3	-19°53.9	18	93°21.2	-20°32.0
19	108°58.3	-17°41.4	19	108°51.8	-18°28.7	19	108°43.5	-19°13.1	19	108°33.2	-19°54.5	19	108°21.1	-20°32.5
20	123°58.3	-17°42.1	20	123°51.7	-18°29.4	20	123°43.3	-19°13.7	20	123°33.0	-19°55.0	20	123°20.9	-20°33.0
21	138°58.2	-17°42.7	21	138°51.6	-18°30.0	21	138°43.2	-19°14.3	21	138°32.9	-19°55.6	21	138°20.7	-20°33.5
22	153°58.1	-17°43.4	22	153°51.5	-18°30.6	22	153°43.1	-19°14.9	22	153°32.7	-19°56.1	22	153°20.5	-20°34.0
23	168°58.0	-17°44.1	23	168°51.4	-18°31.3	23	168°42.9	-19°15.5	23	168°32.6	-19°56.7	23	168°20.3	-20°34.5
	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
<b>12</b>	<b>GHA</b>	<b>Dec</b>	<b>15</b>	<b>GHA</b>	<b>Dec</b>	<b>18</b>	<b>GHA</b>	<b>Dec</b>	<b>21</b>	<b>GHA</b>	<b>Dec</b>	<b>24</b>	<b>GHA</b>	<b>Dec</b>
0	183°57.9	-17°44.8	0	183°51.3	-18°31.9	0	183°42.8	-19°16.1	0	183°32.4	-19°57.2	0	183°20.1	-20°35.0
1	198°57.9	-17°45.4	1	198°51.2	-18°32.5	1	198°42.7	-19°16.7	1	198°32.2	-19°57.8	1	198°20.0	-20°35.5
2	213°57.8	-17°46.1	2	213°51.1	-18°33.2	2	213°42.5	-19°17.3	2	213°32.1	-19°58.3	2	213°19.8	-20°36.0
3	228°57.7	-17°46.8	3	228°51.0	-18°33.8	3	228°42.4	-19°17.9	3	228°31.9	-19°58.9	3	228°19.6	-20°36.5
4	243°57.6	-17°47.5	4	243°50.9	-18°34.4	4	243°42.3	-19°18.5	4	243°31.8	-19°59.4	4	243°19.4	-20°37.0
5	258°57.5	-17°48.1	5	258°50.8	-18°35.1	5	258°42.1	-19°19.1	5	258°31.6	-19°59.9	5	258°19.2	-20°37.5
6	273°57.5	-17°48.8	6	273°50.7	-18°35.7	6	273°42.0	-19°19.7	6	273°31.4	-20°00.5	6	273°19.0	-20°38.0
7	288°57.4	-17°49.5	7	288°50.6	-18°36.3	7	288°41.9	-19°20.2	7	288°31.3	-20°01.0	7	288°18.9	-20°38.5
8	303°57.3	-17°50.1	8	303°50.5	-18°37.0	8	303°41.7	-19°20.8	8	303°31.1	-20°01.6	8	303°18.7	-20°39.0
9	318°57.2	-17°50.8	9	318°50.4	-18°37.6	9	318°41.6	-19°21.4	9	318°31.0	-20°02.1	9	318°18.5	-20°39.5
10	333°57.1	-17°51.5	10	333°50.3	-18°38.2	10	333°41.5	-19°22.0	10	333°30.8	-20°02.7	10	333°18.3	-20°40.0
11	348°57.1	-17°52.2	11	348°50.1	-18°38.9	11	348°41.3	-19°22.6	11	348°30.6	-20°03.2	11	348°18.1	-20°40.5
12	3°57.0	-17°52.8	12	3°50.0	-18°39.5	12	3°41.2	-19°23.2	12	3°30.5	-20°03.7	12	3°17.9	-20°41.0
13	18°56.9	-17°53.5	13	18°49.9	-18°40.1	13	18°41.1	-19°23.8	13	18°30.3	-20°04.3	13	18°17.7	-20°41.5
14	33°56.8	-17°54.2	14	33°49.8	-18°40.7	14	33°40.9	-19°24.4	14	33°30.2	-20°04.8	14	33°17.6	-20°42.0
15	48°56.7	-17°54.8	15	48°49.7	-18°41.4	15	48°40.8	-19°24.9	15	48°30.0	-20°05.4	15	48°17.4	-20°42.5
16	63°56.6	-17°55.5	16	63°49.6	-18°42.0	16	63°40.7	-19°25.5	16	63°29.8	-20°05.9	16	63°17.2	-20°43.0
17	78°56.6	-17°56.2	17	78°49.5	-18°42.6	17	78°40.5	-19°26.1	17	78°29.7	-20°06.4	17	78°17.0	-20°43.5
18	93°56.5	-17°56.8	18	93°49.4	-18°43.2	18	93°40.4	-19°26.7	18	93°29.5	-20°07.0	18	93°16.8	-20°44.0
19	108°56.4	-17°57.5	19	108°49.3	-18°43.9	19	108°40.2	-19°27.3	19	108°29.3	-20°07.5	19	108°16.6	-20°44.5
20	123°56.3	-17°58.1	20	123°49.2	-18°44.5	20	123°40.1	-19°27.8	20	123°29.2	-20°08.1	20	123°16.4	-20°44.9
21	138°56.2	-17°58.8	21	138°49.0	-18°45.1	21	138°40.0	-19°28.4	21	138°29.0	-20°08.6	21	138°16.2	-20°45.4
22	153°56.1	-17°59.5	22	153°48.9	-18°45.7	22	153°39.8	-19°29.0	22	153°28.8	-20°09.1	22	153°16.0	-20°45.9
23	168°56.0	-18°00.1	23	168°48.8	-18°46.4	23	168°39.7	-19°29.6	23	168°28.7	-20°09.7	23	168°15.9	-20°46.4
	SD.=16.2	d=-0.7		SD.=16.2	d=-0.6		SD.=16.2	d=-0.6		SD.=16.2	d=-0.5		SD.=16.2	d=-0.5
<b>13</b>	<b>GHA</b>	<b>Dec</b>	<b>16</b>	<b>GHA</b>	<b>Dec</b>	<b>19</b>	<b>GHA</b>	<b>Dec</b>	<b>22</b>	<b>GHA</b>	<b>Dec</b>	<b>25</b>	<b>GHA</b>	<b>Dec</b>
0	183°55.9	-18°00.8	0	183°48.7	-18°47.0	0	183°39.5	-19°30.2	0	183°28.5	-20°10.2	0	183°15.7	-20°46.9
1	198°55.9	-18°01.5	1	198°48.6	-18°47.6	1	198°39.4	-19°30.7	1	198°28.4	-20°10.7	1	198°15.5	-20°47.4
2	213°55.8	-18°02.1	2	213°48.5	-18°48.2	2	213°39.3	-19°31.3	2	213°28.2	-20°11.3	2	213°15.3	-20°47.9
3	228°55.7	-18°02.8	3	228°48.4	-18°48.8	3	228°39.1	-19°31.9	3	228°28.0	-20°11.8	3	228°15.1	-20°48.3
4	243°55.6	-18°03.4	4	243°48.2	-18°49.5	4	243°39.0	-19°32.5	4	243°27.8	-20°12.3	4	243°14.9	-20°48.8
5	258°55.5	-18°04.1	5	258°48.1	-18°50.1	5	258°38.8	-19°33.0	5	258°27.7	-20°12.8	5	258°14.7	-20°49.3
6	273°55.4	-18°04.8	6	273°48.0	-18°50.7	6	273°38.7	-19°33.6	6	273°27.5	-20°13.4	6	273°14.5	-20°49.8
7	288°55.3	-18°05.4	7	288°47.9	-18°51.3	7	288°38.6	-19°34.2	7	288°27.3	-20°13.9	7	288°14.3	-20°50.3
8	303°55.2	-18°06.1	8	303°47.8	-18°51.9	8	303°38.4	-19°34.8	8	303°27.2	-20°14.4	8	303°14.1	-20°50.8
9	318°55.1	-18°06.7	9	318°47.7	-18°52.5	9	318°38.3	-19°35.3	9	318°27.0	-20°15.0	9	318°13.9	-20°51.2
10	333°55.1	-18°07.4	10	333°47.5	-18°53.2	10	333°38.1	-19°35.9	10	333°26.8	-20°15.5	10	333°13.7	-20°51.7
11	348°55.0	-18°08.0	11	348°47.4	-18°53.8	11	348°38.0	-19°36.5	11	348°26.7	-20°16.0	11	348°13.5	-20°52.2
12	3°54.9	-18°08.7	12	3°47.3	-18°54.4	12	3°37.8	-19°37.1	12	3°26.5	-20°16.5	12	3°13.4	-20°52.7
13	18°54.8	-18°09.4	13	18°47.2	-18°55.0	13	18°37.7	-19°37.6	13	18°26.3	-20°17.1	13	18°13.2	-20°53.2
14	33°54.7	-18°10.0	14	33°47.1	-18°55.6	14	33°37.5	-19°38.2	14	33°26.2	-20°17.6	14	33°13.0	-20°53.6
15	48°54.6	-18°10.7	15	48°46.9	-18°56.2	15	48°37.4	-19°38.8	15	48°26.0	-20°18.1	15	48°12.8	-20°54.1
16	63°54.5	-18°11.3	16	63°46.8	-18°56.8	16	63°37.3	-19°39.3	16	63°25.8	-20°18.6	16	63°12.6	-20°54.6
17	78°54.4	-18°12.0	17	78°46.7	-18°57.5	17	78°37.1	-19°39.9	17	78°25.6	-20°19.2	17	78°12.4	-20°55.1
18	93°54.3	-18°12.6	18	93°46.6	-18°58.1	18	93°37.0	-19°40.5	18	93°25.5	-20°19.7	18	93°12.2	-20°55.5
19	108°54.2	-18°13.3	19	108°46.5	-18°58.7	19	108°36.8	-19°41.0	19	108°25.3	-20°20.2	19	108°12.0	-20°56.0
20	123°54.1	-18°13.9	20	123°46.3	-18°59.3	20	123°36.7	-19°41.6	20	123°25.1	-20°20.7	20	123°11.8	-20°56.5
21	138°54.0	-18°14.6	21	138°46.2	-18°59.9	21	138°36.5	-19°42.2	21	138°25.0	-20°21.2	21	138°11.6	-20°56.9
22	153°53.9	-18°15.2	22	153°46.1	-19									

26	GHA	Dec	29	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec
0	183°11.0	-20°58.4	0	182°55.9	-21°30.4	0	182°39.2	-21°58.8	0	182°21.2	-22°23.3	0	182°02.0	-22°43.9
1	198°10.8	-20°58.8	1	197°55.6	-21°30.8	1	197°39.0	-21°59.1	1	197°20.9	-22°23.6	1	197°01.7	-22°44.2
2	213°10.6	-20°59.3	2	212°55.4	-21°31.2	2	212°38.7	-21°59.5	2	212°20.7	-22°23.9	2	212°01.4	-22°44.5
3	228°10.4	-20°59.8	3	227°55.2	-21°31.6	3	227°38.5	-21°59.9	3	227°20.4	-22°24.3	3	227°01.1	-22°44.7
4	243°10.2	-21°00.2	4	242°55.0	-21°32.1	4	242°38.2	-22°00.2	4	242°20.1	-22°24.6	4	242°00.9	-22°45.0
5	258°10.0	-21°00.7	5	257°54.8	-21°32.5	5	257°38.0	-22°00.6	5	257°19.9	-22°24.9	5	257°00.6	-22°45.2
6	273°09.8	-21°01.2	6	272°54.5	-21°32.9	6	272°37.8	-22°00.9	6	272°19.6	-22°25.2	6	272°00.3	-22°45.5
7	288°09.6	-21°01.6	7	287°54.3	-21°33.3	7	287°37.5	-22°01.3	7	287°19.4	-22°25.5	7	287°00.0	-22°45.7
8	303°09.4	-21°02.1	8	302°54.1	-21°33.7	8	302°37.3	-22°01.7	8	302°19.1	-22°25.8	8	301°59.8	-22°46.0
9	318°09.2	-21°02.6	9	317°53.9	-21°34.1	9	317°37.0	-22°02.0	9	317°18.8	-22°26.1	9	316°59.5	-22°46.2
10	333°09.0	-21°03.0	10	332°53.6	-21°34.6	10	332°36.8	-22°02.4	10	332°18.6	-22°26.4	10	331°59.2	-22°46.5
11	348°08.8	-21°03.5	11	347°53.4	-21°35.0	11	347°36.5	-22°02.8	11	347°18.3	-22°26.7	11	346°58.9	-22°46.8
12	3°08.6	-21°03.9	12	2°53.2	-21°35.4	12	2°36.3	-22°03.1	12	2°18.1	-22°27.0	12	1°58.7	-22°47.0
13	18°08.4	-21°04.4	13	17°53.0	-21°35.8	13	17°36.1	-22°03.5	13	17°17.8	-22°27.3	13	16°58.4	-22°47.2
14	33°08.2	-21°04.9	14	32°52.7	-21°36.2	14	32°35.8	-22°03.8	14	32°17.5	-22°27.6	14	31°58.1	-22°47.5
15	48°08.0	-21°05.3	15	47°52.5	-21°36.6	15	47°35.6	-22°04.2	15	47°17.3	-22°27.9	15	46°57.8	-22°47.7
16	63°07.8	-21°05.8	16	62°52.3	-21°37.0	16	62°35.3	-22°04.5	16	62°17.0	-22°28.2	16	61°57.5	-22°48.0
17	78°07.6	-21°06.2	17	77°52.1	-21°37.4	17	77°35.1	-22°04.9	17	77°16.7	-22°28.5	17	76°57.3	-22°48.2
18	93°07.4	-21°06.7	18	92°51.8	-21°37.8	18	92°34.8	-22°05.3	18	92°16.5	-22°28.8	18	91°57.0	-22°48.5
19	108°07.2	-21°07.2	19	107°51.6	-21°38.2	19	107°34.6	-22°05.6	19	107°16.2	-22°29.1	19	106°56.7	-22°48.7
20	123°07.0	-21°07.6	20	122°51.4	-21°38.6	20	122°34.3	-22°06.0	20	122°16.0	-22°29.4	20	121°56.4	-22°49.0
21	138°06.7	-21°08.1	21	137°51.2	-21°39.0	21	137°34.1	-22°06.3	21	137°15.7	-22°29.7	21	136°56.2	-22°49.2
22	153°06.5	-21°08.5	22	152°50.9	-21°39.5	22	152°33.8	-22°06.7	22	152°15.4	-22°30.0	22	151°55.9	-22°49.5
23	168°06.3	-21°09.0	23	167°50.7	-21°39.9	23	167°33.6	-22°07.0	23	167°15.2	-22°30.3	23	166°55.6	-22°49.7
	SD.=16.2	d=-0.5		SD.=16.2	d=-0.4		SD.=16.2	d=-0.4		SD.=16.2	d=-0.3		SD.=16.2	d=-0.3

27	GHA	Dec	30	GHA	Dec	03	GHA	Dec	06	GHA	Dec	09	GHA	Dec
0	183°06.1	-21°09.4	0	182°50.5	-21°40.3	0	182°33.3	-22°07.4	0	182°14.9	-22°30.6	0	181°55.3	-22°49.9
1	198°05.9	-21°09.9	1	197°50.3	-21°40.7	1	197°33.1	-22°07.7	1	197°14.6	-22°30.9	1	196°55.0	-22°50.2
2	213°05.7	-21°10.3	2	212°50.0	-21°41.1	2	212°32.9	-22°08.1	2	212°14.4	-22°31.2	2	211°54.8	-22°50.4
3	228°05.5	-21°10.8	3	227°49.8	-21°41.5	3	227°32.6	-22°08.4	3	227°14.1	-22°31.5	3	226°54.5	-22°50.7
4	243°05.3	-21°11.2	4	242°49.6	-21°41.9	4	242°32.4	-22°08.8	4	242°13.8	-22°31.8	4	241°54.2	-22°50.9
5	258°05.1	-21°11.7	5	257°49.3	-21°42.3	5	257°32.1	-22°09.1	5	257°13.6	-22°32.1	5	256°53.9	-22°51.1
6	273°04.9	-21°12.1	6	272°49.1	-21°42.7	6	272°31.9	-22°09.5	6	272°13.3	-22°32.4	6	271°53.6	-22°51.4
7	288°04.7	-21°12.6	7	287°48.9	-21°43.1	7	287°31.6	-22°09.8	7	287°13.0	-22°32.7	7	286°53.4	-22°51.6
8	303°04.5	-21°13.0	8	302°48.6	-21°43.5	8	302°31.4	-22°10.1	8	302°12.8	-22°33.0	8	301°53.1	-22°51.8
9	318°04.3	-21°13.5	9	317°48.4	-21°43.9	9	317°31.1	-22°10.5	9	317°12.5	-22°33.3	9	316°52.8	-22°52.1
10	333°04.1	-21°13.9	10	332°48.2	-21°44.3	10	332°30.9	-22°10.8	10	332°12.2	-22°33.6	10	331°52.5	-22°52.3
11	348°03.8	-21°14.4	11	347°48.0	-21°44.6	11	347°30.6	-22°11.2	11	347°12.0	-22°33.8	11	346°52.2	-22°52.5
12	3°03.6	-21°14.8	12	2°47.7	-21°45.0	12	2°30.4	-22°11.5	12	2°11.7	-22°34.1	12	1°52.0	-22°52.8
13	18°03.4	-21°15.3	13	17°47.5	-21°45.4	13	17°30.1	-22°11.9	13	17°11.4	-22°34.4	13	16°51.7	-22°53.0
14	33°03.2	-21°15.7	14	32°47.3	-21°45.8	14	32°29.9	-22°12.2	14	32°11.2	-22°34.7	14	31°51.4	-22°53.2
15	48°03.0	-21°16.2	15	47°47.0	-21°46.2	15	47°29.6	-22°12.5	15	47°10.9	-22°35.0	15	46°51.1	-22°53.5
16	63°02.8	-21°16.6	16	62°46.8	-21°46.6	16	62°29.4	-22°12.9	16	62°10.6	-22°35.3	16	61°50.8	-22°53.7
17	78°02.6	-21°17.0	17	77°46.6	-21°47.0	17	77°29.1	-22°13.2	17	77°10.4	-22°35.6	17	76°50.6	-22°53.9
18	93°02.4	-21°17.5	18	92°46.3	-21°47.4	18	92°28.8	-22°13.5	18	92°10.1	-22°35.8	18	91°50.3	-22°54.1
19	108°02.2	-21°17.9	19	107°46.1	-21°47.8	19	107°28.6	-22°13.9	19	107°09.8	-22°36.1	19	106°50.0	-22°54.4
20	123°01.9	-21°18.4	20	122°45.9	-21°48.2	20	122°28.3	-22°14.2	20	122°09.6	-22°36.4	20	121°49.7	-22°54.6
21	138°01.7	-21°18.8	21	137°45.6	-21°48.6	21	137°28.1	-22°14.6	21	137°09.3	-22°36.7	21	136°49.4	-22°54.8
22	153°01.5	-21°19.2	22	152°45.4	-21°48.9	22	152°27.8	-22°14.9	22	152°09.0	-22°37.0	22	151°49.1	-22°55.0
23	168°01.3	-21°19.7	23	167°45.2	-21°49.3	23	167°27.6	-22°15.2	23	167°08.8	-22°37.2	23	166°48.9	-22°55.3
	SD.=16.2	d=-0.5		SD.=16.2	d=-0.4		SD.=16.2	d=-0.3		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°01.1	-21°20.1	0	182°44.9	-21°49.7	0	182°27.3	-22°15.6	0	182°08.5	-22°37.5	0	181°48.6	-22°55.5
1	198°00.9	-21°20.6	1	197°44.7	-21°50.1	1	197°27.1	-22°15.9	1	197°08.2	-22°37.8	1	196°48.3	-22°55.7
2	213°00.7	-21°21.0	2	212°44.5	-21°50.5	2	212°26.8	-22°16.2	2	212°07.9	-22°38.1	2	211°48.0	-22°55.9
3	228°00.4	-21°21.4	3	227°44.2	-21°50.9	3	227°26.6	-22°16.5	3	227°07.7	-22°38.3	3	226°47.7	-22°56.1
4	243°00.2	-21°21.9	4	242°44.0	-21°51.3	4	242°26.3	-22°16.9	4	242°07.4	-22°38.6	4	241°47.4	-22°56.4
5	258°00.0	-21°22.3	5	257°43.7	-21°51.6	5	257°26.1	-22°17.2	5	257°07.1	-22°38.9	5	256°47.2	-22°56.6
6	272°59.8	-21°22.7	6	272°43.5	-21°52.0	6	272°25.8	-22°17.5	6	272°06.9	-22°39.2	6	271°46.9	-22°56.8
7	287°59.6	-21°23.2	7	287°43.3	-21°52.4	7	287°25.6	-22°17.9	7	287°06.6	-22°39.4	7	286°46.6	-22°57.0
8	302°59.4	-21°23.6	8	302°43.0	-21°52.8	8	302°25.3	-22°18.2	8	302°06.3	-22°39.7	8	301°46.3	-22°57.2
9	317°59.2	-21°24.0	9	317°42.8	-21°53.2	9	317°25.0	-22°18.5	9	317°06.1	-22°40.0	9	316°46.0	-22°57.4
10	332°58.9	-21°24.4	10	332°42.6	-21°53.5	10	332°24.8	-22°18.8	10	332°05.8	-22°40.2	10	331°45.7	-22°57.7
11	347°58.7	-21°24.9	11	347°42.3	-21°53.9	11	347°24.5	-22°19.2	11	347°05.5	-22°40.5	11	346°45.4	-22°57.9
12	2°58.5	-21°25.3	12	2°42.1	-21°54.3	12	2°24.3	-22°19.5	12	2°05.2	-22°40.8	12	1°45.2	-22°58.1
13	17°58.3	-21°25.7	13	17°41.9	-21°54.7	13	17°24.0	-22°19.8	13	17°05.0	-22°41.1	13	16°44.9	-22°58.3
14	32°58.1	-21°26.2	14	32°41.6	-21°55.0	14	32°23.8	-22°20.1	14	32°04.7	-22°41.3	14	31°44.6	-22°58.5
15	47°57.8	-21°26.6	15	47°41.4	-21°55.4	15	47°23.5	-22°20.5	15	47°04.4	-22°41.6	15	46°44.3	-22°58.7
16	62°57.6	-21°27.0	16	62°41.1	-21°55.8	16	62°23.2	-22°20.8	16	62°04.1	-22°41.9	16	61°44.0	-22°58.9
17	77°57.4	-21°27.4	17	77°40.9	-21°56.2	17	77°23.0	-22°21.1	17	77°03.9	-22°42.1	17	76°43.7	-22°59.1
18	92°57.2	-21°27.9	18	92°40.7	-21°56.5	18	92°22.7	-22°21.4	18	92°03.6	-22°42.4	18	91°43.5	-22°59.3
19	107°57.0	-21°28.3	19	107°40.4	-21°56.9	19	107°22.5	-22°21.7	19	107°03.3	-22°42.6	19	106°43.2	-22°59.5
20	122°56.8	-21°28.7	20	122°40.2	-21°57.3	20	122°22.2	-22°22.0	20	122°03.1	-22°42.9	20	121°42.9	-22°59.7
21	137°56.5	-21°29.1	21	137°39.9	-21°57.6	21	137°22.0	-22°22.4	21	137°02.8	-22°43.2	21	136°42.6	-22°60.0
22	152°56.3	-21°29.6	22	152°39.7	-21°58.0	22	152°21.7	-22°22.7	22	152°02.5	-22°43.4	22	151°42.3	-23°00.2
23	167°56.1	-21°30.0	23	167°39.5	-21°58.4	23	167°21.4	-22°23.0	23	167°02.2	-22°43.7	23	166°42.0	-23°00.4
	SD.=16.2													

11	GHA	Dec	14	GHA	Dec	17	GHA	Dec	20	GHA	Dec	23	GHA	Dec
0	181°41.7	-23°00.6	0	181°20.7	-23°13.1	0	180°59.0	-23°21.4	0	180°36.9	-23°25.6	0	180°14.5	-23°25.5
1	196°41.4	-23°00.8	1	196°20.4	-23°13.2	1	195°58.7	-23°21.5	1	195°36.6	-23°25.6	1	195°14.2	-23°25.5
2	211°41.2	-23°01.0	2	211°20.1	-23°13.4	2	210°58.4	-23°21.6	2	210°36.3	-23°25.6	2	210°13.9	-23°25.4
3	226°40.9	-23°01.2	3	226°19.8	-23°13.5	3	225°58.1	-23°21.7	3	225°35.9	-23°25.7	3	225°13.6	-23°25.4
4	241°40.6	-23°01.4	4	241°19.5	-23°13.7	4	240°57.8	-23°21.8	4	240°35.6	-23°25.7	4	240°13.3	-23°25.4
5	256°40.3	-23°01.6	5	256°19.2	-23°13.8	5	255°57.5	-23°21.9	5	255°35.3	-23°25.7	5	255°12.9	-23°25.3
6	271°40.0	-23°01.8	6	271°18.9	-23°13.9	6	270°57.2	-23°21.9	6	270°35.0	-23°25.7	6	270°12.6	-23°25.3
7	286°39.7	-23°02.0	7	286°18.6	-23°14.1	7	285°56.9	-23°22.0	7	285°34.7	-23°25.8	7	285°12.3	-23°25.3
8	301°39.4	-23°02.2	8	301°18.3	-23°14.2	8	300°56.6	-23°22.1	8	300°34.4	-23°25.8	8	300°12.0	-23°25.2
9	316°39.1	-23°02.4	9	316°18.0	-23°14.4	9	315°56.3	-23°22.2	9	315°34.1	-23°25.8	9	315°11.7	-23°25.2
10	331°38.9	-23°02.5	10	331°17.7	-23°14.5	10	330°56.0	-23°22.3	10	330°33.8	-23°25.8	10	330°11.4	-23°25.2
11	346°38.6	-23°02.7	11	346°17.4	-23°14.6	11	345°55.6	-23°22.3	11	345°33.5	-23°25.8	11	345°11.1	-23°25.1
12	1°38.3	-23°02.9	12	1°17.1	-23°14.8	12	0°55.3	-23°22.4	12	0°33.2	-23°25.9	12	0°10.8	-23°25.1
13	16°38.0	-23°03.1	13	16°16.8	-23°14.9	13	15°55.0	-23°22.5	13	15°32.8	-23°25.9	13	15°10.5	-23°25.0
14	31°37.7	-23°03.3	14	31°16.5	-23°15.0	14	30°54.7	-23°22.6	14	30°32.5	-23°25.9	14	30°10.1	-23°25.0
15	46°37.4	-23°03.5	15	46°16.2	-23°15.2	15	45°54.4	-23°22.6	15	45°32.2	-23°25.9	15	45°09.8	-23°25.0
16	61°37.1	-23°03.7	16	61°15.9	-23°15.3	16	60°54.1	-23°22.7	16	60°31.9	-23°25.9	16	60°09.5	-23°24.9
17	76°36.8	-23°03.9	17	76°15.6	-23°15.4	17	75°53.8	-23°22.8	17	75°31.6	-23°25.9	17	75°09.2	-23°24.9
18	91°36.5	-23°04.1	18	91°15.3	-23°15.6	18	90°53.5	-23°22.9	18	90°31.3	-23°26.0	18	90°08.9	-23°24.8
19	106°36.3	-23°04.3	19	106°15.0	-23°15.7	19	105°53.2	-23°22.9	19	105°31.0	-23°26.0	19	105°08.6	-23°24.8
20	121°36.0	-23°04.5	20	121°14.7	-23°15.8	20	120°52.9	-23°23.0	20	120°30.7	-23°26.0	20	120°08.3	-23°24.7
21	136°35.7	-23°04.6	21	136°14.4	-23°15.9	21	135°52.6	-23°23.1	21	135°30.4	-23°26.0	21	135°08.0	-23°24.7
22	151°35.4	-23°04.8	22	151°14.1	-23°16.1	22	150°52.3	-23°23.1	22	150°30.0	-23°26.0	22	150°07.7	-23°24.6
23	166°35.1	-23°05.0	23	166°13.8	-23°16.2	23	165°52.0	-23°23.2	23	165°29.7	-23°26.0	23	165°07.3	-23°24.6
	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

12	GHA	Dec	15	GHA	Dec	18	GHA	Dec	21	GHA	Dec	24	GHA	Dec
0	181°34.8	-23°05.2	0	181°13.5	-23°16.3	0	180°51.7	-23°23.3	0	180°29.4	-23°26.0	0	180°07.0	-23°24.5
1	196°34.5	-23°05.4	1	196°13.2	-23°16.5	1	195°51.4	-23°23.4	1	195°29.1	-23°26.0	1	195°06.7	-23°24.5
2	211°34.2	-23°05.6	2	211°12.9	-23°16.6	2	210°51.1	-23°23.4	2	210°28.8	-23°26.0	2	210°06.4	-23°24.4
3	226°33.9	-23°05.7	3	226°12.6	-23°16.7	3	225°50.7	-23°23.5	3	225°28.5	-23°26.0	3	225°06.1	-23°24.4
4	241°33.6	-23°05.9	4	241°12.3	-23°16.8	4	240°50.4	-23°23.5	4	240°28.2	-23°26.1	4	240°05.8	-23°24.3
5	256°33.3	-23°06.1	5	256°12.0	-23°16.9	5	255°50.1	-23°23.6	5	255°27.9	-23°26.1	5	255°05.5	-23°24.3
6	271°33.1	-23°06.3	6	271°11.7	-23°17.1	6	270°49.8	-23°23.7	6	270°27.6	-23°26.1	6	270°05.2	-23°24.2
7	286°32.8	-23°06.5	7	286°11.4	-23°17.2	7	285°49.5	-23°23.7	7	285°27.3	-23°26.1	7	285°04.9	-23°24.2
8	301°32.5	-23°06.6	8	301°11.1	-23°17.3	8	300°49.2	-23°23.8	8	300°26.9	-23°26.1	8	300°04.5	-23°24.1
9	316°32.2	-23°06.8	9	316°10.8	-23°17.4	9	315°48.9	-23°23.9	9	315°26.6	-23°26.1	9	315°04.2	-23°24.0
10	331°31.9	-23°07.0	10	331°10.5	-23°17.5	10	330°48.6	-23°23.9	10	330°26.3	-23°26.1	10	330°03.9	-23°24.0
11	346°31.6	-23°07.2	11	346°10.2	-23°17.7	11	345°48.3	-23°24.0	11	345°26.0	-23°26.1	11	345°03.6	-23°23.9
12	1°31.3	-23°07.3	12	1°09.9	-23°17.8	12	0°48.0	-23°24.0	12	0°25.7	-23°26.1	12	0°03.3	-23°23.9
13	16°31.0	-23°07.5	13	16°09.6	-23°17.9	13	15°47.7	-23°24.1	13	15°25.4	-23°26.1	13	15°03.0	-23°23.8
14	31°30.7	-23°07.7	14	31°09.3	-23°18.0	14	30°47.4	-23°24.1	14	30°25.1	-23°26.1	14	30°02.7	-23°23.8
15	46°30.4	-23°07.9	15	46°09.0	-23°18.1	15	45°47.1	-23°24.2	15	45°24.8	-23°26.1	15	45°02.4	-23°23.7
16	61°30.1	-23°08.0	16	61°08.7	-23°18.2	16	60°46.7	-23°24.3	16	60°24.5	-23°26.1	16	60°02.1	-23°23.6
17	76°29.8	-23°08.2	17	76°08.4	-23°18.3	17	75°46.4	-23°24.3	17	75°24.1	-23°26.1	17	75°01.7	-23°23.6
18	91°29.5	-23°08.4	18	91°08.1	-23°18.5	18	90°46.1	-23°24.4	18	90°23.8	-23°26.1	18	90°01.4	-23°23.5
19	106°29.3	-23°08.5	19	106°07.8	-23°18.6	19	105°45.8	-23°24.4	19	105°23.5	-23°26.0	19	105°01.1	-23°23.4
20	121°29.0	-23°08.7	20	121°07.5	-23°18.7	20	120°45.5	-23°24.5	20	120°23.2	-23°26.0	20	120°00.8	-23°23.4
21	136°28.7	-23°08.9	21	136°07.2	-23°18.8	21	135°45.2	-23°24.5	21	135°22.9	-23°26.0	21	135°00.5	-23°23.3
22	151°28.4	-23°09.0	22	151°06.9	-23°18.9	22	150°44.9	-23°24.6	22	150°22.6	-23°26.0	22	150°00.2	-23°23.2
23	166°28.1	-23°09.2	23	166°06.6	-23°19.0	23	165°44.6	-23°24.6	23	165°22.3	-23°26.0	23	164°59.9	-23°23.2
	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

13	GHA	Dec	16	GHA	Dec	19	GHA	Dec	22	GHA	Dec	25	GHA	Dec
0	181°27.8	-23°09.4	0	181°06.3	-23°19.1	0	180°44.3	-23°24.7	0	180°22.0	-23°26.0	0	179°59.6	-23°23.1
1	196°27.5	-23°09.5	1	196°06.0	-23°19.2	1	195°44.0	-23°24.7	1	195°21.7	-23°26.0	1	194°59.3	-23°23.0
2	211°27.2	-23°09.7	2	211°05.7	-23°19.3	2	210°43.7	-23°24.8	2	210°21.3	-23°26.0	2	209°59.0	-23°23.0
3	226°26.9	-23°09.9	3	226°05.4	-23°19.4	3	225°43.4	-23°24.8	3	225°21.0	-23°26.0	3	224°58.6	-23°22.9
4	241°26.6	-23°10.0	4	241°05.1	-23°19.5	4	240°43.1	-23°24.9	4	240°20.7	-23°25.9	4	239°58.3	-23°22.8
5	256°26.3	-23°10.2	5	256°04.8	-23°19.6	5	255°42.7	-23°24.9	5	255°20.4	-23°25.9	5	254°58.0	-23°22.7
6	271°26.0	-23°10.3	6	271°04.5	-23°19.7	6	270°42.4	-23°24.9	6	270°20.1	-23°25.9	6	269°57.7	-23°22.7
7	286°25.7	-23°10.5	7	286°04.2	-23°19.8	7	285°42.1	-23°25.0	7	285°19.8	-23°25.9	7	284°57.4	-23°22.6
8	301°25.4	-23°10.7	8	301°03.9	-23°19.9	8	300°41.8	-23°25.0	8	300°19.5	-23°25.9	8	299°57.1	-23°22.5
9	316°25.1	-23°10.8	9	316°03.6	-23°20.0	9	315°41.5	-23°25.1	9	315°19.2	-23°25.9	9	314°56.8	-23°22.4
10	331°24.8	-23°11.0	10	331°03.3	-23°20.1	10	330°41.2	-23°25.1	10	330°18.9	-23°25.8	10	329°56.5	-23°22.4
11	346°24.5	-23°11.1	11	346°03.0	-23°20.2	11	345°40.9	-23°25.1	11	345°18.5	-23°25.8	11	344°56.2	-23°22.3
12	1°24.2	-23°11.3	12	1°02.7	-23°20.3	12	0°40.6	-23°25.2	12	0°18.2	-23°25.8	12	359°55.8	-23°22.2
13	16°23.9	-23°11.4	13	16°02.4	-23°20.4	13	15°40.3	-23°25.2	13	15°17.9	-23°25.8	13	14°55.5	-23°22.1
14	31°23.7	-23°11.6	14	31°02.0	-23°20.5	14	30°40.0	-23°25.3	14	30°17.6	-23°25.8	14	29°55.2	-23°22.0
15	46°23.4	-23°11.7	15	46°01.7	-23°20.6	15	45°39.7	-23°25.3	15	45°17.3	-23°25.7	15	44°54.9	-23°22.0
16	61°23.1	-23°11.9	16	61°01.4	-23°20.7	16	60°39.3	-23°25.3	16	60°17.0	-23°25.7	16	59°54.6	-23°21.9
17	76°22.8	-23°12.0	17	76°01.1	-23°20.8	17	75°39.0	-23°25.4	17	75°16.7	-23°25.7	17	74°54.3	-23°21.8
18	91°22.5	-23°12.2	18	91°00.8	-23°20.9	18	90°38.7	-23°25.4	18	90°16.4	-23°25.7	18	89°54.0	-23°21.7
19	106°22.2	-23°12.3	19	106°00.5	-23°21.0	19	105°38.4	-23°25.4	19	105°16.1	-23°25.6	19	104°53.7	-23°21.6
20	121°21.9	-23°12.5	20	121°00.2	-23°21.1	20	120°38.1	-23°25.5	20	120°15.7	-23°25.6	20	119°53.4	-23°21.5
21	136°21.6	-23°12.6	21	135°59.9	-23°21.2	21	135°37.8	-23°25.5	21	135°15.4	-23°25.6	21	134°53.1	-23°21.5
22	151°21.3	-23°12.8	22	150°59.6	-23°21.3	22	150°37.5	-23°25.5	22	150°15.1	-23°25.6	22	149°52.8	-23°21.4
23	166°21.0	-23°12.9	23	165°59.3	-23°21.3	23	165°37.2	-23°25.6	23	165°14.8	-23°25.5	23	164°52.4	-23°21.3
	SD.=16.2													

26	GHA	Dec	29	GHA	Dec	01	GHA	Dec	04	GHA	Dec	07	GHA	Dec
0	179°52.1	-23°21.2	0	179°30.0	-23°12.7	0	179°08.4	-22°59.9	0	178°47.5	-22°43.1	0	178°27.5	-22°22.2
1	194°51.8	-23°21.1	1	194°29.7	-23°12.5	1	194°08.1	-22°59.7	1	193°47.2	-22°42.8	1	193°27.3	-22°21.9
2	209°51.5	-23°21.0	2	209°29.4	-23°12.4	2	209°07.8	-22°59.5	2	208°46.9	-22°42.6	2	208°27.0	-22°21.6
3	224°51.2	-23°20.9	3	224°29.1	-23°12.2	3	224°07.5	-22°59.3	3	223°46.6	-22°42.3	3	223°26.7	-22°21.2
4	239°50.9	-23°20.8	4	239°28.8	-23°12.1	4	239°07.2	-22°59.1	4	238°46.3	-22°42.0	4	238°26.5	-22°20.9
5	254°50.6	-23°20.7	5	254°28.5	-23°11.9	5	254°06.9	-22°58.9	5	253°46.1	-22°41.8	5	253°26.2	-22°20.6
6	269°50.3	-23°20.6	6	269°28.2	-23°11.8	6	269°06.6	-22°58.7	6	268°45.8	-22°41.5	6	268°25.9	-22°20.3
7	284°50.0	-23°20.5	7	284°27.9	-23°11.6	7	284°06.3	-22°58.5	7	283°45.5	-22°41.2	7	283°25.7	-22°20.0
8	299°49.7	-23°20.4	8	299°27.6	-23°11.4	8	299°06.0	-22°58.3	8	298°45.2	-22°41.0	8	298°25.4	-22°19.6
9	314°49.3	-23°20.4	9	314°27.3	-23°11.3	9	314°05.7	-22°58.1	9	313°44.9	-22°40.7	9	313°25.1	-22°19.3
10	329°49.0	-23°20.3	10	329°27.0	-23°11.1	10	329°05.4	-22°57.8	10	328°44.6	-22°40.4	10	328°24.9	-22°19.0
11	344°48.7	-23°20.2	11	344°26.7	-23°11.0	11	344°05.1	-22°57.6	11	343°44.4	-22°40.2	11	343°24.6	-22°18.7
12	359°48.4	-23°20.1	12	359°26.4	-23°10.8	12	359°04.8	-22°57.4	12	358°44.1	-22°39.9	12	358°24.3	-22°18.3
13	14°48.1	-23°20.0	13	14°26.1	-23°10.7	13	14°04.5	-22°57.2	13	13°43.8	-22°39.6	13	13°24.1	-22°18.0
14	29°47.8	-23°19.9	14	29°25.8	-23°10.5	14	29°04.2	-22°57.0	14	28°43.5	-22°39.4	14	28°23.8	-22°17.7
15	44°47.5	-23°19.8	15	44°25.5	-23°10.3	15	44°04.0	-22°56.8	15	43°43.2	-22°39.1	15	43°23.5	-22°17.3
16	59°47.2	-23°19.7	16	59°25.1	-23°10.2	16	59°03.7	-22°56.6	16	58°43.0	-22°38.8	16	58°23.3	-22°17.0
17	74°46.9	-23°19.6	17	74°24.8	-23°10.0	17	74°03.4	-22°56.3	17	73°42.7	-22°38.5	17	73°23.0	-22°16.7
18	89°46.6	-23°19.4	18	89°24.5	-23°09.9	18	89°03.1	-22°56.1	18	88°42.4	-22°38.3	18	88°22.7	-22°16.4
19	104°46.3	-23°19.3	19	104°24.2	-23°09.7	19	104°02.8	-22°55.9	19	103°42.1	-22°38.0	19	103°22.5	-22°16.0
20	119°46.0	-23°19.2	20	119°23.9	-23°09.5	20	119°02.5	-22°55.7	20	118°41.8	-22°37.7	20	118°22.2	-22°15.7
21	134°45.6	-23°19.1	21	134°23.6	-23°09.4	21	134°02.2	-22°55.5	21	133°41.6	-22°37.4	21	133°21.9	-22°15.4
22	149°45.3	-23°19.0	22	149°23.3	-23°09.2	22	149°01.9	-22°55.2	22	148°41.3	-22°37.1	22	148°21.7	-22°15.0
23	164°45.0	-23°18.9	23	164°23.0	-23°09.0	23	164°01.6	-22°55.0	23	163°41.0	-22°36.9	23	163°21.4	-22°14.7
	SD.=16.3	d=0.1		SD.=16.3	d=0.1		SD.=16.3	d=0.2		SD.=16.3	d=0.3		SD.=16.3	d=0.3

27	GHA	Dec	30	GHA	Dec	02	GHA	Dec	05	GHA	Dec	08	GHA	Dec
0	179°44.7	-23°18.8	0	179°22.7	-23°08.9	0	179°01.3	-22°54.8	0	178°40.7	-22°36.6	0	178°21.1	-22°14.4
1	194°44.4	-23°18.7	1	194°22.4	-23°08.7	1	194°01.0	-22°54.6	1	193°40.4	-22°36.3	1	193°20.9	-22°14.0
2	209°44.1	-23°18.6	2	209°22.1	-23°08.5	2	209°00.7	-22°54.3	2	208°40.2	-22°36.0	2	208°20.6	-22°13.7
3	224°43.8	-23°18.5	3	224°21.8	-23°08.4	3	224°00.4	-22°54.1	3	223°39.9	-22°35.7	3	223°20.3	-22°13.3
4	239°43.5	-23°18.4	4	239°21.5	-23°08.2	4	239°00.1	-22°53.9	4	238°39.6	-22°35.4	4	238°20.1	-22°13.0
5	254°43.2	-23°18.3	5	254°21.2	-23°08.0	5	253°59.9	-22°53.6	5	253°39.3	-22°35.2	5	253°19.8	-22°12.7
6	269°42.9	-23°18.1	6	269°20.9	-23°07.9	6	268°59.6	-22°53.4	6	268°39.0	-22°34.9	6	268°19.6	-22°12.3
7	284°42.6	-23°18.0	7	284°20.6	-23°07.7	7	283°59.3	-22°53.2	7	283°38.8	-22°34.6	7	283°19.3	-22°12.0
8	299°42.3	-23°17.9	8	299°20.3	-23°07.5	8	298°59.0	-22°53.0	8	298°38.5	-22°34.3	8	298°19.0	-22°11.6
9	314°41.9	-23°17.8	9	314°20.0	-23°07.3	9	313°58.7	-22°52.7	9	313°38.2	-22°34.0	9	313°18.8	-22°11.3
10	329°41.6	-23°17.7	10	329°19.7	-23°07.2	10	328°58.4	-22°52.5	10	328°37.9	-22°33.7	10	328°18.5	-22°11.0
11	344°41.3	-23°17.6	11	344°19.4	-23°07.0	11	343°58.1	-22°52.3	11	343°37.7	-22°33.4	11	343°18.2	-22°10.6
12	359°41.0	-23°17.4	12	359°19.1	-23°06.8	12	358°57.8	-22°52.0	12	358°37.4	-22°33.2	12	358°18.0	-22°10.3
13	14°40.7	-23°17.3	13	14°18.8	-23°06.6	13	13°57.5	-22°51.8	13	13°37.1	-22°32.9	13	13°17.7	-22°09.9
14	29°40.4	-23°17.2	14	29°18.5	-23°06.5	14	28°57.2	-22°51.6	14	28°36.8	-22°32.6	14	28°17.5	-22°09.6
15	44°40.1	-23°17.1	15	44°18.2	-23°06.3	15	43°56.9	-22°51.3	15	43°36.5	-22°32.3	15	43°17.2	-22°09.2
16	59°39.8	-23°17.0	16	59°17.9	-23°06.1	16	58°56.7	-22°51.1	16	58°36.3	-22°32.0	16	58°16.9	-22°08.9
17	74°39.5	-23°16.8	17	74°17.6	-23°05.9	17	73°56.4	-22°50.9	17	73°36.0	-22°31.7	17	73°16.7	-22°08.5
18	89°39.2	-23°16.7	18	89°17.3	-23°05.7	18	88°56.1	-22°50.6	18	88°35.7	-22°31.4	18	88°16.4	-22°08.2
19	104°38.9	-23°16.6	19	104°17.0	-23°05.6	19	103°55.8	-22°50.4	19	103°35.4	-22°31.1	19	103°16.2	-22°07.8
20	119°38.6	-23°16.5	20	119°16.7	-23°05.4	20	118°55.5	-22°50.1	20	118°35.2	-22°30.8	20	118°15.9	-22°07.5
21	134°38.3	-23°16.3	21	134°16.4	-23°05.2	21	133°55.2	-22°49.9	21	133°34.9	-22°30.5	21	133°15.6	-22°07.1
22	149°38.0	-23°16.2	22	149°16.1	-23°05.0	22	148°54.9	-22°49.7	22	148°34.6	-22°30.2	22	148°15.4	-22°06.8
23	164°37.6	-23°16.1	23	164°15.8	-23°04.8	23	163°54.6	-22°49.4	23	163°34.3	-22°29.9	23	163°15.1	-22°06.4
	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°37.3	-23°16.0	0	179°15.5	-23°04.6	0	178°54.3	-22°49.2	0	178°34.1	-22°29.6	0	178°14.9	-22°06.1
1	194°37.0	-23°15.8	1	194°15.2	-23°04.5	1	193°54.1	-22°48.9	1	193°33.8	-22°29.3	1	193°14.6	-22°05.7
2	209°36.7	-23°15.7	2	209°14.9	-23°04.3	2	208°53.8	-22°48.7	2	208°33.5	-22°29.0	2	208°14.4	-22°05.4
3	224°36.4	-23°15.6	3	224°14.6	-23°04.1	3	223°53.5	-22°48.4	3	223°33.2	-22°28.7	3	223°14.1	-22°05.0
4	239°36.1	-23°15.4	4	239°14.3	-23°03.9	4	238°53.2	-22°48.2	4	238°33.0	-22°28.4	4	238°13.8	-22°04.6
5	254°35.8	-23°15.3	5	254°14.0	-23°03.7	5	253°52.9	-22°47.9	5	253°32.7	-22°28.1	5	253°13.6	-22°04.3
6	269°35.5	-23°15.2	6	269°13.7	-23°03.5	6	268°52.6	-22°47.7	6	268°32.4	-22°27.8	6	268°13.3	-22°03.9
7	284°35.2	-23°15.0	7	284°13.4	-23°03.3	7	283°52.3	-22°47.4	7	283°32.1	-22°27.5	7	283°13.1	-22°03.6
8	299°34.9	-23°14.9	8	299°13.1	-23°03.1	8	298°52.0	-22°47.2	8	298°31.9	-22°27.2	8	298°12.8	-22°03.2
9	314°34.6	-23°14.8	9	314°12.8	-23°02.9	9	313°51.8	-22°46.9	9	313°31.6	-22°26.9	9	313°12.6	-22°02.8
10	329°34.3	-23°14.6	10	329°12.5	-23°02.7	10	328°51.5	-22°46.7	10	328°31.3	-22°26.6	10	328°12.3	-22°02.5
11	344°34.0	-23°14.5	11	344°12.2	-23°02.5	11	343°51.2	-22°46.4	11	343°31.1	-22°26.3	11	343°12.0	-22°02.1
12	359°33.7	-23°14.4	12	359°11.9	-23°02.3	12	358°50.9	-22°46.2	12	358°30.8	-22°26.0	12	358°11.8	-22°01.8
13	14°33.4	-23°14.2	13	14°11.6	-23°02.2	13	13°50.6	-22°45.9	13	13°30.5	-22°25.7	13	13°11.5	-22°01.4
14	29°33.1	-23°14.1	14	29°11.3	-23°02.0	14	28°50.3	-22°45.7	14	28°30.2	-22°25.3	14	28°11.3	-22°01.0
15	44°32.8	-23°14.0	15	44°11.0	-23°01.8	15	43°50.0	-22°45.4	15	43°30.0	-22°25.0	15	43°11.0	-22°00.7
16	59°32.4	-23°13.8	16	59°10.7	-23°01.6	16	58°49.8	-22°45.2	16	58°29.7	-22°24.7	16	58°10.8	-22°00.3
17	74°32.1	-23°13.7	17	74°10.5	-23°01.4	17	73°49.5	-22°44.9	17	73°29.4	-22°24.4	17	73°10.5	-21°59.9
18	89°31.8	-23°13.5	18	89°10.2	-23°01.2	18	88°49.2	-22°44.7	18	88°29.2	-22°24.1	18	88°10.3	-21°59.6
19	104°31.5	-23°13.4	19	104°09.9	-23°01.0	19	103°48.9	-22°44.4	19	103°28.9	-22°23.8	19	103°10.0	-21°59.2
20	119°31.2	-23°13.2	20	119°09.6	-23°00.8	20	118°48.6	-22°44.1	20	118°28.6	-22°23.5	20	118°09.8	-21°58.8
21	134°30.9	-23°13.1	21	134°09.3	-23°00.6	21	133°48.3	-22°43.9	21	133°28.3	-22°23.2	21	133°09.5	-21°58.5
22	149°30.6	-23°12.9	22	149°09.0	-23°00.3	22	148°48.0	-22°43.6	22	148°28.1	-22°22.8	22	148°09.3	-21°58.1
23	164°30.3	-23°12.8	23	164°08.7	-23°00.1	23	163°47.8	-22°43.4	23	163°27.8	-22°22.5	23	163°09.0	