

Fri Nov 1, 2019 UTC

UTC	Venus -3.8 v = -0.7' d = 0.8'		Jupiter -1.8 v = 1.9' d = 0.0'		Saturn +0.6 v = 2.3' d = 0.0'		Mars +1.8 v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	163°20.5'	S 20°12.8'	137°13.3'	S 23°04.6'	113°15.8'	S 22°24.7'	203°03.9'	S 6°17.9'
1	178°19.7'	S 20°13.5'	152°15.2'	S 23°04.6'	128°18.1'	S 22°24.7'	218°04.9'	S 6°18.5'
2	193°19.0'	S 20°14.3'	167°17.1'	S 23°04.6'	143°20.4'	S 22°24.7'	233°05.8'	S 6°19.1'
3	208°18.3'	S 20°15.1'	182°19.1'	S 23°04.6'	158°22.7'	S 22°24.7'	248°06.8'	S 6°19.8'
4	223°17.5'	S 20°15.9'	197°21.0'	S 23°04.7'	173°25.0'	S 22°24.7'	263°07.7'	S 6°20.4'
5	238°16.8'	S 20°16.7'	212°23.0'	S 23°04.7'	188°27.2'	S 22°24.7'	278°08.7'	S 6°21.0'
6	253°16.0'	S 20°17.5'	227°24.9'	S 23°04.7'	203°29.5'	S 22°24.6'	293°09.6'	S 6°21.7'
7	268°15.3'	S 20°18.2'	242°26.9'	S 23°04.8'	218°31.8'	S 22°24.6'	308°10.6'	S 6°22.3'
8	283°14.5'	S 20°19.0'	257°28.8'	S 23°04.8'	233°34.1'	S 22°24.6'	323°11.5'	S 6°22.9'
9	298°13.8'	S 20°19.8'	272°30.7'	S 23°04.8'	248°36.4'	S 22°24.6'	338°12.5'	S 6°23.6'
10	313°13.1'	S 20°20.6'	287°32.7'	S 23°04.8'	263°38.6'	S 22°24.6'	353°13.5'	S 6°24.2'
11	328°12.3'	S 20°21.3'	302°34.6'	S 23°04.9'	278°40.9'	S 22°24.6'	8°14.4'	S 6°24.8'
12	343°11.6'	S 20°22.1'	317°36.6'	S 23°04.9'	293°43.2'	S 22°24.6'	23°15.4'	S 6°25.5'
13	358°10.8'	S 20°22.9'	332°38.5'	S 23°04.9'	308°45.5'	S 22°24.5'	38°16.3'	S 6°26.1'
14	13°10.1'	S 20°23.7'	347°40.5'	S 23°05.0'	323°47.8'	S 22°24.5'	53°17.3'	S 6°26.7'
15	28°09.3'	S 20°24.4'	2°42.4'	S 23°05.0'	338°50.1'	S 22°24.5'	68°18.2'	S 6°27.4'
16	43°08.6'	S 20°25.2'	17°44.3'	S 23°05.0'	353°52.3'	S 22°24.5'	83°19.2'	S 6°28.0'
17	58°07.8'	S 20°26.0'	32°46.3'	S 23°05.0'	8°54.6'	S 22°24.5'	98°20.1'	S 6°28.6'
18	73°07.1'	S 20°26.7'	47°48.2'	S 23°05.1'	23°56.9'	S 22°24.5'	113°21.1'	S 6°29.2'
19	88°06.3'	S 20°27.5'	62°50.2'	S 23°05.1'	38°59.2'	S 22°24.4'	128°22.0'	S 6°29.9'
20	103°05.6'	S 20°28.3'	77°52.1'	S 23°05.1'	54°01.5'	S 22°24.4'	143°23.0'	S 6°30.5'
21	118°04.8'	S 20°29.0'	92°54.0'	S 23°05.2'	69°03.7'	S 22°24.4'	158°23.9'	S 6°31.1'
22	133°04.1'	S 20°29.8'	107°56.0'	S 23°05.2'	84°06.0'	S 22°24.4'	173°24.9'	S 6°31.8'
23	148°03.3'	S 20°30.6'	122°57.9'	S 23°05.2'	99°08.3'	S 22°24.4'	188°25.8'	S 6°32.4'

Sat Nov 2, 2019 UTC

UTC	Venus -3.8 v = -0.8' d = 0.8'		Jupiter -1.8 v = 1.9' d = 0.0'		Saturn +0.6 v = 2.3' d = 0.0'		Mars +1.8 v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	163°02.6'	S 20°31.3'	137°59.9'	S 23°05.2'	114°10.6'	S 22°24.4'	203°26.8'	S 6°33.0'
1	178°01.8'	S 20°32.1'	153°01.8'	S 23°05.3'	129°12.8'	S 22°24.3'	218°27.7'	S 6°33.7'
2	193°01.0'	S 20°32.9'	168°03.7'	S 23°05.3'	144°15.1'	S 22°24.3'	233°28.7'	S 6°34.3'
3	208°00.3'	S 20°33.6'	183°05.7'	S 23°05.3'	159°17.4'	S 22°24.3'	248°29.6'	S 6°34.9'
4	222°59.5'	S 20°34.4'	198°07.6'	S 23°05.4'	174°19.7'	S 22°24.3'	263°30.6'	S 6°35.6'
5	237°58.8'	S 20°35.1'	213°09.6'	S 23°05.4'	189°22.0'	S 22°24.3'	278°31.5'	S 6°36.2'
6	252°58.0'	S 20°35.9'	228°11.5'	S 23°05.4'	204°24.2'	S 22°24.3'	293°32.5'	S 6°36.8'
7	267°57.3'	S 20°36.7'	243°13.4'	S 23°05.4'	219°26.5'	S 22°24.2'	308°33.4'	S 6°37.5'
8	282°56.5'	S 20°37.4'	258°15.4'	S 23°05.5'	234°28.8'	S 22°24.2'	323°34.4'	S 6°38.1'
9	297°55.8'	S 20°38.2'	273°17.3'	S 23°05.5'	249°31.1'	S 22°24.2'	338°35.4'	S 6°38.7'
10	312°55.0'	S 20°38.9'	288°19.2'	S 23°05.5'	264°33.4'	S 22°24.2'	353°36.3'	S 6°39.3'
11	327°54.2'	S 20°39.7'	303°21.2'	S 23°05.6'	279°35.6'	S 22°24.2'	8°37.3'	S 6°40.0'
12	342°53.5'	S 20°40.4'	318°23.1'	S 23°05.6'	294°37.9'	S 22°24.2'	23°38.2'	S 6°40.6'
13	357°52.7'	S 20°41.2'	333°25.1'	S 23°05.6'	309°40.2'	S 22°24.2'	38°39.2'	S 6°41.2'
14	12°52.0'	S 20°41.9'	348°27.0'	S 23°05.6'	324°42.5'	S 22°24.1'	53°40.1'	S 6°41.9'
15	27°51.2'	S 20°42.7'	3°28.9'	S 23°05.7'	339°44.7'	S 22°24.1'	68°41.1'	S 6°42.5'
16	42°50.4'	S 20°43.4'	18°30.9'	S 23°05.7'	354°47.0'	S 22°24.1'	83°42.0'	S 6°43.1'
17	57°49.7'	S 20°44.2'	33°32.8'	S 23°05.7'	9°49.3'	S 22°24.1'	98°43.0'	S 6°43.8'
18	72°48.9'	S 20°44.9'	48°34.8'	S 23°05.7'	24°51.6'	S 22°24.1'	113°43.9'	S 6°44.4'
19	87°48.1'	S 20°45.6'	63°36.7'	S 23°05.8'	39°53.8'	S 22°24.1'	128°44.9'	S 6°45.0'
20	102°47.4'	S 20°46.4'	78°38.6'	S 23°05.8'	54°56.1'	S 22°24.0'	143°45.8'	S 6°45.7'
21	117°46.6'	S 20°47.1'	93°40.6'	S 23°05.8'	69°58.4'	S 22°24.0'	158°46.8'	S 6°46.3'
22	132°45.9'	S 20°47.9'	108°42.5'	S 23°05.9'	85°00.7'	S 22°24.0'	173°47.7'	S 6°46.9'
23	147°45.1'	S 20°48.6'	123°44.4'	S 23°05.9'	100°02.9'	S 22°24.0'	188°48.7'	S 6°47.5'

Sun Nov 3, 2019 UTC

UTC	Venus -3.8		Jupiter -1.8		Saturn +0.6		Mars +1.8	
	v = -0.8' d = 0.7'		v = 1.9' d = 0.0'		v = 2.3' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	162°44.3'	S 20°49.4'	138°46.4'	S 23°05.9'	115°05.2'	S 22°24.0'	203°49.6'	S 6°48.2'
1	177°43.6'	S 20°50.1'	153°48.3'	S 23°05.9'	130°07.5'	S 22°24.0'	218°50.6'	S 6°48.8'
2	192°42.8'	S 20°50.8'	168°50.2'	S 23°06.0'	145°09.8'	S 22°23.9'	233°51.5'	S 6°49.4'
3	207°42.0'	S 20°51.6'	183°52.2'	S 23°06.0'	160°12.0'	S 22°23.9'	248°52.5'	S 6°50.1'
4	222°41.3'	S 20°52.3'	198°54.1'	S 23°06.0'	175°14.3'	S 22°23.9'	263°53.4'	S 6°50.7'
5	237°40.5'	S 20°53.0'	213°56.0'	S 23°06.1'	190°16.6'	S 22°23.9'	278°54.4'	S 6°51.3'
6	252°39.7'	S 20°53.8'	228°58.0'	S 23°06.1'	205°18.9'	S 22°23.9'	293°55.3'	S 6°52.0'
7	267°38.9'	S 20°54.5'	243°59.9'	S 23°06.1'	220°21.1'	S 22°23.9'	308°56.3'	S 6°52.6'
8	282°38.2'	S 20°55.2'	259°01.9'	S 23°06.1'	235°23.4'	S 22°23.8'	323°57.2'	S 6°53.2'
9	297°37.4'	S 20°56.0'	274°03.8'	S 23°06.2'	250°25.7'	S 22°23.8'	338°58.1'	S 6°53.8'
10	312°36.6'	S 20°56.7'	289°05.7'	S 23°06.2'	265°28.0'	S 22°23.8'	353°59.1'	S 6°54.5'
11	327°35.9'	S 20°57.4'	304°07.7'	S 23°06.2'	280°30.2'	S 22°23.8'	9°00.0'	S 6°55.1'
12	342°35.1'	S 20°58.1'	319°09.6'	S 23°06.2'	295°32.5'	S 22°23.8'	24°01.0'	S 6°55.7'
13	357°34.3'	S 20°58.9'	334°11.5'	S 23°06.3'	310°34.8'	S 22°23.8'	39°01.9'	S 6°56.4'
14	12°33.6'	S 20°59.6'	349°13.5'	S 23°06.3'	325°37.1'	S 22°23.7'	54°02.9'	S 6°57.0'
15	27°32.8'	S 21°00.3'	4°15.4'	S 23°06.3'	340°39.3'	S 22°23.7'	69°03.8'	S 6°57.6'
16	42°32.0'	S 21°01.0'	19°17.3'	S 23°06.4'	355°41.6'	S 22°23.7'	84°04.8'	S 6°58.2'
17	57°31.2'	S 21°01.8'	34°19.3'	S 23°06.4'	10°43.9'	S 22°23.7'	99°05.7'	S 6°58.9'
18	72°30.5'	S 21°02.5'	49°21.2'	S 23°06.4'	25°46.2'	S 22°23.7'	114°06.7'	S 6°59.5'
19	87°29.7'	S 21°03.2'	64°23.1'	S 23°06.4'	40°48.4'	S 22°23.6'	129°07.6'	S 7°00.1'
20	102°28.9'	S 21°03.9'	79°25.1'	S 23°06.5'	55°50.7'	S 22°23.6'	144°08.6'	S 7°00.8'
21	117°28.1'	S 21°04.6'	94°27.0'	S 23°06.5'	70°53.0'	S 22°23.6'	159°09.5'	S 7°01.4'
22	132°27.4'	S 21°05.4'	109°28.9'	S 23°06.5'	85°55.2'	S 22°23.6'	174°10.5'	S 7°02.0'
23	147°26.6'	S 21°06.1'	124°30.9'	S 23°06.5'	100°57.5'	S 22°23.6'	189°11.4'	S 7°02.6'

Mon Nov 4, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.8' d = 0.7'		v = 1.9' d = 0.0'		v = 2.3' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	162°25.8'	S 21°06.8'	139°32.8'	S 23°06.6'	115°59.8'	S 22°23.6'	204°12.4'	S 7°03.3'
1	177°25.0'	S 21°07.5'	154°34.7'	S 23°06.6'	131°02.1'	S 22°23.5'	219°13.3'	S 7°03.9'
2	192°24.2'	S 21°08.2'	169°36.7'	S 23°06.6'	146°04.3'	S 22°23.5'	234°14.3'	S 7°04.5'
3	207°23.5'	S 21°08.9'	184°38.6'	S 23°06.7'	161°06.6'	S 22°23.5'	249°15.2'	S 7°05.2'
4	222°22.7'	S 21°09.6'	199°40.5'	S 23°06.7'	176°08.9'	S 22°23.5'	264°16.2'	S 7°05.8'
5	237°21.9'	S 21°10.4'	214°42.5'	S 23°06.7'	191°11.1'	S 22°23.5'	279°17.1'	S 7°06.4'
6	252°21.1'	S 21°11.1'	229°44.4'	S 23°06.7'	206°13.4'	S 22°23.5'	294°18.1'	S 7°07.0'
7	267°20.3'	S 21°11.8'	244°46.3'	S 23°06.8'	221°15.7'	S 22°23.4'	309°19.0'	S 7°07.7'
8	282°19.6'	S 21°12.5'	259°48.2'	S 23°06.8'	236°18.0'	S 22°23.4'	324°19.9'	S 7°08.3'
9	297°18.8'	S 21°13.2'	274°50.2'	S 23°06.8'	251°20.2'	S 22°23.4'	339°20.9'	S 7°08.9'
10	312°18.0'	S 21°13.9'	289°52.1'	S 23°06.8'	266°22.5'	S 22°23.4'	354°21.8'	S 7°09.5'
11	327°17.2'	S 21°14.6'	304°54.0'	S 23°06.9'	281°24.8'	S 22°23.4'	9°22.8'	S 7°10.2'
12	342°16.4'	S 21°15.3'	319°56.0'	S 23°06.9'	296°27.0'	S 22°23.4'	24°23.7'	S 7°10.8'
13	357°15.6'	S 21°16.0'	334°57.9'	S 23°06.9'	311°29.3'	S 22°23.3'	39°24.7'	S 7°11.4'
14	12°14.9'	S 21°16.7'	349°59.8'	S 23°07.0'	326°31.6'	S 22°23.3'	54°25.6'	S 7°12.1'
15	27°14.1'	S 21°17.4'	5°01.8'	S 23°07.0'	341°33.9'	S 22°23.3'	69°26.6'	S 7°12.7'
16	42°13.3'	S 21°18.1'	20°03.7'	S 23°07.0'	356°36.1'	S 22°23.3'	84°27.5'	S 7°13.3'
17	57°12.5'	S 21°18.8'	35°05.6'	S 23°07.0'	11°38.4'	S 22°23.3'	99°28.5'	S 7°13.9'
18	72°11.7'	S 21°19.5'	50°07.6'	S 23°07.1'	26°40.7'	S 22°23.3'	114°29.4'	S 7°14.6'
19	87°10.9'	S 21°20.2'	65°09.5'	S 23°07.1'	41°42.9'	S 22°23.2'	129°30.3'	S 7°15.2'
20	102°10.1'	S 21°20.9'	80°11.4'	S 23°07.1'	56°45.2'	S 22°23.2'	144°31.3'	S 7°15.8'
21	117°09.3'	S 21°21.6'	95°13.3'	S 23°07.1'	71°47.5'	S 22°23.2'	159°32.2'	S 7°16.4'
22	132°08.6'	S 21°22.3'	110°15.3'	S 23°07.2'	86°49.7'	S 22°23.2'	174°33.2'	S 7°17.1'
23	147°07.8'	S 21°23.0'	125°17.2'	S 23°07.2'	101°52.0'	S 22°23.2'	189°34.1'	S 7°17.7'

Tue Nov 5, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.8' d = 0.7'		v = 1.9' d = 0.0'		v = 2.3' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	162°07.0'	S 21°23.6'	140°19.1'	S 23°07.2'	116°54.3'	S 22°23.1'	204°35.1'	S 7°18.3'
1	177°06.2'	S 21°24.3'	155°21.1'	S 23°07.3'	131°56.5'	S 22°23.1'	219°36.0'	S 7°18.9'
2	192°05.4'	S 21°25.0'	170°23.0'	S 23°07.3'	146°58.8'	S 22°23.1'	234°37.0'	S 7°19.6'
3	207°04.6'	S 21°25.7'	185°24.9'	S 23°07.3'	162°01.1'	S 22°23.1'	249°37.9'	S 7°20.2'
4	222°03.8'	S 21°26.4'	200°26.8'	S 23°07.3'	177°03.4'	S 22°23.1'	264°38.9'	S 7°20.8'
5	237°03.0'	S 21°27.1'	215°28.8'	S 23°07.4'	192°05.6'	S 22°23.1'	279°39.8'	S 7°21.5'
6	252°02.2'	S 21°27.8'	230°30.7'	S 23°07.4'	207°07.9'	S 22°23.0'	294°40.7'	S 7°22.1'
7	267°01.4'	S 21°28.4'	245°32.6'	S 23°07.4'	222°10.2'	S 22°23.0'	309°41.7'	S 7°22.7'
8	282°00.6'	S 21°29.1'	260°34.6'	S 23°07.4'	237°12.4'	S 22°23.0'	324°42.6'	S 7°23.3'
9	296°59.8'	S 21°29.8'	275°36.5'	S 23°07.5'	252°14.7'	S 22°23.0'	339°43.6'	S 7°24.0'
10	311°59.1'	S 21°30.5'	290°38.4'	S 23°07.5'	267°17.0'	S 22°23.0'	354°44.5'	S 7°24.6'
11	326°58.3'	S 21°31.2'	305°40.3'	S 23°07.5'	282°19.2'	S 22°23.0'	9°45.5'	S 7°25.2'
12	341°57.5'	S 21°31.8'	320°42.3'	S 23°07.5'	297°21.5'	S 22°22.9'	24°46.4'	S 7°25.8'
13	356°56.7'	S 21°32.5'	335°44.2'	S 23°07.6'	312°23.8'	S 22°22.9'	39°47.3'	S 7°26.5'
14	11°55.9'	S 21°33.2'	350°46.1'	S 23°07.6'	327°26.0'	S 22°22.9'	54°48.3'	S 7°27.1'
15	26°55.1'	S 21°33.9'	5°48.1'	S 23°07.6'	342°28.3'	S 22°22.9'	69°49.2'	S 7°27.7'
16	41°54.3'	S 21°34.5'	20°50.0'	S 23°07.6'	357°30.6'	S 22°22.9'	84°50.2'	S 7°28.3'
17	56°53.5'	S 21°35.2'	35°51.9'	S 23°07.7'	12°32.8'	S 22°22.8'	99°51.1'	S 7°29.0'
18	71°52.7'	S 21°35.9'	50°53.8'	S 23°07.7'	27°35.1'	S 22°22.8'	114°52.1'	S 7°29.6'
19	86°51.9'	S 21°36.6'	65°55.8'	S 23°07.7'	42°37.4'	S 22°22.8'	129°53.0'	S 7°30.2'
20	101°51.1'	S 21°37.2'	80°57.7'	S 23°07.8'	57°39.6'	S 22°22.8'	144°54.0'	S 7°30.8'
21	116°50.3'	S 21°37.9'	95°59.6'	S 23°07.8'	72°41.9'	S 22°22.8'	159°54.9'	S 7°31.5'
22	131°49.5'	S 21°38.6'	111°01.5'	S 23°07.8'	87°44.2'	S 22°22.8'	174°55.8'	S 7°32.1'
23	146°48.7'	S 21°39.2'	126°03.5'	S 23°07.8'	102°46.4'	S 22°22.7'	189°56.8'	S 7°32.7'

Wed Nov 6, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.8' d = 0.7'		v = 1.9' d = 0.0'		v = 2.3' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	161°47.9'	S 21°39.9'	141°05.4'	S 23°07.9'	117°48.7'	S 22°22.7'	204°57.7'	S 7°33.3'
1	176°47.1'	S 21°40.6'	156°07.3'	S 23°07.9'	132°50.9'	S 22°22.7'	219°58.7'	S 7°34.0'
2	191°46.3'	S 21°41.2'	171°09.2'	S 23°07.9'	147°53.2'	S 22°22.7'	234°59.6'	S 7°34.6'
3	206°45.5'	S 21°41.9'	186°11.2'	S 23°07.9'	162°55.5'	S 22°22.7'	250°00.5'	S 7°35.2'
4	221°44.7'	S 21°42.5'	201°13.1'	S 23°08.0'	177°57.7'	S 22°22.6'	265°01.5'	S 7°35.8'
5	236°43.9'	S 21°43.2'	216°15.0'	S 23°08.0'	193°00.0'	S 22°22.6'	280°02.4'	S 7°36.4'
6	251°43.1'	S 21°43.9'	231°16.9'	S 23°08.0'	208°02.3'	S 22°22.6'	295°03.4'	S 7°37.1'
7	266°42.3'	S 21°44.5'	246°18.9'	S 23°08.0'	223°04.5'	S 22°22.6'	310°04.3'	S 7°37.7'
8	281°41.4'	S 21°45.2'	261°20.8'	S 23°08.1'	238°06.8'	S 22°22.6'	325°05.3'	S 7°38.3'
9	296°40.6'	S 21°45.8'	276°22.7'	S 23°08.1'	253°09.1'	S 22°22.6'	340°06.2'	S 7°38.9'
10	311°39.8'	S 21°46.5'	291°24.6'	S 23°08.1'	268°11.3'	S 22°22.5'	355°07.1'	S 7°39.6'
11	326°39.0'	S 21°47.1'	306°26.6'	S 23°08.1'	283°13.6'	S 22°22.5'	10°08.1'	S 7°40.2'
12	341°38.2'	S 21°47.8'	321°28.5'	S 23°08.2'	298°15.9'	S 22°22.5'	25°09.0'	S 7°40.8'
13	356°37.4'	S 21°48.4'	336°30.4'	S 23°08.2'	313°18.1'	S 22°22.5'	40°10.0'	S 7°41.4'
14	11°36.6'	S 21°49.1'	351°32.3'	S 23°08.2'	328°20.4'	S 22°22.5'	55°10.9'	S 7°42.1'
15	26°35.8'	S 21°49.7'	6°34.3'	S 23°08.2'	343°22.6'	S 22°22.4'	70°11.8'	S 7°42.7'
16	41°35.0'	S 21°50.4'	21°36.2'	S 23°08.3'	358°24.9'	S 22°22.4'	85°12.8'	S 7°43.3'
17	56°34.2'	S 21°51.0'	36°38.1'	S 23°08.3'	13°27.2'	S 22°22.4'	100°13.7'	S 7°43.9'
18	71°33.4'	S 21°51.7'	51°40.0'	S 23°08.3'	28°29.4'	S 22°22.4'	115°14.7'	S 7°44.6'
19	86°32.6'	S 21°52.3'	66°42.0'	S 23°08.3'	43°31.7'	S 22°22.4'	130°15.6'	S 7°45.2'
20	101°31.7'	S 21°53.0'	81°43.9'	S 23°08.4'	58°34.0'	S 22°22.4'	145°16.5'	S 7°45.8'
21	116°30.9'	S 21°53.6'	96°45.8'	S 23°08.4'	73°36.2'	S 22°22.3'	160°17.5'	S 7°46.4'
22	131°30.1'	S 21°54.3'	111°47.7'	S 23°08.4'	88°38.5'	S 22°22.3'	175°18.4'	S 7°47.0'
23	146°29.3'	S 21°54.9'	126°49.6'	S 23°08.4'	103°40.7'	S 22°22.3'	190°19.4'	S 7°47.7'

Thu Nov 7, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.8' d = 0.6'		v = 1.9' d = 0.0'		v = 2.3' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	161°28.5'	S 21°55.5'	141°51.6'	S 23°08.5'	118°43.0'	S 22°22.3'	205°20.3'	S 7°48.3'
1	176°27.7'	S 21°56.2'	156°53.5'	S 23°08.5'	133°45.3'	S 22°22.3'	220°21.2'	S 7°48.9'
2	191°26.9'	S 21°56.8'	171°55.4'	S 23°08.5'	148°47.5'	S 22°22.2'	235°22.2'	S 7°49.5'
3	206°26.1'	S 21°57.4'	186°57.3'	S 23°08.6'	163°49.8'	S 22°22.2'	250°23.1'	S 7°50.2'
4	221°25.2'	S 21°58.1'	201°59.3'	S 23°08.6'	178°52.1'	S 22°22.2'	265°24.1'	S 7°50.8'
5	236°24.4'	S 21°58.7'	217°01.2'	S 23°08.6'	193°54.3'	S 22°22.2'	280°25.0'	S 7°51.4'
6	251°23.6'	S 21°59.3'	232°03.1'	S 23°08.6'	208°56.6'	S 22°22.2'	295°25.9'	S 7°52.0'
7	266°22.8'	S 21°60.0'	247°05.0'	S 23°08.7'	223°58.8'	S 22°22.2'	310°26.9'	S 7°52.6'
8	281°22.0'	S 22°00.6'	262°06.9'	S 23°08.7'	239°01.1'	S 22°22.1'	325°27.8'	S 7°53.3'
9	296°21.2'	S 22°01.2'	277°08.9'	S 23°08.7'	254°03.4'	S 22°22.1'	340°28.8'	S 7°53.9'
10	311°20.3'	S 22°01.9'	292°10.8'	S 23°08.7'	269°05.6'	S 22°22.1'	355°29.7'	S 7°54.5'
11	326°19.5'	S 22°02.5'	307°12.7'	S 23°08.8'	284°07.9'	S 22°22.1'	10°30.6'	S 7°55.1'
12	341°18.7'	S 22°03.1'	322°14.6'	S 23°08.8'	299°10.1'	S 22°22.1'	25°31.6'	S 7°55.7'
13	356°17.9'	S 22°03.7'	337°16.5'	S 23°08.8'	314°12.4'	S 22°22.0'	40°32.5'	S 7°56.4'
14	11°17.1'	S 22°04.4'	352°18.5'	S 23°08.8'	329°14.7'	S 22°22.0'	55°33.5'	S 7°57.0'
15	26°16.2'	S 22°05.0'	7°20.4'	S 23°08.9'	344°16.9'	S 22°22.0'	70°34.4'	S 7°57.6'
16	41°15.4'	S 22°05.6'	22°22.3'	S 23°08.9'	359°19.2'	S 22°22.0'	85°35.3'	S 7°58.2'
17	56°14.6'	S 22°06.2'	37°24.2'	S 23°08.9'	14°21.4'	S 22°22.0'	100°36.3'	S 7°58.9'
18	71°13.8'	S 22°06.9'	52°26.1'	S 23°08.9'	29°23.7'	S 22°21.9'	115°37.2'	S 7°59.5'
19	86°13.0'	S 22°07.5'	67°28.1'	S 23°09.0'	44°26.0'	S 22°21.9'	130°38.1'	S 8°00.1'
20	101°12.1'	S 22°08.1'	82°30.0'	S 23°09.0'	59°28.2'	S 22°21.9'	145°39.1'	S 8°00.7'
21	116°11.3'	S 22°08.7'	97°31.9'	S 23°09.0'	74°30.5'	S 22°21.9'	160°40.0'	S 8°01.3'
22	131°10.5'	S 22°09.3'	112°33.8'	S 23°09.0'	89°32.7'	S 22°21.9'	175°41.0'	S 8°02.0'
23	146°09.7'	S 22°09.9'	127°35.7'	S 23°09.1'	104°35.0'	S 22°21.9'	190°41.9'	S 8°02.6'

Fri Nov 8, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.8' d = 0.6'		v = 1.9' d = 0.0'		v = 2.3' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	161°08.8'	S 22°10.6'	142°37.7'	S 23°09.1'	119°37.3'	S 22°21.8'	205°42.8'	S 8°03.2'
1	176°08.0'	S 22°11.2'	157°39.6'	S 23°09.1'	134°39.5'	S 22°21.8'	220°43.8'	S 8°03.8'
2	191°07.2'	S 22°11.8'	172°41.5'	S 23°09.1'	149°41.8'	S 22°21.8'	235°44.7'	S 8°04.4'
3	206°06.4'	S 22°12.4'	187°43.4'	S 23°09.1'	164°44.0'	S 22°21.8'	250°45.6'	S 8°05.1'
4	221°05.5'	S 22°13.0'	202°45.3'	S 23°09.2'	179°46.3'	S 22°21.8'	265°46.6'	S 8°05.7'
5	236°04.7'	S 22°13.6'	217°47.3'	S 23°09.2'	194°48.5'	S 22°21.7'	280°47.5'	S 8°06.3'
6	251°03.9'	S 22°14.2'	232°49.2'	S 23°09.2'	209°50.8'	S 22°21.7'	295°48.5'	S 8°06.9'
7	266°03.1'	S 22°14.8'	247°51.1'	S 23°09.2'	224°53.1'	S 22°21.7'	310°49.4'	S 8°07.5'
8	281°02.2'	S 22°15.4'	262°53.0'	S 23°09.3'	239°55.3'	S 22°21.7'	325°50.3'	S 8°08.2'
9	296°01.4'	S 22°16.0'	277°54.9'	S 23°09.3'	254°57.6'	S 22°21.7'	340°51.3'	S 8°08.8'
10	311°00.6'	S 22°16.6'	292°56.8'	S 23°09.3'	269°59.8'	S 22°21.6'	355°52.2'	S 8°09.4'
11	325°59.7'	S 22°17.2'	307°58.8'	S 23°09.3'	285°02.1'	S 22°21.6'	10°53.1'	S 8°10.0'
12	340°58.9'	S 22°17.8'	323°00.7'	S 23°09.4'	300°04.4'	S 22°21.6'	25°54.1'	S 8°10.6'
13	355°58.1'	S 22°18.4'	338°02.6'	S 23°09.4'	315°06.6'	S 22°21.6'	40°55.0'	S 8°11.3'
14	10°57.3'	S 22°19.0'	353°04.5'	S 23°09.4'	330°08.9'	S 22°21.6'	55°55.9'	S 8°11.9'
15	25°56.4'	S 22°19.6'	8°06.4'	S 23°09.4'	345°11.1'	S 22°21.5'	70°56.9'	S 8°12.5'
16	40°55.6'	S 22°20.2'	23°08.3'	S 23°09.5'	0°13.4'	S 22°21.5'	85°57.8'	S 8°13.1'
17	55°54.8'	S 22°20.8'	38°10.3'	S 23°09.5'	15°15.6'	S 22°21.5'	100°58.7'	S 8°13.7'
18	70°53.9'	S 22°21.4'	53°12.2'	S 23°09.5'	30°17.9'	S 22°21.5'	115°59.7'	S 8°14.3'
19	85°53.1'	S 22°22.0'	68°14.1'	S 23°09.5'	45°20.1'	S 22°21.5'	131°00.6'	S 8°15.0'
20	100°52.3'	S 22°22.6'	83°16.0'	S 23°09.6'	60°22.4'	S 22°21.4'	146°01.6'	S 8°15.6'
21	115°51.4'	S 22°23.2'	98°17.9'	S 23°09.6'	75°24.7'	S 22°21.4'	161°02.5'	S 8°16.2'
22	130°50.6'	S 22°23.8'	113°19.8'	S 23°09.6'	90°26.9'	S 22°21.4'	176°03.4'	S 8°16.8'
23	145°49.8'	S 22°24.4'	128°21.8'	S 23°09.6'	105°29.2'	S 22°21.4'	191°04.4'	S 8°17.4'

Sat Nov 9, 2019 UTC

UTC	Venus -3.8 v = -0.8' d = 0.6'		Jupiter -1.7 v = 1.9' d = 0.0'		Saturn +0.6 v = 2.3' d = 0.0'		Mars +1.8 v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	160°48.9'	S 22°24.9'	143°23.7'	S 23°09.7'	120°31.4'	S 22°21.4'	206°05.3'	S 8°18.1'
1	175°48.1'	S 22°25.5'	158°25.6'	S 23°09.7'	135°33.7'	S 22°21.4'	221°06.2'	S 8°18.7'
2	190°47.2'	S 22°26.1'	173°27.5'	S 23°09.7'	150°35.9'	S 22°21.3'	236°07.2'	S 8°19.3'
3	205°46.4'	S 22°26.7'	188°29.4'	S 23°09.7'	165°38.2'	S 22°21.3'	251°08.1'	S 8°19.9'
4	220°45.6'	S 22°27.3'	203°31.3'	S 23°09.8'	180°40.4'	S 22°21.3'	266°09.0'	S 8°20.5'
5	235°44.7'	S 22°27.9'	218°33.3'	S 23°09.8'	195°42.7'	S 22°21.3'	281°10.0'	S 8°21.1'
6	250°43.9'	S 22°28.4'	233°35.2'	S 23°09.8'	210°45.0'	S 22°21.3'	296°10.9'	S 8°21.8'
7	265°43.1'	S 22°29.0'	248°37.1'	S 23°09.8'	225°47.2'	S 22°21.2'	311°11.8'	S 8°22.4'
8	280°42.2'	S 22°29.6'	263°39.0'	S 23°09.9'	240°49.5'	S 22°21.2'	326°12.8'	S 8°23.0'
9	295°41.4'	S 22°30.2'	278°40.9'	S 23°09.9'	255°51.7'	S 22°21.2'	341°13.7'	S 8°23.6'
10	310°40.5'	S 22°30.7'	293°42.8'	S 23°09.9'	270°54.0'	S 22°21.2'	356°14.6'	S 8°24.2'
11	325°39.7'	S 22°31.3'	308°44.7'	S 23°09.9'	285°56.2'	S 22°21.2'	11°15.6'	S 8°24.9'
12	340°38.9'	S 22°31.9'	323°46.7'	S 23°09.9'	300°58.5'	S 22°21.1'	26°16.5'	S 8°25.5'
13	355°38.0'	S 22°32.5'	338°48.6'	S 23°10.0'	316°00.7'	S 22°21.1'	41°17.4'	S 8°26.1'
14	10°37.2'	S 22°33.0'	353°50.5'	S 23°10.0'	331°03.0'	S 22°21.1'	56°18.4'	S 8°26.7'
15	25°36.3'	S 22°33.6'	8°52.4'	S 23°10.0'	346°05.2'	S 22°21.1'	71°19.3'	S 8°27.3'
16	40°35.5'	S 22°34.2'	23°54.3'	S 23°10.0'	1°07.5'	S 22°21.1'	86°20.2'	S 8°27.9'
17	55°34.7'	S 22°34.7'	38°56.2'	S 23°10.1'	16°09.8'	S 22°21.0'	101°21.2'	S 8°28.6'
18	70°33.8'	S 22°35.3'	53°58.1'	S 23°10.1'	31°12.0'	S 22°21.0'	116°22.1'	S 8°29.2'
19	85°33.0'	S 22°35.9'	69°00.1'	S 23°10.1'	46°14.3'	S 22°21.0'	131°23.0'	S 8°29.8'
20	100°32.1'	S 22°36.4'	84°02.0'	S 23°10.1'	61°16.5'	S 22°21.0'	146°24.0'	S 8°30.4'
21	115°31.3'	S 22°37.0'	99°03.9'	S 23°10.2'	76°18.8'	S 22°21.0'	161°24.9'	S 8°31.0'
22	130°30.4'	S 22°37.6'	114°05.8'	S 23°10.2'	91°21.0'	S 22°20.9'	176°25.8'	S 8°31.6'
23	145°29.6'	S 22°38.1'	129°07.7'	S 23°10.2'	106°23.3'	S 22°20.9'	191°26.8'	S 8°32.3'

Sun Nov 10, 2019 UTC

UTC	Venus -3.8 v = -0.9' d = 0.5'		Jupiter -1.7 v = 1.9' d = 0.0'		Saturn +0.6 v = 2.3' d = 0.0'		Mars +1.8 v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	160°28.7'	S 22°38.7'	144°09.6'	S 23°10.2'	121°25.5'	S 22°20.9'	206°27.7'	S 8°32.9'
1	175°27.9'	S 22°39.2'	159°11.5'	S 23°10.3'	136°27.8'	S 22°20.9'	221°28.6'	S 8°33.5'
2	190°27.0'	S 22°39.8'	174°13.4'	S 23°10.3'	151°30.0'	S 22°20.9'	236°29.6'	S 8°34.1'
3	205°26.2'	S 22°40.4'	189°15.4'	S 23°10.3'	166°32.3'	S 22°20.8'	251°30.5'	S 8°34.7'
4	220°25.4'	S 22°40.9'	204°17.3'	S 23°10.3'	181°34.5'	S 22°20.8'	266°31.4'	S 8°35.3'
5	235°24.5'	S 22°41.5'	219°19.2'	S 23°10.3'	196°36.8'	S 22°20.8'	281°32.3'	S 8°35.9'
6	250°23.7'	S 22°42.0'	234°21.1'	S 23°10.4'	211°39.0'	S 22°20.8'	296°33.3'	S 8°36.6'
7	265°22.8'	S 22°42.6'	249°23.0'	S 23°10.4'	226°41.3'	S 22°20.8'	311°34.2'	S 8°37.2'
8	280°22.0'	S 22°43.1'	264°24.9'	S 23°10.4'	241°43.5'	S 22°20.7'	326°35.1'	S 8°37.8'
9	295°21.1'	S 22°43.7'	279°26.8'	S 23°10.4'	256°45.8'	S 22°20.7'	341°36.1'	S 8°38.4'
10	310°20.3'	S 22°44.2'	294°28.7'	S 23°10.5'	271°48.0'	S 22°20.7'	356°37.0'	S 8°39.0'
11	325°19.4'	S 22°44.8'	309°30.6'	S 23°10.5'	286°50.3'	S 22°20.7'	11°37.9'	S 8°39.6'
12	340°18.6'	S 22°45.3'	324°32.6'	S 23°10.5'	301°52.5'	S 22°20.7'	26°38.9'	S 8°40.3'
13	355°17.7'	S 22°45.9'	339°34.5'	S 23°10.5'	316°54.8'	S 22°20.6'	41°39.8'	S 8°40.9'
14	10°16.9'	S 22°46.4'	354°36.4'	S 23°10.6'	331°57.0'	S 22°20.6'	56°40.7'	S 8°41.5'
15	25°16.0'	S 22°46.9'	9°38.3'	S 23°10.6'	346°59.3'	S 22°20.6'	71°41.7'	S 8°42.1'
16	40°15.2'	S 22°47.5'	24°40.2'	S 23°10.6'	2°01.5'	S 22°20.6'	86°42.6'	S 8°42.7'
17	55°14.3'	S 22°48.0'	39°42.1'	S 23°10.6'	17°03.8'	S 22°20.6'	101°43.5'	S 8°43.3'
18	70°13.4'	S 22°48.6'	54°44.0'	S 23°10.6'	32°06.0'	S 22°20.5'	116°44.4'	S 8°43.9'
19	85°12.6'	S 22°49.1'	69°45.9'	S 23°10.7'	47°08.3'	S 22°20.5'	131°45.4'	S 8°44.6'
20	100°11.7'	S 22°49.6'	84°47.8'	S 23°10.7'	62°10.5'	S 22°20.5'	146°46.3'	S 8°45.2'
21	115°10.9'	S 22°50.2'	99°49.8'	S 23°10.7'	77°12.8'	S 22°20.5'	161°47.2'	S 8°45.8'
22	130°10.0'	S 22°50.7'	114°51.7'	S 23°10.7'	92°15.0'	S 22°20.5'	176°48.2'	S 8°46.4'
23	145°09.2'	S 22°51.2'	129°53.6'	S 23°10.8'	107°17.3'	S 22°20.4'	191°49.1'	S 8°47.0'

Mon Nov 11, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.9' d = 0.5'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	160°08.3'	S 22°51.8'	144°55.5'	S 23°10.8'	122°19.5'	S 22°20.4'	206°50.0'	S 8°47.6'
1	175°07.5'	S 22°52.3'	159°57.4'	S 23°10.8'	137°21.8'	S 22°20.4'	221°50.9'	S 8°48.2'
2	190°06.6'	S 22°52.8'	174°59.3'	S 23°10.8'	152°24.0'	S 22°20.4'	236°51.9'	S 8°48.8'
3	205°05.7'	S 22°53.4'	190°01.2'	S 23°10.8'	167°26.3'	S 22°20.4'	251°52.8'	S 8°49.5'
4	220°04.9'	S 22°53.9'	205°03.1'	S 23°10.9'	182°28.5'	S 22°20.3'	266°53.7'	S 8°50.1'
5	235°04.0'	S 22°54.4'	220°05.0'	S 23°10.9'	197°30.8'	S 22°20.3'	281°54.7'	S 8°50.7'
6	250°03.2'	S 22°54.9'	235°06.9'	S 23°10.9'	212°33.0'	S 22°20.3'	296°55.6'	S 8°51.3'
7	265°02.3'	S 22°55.5'	250°08.8'	S 23°10.9'	227°35.3'	S 22°20.3'	311°56.5'	S 8°51.9'
8	280°01.5'	S 22°56.0'	265°10.8'	S 23°11.0'	242°37.5'	S 22°20.2'	326°57.4'	S 8°52.5'
9	295°00.6'	S 22°56.5'	280°12.7'	S 23°11.0'	257°39.8'	S 22°20.2'	341°58.4'	S 8°53.1'
10	309°59.7'	S 22°57.0'	295°14.6'	S 23°11.0'	272°42.0'	S 22°20.2'	356°59.3'	S 8°53.8'
11	324°58.9'	S 22°57.6'	310°16.5'	S 23°11.0'	287°44.3'	S 22°20.2'	12°00.2'	S 8°54.4'
12	339°58.0'	S 22°58.1'	325°18.4'	S 23°11.0'	302°46.5'	S 22°20.2'	27°01.2'	S 8°55.0'
13	354°57.1'	S 22°58.6'	340°20.3'	S 23°11.1'	317°48.8'	S 22°20.1'	42°02.1'	S 8°55.6'
14	9°56.3'	S 22°59.1'	355°22.2'	S 23°11.1'	332°51.0'	S 22°20.1'	57°03.0'	S 8°56.2'
15	24°55.4'	S 22°59.6'	10°24.1'	S 23°11.1'	347°53.3'	S 22°20.1'	72°03.9'	S 8°56.8'
16	39°54.6'	S 23°00.1'	25°26.0'	S 23°11.1'	2°55.5'	S 22°20.1'	87°04.9'	S 8°57.4'
17	54°53.7'	S 23°00.6'	40°27.9'	S 23°11.2'	17°57.8'	S 22°20.1'	102°05.8'	S 8°58.0'
18	69°52.8'	S 23°01.2'	55°29.8'	S 23°11.2'	33°00.0'	S 22°20.0'	117°06.7'	S 8°58.7'
19	84°52.0'	S 23°01.7'	70°31.7'	S 23°11.2'	48°02.2'	S 22°20.0'	132°07.6'	S 8°59.3'
20	99°51.1'	S 23°02.2'	85°33.6'	S 23°11.2'	63°04.5'	S 22°20.0'	147°08.6'	S 8°59.9'
21	114°50.2'	S 23°02.7'	100°35.6'	S 23°11.2'	78°06.7'	S 22°20.0'	162°09.5'	S 9°00.5'
22	129°49.4'	S 23°03.2'	115°37.5'	S 23°11.3'	93°09.0'	S 22°20.0'	177°10.4'	S 9°01.1'
23	144°48.5'	S 23°03.7'	130°39.4'	S 23°11.3'	108°11.2'	S 22°19.9'	192°11.4'	S 9°01.7'

Tue Nov 12, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.9' d = 0.5'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	159°47.6'	S 23°04.2'	145°41.3'	S 23°11.3'	123°13.5'	S 22°19.9'	207°12.3'	S 9°02.3'
1	174°46.8'	S 23°04.7'	160°43.2'	S 23°11.3'	138°15.7'	S 22°19.9'	222°13.2'	S 9°02.9'
2	189°45.9'	S 23°05.2'	175°45.1'	S 23°11.4'	153°18.0'	S 22°19.9'	237°14.1'	S 9°03.5'
3	204°45.0'	S 23°05.7'	190°47.0'	S 23°11.4'	168°20.2'	S 22°19.9'	252°15.1'	S 9°04.2'
4	219°44.2'	S 23°06.2'	205°48.9'	S 23°11.4'	183°22.5'	S 22°19.8'	267°16.0'	S 9°04.8'
5	234°43.3'	S 23°06.7'	220°50.8'	S 23°11.4'	198°24.7'	S 22°19.8'	282°16.9'	S 9°05.4'
6	249°42.4'	S 23°07.2'	235°52.7'	S 23°11.4'	213°27.0'	S 22°19.8'	297°17.8'	S 9°06.0'
7	264°41.6'	S 23°07.7'	250°54.6'	S 23°11.5'	228°29.2'	S 22°19.8'	312°18.8'	S 9°06.6'
8	279°40.7'	S 23°08.2'	265°56.5'	S 23°11.5'	243°31.4'	S 22°19.7'	327°19.7'	S 9°07.2'
9	294°39.8'	S 23°08.7'	280°58.4'	S 23°11.5'	258°33.7'	S 22°19.7'	342°20.6'	S 9°07.8'
10	309°39.0'	S 23°09.2'	296°00.3'	S 23°11.5'	273°35.9'	S 22°19.7'	357°21.5'	S 9°08.4'
11	324°38.1'	S 23°09.7'	311°02.2'	S 23°11.6'	288°38.2'	S 22°19.7'	12°22.5'	S 9°09.0'
12	339°37.2'	S 23°10.2'	326°04.1'	S 23°11.6'	303°40.4'	S 22°19.7'	27°23.4'	S 9°09.7'
13	354°36.4'	S 23°10.7'	341°06.0'	S 23°11.6'	318°42.7'	S 22°19.6'	42°24.3'	S 9°10.3'
14	9°35.5'	S 23°11.1'	356°08.0'	S 23°11.6'	333°44.9'	S 22°19.6'	57°25.2'	S 9°10.9'
15	24°34.6'	S 23°11.6'	11°09.9'	S 23°11.6'	348°47.2'	S 22°19.6'	72°26.2'	S 9°11.5'
16	39°33.7'	S 23°12.1'	26°11.8'	S 23°11.7'	3°49.4'	S 22°19.6'	87°27.1'	S 9°12.1'
17	54°32.9'	S 23°12.6'	41°13.7'	S 23°11.7'	18°51.6'	S 22°19.6'	102°28.0'	S 9°12.7'
18	69°32.0'	S 23°13.1'	56°15.6'	S 23°11.7'	33°53.9'	S 22°19.5'	117°28.9'	S 9°13.3'
19	84°31.1'	S 23°13.6'	71°17.5'	S 23°11.7'	48°56.1'	S 22°19.5'	132°29.8'	S 9°13.9'
20	99°30.2'	S 23°14.1'	86°19.4'	S 23°11.7'	63°58.4'	S 22°19.5'	147°30.8'	S 9°14.5'
21	114°29.4'	S 23°14.5'	101°21.3'	S 23°11.8'	79°00.6'	S 22°19.5'	162°31.7'	S 9°15.1'
22	129°28.5'	S 23°15.0'	116°23.2'	S 23°11.8'	94°02.9'	S 22°19.4'	177°32.6'	S 9°15.8'
23	144°27.6'	S 23°15.5'	131°25.1'	S 23°11.8'	109°05.1'	S 22°19.4'	192°33.5'	S 9°16.4'

Wed Nov 13, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.9' d = 0.5'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	159°26.8'	S 23°16.0'	146°27.0'	S 23°11.8'	124°07.3'	S 22°19.4'	207°34.5'	S 9°17.0'
1	174°25.9'	S 23°16.4'	161°28.9'	S 23°11.9'	139°09.6'	S 22°19.4'	222°35.4'	S 9°17.6'
2	189°25.0'	S 23°16.9'	176°30.8'	S 23°11.9'	154°11.8'	S 22°19.4'	237°36.3'	S 9°18.2'
3	204°24.1'	S 23°17.4'	191°32.7'	S 23°11.9'	169°14.1'	S 22°19.3'	252°37.2'	S 9°18.8'
4	219°23.2'	S 23°17.9'	206°34.6'	S 23°11.9'	184°16.3'	S 22°19.3'	267°38.2'	S 9°19.4'
5	234°22.4'	S 23°18.3'	221°36.5'	S 23°11.9'	199°18.6'	S 22°19.3'	282°39.1'	S 9°20.0'
6	249°21.5'	S 23°18.8'	236°38.4'	S 23°12.0'	214°20.8'	S 22°19.3'	297°40.0'	S 9°20.6'
7	264°20.6'	S 23°19.3'	251°40.3'	S 23°12.0'	229°23.0'	S 22°19.3'	312°40.9'	S 9°21.2'
8	279°19.7'	S 23°19.7'	266°42.2'	S 23°12.0'	244°25.3'	S 22°19.2'	327°41.8'	S 9°21.8'
9	294°18.9'	S 23°20.2'	281°44.1'	S 23°12.0'	259°27.5'	S 22°19.2'	342°42.8'	S 9°22.4'
10	309°18.0'	S 23°20.7'	296°46.0'	S 23°12.0'	274°29.8'	S 22°19.2'	357°43.7'	S 9°23.1'
11	324°17.1'	S 23°21.1'	311°47.9'	S 23°12.1'	289°32.0'	S 22°19.2'	12°44.6'	S 9°23.7'
12	339°16.2'	S 23°21.6'	326°49.8'	S 23°12.1'	304°34.3'	S 22°19.1'	27°45.5'	S 9°24.3'
13	354°15.3'	S 23°22.1'	341°51.7'	S 23°12.1'	319°36.5'	S 22°19.1'	42°46.5'	S 9°24.9'
14	9°14.5'	S 23°22.5'	356°53.6'	S 23°12.1'	334°38.7'	S 22°19.1'	57°47.4'	S 9°25.5'
15	24°13.6'	S 23°23.0'	11°55.5'	S 23°12.1'	349°41.0'	S 22°19.1'	72°48.3'	S 9°26.1'
16	39°12.7'	S 23°23.4'	26°57.4'	S 23°12.2'	4°43.2'	S 22°19.1'	87°49.2'	S 9°26.7'
17	54°11.8'	S 23°23.9'	41°59.3'	S 23°12.2'	19°45.5'	S 22°19.0'	102°50.1'	S 9°27.3'
18	69°10.9'	S 23°24.3'	57°01.2'	S 23°12.2'	34°47.7'	S 22°19.0'	117°51.1'	S 9°27.9'
19	84°10.1'	S 23°24.8'	72°03.1'	S 23°12.2'	49°49.9'	S 22°19.0'	132°52.0'	S 9°28.5'
20	99°09.2'	S 23°25.2'	87°05.0'	S 23°12.2'	64°52.2'	S 22°19.0'	147°52.9'	S 9°29.1'
21	114°08.3'	S 23°25.7'	102°06.9'	S 23°12.3'	79°54.4'	S 22°19.0'	162°53.8'	S 9°29.7'
22	129°07.4'	S 23°26.2'	117°08.8'	S 23°12.3'	94°56.7'	S 22°18.9'	177°54.7'	S 9°30.3'
23	144°06.5'	S 23°26.6'	132°10.7'	S 23°12.3'	109°58.9'	S 22°18.9'	192°55.7'	S 9°30.9'

Thu Nov 14, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.9' d = 0.4'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	159°05.6'	S 23°27.0'	147°12.6'	S 23°12.3'	125°01.1'	S 22°18.9'	207°56.6'	S 9°31.6'
1	174°04.8'	S 23°27.5'	162°14.5'	S 23°12.4'	140°03.4'	S 22°18.9'	222°57.5'	S 9°32.2'
2	189°03.9'	S 23°27.9'	177°16.4'	S 23°12.4'	155°05.6'	S 22°18.8'	237°58.4'	S 9°32.8'
3	204°03.0'	S 23°28.4'	192°18.3'	S 23°12.4'	170°07.9'	S 22°18.8'	252°59.3'	S 9°33.4'
4	219°02.1'	S 23°28.8'	207°20.2'	S 23°12.4'	185°10.1'	S 22°18.8'	268°00.3'	S 9°34.0'
5	234°01.2'	S 23°29.3'	222°22.1'	S 23°12.4'	200°12.3'	S 22°18.8'	283°01.2'	S 9°34.6'
6	249°00.3'	S 23°29.7'	237°24.0'	S 23°12.5'	215°14.6'	S 22°18.8'	298°02.1'	S 9°35.2'
7	263°59.4'	S 23°30.2'	252°25.9'	S 23°12.5'	230°16.8'	S 22°18.7'	313°03.0'	S 9°35.8'
8	278°58.5'	S 23°30.6'	267°27.8'	S 23°12.5'	245°19.1'	S 22°18.7'	328°03.9'	S 9°36.4'
9	293°57.7'	S 23°31.0'	282°29.7'	S 23°12.5'	260°21.3'	S 22°18.7'	343°04.9'	S 9°37.0'
10	308°56.8'	S 23°31.5'	297°31.6'	S 23°12.5'	275°23.5'	S 22°18.7'	358°05.8'	S 9°37.6'
11	323°55.9'	S 23°31.9'	312°33.5'	S 23°12.6'	290°25.8'	S 22°18.6'	13°06.7'	S 9°38.2'
12	338°55.0'	S 23°32.3'	327°35.4'	S 23°12.6'	305°28.0'	S 22°18.6'	28°07.6'	S 9°38.8'
13	353°54.1'	S 23°32.8'	342°37.3'	S 23°12.6'	320°30.3'	S 22°18.6'	43°08.5'	S 9°39.4'
14	8°53.2'	S 23°33.2'	357°39.2'	S 23°12.6'	335°32.5'	S 22°18.6'	58°09.5'	S 9°40.0'
15	23°52.3'	S 23°33.6'	12°41.1'	S 23°12.6'	350°34.7'	S 22°18.6'	73°10.4'	S 9°40.6'
16	38°51.4'	S 23°34.1'	27°43.0'	S 23°12.7'	5°37.0'	S 22°18.5'	88°11.3'	S 9°41.2'
17	53°50.5'	S 23°34.5'	42°44.9'	S 23°12.7'	20°39.2'	S 22°18.5'	103°12.2'	S 9°41.9'
18	68°49.7'	S 23°34.9'	57°46.8'	S 23°12.7'	35°41.4'	S 22°18.5'	118°13.1'	S 9°42.5'
19	83°48.8'	S 23°35.3'	72°48.7'	S 23°12.7'	50°43.7'	S 22°18.5'	133°14.0'	S 9°43.1'
20	98°47.9'	S 23°35.8'	87°50.6'	S 23°12.7'	65°45.9'	S 22°18.4'	148°15.0'	S 9°43.7'
21	113°47.0'	S 23°36.2'	102°52.5'	S 23°12.8'	80°48.2'	S 22°18.4'	163°15.9'	S 9°44.3'
22	128°46.1'	S 23°36.6'	117°54.4'	S 23°12.8'	95°50.4'	S 22°18.4'	178°16.8'	S 9°44.9'
23	143°45.2'	S 23°37.0'	132°56.3'	S 23°12.8'	110°52.6'	S 22°18.4'	193°17.7'	S 9°45.5'

Fri Nov 15, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.9' d = 0.4'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	158°44.3'	S 23°37.4'	147°58.2'	S 23°12.8'	125°54.9'	S 22°18.4'	208°18.6'	S 9°46.1'
1	173°43.4'	S 23°37.9'	163°00.1'	S 23°12.8'	140°57.1'	S 22°18.3'	223°19.5'	S 9°46.7'
2	188°42.5'	S 23°38.3'	178°02.0'	S 23°12.8'	155°59.3'	S 22°18.3'	238°20.5'	S 9°47.3'
3	203°41.6'	S 23°38.7'	193°03.9'	S 23°12.9'	171°01.6'	S 22°18.3'	253°21.4'	S 9°47.9'
4	218°40.7'	S 23°39.1'	208°05.8'	S 23°12.9'	186°03.8'	S 22°18.3'	268°22.3'	S 9°48.5'
5	233°39.8'	S 23°39.5'	223°07.7'	S 23°12.9'	201°06.1'	S 22°18.2'	283°23.2'	S 9°49.1'
6	248°38.9'	S 23°39.9'	238°09.6'	S 23°12.9'	216°08.3'	S 22°18.2'	298°24.1'	S 9°49.7'
7	263°38.1'	S 23°40.3'	253°11.5'	S 23°12.9'	231°10.5'	S 22°18.2'	313°25.0'	S 9°50.3'
8	278°37.2'	S 23°40.8'	268°13.4'	S 23°13.0'	246°12.8'	S 22°18.2'	328°26.0'	S 9°50.9'
9	293°36.3'	S 23°41.2'	283°15.3'	S 23°13.0'	261°15.0'	S 22°18.2'	343°26.9'	S 9°51.5'
10	308°35.4'	S 23°41.6'	298°17.2'	S 23°13.0'	276°17.2'	S 22°18.1'	358°27.8'	S 9°52.1'
11	323°34.5'	S 23°42.0'	313°19.1'	S 23°13.0'	291°19.5'	S 22°18.1'	13°28.7'	S 9°52.7'
12	338°33.6'	S 23°42.4'	328°21.0'	S 23°13.0'	306°21.7'	S 22°18.1'	28°29.6'	S 9°53.3'
13	353°32.7'	S 23°42.8'	343°22.9'	S 23°13.1'	321°23.9'	S 22°18.1'	43°30.5'	S 9°53.9'
14	8°31.8'	S 23°43.2'	358°24.8'	S 23°13.1'	336°26.2'	S 22°18.0'	58°31.5'	S 9°54.5'
15	23°30.9'	S 23°43.6'	13°26.7'	S 23°13.1'	351°28.4'	S 22°18.0'	73°32.4'	S 9°55.1'
16	38°30.0'	S 23°44.0'	28°28.6'	S 23°13.1'	6°30.6'	S 22°18.0'	88°33.3'	S 9°55.7'
17	53°29.1'	S 23°44.4'	43°30.5'	S 23°13.1'	21°32.9'	S 22°18.0'	103°34.2'	S 9°56.3'
18	68°28.2'	S 23°44.8'	58°32.4'	S 23°13.2'	36°35.1'	S 22°17.9'	118°35.1'	S 9°56.9'
19	83°27.3'	S 23°45.2'	73°34.3'	S 23°13.2'	51°37.4'	S 22°17.9'	133°36.0'	S 9°57.5'
20	98°26.4'	S 23°45.6'	88°36.2'	S 23°13.2'	66°39.6'	S 22°17.9'	148°36.9'	S 9°58.1'
21	113°25.5'	S 23°46.0'	103°38.1'	S 23°13.2'	81°41.8'	S 22°17.9'	163°37.9'	S 9°58.7'
22	128°24.6'	S 23°46.4'	118°39.9'	S 23°13.2'	96°44.1'	S 22°17.9'	178°38.8'	S 9°59.3'
23	143°23.7'	S 23°46.8'	133°41.8'	S 23°13.3'	111°46.3'	S 22°17.8'	193°39.7'	S 9°59.9'

Sat Nov 16, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.9' d = 0.4'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	158°22.8'	S 23°47.1'	148°43.7'	S 23°13.3'	126°48.5'	S 22°17.8'	208°40.6'	S 10°00.6'
1	173°21.9'	S 23°47.5'	163°45.6'	S 23°13.3'	141°50.8'	S 22°17.8'	223°41.5'	S 10°01.2'
2	188°21.0'	S 23°47.9'	178°47.5'	S 23°13.3'	156°53.0'	S 22°17.8'	238°42.4'	S 10°01.8'
3	203°20.1'	S 23°48.3'	193°49.4'	S 23°13.3'	171°55.2'	S 22°17.7'	253°43.3'	S 10°02.4'
4	218°19.2'	S 23°48.7'	208°51.3'	S 23°13.3'	186°57.5'	S 22°17.7'	268°44.2'	S 10°03.0'
5	233°18.3'	S 23°49.1'	223°53.2'	S 23°13.4'	201°59.7'	S 22°17.7'	283°45.2'	S 10°03.6'
6	248°17.4'	S 23°49.5'	238°55.1'	S 23°13.4'	217°01.9'	S 22°17.7'	298°46.1'	S 10°04.2'
7	263°16.5'	S 23°49.8'	253°57.0'	S 23°13.4'	232°04.2'	S 22°17.7'	313°47.0'	S 10°04.8'
8	278°15.6'	S 23°50.2'	268°58.9'	S 23°13.4'	247°06.4'	S 22°17.6'	328°47.9'	S 10°05.4'
9	293°14.7'	S 23°50.6'	284°00.8'	S 23°13.4'	262°08.6'	S 22°17.6'	343°48.8'	S 10°06.0'
10	308°13.8'	S 23°51.0'	299°02.7'	S 23°13.5'	277°10.9'	S 22°17.6'	358°49.7'	S 10°06.6'
11	323°12.9'	S 23°51.4'	314°04.6'	S 23°13.5'	292°13.1'	S 22°17.6'	13°50.6'	S 10°07.2'
12	338°12.0'	S 23°51.7'	329°06.5'	S 23°13.5'	307°15.3'	S 22°17.5'	28°51.5'	S 10°07.8'
13	353°11.0'	S 23°52.1'	344°08.4'	S 23°13.5'	322°17.6'	S 22°17.5'	43°52.5'	S 10°08.4'
14	8°10.1'	S 23°52.5'	359°10.3'	S 23°13.5'	337°19.8'	S 22°17.5'	58°53.4'	S 10°09.0'
15	23°09.2'	S 23°52.8'	14°12.2'	S 23°13.6'	352°22.0'	S 22°17.5'	73°54.3'	S 10°09.6'
16	38°08.3'	S 23°53.2'	29°14.0'	S 23°13.6'	7°24.3'	S 22°17.4'	88°55.2'	S 10°10.2'
17	53°07.4'	S 23°53.6'	44°15.9'	S 23°13.6'	22°26.5'	S 22°17.4'	103°56.1'	S 10°10.8'
18	68°06.5'	S 23°54.0'	59°17.8'	S 23°13.6'	37°28.7'	S 22°17.4'	118°57.0'	S 10°11.4'
19	83°05.6'	S 23°54.3'	74°19.7'	S 23°13.6'	52°31.0'	S 22°17.4'	133°57.9'	S 10°12.0'
20	98°04.7'	S 23°54.7'	89°21.6'	S 23°13.6'	67°33.2'	S 22°17.3'	148°58.8'	S 10°12.6'
21	113°03.8'	S 23°55.1'	104°23.5'	S 23°13.7'	82°35.4'	S 22°17.3'	163°59.8'	S 10°13.2'
22	128°02.9'	S 23°55.4'	119°25.4'	S 23°13.7'	97°37.6'	S 22°17.3'	179°00.7'	S 10°13.8'
23	143°02.0'	S 23°55.8'	134°27.3'	S 23°13.7'	112°39.9'	S 22°17.3'	194°01.6'	S 10°14.4'



Sun Nov 17, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.9' d = 0.3'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	158°01.1'	S 23°56.1'	149°29.2'	S 23°13.7'	127°42.1'	S 22°17.3'	209°02.5'	S 10°15.0'
1	173°00.2'	S 23°56.5'	164°31.1'	S 23°13.7'	142°44.3'	S 22°17.2'	224°03.4'	S 10°15.6'
2	187°59.3'	S 23°56.9'	179°33.0'	S 23°13.8'	157°46.6'	S 22°17.2'	239°04.3'	S 10°16.2'
3	202°58.4'	S 23°57.2'	194°34.9'	S 23°13.8'	172°48.8'	S 22°17.2'	254°05.2'	S 10°16.7'
4	217°57.4'	S 23°57.6'	209°36.8'	S 23°13.8'	187°51.0'	S 22°17.2'	269°06.1'	S 10°17.3'
5	232°56.5'	S 23°57.9'	224°38.6'	S 23°13.8'	202°53.3'	S 22°17.1'	284°07.0'	S 10°17.9'
6	247°55.6'	S 23°58.3'	239°40.5'	S 23°13.8'	217°55.5'	S 22°17.1'	299°07.9'	S 10°18.5'
7	262°54.7'	S 23°58.6'	254°42.4'	S 23°13.8'	232°57.7'	S 22°17.1'	314°08.9'	S 10°19.1'
8	277°53.8'	S 23°59.0'	269°44.3'	S 23°13.9'	247°60.0'	S 22°17.1'	329°09.8'	S 10°19.7'
9	292°52.9'	S 23°59.3'	284°46.2'	S 23°13.9'	263°02.2'	S 22°17.0'	344°10.7'	S 10°20.3'
10	307°52.0'	S 23°59.7'	299°48.1'	S 23°13.9'	278°04.4'	S 22°17.0'	359°11.6'	S 10°20.9'
11	322°51.1'	S 24°00.0'	314°50.0'	S 23°13.9'	293°06.6'	S 22°17.0'	14°12.5'	S 10°21.5'
12	337°50.2'	S 24°00.4'	329°51.9'	S 23°13.9'	308°08.9'	S 22°17.0'	29°13.4'	S 10°22.1'
13	352°49.2'	S 24°00.7'	344°53.8'	S 23°14.0'	323°11.1'	S 22°17.0'	44°14.3'	S 10°22.7'
14	7°48.3'	S 24°01.1'	359°55.7'	S 23°14.0'	338°13.3'	S 22°16.9'	59°15.2'	S 10°23.3'
15	22°47.4'	S 24°01.4'	14°57.6'	S 23°14.0'	353°15.6'	S 22°16.9'	74°16.1'	S 10°23.9'
16	37°46.5'	S 24°01.7'	29°59.4'	S 23°14.0'	8°17.8'	S 22°16.9'	89°17.0'	S 10°24.5'
17	52°45.6'	S 24°02.1'	45°01.3'	S 23°14.0'	23°20.0'	S 22°16.9'	104°17.9'	S 10°25.1'
18	67°44.7'	S 24°02.4'	60°03.2'	S 23°14.0'	38°22.3'	S 22°16.8'	119°18.9'	S 10°25.7'
19	82°43.8'	S 24°02.8'	75°05.1'	S 23°14.1'	53°24.5'	S 22°16.8'	134°19.8'	S 10°26.3'
20	97°42.9'	S 24°03.1'	90°07.0'	S 23°14.1'	68°26.7'	S 22°16.8'	149°20.7'	S 10°26.9'
21	112°41.9'	S 24°03.4'	105°08.9'	S 23°14.1'	83°28.9'	S 22°16.8'	164°21.6'	S 10°27.5'
22	127°41.0'	S 24°03.8'	120°10.8'	S 23°14.1'	98°31.2'	S 22°16.7'	179°22.5'	S 10°28.1'
23	142°40.1'	S 24°04.1'	135°12.7'	S 23°14.1'	113°33.4'	S 22°16.7'	194°23.4'	S 10°28.7'

Mon Nov 18, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.9' d = 0.3'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	157°39.2'	S 24°04.4'	150°14.6'	S 23°14.1'	128°35.6'	S 22°16.7'	209°24.3'	S 10°29.3'
1	172°38.3'	S 24°04.8'	165°16.5'	S 23°14.2'	143°37.9'	S 22°16.7'	224°25.2'	S 10°29.9'
2	187°37.4'	S 24°05.1'	180°18.3'	S 23°14.2'	158°40.1'	S 22°16.6'	239°26.1'	S 10°30.5'
3	202°36.5'	S 24°05.4'	195°20.2'	S 23°14.2'	173°42.3'	S 22°16.6'	254°27.0'	S 10°31.1'
4	217°35.5'	S 24°05.7'	210°22.1'	S 23°14.2'	188°44.5'	S 22°16.6'	269°27.9'	S 10°31.7'
5	232°34.6'	S 24°06.1'	225°24.0'	S 23°14.2'	203°46.8'	S 22°16.6'	284°28.8'	S 10°32.3'
6	247°33.7'	S 24°06.4'	240°25.9'	S 23°14.2'	218°49.0'	S 22°16.5'	299°29.7'	S 10°32.9'
7	262°32.8'	S 24°06.7'	255°27.8'	S 23°14.3'	233°51.2'	S 22°16.5'	314°30.6'	S 10°33.5'
8	277°31.9'	S 24°07.0'	270°29.7'	S 23°14.3'	248°53.4'	S 22°16.5'	329°31.6'	S 10°34.1'
9	292°30.9'	S 24°07.3'	285°31.6'	S 23°14.3'	263°55.7'	S 22°16.5'	344°32.5'	S 10°34.7'
10	307°30.0'	S 24°07.7'	300°33.5'	S 23°14.3'	278°57.9'	S 22°16.5'	359°33.4'	S 10°35.2'
11	322°29.1'	S 24°08.0'	315°35.3'	S 23°14.3'	294°00.1'	S 22°16.4'	14°34.3'	S 10°35.8'
12	337°28.2'	S 24°08.3'	330°37.2'	S 23°14.3'	309°02.4'	S 22°16.4'	29°35.2'	S 10°36.4'
13	352°27.3'	S 24°08.6'	345°39.1'	S 23°14.4'	324°04.6'	S 22°16.4'	44°36.1'	S 10°37.0'
14	7°26.4'	S 24°08.9'	0°41.0'	S 23°14.4'	339°06.8'	S 22°16.4'	59°37.0'	S 10°37.6'
15	22°25.4'	S 24°09.2'	15°42.9'	S 23°14.4'	354°09.0'	S 22°16.3'	74°37.9'	S 10°38.2'
16	37°24.5'	S 24°09.5'	30°44.8'	S 23°14.4'	9°11.3'	S 22°16.3'	89°38.8'	S 10°38.8'
17	52°23.6'	S 24°09.9'	45°46.7'	S 23°14.4'	24°13.5'	S 22°16.3'	104°39.7'	S 10°39.4'
18	67°22.7'	S 24°10.2'	60°48.6'	S 23°14.4'	39°15.7'	S 22°16.3'	119°40.6'	S 10°40.0'
19	82°21.8'	S 24°10.5'	75°50.4'	S 23°14.5'	54°17.9'	S 22°16.2'	134°41.5'	S 10°40.6'
20	97°20.8'	S 24°10.8'	90°52.3'	S 23°14.5'	69°20.2'	S 22°16.2'	149°42.4'	S 10°41.2'
21	112°19.9'	S 24°11.1'	105°54.2'	S 23°14.5'	84°22.4'	S 22°16.2'	164°43.3'	S 10°41.8'
22	127°19.0'	S 24°11.4'	120°56.1'	S 23°14.5'	99°24.6'	S 22°16.2'	179°44.2'	S 10°42.4'
23	142°18.1'	S 24°11.7'	135°58.0'	S 23°14.5'	114°26.8'	S 22°16.1'	194°45.1'	S 10°43.0'

Tue Nov 19, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.9' d = 0.3'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	157°17.2'	S 24°12.0'	150°59.9'	S 23°14.5'	129°29.1'	S 22°16.1'	209°46.0'	S 10°43.6'
1	172°16.2'	S 24°12.3'	166°01.8'	S 23°14.6'	144°31.3'	S 22°16.1'	224°46.9'	S 10°44.2'
2	187°15.3'	S 24°12.6'	181°03.7'	S 23°14.6'	159°33.5'	S 22°16.1'	239°47.8'	S 10°44.8'
3	202°14.4'	S 24°12.9'	196°05.5'	S 23°14.6'	174°35.7'	S 22°16.0'	254°48.7'	S 10°45.3'
4	217°13.5'	S 24°13.2'	211°07.4'	S 23°14.6'	189°38.0'	S 22°16.0'	269°49.6'	S 10°45.9'
5	232°12.5'	S 24°13.5'	226°09.3'	S 23°14.6'	204°40.2'	S 22°16.0'	284°50.5'	S 10°46.5'
6	247°11.6'	S 24°13.8'	241°11.2'	S 23°14.6'	219°42.4'	S 22°16.0'	299°51.5'	S 10°47.1'
7	262°10.7'	S 24°14.1'	256°13.1'	S 23°14.7'	234°44.6'	S 22°15.9'	314°52.4'	S 10°47.7'
8	277°09.8'	S 24°14.4'	271°15.0'	S 23°14.7'	249°46.9'	S 22°15.9'	329°53.3'	S 10°48.3'
9	292°08.9'	S 24°14.6'	286°16.9'	S 23°14.7'	264°49.1'	S 22°15.9'	344°54.2'	S 10°48.9'
10	307°07.9'	S 24°14.9'	301°18.8'	S 23°14.7'	279°51.3'	S 22°15.9'	359°55.1'	S 10°49.5'
11	322°07.0'	S 24°15.2'	316°20.6'	S 23°14.7'	294°53.5'	S 22°15.8'	14°56.0'	S 10°50.1'
12	337°06.1'	S 24°15.5'	331°22.5'	S 23°14.7'	309°55.8'	S 22°15.8'	29°56.9'	S 10°50.7'
13	352°05.2'	S 24°15.8'	346°24.4'	S 23°14.8'	324°58.0'	S 22°15.8'	44°57.8'	S 10°51.3'
14	7°04.2'	S 24°16.1'	1°26.3'	S 23°14.8'	340°00.2'	S 22°15.8'	59°58.7'	S 10°51.9'
15	22°03.3'	S 24°16.4'	16°28.2'	S 23°14.8'	355°02.4'	S 22°15.7'	74°59.6'	S 10°52.5'
16	37°02.4'	S 24°16.6'	31°30.1'	S 23°14.8'	10°04.7'	S 22°15.7'	90°00.5'	S 10°53.0'
17	52°01.5'	S 24°16.9'	46°31.9'	S 23°14.8'	25°06.9'	S 22°15.7'	105°01.4'	S 10°53.6'
18	67°00.5'	S 24°17.2'	61°33.8'	S 23°14.8'	40°09.1'	S 22°15.7'	120°02.3'	S 10°54.2'
19	81°59.6'	S 24°17.5'	76°35.7'	S 23°14.9'	55°11.3'	S 22°15.7'	135°03.2'	S 10°54.8'
20	96°58.7'	S 24°17.8'	91°37.6'	S 23°14.9'	70°13.6'	S 22°15.6'	150°04.1'	S 10°55.4'
21	111°57.8'	S 24°18.0'	106°39.5'	S 23°14.9'	85°15.8'	S 22°15.6'	165°05.0'	S 10°56.0'
22	126°56.8'	S 24°18.3'	121°41.4'	S 23°14.9'	100°18.0'	S 22°15.6'	180°05.9'	S 10°56.6'
23	141°55.9'	S 24°18.6'	136°43.3'	S 23°14.9'	115°20.2'	S 22°15.6'	195°06.8'	S 10°57.2'

Wed Nov 20, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.9' d = 0.3'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	156°55.0'	S 24°18.8'	151°45.1'	S 23°14.9'	130°22.5'	S 22°15.5'	210°07.7'	S 10°57.8'
1	171°54.0'	S 24°19.1'	166°47.0'	S 23°15.0'	145°24.7'	S 22°15.5'	225°08.6'	S 10°58.4'
2	186°53.1'	S 24°19.4'	181°48.9'	S 23°15.0'	160°26.9'	S 22°15.5'	240°09.5'	S 10°59.0'
3	201°52.2'	S 24°19.6'	196°50.8'	S 23°15.0'	175°29.1'	S 22°15.5'	255°10.4'	S 10°59.5'
4	216°51.3'	S 24°19.9'	211°52.7'	S 23°15.0'	190°31.3'	S 22°15.4'	270°11.3'	S 11°00.1'
5	231°50.3'	S 24°20.2'	226°54.6'	S 23°15.0'	205°33.6'	S 22°15.4'	285°12.2'	S 11°00.7'
6	246°49.4'	S 24°20.4'	241°56.4'	S 23°15.0'	220°35.8'	S 22°15.4'	300°13.1'	S 11°01.3'
7	261°48.5'	S 24°20.7'	256°58.3'	S 23°15.0'	235°38.0'	S 22°15.4'	315°14.0'	S 11°01.9'
8	276°47.5'	S 24°21.0'	272°00.2'	S 23°15.1'	250°40.2'	S 22°15.3'	330°14.9'	S 11°02.5'
9	291°46.6'	S 24°21.2'	287°02.1'	S 23°15.1'	265°42.5'	S 22°15.3'	345°15.8'	S 11°03.1'
10	306°45.7'	S 24°21.5'	302°04.0'	S 23°15.1'	280°44.7'	S 22°15.3'	0°16.7'	S 11°03.7'
11	321°44.8'	S 24°21.7'	317°05.9'	S 23°15.1'	295°46.9'	S 22°15.3'	15°17.6'	S 11°04.3'
12	336°43.8'	S 24°22.0'	332°07.7'	S 23°15.1'	310°49.1'	S 22°15.2'	30°18.5'	S 11°04.8'
13	351°42.9'	S 24°22.2'	347°09.6'	S 23°15.1'	325°51.3'	S 22°15.2'	45°19.4'	S 11°05.4'
14	6°42.0'	S 24°22.5'	2°11.5'	S 23°15.2'	340°53.6'	S 22°15.2'	60°20.3'	S 11°06.0'
15	21°41.0'	S 24°22.8'	17°13.4'	S 23°15.2'	355°55.8'	S 22°15.2'	75°21.2'	S 11°06.6'
16	36°40.1'	S 24°23.0'	32°15.3'	S 23°15.2'	10°58.0'	S 22°15.1'	90°22.1'	S 11°07.2'
17	51°39.2'	S 24°23.3'	47°17.2'	S 23°15.2'	26°00.2'	S 22°15.1'	105°23.0'	S 11°07.8'
18	66°38.2'	S 24°23.5'	62°19.0'	S 23°15.2'	41°02.4'	S 22°15.1'	120°23.9'	S 11°08.4'
19	81°37.3'	S 24°23.7'	77°20.9'	S 23°15.2'	56°04.7'	S 22°15.1'	135°24.8'	S 11°09.0'
20	96°36.4'	S 24°24.0'	92°22.8'	S 23°15.2'	71°06.9'	S 22°15.0'	150°25.7'	S 11°09.6'
21	111°35.4'	S 24°24.2'	107°24.7'	S 23°15.3'	86°09.1'	S 22°15.0'	165°26.6'	S 11°10.1'
22	126°34.5'	S 24°24.5'	122°26.6'	S 23°15.3'	101°11.3'	S 22°15.0'	180°27.5'	S 11°10.7'
23	141°33.6'	S 24°24.7'	137°28.5'	S 23°15.3'	116°13.5'	S 22°15.0'	195°28.4'	S 11°11.3'

Thu Nov 21, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.8	
	v = -0.9' d = 0.2'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	156°32.7'	S 24°25.0'	152°30.3'	S 23°15.3'	131°15.8'	S 22°14.9'	210°29.3'	S 11°11.9'
1	171°31.7'	S 24°25.2'	167°32.2'	S 23°15.3'	146°18.0'	S 22°14.9'	225°30.1'	S 11°12.5'
2	186°30.8'	S 24°25.4'	182°34.1'	S 23°15.3'	161°20.2'	S 22°14.9'	240°31.0'	S 11°13.1'
3	201°29.9'	S 24°25.7'	197°36.0'	S 23°15.3'	176°22.4'	S 22°14.9'	255°31.9'	S 11°13.7'
4	216°28.9'	S 24°25.9'	212°37.9'	S 23°15.4'	191°24.6'	S 22°14.8'	270°32.8'	S 11°14.3'
5	231°28.0'	S 24°26.1'	227°39.7'	S 23°15.4'	206°26.9'	S 22°14.8'	285°33.7'	S 11°14.8'
6	246°27.1'	S 24°26.4'	242°41.6'	S 23°15.4'	221°29.1'	S 22°14.8'	300°34.6'	S 11°15.4'
7	261°26.1'	S 24°26.6'	257°43.5'	S 23°15.4'	236°31.3'	S 22°14.8'	315°35.5'	S 11°16.0'
8	276°25.2'	S 24°26.8'	272°45.4'	S 23°15.4'	251°33.5'	S 22°14.7'	330°36.4'	S 11°16.6'
9	291°24.3'	S 24°27.1'	287°47.3'	S 23°15.4'	266°35.7'	S 22°14.7'	345°37.3'	S 11°17.2'
10	306°23.3'	S 24°27.3'	302°49.2'	S 23°15.4'	281°38.0'	S 22°14.7'	0°38.2'	S 11°17.8'
11	321°22.4'	S 24°27.5'	317°51.0'	S 23°15.5'	296°40.2'	S 22°14.6'	15°39.1'	S 11°18.4'
12	336°21.5'	S 24°27.7'	332°52.9'	S 23°15.5'	311°42.4'	S 22°14.6'	30°40.0'	S 11°18.9'
13	351°20.5'	S 24°28.0'	347°54.8'	S 23°15.5'	326°44.6'	S 22°14.6'	45°40.9'	S 11°19.5'
14	6°19.6'	S 24°28.2'	2°56.7'	S 23°15.5'	341°46.8'	S 22°14.6'	60°41.8'	S 11°20.1'
15	21°18.6'	S 24°28.4'	17°58.6'	S 23°15.5'	356°49.1'	S 22°14.5'	75°42.7'	S 11°20.7'
16	36°17.7'	S 24°28.6'	33°00.4'	S 23°15.5'	11°51.3'	S 22°14.5'	90°43.6'	S 11°21.3'
17	51°16.8'	S 24°28.9'	48°02.3'	S 23°15.6'	26°53.5'	S 22°14.5'	105°44.5'	S 11°21.9'
18	66°15.8'	S 24°29.1'	63°04.2'	S 23°15.6'	41°55.7'	S 22°14.5'	120°45.4'	S 11°22.5'
19	81°14.9'	S 24°29.3'	78°06.1'	S 23°15.6'	56°57.9'	S 22°14.4'	135°46.3'	S 11°23.0'
20	96°14.0'	S 24°29.5'	93°08.0'	S 23°15.6'	72°00.1'	S 22°14.4'	150°47.2'	S 11°23.6'
21	111°13.0'	S 24°29.7'	108°09.8'	S 23°15.6'	87°02.4'	S 22°14.4'	165°48.1'	S 11°24.2'
22	126°12.1'	S 24°29.9'	123°11.7'	S 23°15.6'	102°04.6'	S 22°14.4'	180°49.0'	S 11°24.8'
23	141°11.2'	S 24°30.1'	138°13.6'	S 23°15.6'	117°06.8'	S 22°14.3'	195°49.8'	S 11°25.4'

Fri Nov 22, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.7	
	v = -0.9' d = 0.2'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	156°10.2'	S 24°30.3'	153°15.5'	S 23°15.6'	132°09.0'	S 22°14.3'	210°50.7'	S 11°26.0'
1	171°09.3'	S 24°30.6'	168°17.4'	S 23°15.7'	147°11.2'	S 22°14.3'	225°51.6'	S 11°26.5'
2	186°08.3'	S 24°30.8'	183°19.2'	S 23°15.7'	162°13.5'	S 22°14.3'	240°52.5'	S 11°27.1'
3	201°07.4'	S 24°31.0'	198°21.1'	S 23°15.7'	177°15.7'	S 22°14.2'	255°53.4'	S 11°27.7'
4	216°06.5'	S 24°31.2'	213°23.0'	S 23°15.7'	192°17.9'	S 22°14.2'	270°54.3'	S 11°28.3'
5	231°05.5'	S 24°31.4'	228°24.9'	S 23°15.7'	207°20.1'	S 22°14.2'	285°55.2'	S 11°28.9'
6	246°04.6'	S 24°31.6'	243°26.8'	S 23°15.7'	222°22.3'	S 22°14.2'	300°56.1'	S 11°29.5'
7	261°03.7'	S 24°31.8'	258°28.6'	S 23°15.7'	237°24.5'	S 22°14.1'	315°57.0'	S 11°30.1'
8	276°02.7'	S 24°32.0'	273°30.5'	S 23°15.8'	252°26.8'	S 22°14.1'	330°57.9'	S 11°30.6'
9	291°01.8'	S 24°32.2'	288°32.4'	S 23°15.8'	267°29.0'	S 22°14.1'	345°58.8'	S 11°31.2'
10	306°00.8'	S 24°32.4'	303°34.3'	S 23°15.8'	282°31.2'	S 22°14.1'	0°59.7'	S 11°31.8'
11	320°59.9'	S 24°32.6'	318°36.1'	S 23°15.8'	297°33.4'	S 22°14.0'	16°00.6'	S 11°32.4'
12	335°59.0'	S 24°32.8'	333°38.0'	S 23°15.8'	312°35.6'	S 22°14.0'	31°01.5'	S 11°33.0'
13	350°58.0'	S 24°33.0'	348°39.9'	S 23°15.8'	327°37.8'	S 22°14.0'	46°02.3'	S 11°33.5'
14	5°57.1'	S 24°33.1'	3°41.8'	S 23°15.8'	342°40.1'	S 22°14.0'	61°03.2'	S 11°34.1'
15	20°56.1'	S 24°33.3'	18°43.7'	S 23°15.9'	357°42.3'	S 22°13.9'	76°04.1'	S 11°34.7'
16	35°55.2'	S 24°33.5'	33°45.5'	S 23°15.9'	12°44.5'	S 22°13.9'	91°05.0'	S 11°35.3'
17	50°54.3'	S 24°33.7'	48°47.4'	S 23°15.9'	27°46.7'	S 22°13.9'	106°05.9'	S 11°35.9'
18	65°53.3'	S 24°33.9'	63°49.3'	S 23°15.9'	42°48.9'	S 22°13.9'	121°06.8'	S 11°36.5'
19	80°52.4'	S 24°34.1'	78°51.2'	S 23°15.9'	57°51.1'	S 22°13.8'	136°07.7'	S 11°37.0'
20	95°51.4'	S 24°34.3'	93°53.0'	S 23°15.9'	72°53.3'	S 22°13.8'	151°08.6'	S 11°37.6'
21	110°50.5'	S 24°34.5'	108°54.9'	S 23°15.9'	87°55.6'	S 22°13.8'	166°09.5'	S 11°38.2'
22	125°49.6'	S 24°34.6'	123°56.8'	S 23°15.9'	102°57.8'	S 22°13.7'	181°10.4'	S 11°38.8'
23	140°48.6'	S 24°34.8'	138°58.7'	S 23°16.0'	117°60.0'	S 22°13.7'	196°11.3'	S 11°39.4'

Sat Nov 23, 2019 UTC

UTC	Venus -3.8 v = -0.9' d = 0.2'		Jupiter -1.7 v = 1.9' d = 0.0'		Saturn +0.6 v = 2.2' d = 0.0'		Mars +1.7 v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	155°47.7'	S 24°35.0'	154°00.6'	S 23°16.0'	133°02.2'	S 22°13.7'	211°12.1'	S 11°40.0'
1	170°46.7'	S 24°35.2'	169°02.4'	S 23°16.0'	148°04.4'	S 22°13.7'	226°13.0'	S 11°40.5'
2	185°45.8'	S 24°35.4'	184°04.3'	S 23°16.0'	163°06.6'	S 22°13.6'	241°13.9'	S 11°41.1'
3	200°44.9'	S 24°35.5'	199°06.2'	S 23°16.0'	178°08.9'	S 22°13.6'	256°14.8'	S 11°41.7'
4	215°43.9'	S 24°35.7'	214°08.1'	S 23°16.0'	193°11.1'	S 22°13.6'	271°15.7'	S 11°42.3'
5	230°43.0'	S 24°35.9'	229°09.9'	S 23°16.0'	208°13.3'	S 22°13.6'	286°16.6'	S 11°42.9'
6	245°42.0'	S 24°36.0'	244°11.8'	S 23°16.1'	223°15.5'	S 22°13.5'	301°17.5'	S 11°43.4'
7	260°41.1'	S 24°36.2'	259°13.7'	S 23°16.1'	238°17.7'	S 22°13.5'	316°18.4'	S 11°44.0'
8	275°40.2'	S 24°36.4'	274°15.6'	S 23°16.1'	253°19.9'	S 22°13.5'	331°19.3'	S 11°44.6'
9	290°39.2'	S 24°36.5'	289°17.4'	S 23°16.1'	268°22.1'	S 22°13.5'	346°20.1'	S 11°45.2'
10	305°38.3'	S 24°36.7'	304°19.3'	S 23°16.1'	283°24.4'	S 22°13.4'	1°21.0'	S 11°45.8'
11	320°37.3'	S 24°36.9'	319°21.2'	S 23°16.1'	298°26.6'	S 22°13.4'	16°21.9'	S 11°46.3'
12	335°36.4'	S 24°37.0'	334°23.1'	S 23°16.1'	313°28.8'	S 22°13.4'	31°22.8'	S 11°46.9'
13	350°35.4'	S 24°37.2'	349°25.0'	S 23°16.1'	328°31.0'	S 22°13.4'	46°23.7'	S 11°47.5'
14	5°34.5'	S 24°37.4'	4°26.8'	S 23°16.2'	343°33.2'	S 22°13.3'	61°24.6'	S 11°48.1'
15	20°33.6'	S 24°37.5'	19°28.7'	S 23°16.2'	358°35.4'	S 22°13.3'	76°25.5'	S 11°48.7'
16	35°32.6'	S 24°37.7'	34°30.6'	S 23°16.2'	13°37.6'	S 22°13.3'	91°26.4'	S 11°49.2'
17	50°31.7'	S 24°37.8'	49°32.5'	S 23°16.2'	28°39.8'	S 22°13.2'	106°27.3'	S 11°49.8'
18	65°30.7'	S 24°38.0'	64°34.3'	S 23°16.2'	43°42.1'	S 22°13.2'	121°28.1'	S 11°50.4'
19	80°29.8'	S 24°38.2'	79°36.2'	S 23°16.2'	58°44.3'	S 22°13.2'	136°29.0'	S 11°51.0'
20	95°28.8'	S 24°38.3'	94°38.1'	S 23°16.2'	73°46.5'	S 22°13.2'	151°29.9'	S 11°51.5'
21	110°27.9'	S 24°38.5'	109°40.0'	S 23°16.2'	88°48.7'	S 22°13.1'	166°30.8'	S 11°52.1'
22	125°27.0'	S 24°38.6'	124°41.8'	S 23°16.3'	103°50.9'	S 22°13.1'	181°31.7'	S 11°52.7'
23	140°26.0'	S 24°38.8'	139°43.7'	S 23°16.3'	118°53.1'	S 22°13.1'	196°32.6'	S 11°53.3'

Sun Nov 24, 2019 UTC

UTC	Venus -3.8 v = -0.9' d = 0.1'		Jupiter -1.7 v = 1.9' d = 0.0'		Saturn +0.6 v = 2.2' d = 0.0'		Mars +1.7 v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	155°25.1'	S 24°38.9'	154°45.6'	S 23°16.3'	133°55.3'	S 22°13.1'	211°33.5'	S 11°53.9'
1	170°24.1'	S 24°39.0'	169°47.5'	S 23°16.3'	148°57.5'	S 22°13.0'	226°34.3'	S 11°54.4'
2	185°23.2'	S 24°39.2'	184°49.3'	S 23°16.3'	163°59.8'	S 22°13.0'	241°35.2'	S 11°55.0'
3	200°22.2'	S 24°39.3'	199°51.2'	S 23°16.3'	179°02.0'	S 22°13.0'	256°36.1'	S 11°55.6'
4	215°21.3'	S 24°39.5'	214°53.1'	S 23°16.3'	194°04.2'	S 22°13.0'	271°37.0'	S 11°56.2'
5	230°20.3'	S 24°39.6'	229°55.0'	S 23°16.3'	209°06.4'	S 22°12.9'	286°37.9'	S 11°56.7'
6	245°19.4'	S 24°39.8'	244°56.8'	S 23°16.4'	224°08.6'	S 22°12.9'	301°38.8'	S 11°57.3'
7	260°18.5'	S 24°39.9'	259°58.7'	S 23°16.4'	239°10.8'	S 22°12.9'	316°39.7'	S 11°57.9'
8	275°17.5'	S 24°40.0'	275°00.6'	S 23°16.4'	254°13.0'	S 22°12.8'	331°40.5'	S 11°58.5'
9	290°16.6'	S 24°40.2'	290°02.5'	S 23°16.4'	269°15.2'	S 22°12.8'	346°41.4'	S 11°59.1'
10	305°15.6'	S 24°40.3'	305°04.3'	S 23°16.4'	284°17.5'	S 22°12.8'	1°42.3'	S 11°59.6'
11	320°14.7'	S 24°40.4'	320°06.2'	S 23°16.4'	299°19.7'	S 22°12.8'	16°43.2'	S 12°00.2'
12	335°13.7'	S 24°40.6'	335°08.1'	S 23°16.4'	314°21.9'	S 22°12.7'	31°44.1'	S 12°00.8'
13	350°12.8'	S 24°40.7'	350°09.9'	S 23°16.4'	329°24.1'	S 22°12.7'	46°45.0'	S 12°01.4'
14	5°11.8'	S 24°40.8'	5°11.8'	S 23°16.4'	344°26.3'	S 22°12.7'	61°45.9'	S 12°01.9'
15	20°10.9'	S 24°41.0'	20°13.7'	S 23°16.5'	359°28.5'	S 22°12.7'	76°46.7'	S 12°02.5'
16	35°09.9'	S 24°41.1'	35°15.6'	S 23°16.5'	14°30.7'	S 22°12.6'	91°47.6'	S 12°03.1'
17	50°09.0'	S 24°41.2'	50°17.4'	S 23°16.5'	29°32.9'	S 22°12.6'	106°48.5'	S 12°03.7'
18	65°08.1'	S 24°41.3'	65°19.3'	S 23°16.5'	44°35.1'	S 22°12.6'	121°49.4'	S 12°04.2'
19	80°07.1'	S 24°41.5'	80°21.2'	S 23°16.5'	59°37.3'	S 22°12.5'	136°50.3'	S 12°04.8'
20	95°06.2'	S 24°41.6'	95°23.1'	S 23°16.5'	74°39.6'	S 22°12.5'	151°51.2'	S 12°05.4'
21	110°05.2'	S 24°41.7'	110°24.9'	S 23°16.5'	89°41.8'	S 22°12.5'	166°52.0'	S 12°06.0'
22	125°04.3'	S 24°41.8'	125°26.8'	S 23°16.5'	104°44.0'	S 22°12.5'	181°52.9'	S 12°06.5'
23	140°03.3'	S 24°41.9'	140°28.7'	S 23°16.6'	119°46.2'	S 22°12.4'	196°53.8'	S 12°07.1'

Mon Nov 25, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.7	
	v = -0.9' d = 0.1'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	155°02.4'	S 24°42.1'	155°30.6'	S 23°16.6'	134°48.4'	S 22°12.4'	211°54.7'	S 12°07.7'
1	170°01.4'	S 24°42.2'	170°32.4'	S 23°16.6'	149°50.6'	S 22°12.4'	226°55.6'	S 12°08.3'
2	185°00.5'	S 24°42.3'	185°34.3'	S 23°16.6'	164°52.8'	S 22°12.4'	241°56.5'	S 12°08.8'
3	199°59.5'	S 24°42.4'	200°36.2'	S 23°16.6'	179°55.0'	S 22°12.3'	256°57.3'	S 12°09.4'
4	214°58.6'	S 24°42.5'	215°38.0'	S 23°16.6'	194°57.2'	S 22°12.3'	271°58.2'	S 12°10.0'
5	229°57.6'	S 24°42.6'	230°39.9'	S 23°16.6'	209°59.4'	S 22°12.3'	286°59.1'	S 12°10.6'
6	244°56.7'	S 24°42.7'	245°41.8'	S 23°16.6'	225°01.7'	S 22°12.3'	301°60.0'	S 12°11.1'
7	259°55.8'	S 24°42.8'	260°43.7'	S 23°16.6'	240°03.9'	S 22°12.2'	317°00.9'	S 12°11.7'
8	274°54.8'	S 24°43.0'	275°45.5'	S 23°16.7'	255°06.1'	S 22°12.2'	332°01.8'	S 12°12.3'
9	289°53.9'	S 24°43.1'	290°47.4'	S 23°16.7'	270°08.3'	S 22°12.2'	347°02.6'	S 12°12.9'
10	304°52.9'	S 24°43.2'	305°49.3'	S 23°16.7'	285°10.5'	S 22°12.1'	2°03.5'	S 12°13.4'
11	319°52.0'	S 24°43.3'	320°51.1'	S 23°16.7'	300°12.7'	S 22°12.1'	17°04.4'	S 12°14.0'
12	334°51.0'	S 24°43.4'	335°53.0'	S 23°16.7'	315°14.9'	S 22°12.1'	32°05.3'	S 12°14.6'
13	349°50.1'	S 24°43.5'	350°54.9'	S 23°16.7'	330°17.1'	S 22°12.1'	47°06.2'	S 12°15.2'
14	4°49.1'	S 24°43.6'	5°56.8'	S 23°16.7'	345°19.3'	S 22°12.0'	62°07.0'	S 12°15.7'
15	19°48.2'	S 24°43.7'	20°58.6'	S 23°16.7'	0°21.5'	S 22°12.0'	77°07.9'	S 12°16.3'
16	34°47.2'	S 24°43.8'	36°00.5'	S 23°16.7'	15°23.7'	S 22°12.0'	92°08.8'	S 12°16.9'
17	49°46.3'	S 24°43.9'	51°02.4'	S 23°16.8'	30°25.9'	S 22°11.9'	107°09.7'	S 12°17.4'
18	64°45.3'	S 24°43.9'	66°04.2'	S 23°16.8'	45°28.2'	S 22°11.9'	122°10.6'	S 12°18.0'
19	79°44.4'	S 24°44.0'	81°06.1'	S 23°16.8'	60°30.4'	S 22°11.9'	137°11.4'	S 12°18.6'
20	94°43.4'	S 24°44.1'	96°08.0'	S 23°16.8'	75°32.6'	S 22°11.9'	152°12.3'	S 12°19.2'
21	109°42.5'	S 24°44.2'	111°09.9'	S 23°16.8'	90°34.8'	S 22°11.8'	167°13.2'	S 12°19.7'
22	124°41.5'	S 24°44.3'	126°11.7'	S 23°16.8'	105°37.0'	S 22°11.8'	182°14.1'	S 12°20.3'
23	139°40.6'	S 24°44.4'	141°13.6'	S 23°16.8'	120°39.2'	S 22°11.8'	197°15.0'	S 12°20.9'

Tue Nov 26, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.7	
	v = -0.9' d = 0.1'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	154°39.6'	S 24°44.5'	156°15.5'	S 23°16.8'	135°41.4'	S 22°11.8'	212°15.8'	S 12°21.4'
1	169°38.7'	S 24°44.6'	171°17.3'	S 23°16.8'	150°43.6'	S 22°11.7'	227°16.7'	S 12°22.0'
2	184°37.7'	S 24°44.6'	186°19.2'	S 23°16.8'	165°45.8'	S 22°11.7'	242°17.6'	S 12°22.6'
3	199°36.8'	S 24°44.7'	201°21.1'	S 23°16.9'	180°48.0'	S 22°11.7'	257°18.5'	S 12°23.2'
4	214°35.8'	S 24°44.8'	216°22.9'	S 23°16.9'	195°50.2'	S 22°11.6'	272°19.4'	S 12°23.7'
5	229°34.9'	S 24°44.9'	231°24.8'	S 23°16.9'	210°52.4'	S 22°11.6'	287°20.2'	S 12°24.3'
6	244°34.0'	S 24°45.0'	246°26.7'	S 23°16.9'	225°54.6'	S 22°11.6'	302°21.1'	S 12°24.9'
7	259°33.0'	S 24°45.0'	261°28.6'	S 23°16.9'	240°56.9'	S 22°11.6'	317°22.0'	S 12°25.4'
8	274°32.1'	S 24°45.1'	276°30.4'	S 23°16.9'	255°59.1'	S 22°11.5'	332°22.9'	S 12°26.0'
9	289°31.1'	S 24°45.2'	291°32.3'	S 23°16.9'	271°01.3'	S 22°11.5'	347°23.8'	S 12°26.6'
10	304°30.2'	S 24°45.3'	306°34.2'	S 23°16.9'	286°03.5'	S 22°11.5'	2°24.6'	S 12°27.1'
11	319°29.2'	S 24°45.3'	321°36.0'	S 23°16.9'	301°05.7'	S 22°11.5'	17°25.5'	S 12°27.7'
12	334°28.3'	S 24°45.4'	336°37.9'	S 23°16.9'	316°07.9'	S 22°11.4'	32°26.4'	S 12°28.3'
13	349°27.3'	S 24°45.5'	351°39.8'	S 23°17.0'	331°10.1'	S 22°11.4'	47°27.3'	S 12°28.9'
14	4°26.4'	S 24°45.5'	6°41.6'	S 23°17.0'	346°12.3'	S 22°11.4'	62°28.1'	S 12°29.4'
15	19°25.4'	S 24°45.6'	21°43.5'	S 23°17.0'	1°14.5'	S 22°11.3'	77°29.0'	S 12°30.0'
16	34°24.5'	S 24°45.7'	36°45.4'	S 23°17.0'	16°16.7'	S 22°11.3'	92°29.9'	S 12°30.6'
17	49°23.5'	S 24°45.7'	51°47.3'	S 23°17.0'	31°18.9'	S 22°11.3'	107°30.8'	S 12°31.1'
18	64°22.6'	S 24°45.8'	66°49.1'	S 23°17.0'	46°21.1'	S 22°11.3'	122°31.6'	S 12°31.7'
19	79°21.6'	S 24°45.9'	81°51.0'	S 23°17.0'	61°23.3'	S 22°11.2'	137°32.5'	S 12°32.3'
20	94°20.7'	S 24°45.9'	96°52.9'	S 23°17.0'	76°25.5'	S 22°11.2'	152°33.4'	S 12°32.8'
21	109°19.7'	S 24°46.0'	111°54.7'	S 23°17.0'	91°27.7'	S 22°11.2'	167°34.3'	S 12°33.4'
22	124°18.8'	S 24°46.0'	126°56.6'	S 23°17.0'	106°29.9'	S 22°11.1'	182°35.2'	S 12°34.0'
23	139°17.8'	S 24°46.1'	141°58.5'	S 23°17.1'	121°32.1'	S 22°11.1'	197°36.0'	S 12°34.5'

Wed Nov 27, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.7	
	v = -0.9' d = 0.0'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	154°16.9'	S 24°46.1'	157°00.3'	S 23°17.1'	136°34.3'	S 22°11.1'	212°36.9'	S 12°35.1'
1	169°15.9'	S 24°46.2'	172°02.2'	S 23°17.1'	151°36.6'	S 22°11.1'	227°37.8'	S 12°35.7'
2	184°15.0'	S 24°46.2'	187°04.1'	S 23°17.1'	166°38.8'	S 22°11.0'	242°38.7'	S 12°36.2'
3	199°14.0'	S 24°46.3'	202°05.9'	S 23°17.1'	181°41.0'	S 22°11.0'	257°39.5'	S 12°36.8'
4	214°13.1'	S 24°46.3'	217°07.8'	S 23°17.1'	196°43.2'	S 22°11.0'	272°40.4'	S 12°37.4'
5	229°12.1'	S 24°46.4'	232°09.7'	S 23°17.1'	211°45.4'	S 22°10.9'	287°41.3'	S 12°38.0'
6	244°11.2'	S 24°46.4'	247°11.5'	S 23°17.1'	226°47.6'	S 22°10.9'	302°42.2'	S 12°38.5'
7	259°10.2'	S 24°46.5'	262°13.4'	S 23°17.1'	241°49.8'	S 22°10.9'	317°43.0'	S 12°39.1'
8	274°09.3'	S 24°46.5'	277°15.3'	S 23°17.1'	256°52.0'	S 22°10.9'	332°43.9'	S 12°39.7'
9	289°08.3'	S 24°46.6'	292°17.1'	S 23°17.1'	271°54.2'	S 22°10.8'	347°44.8'	S 12°40.2'
10	304°07.4'	S 24°46.6'	307°19.0'	S 23°17.2'	286°56.4'	S 22°10.8'	2°45.7'	S 12°40.8'
11	319°06.4'	S 24°46.7'	322°20.9'	S 23°17.2'	301°58.6'	S 22°10.8'	17°46.5'	S 12°41.4'
12	334°05.5'	S 24°46.7'	337°22.7'	S 23°17.2'	317°00.8'	S 22°10.7'	32°47.4'	S 12°41.9'
13	349°04.5'	S 24°46.7'	352°24.6'	S 23°17.2'	332°03.0'	S 22°10.7'	47°48.3'	S 12°42.5'
14	4°03.6'	S 24°46.8'	7°26.5'	S 23°17.2'	347°05.2'	S 22°10.7'	62°49.1'	S 12°43.0'
15	19°02.6'	S 24°46.8'	22°28.4'	S 23°17.2'	2°07.4'	S 22°10.7'	77°50.0'	S 12°43.6'
16	34°01.7'	S 24°46.8'	37°30.2'	S 23°17.2'	17°09.6'	S 22°10.6'	92°50.9'	S 12°44.2'
17	49°00.7'	S 24°46.9'	52°32.1'	S 23°17.2'	32°11.8'	S 22°10.6'	107°51.8'	S 12°44.7'
18	63°59.8'	S 24°46.9'	67°34.0'	S 23°17.2'	47°14.0'	S 22°10.6'	122°52.6'	S 12°45.3'
19	78°58.8'	S 24°46.9'	82°35.8'	S 23°17.2'	62°16.2'	S 22°10.5'	137°53.5'	S 12°45.9'
20	93°57.9'	S 24°47.0'	97°37.7'	S 23°17.2'	77°18.4'	S 22°10.5'	152°54.4'	S 12°46.4'
21	108°56.9'	S 24°47.0'	112°39.6'	S 23°17.3'	92°20.6'	S 22°10.5'	167°55.3'	S 12°47.0'
22	123°56.0'	S 24°47.0'	127°41.4'	S 23°17.3'	107°22.8'	S 22°10.5'	182°56.1'	S 12°47.6'
23	138°55.0'	S 24°47.0'	142°43.3'	S 23°17.3'	122°25.0'	S 22°10.4'	197°57.0'	S 12°48.1'

Thu Nov 28, 2019 UTC

UTC	Venus -3.8		Jupiter -1.7		Saturn +0.6		Mars +1.7	
	v = -0.9' d = 0.0'		v = 1.9' d = 0.0'		v = 2.2' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	153°54.1'	S 24°47.1'	157°45.2'	S 23°17.3'	137°27.2'	S 22°10.4'	212°57.9'	S 12°48.7'
1	168°53.1'	S 24°47.1'	172°47.0'	S 23°17.3'	152°29.4'	S 22°10.4'	227°58.8'	S 12°49.3'
2	183°52.2'	S 24°47.1'	187°48.9'	S 23°17.3'	167°31.6'	S 22°10.3'	242°59.6'	S 12°49.8'
3	198°51.2'	S 24°47.1'	202°50.8'	S 23°17.3'	182°33.8'	S 22°10.3'	258°00.5'	S 12°50.4'
4	213°50.3'	S 24°47.1'	217°52.6'	S 23°17.3'	197°36.0'	S 22°10.3'	273°01.4'	S 12°51.0'
5	228°49.3'	S 24°47.1'	232°54.5'	S 23°17.3'	212°38.2'	S 22°10.3'	288°02.2'	S 12°51.5'
6	243°48.4'	S 24°47.2'	247°56.3'	S 23°17.3'	227°40.4'	S 22°10.2'	303°03.1'	S 12°52.1'
7	258°47.4'	S 24°47.2'	262°58.2'	S 23°17.3'	242°42.6'	S 22°10.2'	318°04.0'	S 12°52.6'
8	273°46.5'	S 24°47.2'	278°00.1'	S 23°17.4'	257°44.9'	S 22°10.2'	333°04.9'	S 12°53.2'
9	288°45.5'	S 24°47.2'	293°01.9'	S 23°17.4'	272°47.1'	S 22°10.1'	348°05.7'	S 12°53.8'
10	303°44.6'	S 24°47.2'	308°03.8'	S 23°17.4'	287°49.3'	S 22°10.1'	3°06.6'	S 12°54.3'
11	318°43.6'	S 24°47.2'	323°05.7'	S 23°17.4'	302°51.5'	S 22°10.1'	18°07.5'	S 12°54.9'
12	333°42.7'	S 24°47.2'	338°07.5'	S 23°17.4'	317°53.7'	S 22°10.1'	33°08.3'	S 12°55.5'
13	348°41.7'	S 24°47.2'	353°09.4'	S 23°17.4'	332°55.9'	S 22°10.0'	48°09.2'	S 12°56.0'
14	3°40.8'	S 24°47.2'	8°11.3'	S 23°17.4'	347°58.1'	S 22°10.0'	63°10.1'	S 12°56.6'
15	18°39.8'	S 24°47.2'	23°13.1'	S 23°17.4'	3°00.3'	S 22°10.0'	78°10.9'	S 12°57.1'
16	33°38.9'	S 24°47.2'	38°15.0'	S 23°17.4'	18°02.5'	S 22°09.9'	93°11.8'	S 12°57.7'
17	48°37.9'	S 24°47.2'	53°16.9'	S 23°17.4'	33°04.7'	S 22°09.9'	108°12.7'	S 12°58.3'
18	63°37.0'	S 24°47.2'	68°18.7'	S 23°17.4'	48°06.9'	S 22°09.9'	123°13.6'	S 12°58.8'
19	78°36.0'	S 24°47.2'	83°20.6'	S 23°17.4'	63°09.1'	S 22°09.9'	138°14.4'	S 12°59.4'
20	93°35.1'	S 24°47.2'	98°22.5'	S 23°17.5'	78°11.3'	S 22°09.8'	153°15.3'	S 12°60.0'
21	108°34.1'	S 24°47.2'	113°24.3'	S 23°17.5'	93°13.5'	S 22°09.8'	168°16.2'	S 13°00.5'
22	123°33.2'	S 24°47.2'	128°26.2'	S 23°17.5'	108°15.7'	S 22°09.8'	183°17.0'	S 13°01.1'
23	138°32.3'	S 24°47.2'	143°28.1'	S 23°17.5'	123°17.9'	S 22°09.7'	198°17.9'	S 13°01.6'

Fri Nov 29, 2019 UTC

UTC	Venus -3.8 v = -0.9' d = 0.0'		Jupiter -1.7 v = 1.9' d = 0.0'		Saturn +0.6 v = 2.2' d = 0.0'		Mars +1.7 v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	153°31.3'	S 24°47.2'	158°29.9'	S 23°17.5'	138°20.1'	S 22°09.7'	213°18.8'	S 13°02.2'
1	168°30.4'	S 24°47.2'	173°31.8'	S 23°17.5'	153°22.3'	S 22°09.7'	228°19.6'	S 13°02.8'
2	183°29.4'	S 24°47.2'	188°33.7'	S 23°17.5'	168°24.5'	S 22°09.7'	243°20.5'	S 13°03.3'
3	198°28.5'	S 24°47.2'	203°35.5'	S 23°17.5'	183°26.7'	S 22°09.6'	258°21.4'	S 13°03.9'
4	213°27.5'	S 24°47.2'	218°37.4'	S 23°17.5'	198°28.9'	S 22°09.6'	273°22.2'	S 13°04.4'
5	228°26.6'	S 24°47.1'	233°39.2'	S 23°17.5'	213°31.1'	S 22°09.6'	288°23.1'	S 13°05.0'
6	243°25.6'	S 24°47.1'	248°41.1'	S 23°17.5'	228°33.3'	S 22°09.5'	303°24.0'	S 13°05.6'
7	258°24.7'	S 24°47.1'	263°43.0'	S 23°17.5'	243°35.5'	S 22°09.5'	318°24.8'	S 13°06.1'
8	273°23.7'	S 24°47.1'	278°44.8'	S 23°17.5'	258°37.7'	S 22°09.5'	333°25.7'	S 13°06.7'
9	288°22.8'	S 24°47.1'	293°46.7'	S 23°17.6'	273°39.9'	S 22°09.5'	348°26.6'	S 13°07.2'
10	303°21.8'	S 24°47.1'	308°48.6'	S 23°17.6'	288°42.1'	S 22°09.4'	3°27.4'	S 13°07.8'
11	318°20.9'	S 24°47.0'	323°50.4'	S 23°17.6'	303°44.3'	S 22°09.4'	18°28.3'	S 13°08.4'
12	333°19.9'	S 24°47.0'	338°52.3'	S 23°17.6'	318°46.5'	S 22°09.4'	33°29.2'	S 13°08.9'
13	348°19.0'	S 24°47.0'	353°54.2'	S 23°17.6'	333°48.7'	S 22°09.3'	48°30.0'	S 13°09.5'
14	3°18.0'	S 24°47.0'	8°56.0'	S 23°17.6'	348°50.9'	S 22°09.3'	63°30.9'	S 13°10.0'
15	18°17.1'	S 24°46.9'	23°57.9'	S 23°17.6'	3°53.1'	S 22°09.3'	78°31.8'	S 13°10.6'
16	33°16.1'	S 24°46.9'	38°59.7'	S 23°17.6'	18°55.3'	S 22°09.2'	93°32.6'	S 13°11.1'
17	48°15.2'	S 24°46.9'	54°01.6'	S 23°17.6'	33°57.5'	S 22°09.2'	108°33.5'	S 13°11.7'
18	63°14.2'	S 24°46.8'	69°03.5'	S 23°17.6'	48°59.7'	S 22°09.2'	123°34.4'	S 13°12.3'
19	78°13.3'	S 24°46.8'	84°05.3'	S 23°17.6'	64°01.9'	S 22°09.2'	138°35.2'	S 13°12.8'
20	93°12.3'	S 24°46.8'	99°07.2'	S 23°17.6'	79°04.1'	S 22°09.1'	153°36.1'	S 13°13.4'
21	108°11.4'	S 24°46.7'	114°09.1'	S 23°17.6'	94°06.2'	S 22°09.1'	168°37.0'	S 13°13.9'
22	123°10.4'	S 24°46.7'	129°10.9'	S 23°17.6'	109°08.4'	S 22°09.1'	183°37.8'	S 13°14.5'
23	138°09.5'	S 24°46.7'	144°12.8'	S 23°17.7'	124°10.6'	S 22°09.0'	198°38.7'	S 13°15.1'

Sat Nov 30, 2019 UTC

UTC	Venus -3.8 v = -0.9' d = 0.1'		Jupiter -1.7 v = 1.9' d = 0.0'		Saturn +0.6 v = 2.2' d = 0.0'		Mars +1.7 v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	153°08.5'	S 24°46.6'	159°14.6'	S 23°17.7'	139°12.8'	S 22°09.0'	213°39.6'	S 13°15.6'
1	168°07.6'	S 24°46.6'	174°16.5'	S 23°17.7'	154°15.0'	S 22°09.0'	228°40.4'	S 13°16.2'
2	183°06.6'	S 24°46.5'	189°18.4'	S 23°17.7'	169°17.2'	S 22°09.0'	243°41.3'	S 13°16.7'
3	198°05.7'	S 24°46.5'	204°20.2'	S 23°17.7'	184°19.4'	S 22°08.9'	258°42.2'	S 13°17.3'
4	213°04.7'	S 24°46.4'	219°22.1'	S 23°17.7'	199°21.6'	S 22°08.9'	273°43.0'	S 13°17.8'
5	228°03.8'	S 24°46.4'	234°24.0'	S 23°17.7'	214°23.8'	S 22°08.9'	288°43.9'	S 13°18.4'
6	243°02.9'	S 24°46.4'	249°25.8'	S 23°17.7'	229°26.0'	S 22°08.8'	303°44.7'	S 13°18.9'
7	258°01.9'	S 24°46.3'	264°27.7'	S 23°17.7'	244°28.2'	S 22°08.8'	318°45.6'	S 13°19.5'
8	273°01.0'	S 24°46.3'	279°29.5'	S 23°17.7'	259°30.4'	S 22°08.8'	333°46.5'	S 13°20.1'
9	288°00.0'	S 24°46.2'	294°31.4'	S 23°17.7'	274°32.6'	S 22°08.7'	348°47.3'	S 13°20.6'
10	302°59.1'	S 24°46.1'	309°33.3'	S 23°17.7'	289°34.8'	S 22°08.7'	3°48.2'	S 13°21.2'
11	317°58.1'	S 24°46.1'	324°35.1'	S 23°17.7'	304°37.0'	S 22°08.7'	18°49.1'	S 13°21.7'
12	332°57.2'	S 24°46.0'	339°37.0'	S 23°17.7'	319°39.2'	S 22°08.7'	33°49.9'	S 13°22.3'
13	347°56.2'	S 24°46.0'	354°38.9'	S 23°17.7'	334°41.4'	S 22°08.6'	48°50.8'	S 13°22.8'
14	2°55.3'	S 24°45.9'	9°40.7'	S 23°17.7'	349°43.6'	S 22°08.6'	63°51.7'	S 13°23.4'
15	17°54.3'	S 24°45.9'	24°42.6'	S 23°17.8'	4°45.8'	S 22°08.6'	78°52.5'	S 13°23.9'
16	32°53.4'	S 24°45.8'	39°44.4'	S 23°17.8'	19°48.0'	S 22°08.5'	93°53.4'	S 13°24.5'
17	47°52.4'	S 24°45.7'	54°46.3'	S 23°17.8'	34°50.2'	S 22°08.5'	108°54.2'	S 13°25.1'
18	62°51.5'	S 24°45.7'	69°48.2'	S 23°17.8'	49°52.4'	S 22°08.5'	123°55.1'	S 13°25.6'
19	77°50.5'	S 24°45.6'	84°50.0'	S 23°17.8'	64°54.6'	S 22°08.5'	138°56.0'	S 13°26.2'
20	92°49.6'	S 24°45.5'	99°51.9'	S 23°17.8'	79°56.8'	S 22°08.4'	153°56.8'	S 13°26.7'
21	107°48.7'	S 24°45.5'	114°53.7'	S 23°17.8'	94°59.0'	S 22°08.4'	168°57.7'	S 13°27.3'
22	122°47.7'	S 24°45.4'	129°55.6'	S 23°17.8'	110°01.2'	S 22°08.4'	183°58.6'	S 13°27.8'
23	137°46.8'	S 24°45.3'	144°57.5'	S 23°17.8'	125°03.4'	S 22°08.3'	198°59.4'	S 13°28.4'