

Thu Aug 1, 2019 UTC

UTC	Venus -3.8		Jupiter -2.3		Saturn +0.1		Mars +1.8	
	v = -0.7' d = 0.7'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	181°53.6'	N 19°59.2'	55°53.2'	S 22°07.3'	22°22.8'	S 22°14.3'	167°26.9'	N 16°12.1'
1	196°52.9'	N 19°58.5'	70°55.7'	S 22°07.3'	37°25.5'	S 22°14.3'	182°27.8'	N 16°11.6'
2	211°52.1'	N 19°57.8'	85°58.3'	S 22°07.3'	52°28.1'	S 22°14.3'	197°28.7'	N 16°11.1'
3	226°51.4'	N 19°57.1'	101°00.8'	S 22°07.3'	67°30.7'	S 22°14.3'	212°29.6'	N 16°10.6'
4	241°50.7'	N 19°56.5'	116°03.4'	S 22°07.3'	82°33.4'	S 22°14.4'	227°30.5'	N 16°10.1'
5	256°49.9'	N 19°55.8'	131°05.9'	S 22°07.3'	97°36.0'	S 22°14.4'	242°31.4'	N 16°09.6'
6	271°49.2'	N 19°55.1'	146°08.5'	S 22°07.3'	112°38.6'	S 22°14.4'	257°32.3'	N 16°09.1'
7	286°48.5'	N 19°54.4'	161°11.0'	S 22°07.3'	127°41.3'	S 22°14.4'	272°33.2'	N 16°08.6'
8	301°47.7'	N 19°53.7'	176°13.6'	S 22°07.3'	142°43.9'	S 22°14.5'	287°34.1'	N 16°08.1'
9	316°47.0'	N 19°53.0'	191°16.1'	S 22°07.3'	157°46.6'	S 22°14.5'	302°35.0'	N 16°07.6'
10	331°46.3'	N 19°52.4'	206°18.7'	S 22°07.3'	172°49.2'	S 22°14.5'	317°35.8'	N 16°07.1'
11	346°45.5'	N 19°51.7'	221°21.2'	S 22°07.3'	187°51.8'	S 22°14.5'	332°36.7'	N 16°06.6'
12	1°44.8'	N 19°51.0'	236°23.8'	S 22°07.3'	202°54.5'	S 22°14.6'	347°37.6'	N 16°06.1'
13	16°44.1'	N 19°50.3'	251°26.3'	S 22°07.3'	217°57.1'	S 22°14.6'	2°38.5'	N 16°05.6'
14	31°43.3'	N 19°49.6'	266°28.9'	S 22°07.3'	232°59.7'	S 22°14.6'	17°39.4'	N 16°05.0'
15	46°42.6'	N 19°48.9'	281°31.4'	S 22°07.3'	248°02.4'	S 22°14.6'	32°40.3'	N 16°04.5'
16	61°41.9'	N 19°48.2'	296°34.0'	S 22°07.3'	263°05.0'	S 22°14.6'	47°41.2'	N 16°04.0'
17	76°41.2'	N 19°47.5'	311°36.5'	S 22°07.3'	278°07.6'	S 22°14.7'	62°42.1'	N 16°03.5'
18	91°40.4'	N 19°46.9'	326°39.1'	S 22°07.3'	293°10.3'	S 22°14.7'	77°43.0'	N 16°03.0'
19	106°39.7'	N 19°46.2'	341°41.6'	S 22°07.3'	308°12.9'	S 22°14.7'	92°43.9'	N 16°02.5'
20	121°39.0'	N 19°45.5'	356°44.2'	S 22°07.3'	323°15.6'	S 22°14.7'	107°44.8'	N 16°02.0'
21	136°38.2'	N 19°44.8'	11°46.7'	S 22°07.3'	338°18.2'	S 22°14.8'	122°45.7'	N 16°01.5'
22	151°37.5'	N 19°44.1'	26°49.3'	S 22°07.3'	353°20.8'	S 22°14.8'	137°46.6'	N 16°01.0'
23	166°36.8'	N 19°43.4'	41°51.8'	S 22°07.3'	8°23.5'	S 22°14.8'	152°47.5'	N 16°00.5'

Fri Aug 2, 2019 UTC

UTC	Venus -3.8		Jupiter -2.3		Saturn +0.1		Mars +1.8	
	v = -0.7' d = 0.7'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	181°36.1'	N 19°42.7'	56°54.3'	S 22°07.3'	23°26.1'	S 22°14.8'	167°48.4'	N 16°00.0'
1	196°35.3'	N 19°42.0'	71°56.9'	S 22°07.3'	38°28.7'	S 22°14.8'	182°49.3'	N 15°59.5'
2	211°34.6'	N 19°41.3'	86°59.4'	S 22°07.3'	53°31.4'	S 22°14.9'	197°50.2'	N 15°59.0'
3	226°33.9'	N 19°40.6'	102°02.0'	S 22°07.3'	68°34.0'	S 22°14.9'	212°51.1'	N 15°58.5'
4	241°33.2'	N 19°39.9'	117°04.5'	S 22°07.3'	83°36.6'	S 22°14.9'	227°52.0'	N 15°58.0'
5	256°32.4'	N 19°39.2'	132°07.1'	S 22°07.3'	98°39.3'	S 22°14.9'	242°52.9'	N 15°57.5'
6	271°31.7'	N 19°38.5'	147°09.6'	S 22°07.3'	113°41.9'	S 22°15.0'	257°53.8'	N 15°57.0'
7	286°31.0'	N 19°37.8'	162°12.1'	S 22°07.3'	128°44.5'	S 22°15.0'	272°54.7'	N 15°56.5'
8	301°30.3'	N 19°37.1'	177°14.7'	S 22°07.3'	143°47.2'	S 22°15.0'	287°55.6'	N 15°56.0'
9	316°29.6'	N 19°36.4'	192°17.2'	S 22°07.3'	158°49.8'	S 22°15.0'	302°56.5'	N 15°55.5'
10	331°28.8'	N 19°35.7'	207°19.8'	S 22°07.3'	173°52.4'	S 22°15.0'	317°57.4'	N 15°55.0'
11	346°28.1'	N 19°34.9'	222°22.3'	S 22°07.3'	188°55.1'	S 22°15.1'	332°58.3'	N 15°54.5'
12	1°27.4'	N 19°34.2'	237°24.9'	S 22°07.3'	203°57.7'	S 22°15.1'	347°59.2'	N 15°54.0'
13	16°26.7'	N 19°33.5'	252°27.4'	S 22°07.3'	219°00.3'	S 22°15.1'	3°00.1'	N 15°53.4'
14	31°26.0'	N 19°32.8'	267°29.9'	S 22°07.3'	234°03.0'	S 22°15.1'	18°01.0'	N 15°52.9'
15	46°25.2'	N 19°32.1'	282°32.5'	S 22°07.3'	249°05.6'	S 22°15.2'	33°01.9'	N 15°52.4'
16	61°24.5'	N 19°31.4'	297°35.0'	S 22°07.3'	264°08.2'	S 22°15.2'	48°02.8'	N 15°51.9'
17	76°23.8'	N 19°30.7'	312°37.6'	S 22°07.3'	279°10.9'	S 22°15.2'	63°03.7'	N 15°51.4'
18	91°23.1'	N 19°30.0'	327°40.1'	S 22°07.3'	294°13.5'	S 22°15.2'	78°04.6'	N 15°50.9'
19	106°22.4'	N 19°29.2'	342°42.6'	S 22°07.3'	309°16.1'	S 22°15.2'	93°05.5'	N 15°50.4'
20	121°21.7'	N 19°28.5'	357°45.2'	S 22°07.3'	324°18.8'	S 22°15.3'	108°06.4'	N 15°49.9'
21	136°20.9'	N 19°27.8'	12°47.7'	S 22°07.3'	339°21.4'	S 22°15.3'	123°07.3'	N 15°49.4'
22	151°20.2'	N 19°27.1'	27°50.2'	S 22°07.3'	354°24.0'	S 22°15.3'	138°08.2'	N 15°48.9'
23	166°19.5'	N 19°26.4'	42°52.8'	S 22°07.3'	9°26.7'	S 22°15.3'	153°09.1'	N 15°48.4'

Sat Aug 3, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.8	
	v = -0.7' d = 0.7'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	181°18.8'	N 19°25.7'	57°55.3'	S 22°07.3'	24°29.3'	S 22°15.4'	168°10.0'	N 15°47.9'
1	196°18.1'	N 19°24.9'	72°57.8'	S 22°07.3'	39°31.9'	S 22°15.4'	183°11.0'	N 15°47.4'
2	211°17.4'	N 19°24.2'	88°00.4'	S 22°07.3'	54°34.6'	S 22°15.4'	198°11.9'	N 15°46.8'
3	226°16.7'	N 19°23.5'	103°02.9'	S 22°07.3'	69°37.2'	S 22°15.4'	213°12.8'	N 15°46.3'
4	241°15.9'	N 19°22.8'	118°05.5'	S 22°07.3'	84°39.8'	S 22°15.5'	228°13.7'	N 15°45.8'
5	256°15.2'	N 19°22.0'	133°08.0'	S 22°07.3'	99°42.5'	S 22°15.5'	243°14.6'	N 15°45.3'
6	271°14.5'	N 19°21.3'	148°10.5'	S 22°07.3'	114°45.1'	S 22°15.5'	258°15.5'	N 15°44.8'
7	286°13.8'	N 19°20.6'	163°13.1'	S 22°07.3'	129°47.7'	S 22°15.5'	273°16.4'	N 15°44.3'
8	301°13.1'	N 19°19.9'	178°15.6'	S 22°07.3'	144°50.4'	S 22°15.5'	288°17.3'	N 15°43.8'
9	316°12.4'	N 19°19.1'	193°18.1'	S 22°07.3'	159°53.0'	S 22°15.6'	303°18.2'	N 15°43.3'
10	331°11.7'	N 19°18.4'	208°20.7'	S 22°07.3'	174°55.6'	S 22°15.6'	318°19.1'	N 15°42.8'
11	346°11.0'	N 19°17.7'	223°23.2'	S 22°07.3'	189°58.3'	S 22°15.6'	333°20.0'	N 15°42.3'
12	1°10.3'	N 19°16.9'	238°25.7'	S 22°07.3'	205°00.9'	S 22°15.6'	348°20.9'	N 15°41.7'
13	16°09.5'	N 19°16.2'	253°28.3'	S 22°07.3'	220°03.5'	S 22°15.7'	3°21.8'	N 15°41.2'
14	31°08.8'	N 19°15.5'	268°30.8'	S 22°07.3'	235°06.2'	S 22°15.7'	18°22.7'	N 15°40.7'
15	46°08.1'	N 19°14.7'	283°33.3'	S 22°07.3'	250°08.8'	S 22°15.7'	33°23.6'	N 15°40.2'
16	61°07.4'	N 19°14.0'	298°35.9'	S 22°07.3'	265°11.4'	S 22°15.7'	48°24.5'	N 15°39.7'
17	76°06.7'	N 19°13.3'	313°38.4'	S 22°07.3'	280°14.1'	S 22°15.7'	63°25.4'	N 15°39.2'
18	91°06.0'	N 19°12.5'	328°40.9'	S 22°07.3'	295°16.7'	S 22°15.8'	78°26.3'	N 15°38.7'
19	106°05.3'	N 19°11.8'	343°43.4'	S 22°07.3'	310°19.3'	S 22°15.8'	93°27.2'	N 15°38.2'
20	121°04.6'	N 19°11.0'	358°46.0'	S 22°07.3'	325°22.0'	S 22°15.8'	108°28.1'	N 15°37.7'
21	136°03.9'	N 19°10.3'	13°48.5'	S 22°07.3'	340°24.6'	S 22°15.8'	123°29.0'	N 15°37.1'
22	151°03.2'	N 19°09.6'	28°51.0'	S 22°07.3'	355°27.2'	S 22°15.8'	138°29.9'	N 15°36.6'
23	166°02.5'	N 19°08.8'	43°53.6'	S 22°07.3'	10°29.8'	S 22°15.9'	153°30.8'	N 15°36.1'

Sun Aug 4, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.8	
	v = -0.7' d = 0.8'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	181°01.8'	N 19°08.1'	58°56.1'	S 22°07.3'	25°32.5'	S 22°15.9'	168°31.7'	N 15°35.6'
1	196°01.1'	N 19°07.3'	73°58.6'	S 22°07.3'	40°35.1'	S 22°15.9'	183°32.7'	N 15°35.1'
2	211°00.4'	N 19°06.6'	89°01.1'	S 22°07.3'	55°37.7'	S 22°15.9'	198°33.6'	N 15°34.6'
3	225°59.7'	N 19°05.8'	104°03.7'	S 22°07.3'	70°40.4'	S 22°16.0'	213°34.5'	N 15°34.1'
4	240°59.0'	N 19°05.1'	119°06.2'	S 22°07.3'	85°43.0'	S 22°16.0'	228°35.4'	N 15°33.6'
5	255°58.3'	N 19°04.3'	134°08.7'	S 22°07.3'	100°45.6'	S 22°16.0'	243°36.3'	N 15°33.0'
6	270°57.6'	N 19°03.6'	149°11.2'	S 22°07.3'	115°48.3'	S 22°16.0'	258°37.2'	N 15°32.5'
7	285°56.9'	N 19°02.8'	164°13.8'	S 22°07.3'	130°50.9'	S 22°16.0'	273°38.1'	N 15°32.0'
8	300°56.2'	N 19°02.1'	179°16.3'	S 22°07.3'	145°53.5'	S 22°16.1'	288°39.0'	N 15°31.5'
9	315°55.5'	N 19°01.3'	194°18.8'	S 22°07.3'	160°56.1'	S 22°16.1'	303°39.9'	N 15°31.0'
10	330°54.8'	N 19°00.6'	209°21.3'	S 22°07.3'	175°58.8'	S 22°16.1'	318°40.8'	N 15°30.5'
11	345°54.1'	N 18°59.8'	224°23.9'	S 22°07.3'	191°01.4'	S 22°16.1'	333°41.7'	N 15°30.0'
12	0°53.4'	N 18°59.1'	239°26.4'	S 22°07.3'	206°04.0'	S 22°16.2'	348°42.6'	N 15°29.4'
13	15°52.7'	N 18°58.3'	254°28.9'	S 22°07.3'	221°06.7'	S 22°16.2'	3°43.5'	N 15°28.9'
14	30°52.0'	N 18°57.6'	269°31.4'	S 22°07.3'	236°09.3'	S 22°16.2'	18°44.4'	N 15°28.4'
15	45°51.3'	N 18°56.8'	284°34.0'	S 22°07.3'	251°11.9'	S 22°16.2'	33°45.3'	N 15°27.9'
16	60°50.6'	N 18°56.0'	299°36.5'	S 22°07.3'	266°14.6'	S 22°16.2'	48°46.2'	N 15°27.4'
17	75°49.9'	N 18°55.3'	314°39.0'	S 22°07.3'	281°17.2'	S 22°16.3'	63°47.2'	N 15°26.9'
18	90°49.2'	N 18°54.5'	329°41.5'	S 22°07.3'	296°19.8'	S 22°16.3'	78°48.1'	N 15°26.3'
19	105°48.5'	N 18°53.8'	344°44.1'	S 22°07.3'	311°22.4'	S 22°16.3'	93°49.0'	N 15°25.8'
20	120°47.8'	N 18°53.0'	359°46.6'	S 22°07.3'	326°25.1'	S 22°16.3'	108°49.9'	N 15°25.3'
21	135°47.1'	N 18°52.2'	14°49.1'	S 22°07.3'	341°27.7'	S 22°16.4'	123°50.8'	N 15°24.8'
22	150°46.4'	N 18°51.5'	29°51.6'	S 22°07.3'	356°30.3'	S 22°16.4'	138°51.7'	N 15°24.3'
23	165°45.7'	N 18°50.7'	44°54.1'	S 22°07.3'	11°33.0'	S 22°16.4'	153°52.6'	N 15°23.8'

Mon Aug 5, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.8	
	v = -0.7' d = 0.8'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	180°45.0'	N 18°49.9'	59°56.7'	S 22°07.3'	26°35.6'	S 22°16.4'	168°53.5'	N 15°23.3'
1	195°44.4'	N 18°49.2'	74°59.2'	S 22°07.3'	41°38.2'	S 22°16.4'	183°54.4'	N 15°22.7'
2	210°43.7'	N 18°48.4'	90°01.7'	S 22°07.3'	56°40.8'	S 22°16.5'	198°55.3'	N 15°22.2'
3	225°43.0'	N 18°47.6'	105°04.2'	S 22°07.3'	71°43.5'	S 22°16.5'	213°56.2'	N 15°21.7'
4	240°42.3'	N 18°46.9'	120°06.7'	S 22°07.3'	86°46.1'	S 22°16.5'	228°57.1'	N 15°21.2'
5	255°41.6'	N 18°46.1'	135°09.3'	S 22°07.3'	101°48.7'	S 22°16.5'	243°58.1'	N 15°20.7'
6	270°40.9'	N 18°45.3'	150°11.8'	S 22°07.3'	116°51.4'	S 22°16.5'	258°59.0'	N 15°20.1'
7	285°40.2'	N 18°44.5'	165°14.3'	S 22°07.3'	131°54.0'	S 22°16.6'	273°59.9'	N 15°19.6'
8	300°39.5'	N 18°43.8'	180°16.8'	S 22°07.3'	146°56.6'	S 22°16.6'	289°00.8'	N 15°19.1'
9	315°38.8'	N 18°43.0'	195°19.3'	S 22°07.3'	161°59.2'	S 22°16.6'	304°01.7'	N 15°18.6'
10	330°38.1'	N 18°42.2'	210°21.8'	S 22°07.3'	177°01.9'	S 22°16.6'	319°02.6'	N 15°18.1'
11	345°37.5'	N 18°41.4'	225°24.4'	S 22°07.3'	192°04.5'	S 22°16.7'	334°03.5'	N 15°17.6'
12	0°36.8'	N 18°40.7'	240°26.9'	S 22°07.3'	207°07.1'	S 22°16.7'	349°04.4'	N 15°17.0'
13	15°36.1'	N 18°39.9'	255°29.4'	S 22°07.3'	222°09.7'	S 22°16.7'	4°05.3'	N 15°16.5'
14	30°35.4'	N 18°39.1'	270°31.9'	S 22°07.3'	237°12.4'	S 22°16.7'	19°06.2'	N 15°16.0'
15	45°34.7'	N 18°38.3'	285°34.4'	S 22°07.3'	252°15.0'	S 22°16.7'	34°07.2'	N 15°15.5'
16	60°34.0'	N 18°37.6'	300°36.9'	S 22°07.4'	267°17.6'	S 22°16.8'	49°08.1'	N 15°15.0'
17	75°33.3'	N 18°36.8'	315°39.4'	S 22°07.4'	282°20.2'	S 22°16.8'	64°09.0'	N 15°14.4'
18	90°32.7'	N 18°36.0'	330°42.0'	S 22°07.4'	297°22.9'	S 22°16.8'	79°09.9'	N 15°13.9'
19	105°32.0'	N 18°35.2'	345°44.5'	S 22°07.4'	312°25.5'	S 22°16.8'	94°10.8'	N 15°13.4'
20	120°31.3'	N 18°34.4'	0°47.0'	S 22°07.4'	327°28.1'	S 22°16.8'	109°11.7'	N 15°12.9'
21	135°30.6'	N 18°33.6'	15°49.5'	S 22°07.4'	342°30.8'	S 22°16.9'	124°12.6'	N 15°12.4'
22	150°29.9'	N 18°32.8'	30°52.0'	S 22°07.4'	357°33.4'	S 22°16.9'	139°13.5'	N 15°11.8'
23	165°29.2'	N 18°32.1'	45°54.5'	S 22°07.4'	12°36.0'	S 22°16.9'	154°14.4'	N 15°11.3'

Tue Aug 6, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.8	
	v = -0.7' d = 0.8'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	180°28.6'	N 18°31.3'	60°57.0'	S 22°07.4'	27°38.6'	S 22°16.9'	169°15.4'	N 15°10.8'
1	195°27.9'	N 18°30.5'	75°59.5'	S 22°07.4'	42°41.3'	S 22°17.0'	184°16.3'	N 15°10.3'
2	210°27.2'	N 18°29.7'	91°02.1'	S 22°07.4'	57°43.9'	S 22°17.0'	199°17.2'	N 15°09.8'
3	225°26.5'	N 18°28.9'	106°04.6'	S 22°07.4'	72°46.5'	S 22°17.0'	214°18.1'	N 15°09.2'
4	240°25.8'	N 18°28.1'	121°07.1'	S 22°07.4'	87°49.1'	S 22°17.0'	229°19.0'	N 15°08.7'
5	255°25.2'	N 18°27.3'	136°09.6'	S 22°07.4'	102°51.8'	S 22°17.0'	244°19.9'	N 15°08.2'
6	270°24.5'	N 18°26.5'	151°12.1'	S 22°07.4'	117°54.4'	S 22°17.1'	259°20.8'	N 15°07.7'
7	285°23.8'	N 18°25.7'	166°14.6'	S 22°07.4'	132°57.0'	S 22°17.1'	274°21.7'	N 15°07.1'
8	300°23.1'	N 18°24.9'	181°17.1'	S 22°07.4'	147°59.6'	S 22°17.1'	289°22.6'	N 15°06.6'
9	315°22.5'	N 18°24.1'	196°19.6'	S 22°07.4'	163°02.3'	S 22°17.1'	304°23.6'	N 15°06.1'
10	330°21.8'	N 18°23.3'	211°22.1'	S 22°07.4'	178°04.9'	S 22°17.1'	319°24.5'	N 15°05.6'
11	345°21.1'	N 18°22.5'	226°24.6'	S 22°07.4'	193°07.5'	S 22°17.2'	334°25.4'	N 15°05.1'
12	0°20.4'	N 18°21.7'	241°27.1'	S 22°07.4'	208°10.1'	S 22°17.2'	349°26.3'	N 15°04.5'
13	15°19.8'	N 18°20.9'	256°29.7'	S 22°07.4'	223°12.8'	S 22°17.2'	4°27.2'	N 15°04.0'
14	30°19.1'	N 18°20.1'	271°32.2'	S 22°07.4'	238°15.4'	S 22°17.2'	19°28.1'	N 15°03.5'
15	45°18.4'	N 18°19.3'	286°34.7'	S 22°07.4'	253°18.0'	S 22°17.2'	34°29.0'	N 15°03.0'
16	60°17.7'	N 18°18.5'	301°37.2'	S 22°07.4'	268°20.6'	S 22°17.3'	49°30.0'	N 15°02.4'
17	75°17.1'	N 18°17.7'	316°39.7'	S 22°07.4'	283°23.3'	S 22°17.3'	64°30.9'	N 15°01.9'
18	90°16.4'	N 18°16.9'	331°42.2'	S 22°07.4'	298°25.9'	S 22°17.3'	79°31.8'	N 15°01.4'
19	105°15.7'	N 18°16.1'	346°44.7'	S 22°07.4'	313°28.5'	S 22°17.3'	94°32.7'	N 15°00.9'
20	120°15.0'	N 18°15.3'	1°47.2'	S 22°07.4'	328°31.1'	S 22°17.4'	109°33.6'	N 15°00.3'
21	135°14.4'	N 18°14.5'	16°49.7'	S 22°07.4'	343°33.7'	S 22°17.4'	124°34.5'	N 14°59.8'
22	150°13.7'	N 18°13.7'	31°52.2'	S 22°07.4'	358°36.4'	S 22°17.4'	139°35.4'	N 14°59.3'
23	165°13.0'	N 18°12.9'	46°54.7'	S 22°07.5'	13°39.0'	S 22°17.4'	154°36.3'	N 14°58.8'

Wed Aug 7, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.8	
	v = -0.7' d = 0.8'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	180°12.4'	N 18°12.1'	61°57.2'	S 22°07.5'	28°41.6'	S 22°17.4'	169°37.3'	N 14°58.2'
1	195°11.7'	N 18°11.3'	76°59.7'	S 22°07.5'	43°44.2'	S 22°17.5'	184°38.2'	N 14°57.7'
2	210°11.0'	N 18°10.5'	92°02.2'	S 22°07.5'	58°46.9'	S 22°17.5'	199°39.1'	N 14°57.2'
3	225°10.4'	N 18°09.7'	107°04.7'	S 22°07.5'	73°49.5'	S 22°17.5'	214°40.0'	N 14°56.7'
4	240°09.7'	N 18°08.8'	122°07.2'	S 22°07.5'	88°52.1'	S 22°17.5'	229°40.9'	N 14°56.1'
5	255°09.0'	N 18°08.0'	137°09.7'	S 22°07.5'	103°54.7'	S 22°17.5'	244°41.8'	N 14°55.6'
6	270°08.4'	N 18°07.2'	152°12.2'	S 22°07.5'	118°57.4'	S 22°17.6'	259°42.8'	N 14°55.1'
7	285°07.7'	N 18°06.4'	167°14.7'	S 22°07.5'	133°60.0'	S 22°17.6'	274°43.7'	N 14°54.6'
8	300°07.0'	N 18°05.6'	182°17.2'	S 22°07.5'	149°02.6'	S 22°17.6'	289°44.6'	N 14°54.0'
9	315°06.4'	N 18°04.8'	197°19.7'	S 22°07.5'	164°05.2'	S 22°17.6'	304°45.5'	N 14°53.5'
10	330°05.7'	N 18°03.9'	212°22.2'	S 22°07.5'	179°07.8'	S 22°17.6'	319°46.4'	N 14°53.0'
11	345°05.0'	N 18°03.1'	227°24.7'	S 22°07.5'	194°10.5'	S 22°17.7'	334°47.3'	N 14°52.5'
12	0°04.4'	N 18°02.3'	242°27.2'	S 22°07.5'	209°13.1'	S 22°17.7'	349°48.2'	N 14°51.9'
13	15°03.7'	N 18°01.5'	257°29.7'	S 22°07.5'	224°15.7'	S 22°17.7'	4°49.2'	N 14°51.4'
14	30°03.0'	N 18°00.7'	272°32.2'	S 22°07.5'	239°18.3'	S 22°17.7'	19°50.1'	N 14°50.9'
15	45°02.4'	N 17°59.8'	287°34.7'	S 22°07.5'	254°21.0'	S 22°17.8'	34°51.0'	N 14°50.4'
16	60°01.7'	N 17°59.0'	302°37.2'	S 22°07.5'	269°23.6'	S 22°17.8'	49°51.9'	N 14°49.8'
17	75°01.0'	N 17°58.2'	317°39.7'	S 22°07.5'	284°26.2'	S 22°17.8'	64°52.8'	N 14°49.3'
18	90°00.4'	N 17°57.4'	332°42.2'	S 22°07.5'	299°28.8'	S 22°17.8'	79°53.7'	N 14°48.8'
19	104°59.7'	N 17°56.5'	347°44.7'	S 22°07.5'	314°31.4'	S 22°17.8'	94°54.7'	N 14°48.2'
20	119°59.1'	N 17°55.7'	2°47.2'	S 22°07.5'	329°34.1'	S 22°17.9'	109°55.6'	N 14°47.7'
21	134°58.4'	N 17°54.9'	17°49.7'	S 22°07.5'	344°36.7'	S 22°17.9'	124°56.5'	N 14°47.2'
22	149°57.7'	N 17°54.0'	32°52.2'	S 22°07.5'	359°39.3'	S 22°17.9'	139°57.4'	N 14°46.7'
23	164°57.1'	N 17°53.2'	47°54.7'	S 22°07.6'	14°41.9'	S 22°17.9'	154°58.3'	N 14°46.1'

Thu Aug 8, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.7	
	v = -0.7' d = 0.8'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	179°56.4'	N 17°52.4'	62°57.2'	S 22°07.6'	29°44.5'	S 22°17.9'	169°59.2'	N 14°45.6'
1	194°55.8'	N 17°51.6'	77°59.7'	S 22°07.6'	44°47.2'	S 22°18.0'	185°00.2'	N 14°45.1'
2	209°55.1'	N 17°50.7'	93°02.2'	S 22°07.6'	59°49.8'	S 22°18.0'	200°01.1'	N 14°44.5'
3	224°54.5'	N 17°49.9'	108°04.7'	S 22°07.6'	74°52.4'	S 22°18.0'	215°02.0'	N 14°44.0'
4	239°53.8'	N 17°49.1'	123°07.2'	S 22°07.6'	89°55.0'	S 22°18.0'	230°02.9'	N 14°43.5'
5	254°53.1'	N 17°48.2'	138°09.7'	S 22°07.6'	104°57.6'	S 22°18.0'	245°03.8'	N 14°43.0'
6	269°52.5'	N 17°47.4'	153°12.1'	S 22°07.6'	120°00.3'	S 22°18.1'	260°04.7'	N 14°42.4'
7	284°51.8'	N 17°46.5'	168°14.6'	S 22°07.6'	135°02.9'	S 22°18.1'	275°05.7'	N 14°41.9'
8	299°51.2'	N 17°45.7'	183°17.1'	S 22°07.6'	150°05.5'	S 22°18.1'	290°06.6'	N 14°41.4'
9	314°50.5'	N 17°44.9'	198°19.6'	S 22°07.6'	165°08.1'	S 22°18.1'	305°07.5'	N 14°40.8'
10	329°49.9'	N 17°44.0'	213°22.1'	S 22°07.6'	180°10.7'	S 22°18.1'	320°08.4'	N 14°40.3'
11	344°49.2'	N 17°43.2'	228°24.6'	S 22°07.6'	195°13.4'	S 22°18.2'	335°09.3'	N 14°39.8'
12	359°48.6'	N 17°42.3'	243°27.1'	S 22°07.6'	210°16.0'	S 22°18.2'	350°10.3'	N 14°39.2'
13	14°47.9'	N 17°41.5'	258°29.6'	S 22°07.6'	225°18.6'	S 22°18.2'	5°11.2'	N 14°38.7'
14	29°47.3'	N 17°40.7'	273°32.1'	S 22°07.6'	240°21.2'	S 22°18.2'	20°12.1'	N 14°38.2'
15	44°46.6'	N 17°39.8'	288°34.6'	S 22°07.6'	255°23.8'	S 22°18.2'	35°13.0'	N 14°37.6'
16	59°46.0'	N 17°39.0'	303°37.1'	S 22°07.6'	270°26.5'	S 22°18.3'	50°13.9'	N 14°37.1'
17	74°45.3'	N 17°38.1'	318°39.5'	S 22°07.6'	285°29.1'	S 22°18.3'	65°14.9'	N 14°36.6'
18	89°44.7'	N 17°37.3'	333°42.0'	S 22°07.6'	300°31.7'	S 22°18.3'	80°15.8'	N 14°36.1'
19	104°44.0'	N 17°36.4'	348°44.5'	S 22°07.7'	315°34.3'	S 22°18.3'	95°16.7'	N 14°35.5'
20	119°43.4'	N 17°35.6'	3°47.0'	S 22°07.7'	330°36.9'	S 22°18.3'	110°17.6'	N 14°35.0'
21	134°42.7'	N 17°34.7'	18°49.5'	S 22°07.7'	345°39.5'	S 22°18.4'	125°18.5'	N 14°34.5'
22	149°42.1'	N 17°33.9'	33°52.0'	S 22°07.7'	0°42.2'	S 22°18.4'	140°19.5'	N 14°33.9'
23	164°41.4'	N 17°33.0'	48°54.5'	S 22°07.7'	15°44.8'	S 22°18.4'	155°20.4'	N 14°33.4'

Fri Aug 9, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.7	
	v = -0.6' d = 0.9'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	179°40.8'	N 17°32.2'	63°57.0'	S 22°07.7'	30°47.4'	S 22°18.4'	170°21.3'	N 14°32.9'
1	194°40.1'	N 17°31.3'	78°59.4'	S 22°07.7'	45°50.0'	S 22°18.4'	185°22.2'	N 14°32.3'
2	209°39.5'	N 17°30.5'	94°01.9'	S 22°07.7'	60°52.6'	S 22°18.5'	200°23.1'	N 14°31.8'
3	224°38.8'	N 17°29.6'	109°04.4'	S 22°07.7'	75°55.2'	S 22°18.5'	215°24.1'	N 14°31.3'
4	239°38.2'	N 17°28.8'	124°06.9'	S 22°07.7'	90°57.9'	S 22°18.5'	230°25.0'	N 14°30.7'
5	254°37.5'	N 17°27.9'	139°09.4'	S 22°07.7'	106°00.5'	S 22°18.5'	245°25.9'	N 14°30.2'
6	269°36.9'	N 17°27.1'	154°11.9'	S 22°07.7'	121°03.1'	S 22°18.5'	260°26.8'	N 14°29.7'
7	284°36.3'	N 17°26.2'	169°14.4'	S 22°07.7'	136°05.7'	S 22°18.6'	275°27.7'	N 14°29.1'
8	299°35.6'	N 17°25.3'	184°16.8'	S 22°07.7'	151°08.3'	S 22°18.6'	290°28.7'	N 14°28.6'
9	314°35.0'	N 17°24.5'	199°19.3'	S 22°07.7'	166°11.0'	S 22°18.6'	305°29.6'	N 14°28.1'
10	329°34.3'	N 17°23.6'	214°21.8'	S 22°07.7'	181°13.6'	S 22°18.6'	320°30.5'	N 14°27.5'
11	344°33.7'	N 17°22.8'	229°24.3'	S 22°07.7'	196°16.2'	S 22°18.7'	335°31.4'	N 14°27.0'
12	359°33.0'	N 17°21.9'	244°26.8'	S 22°07.8'	211°18.8'	S 22°18.7'	350°32.3'	N 14°26.5'
13	14°32.4'	N 17°21.0'	259°29.3'	S 22°07.8'	226°21.4'	S 22°18.7'	5°33.3'	N 14°25.9'
14	29°31.8'	N 17°20.2'	274°31.7'	S 22°07.8'	241°24.0'	S 22°18.7'	20°34.2'	N 14°25.4'
15	44°31.1'	N 17°19.3'	289°34.2'	S 22°07.8'	256°26.6'	S 22°18.7'	35°35.1'	N 14°24.8'
16	59°30.5'	N 17°18.4'	304°36.7'	S 22°07.8'	271°29.3'	S 22°18.8'	50°36.0'	N 14°24.3'
17	74°29.8'	N 17°17.6'	319°39.2'	S 22°07.8'	286°31.9'	S 22°18.8'	65°37.0'	N 14°23.8'
18	89°29.2'	N 17°16.7'	334°41.7'	S 22°07.8'	301°34.5'	S 22°18.8'	80°37.9'	N 14°23.2'
19	104°28.6'	N 17°15.8'	349°44.1'	S 22°07.8'	316°37.1'	S 22°18.8'	95°38.8'	N 14°22.7'
20	119°27.9'	N 17°15.0'	4°46.6'	S 22°07.8'	331°39.7'	S 22°18.8'	110°39.7'	N 14°22.2'
21	134°27.3'	N 17°14.1'	19°49.1'	S 22°07.8'	346°42.3'	S 22°18.9'	125°40.6'	N 14°21.6'
22	149°26.7'	N 17°13.2'	34°51.6'	S 22°07.8'	1°45.0'	S 22°18.9'	140°41.6'	N 14°21.1'
23	164°26.0'	N 17°12.4'	49°54.1'	S 22°07.8'	16°47.6'	S 22°18.9'	155°42.5'	N 14°20.6'

Sat Aug 10, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.7	
	v = -0.6' d = 0.9'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	179°25.4'	N 17°11.5'	64°56.5'	S 22°07.8'	31°50.2'	S 22°18.9'	170°43.4'	N 14°20.0'
1	194°24.8'	N 17°10.6'	79°59.0'	S 22°07.8'	46°52.8'	S 22°18.9'	185°44.3'	N 14°19.5'
2	209°24.1'	N 17°09.8'	95°01.5'	S 22°07.8'	61°55.4'	S 22°19.0'	200°45.3'	N 14°19.0'
3	224°23.5'	N 17°08.9'	110°04.0'	S 22°07.8'	76°58.0'	S 22°19.0'	215°46.2'	N 14°18.4'
4	239°22.9'	N 17°08.0'	125°06.4'	S 22°07.9'	92°00.6'	S 22°19.0'	230°47.1'	N 14°17.9'
5	254°22.2'	N 17°07.1'	140°08.9'	S 22°07.9'	107°03.3'	S 22°19.0'	245°48.0'	N 14°17.3'
6	269°21.6'	N 17°06.2'	155°11.4'	S 22°07.9'	122°05.9'	S 22°19.0'	260°49.0'	N 14°16.8'
7	284°21.0'	N 17°05.4'	170°13.9'	S 22°07.9'	137°08.5'	S 22°19.1'	275°49.9'	N 14°16.3'
8	299°20.3'	N 17°04.5'	185°16.3'	S 22°07.9'	152°11.1'	S 22°19.1'	290°50.8'	N 14°15.7'
9	314°19.7'	N 17°03.6'	200°18.8'	S 22°07.9'	167°13.7'	S 22°19.1'	305°51.7'	N 14°15.2'
10	329°19.1'	N 17°02.7'	215°21.3'	S 22°07.9'	182°16.3'	S 22°19.1'	320°52.7'	N 14°14.7'
11	344°18.4'	N 17°01.9'	230°23.8'	S 22°07.9'	197°18.9'	S 22°19.1'	335°53.6'	N 14°14.1'
12	359°17.8'	N 17°01.0'	245°26.2'	S 22°07.9'	212°21.6'	S 22°19.1'	350°54.5'	N 14°13.6'
13	14°17.2'	N 17°00.1'	260°28.7'	S 22°07.9'	227°24.2'	S 22°19.2'	5°55.4'	N 14°13.0'
14	29°16.5'	N 16°59.2'	275°31.2'	S 22°07.9'	242°26.8'	S 22°19.2'	20°56.3'	N 14°12.5'
15	44°15.9'	N 16°58.3'	290°33.7'	S 22°07.9'	257°29.4'	S 22°19.2'	35°57.3'	N 14°12.0'
16	59°15.3'	N 16°57.4'	305°36.1'	S 22°07.9'	272°32.0'	S 22°19.2'	50°58.2'	N 14°11.4'
17	74°14.7'	N 16°56.6'	320°38.6'	S 22°07.9'	287°34.6'	S 22°19.2'	65°59.1'	N 14°10.9'
18	89°14.0'	N 16°55.7'	335°41.1'	S 22°07.9'	302°37.2'	S 22°19.3'	81°00.0'	N 14°10.3'
19	104°13.4'	N 16°54.8'	350°43.6'	S 22°08.0'	317°39.8'	S 22°19.3'	96°01.0'	N 14°09.8'
20	119°12.8'	N 16°53.9'	5°46.0'	S 22°08.0'	332°42.5'	S 22°19.3'	111°01.9'	N 14°09.3'
21	134°12.2'	N 16°53.0'	20°48.5'	S 22°08.0'	347°45.1'	S 22°19.3'	126°02.8'	N 14°08.7'
22	149°11.5'	N 16°52.1'	35°51.0'	S 22°08.0'	2°47.7'	S 22°19.3'	141°03.8'	N 14°08.2'
23	164°10.9'	N 16°51.2'	50°53.4'	S 22°08.0'	17°50.3'	S 22°19.4'	156°04.7'	N 14°07.6'

Sun Aug 11, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.7	
	v = -0.6' d = 0.9'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	179°10.3'	N 16°50.3'	65°55.9'	S 22°08.0'	32°52.9'	S 22°19.4'	171°05.6'	N 14°07.1'
1	194°09.7'	N 16°49.4'	80°58.4'	S 22°08.0'	47°55.5'	S 22°19.4'	186°06.5'	N 14°06.6'
2	209°09.0'	N 16°48.5'	96°00.8'	S 22°08.0'	62°58.1'	S 22°19.4'	201°07.5'	N 14°06.0'
3	224°08.4'	N 16°47.6'	111°03.3'	S 22°08.0'	78°00.7'	S 22°19.4'	216°08.4'	N 14°05.5'
4	239°07.8'	N 16°46.8'	126°05.8'	S 22°08.0'	93°03.4'	S 22°19.5'	231°09.3'	N 14°04.9'
5	254°07.2'	N 16°45.9'	141°08.3'	S 22°08.0'	108°06.0'	S 22°19.5'	246°10.2'	N 14°04.4'
6	269°06.5'	N 16°45.0'	156°10.7'	S 22°08.0'	123°08.6'	S 22°19.5'	261°11.2'	N 14°03.9'
7	284°05.9'	N 16°44.1'	171°13.2'	S 22°08.0'	138°11.2'	S 22°19.5'	276°12.1'	N 14°03.3'
8	299°05.3'	N 16°43.2'	186°15.7'	S 22°08.1'	153°13.8'	S 22°19.5'	291°13.0'	N 14°02.8'
9	314°04.7'	N 16°42.3'	201°18.1'	S 22°08.1'	168°16.4'	S 22°19.6'	306°13.9'	N 14°02.2'
10	329°04.1'	N 16°41.4'	216°20.6'	S 22°08.1'	183°19.0'	S 22°19.6'	321°14.9'	N 14°01.7'
11	344°03.4'	N 16°40.5'	231°23.1'	S 22°08.1'	198°21.6'	S 22°19.6'	336°15.8'	N 14°01.1'
12	359°02.8'	N 16°39.6'	246°25.5'	S 22°08.1'	213°24.2'	S 22°19.6'	351°16.7'	N 14°00.6'
13	14°02.2'	N 16°38.7'	261°28.0'	S 22°08.1'	228°26.9'	S 22°19.6'	6°17.6'	N 14°00.1'
14	29°01.6'	N 16°37.8'	276°30.5'	S 22°08.1'	243°29.5'	S 22°19.7'	21°18.6'	N 13°59.5'
15	44°01.0'	N 16°36.9'	291°32.9'	S 22°08.1'	258°32.1'	S 22°19.7'	36°19.5'	N 13°59.0'
16	59°00.4'	N 16°36.0'	306°35.4'	S 22°08.1'	273°34.7'	S 22°19.7'	51°20.4'	N 13°58.4'
17	73°59.7'	N 16°35.0'	321°37.8'	S 22°08.1'	288°37.3'	S 22°19.7'	66°21.4'	N 13°57.9'
18	88°59.1'	N 16°34.1'	336°40.3'	S 22°08.1'	303°39.9'	S 22°19.7'	81°22.3'	N 13°57.4'
19	103°58.5'	N 16°33.2'	351°42.8'	S 22°08.1'	318°42.5'	S 22°19.8'	96°23.2'	N 13°56.8'
20	118°57.9'	N 16°32.3'	6°45.2'	S 22°08.1'	333°45.1'	S 22°19.8'	111°24.1'	N 13°56.3'
21	133°57.3'	N 16°31.4'	21°47.7'	S 22°08.2'	348°47.7'	S 22°19.8'	126°25.1'	N 13°55.7'
22	148°56.7'	N 16°30.5'	36°50.2'	S 22°08.2'	3°50.3'	S 22°19.8'	141°26.0'	N 13°55.2'
23	163°56.1'	N 16°29.6'	51°52.6'	S 22°08.2'	18°53.0'	S 22°19.8'	156°26.9'	N 13°54.6'

Mon Aug 12, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.7	
	v = -0.6' d = 0.9'		v = 2.5' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	178°55.4'	N 16°28.7'	66°55.1'	S 22°08.2'	33°55.6'	S 22°19.9'	171°27.9'	N 13°54.1'
1	193°54.8'	N 16°27.8'	81°57.5'	S 22°08.2'	48°58.2'	S 22°19.9'	186°28.8'	N 13°53.5'
2	208°54.2'	N 16°26.9'	97°00.0'	S 22°08.2'	64°00.8'	S 22°19.9'	201°29.7'	N 13°53.0'
3	223°53.6'	N 16°26.0'	112°02.5'	S 22°08.2'	79°03.4'	S 22°19.9'	216°30.6'	N 13°52.5'
4	238°53.0'	N 16°25.0'	127°04.9'	S 22°08.2'	94°06.0'	S 22°19.9'	231°31.6'	N 13°51.9'
5	253°52.4'	N 16°24.1'	142°07.4'	S 22°08.2'	109°08.6'	S 22°19.9'	246°32.5'	N 13°51.4'
6	268°51.8'	N 16°23.2'	157°09.9'	S 22°08.2'	124°11.2'	S 22°20.0'	261°33.4'	N 13°50.8'
7	283°51.2'	N 16°22.3'	172°12.3'	S 22°08.2'	139°13.8'	S 22°20.0'	276°34.4'	N 13°50.3'
8	298°50.6'	N 16°21.4'	187°14.8'	S 22°08.2'	154°16.4'	S 22°20.0'	291°35.3'	N 13°49.7'
9	313°50.0'	N 16°20.5'	202°17.2'	S 22°08.3'	169°19.0'	S 22°20.0'	306°36.2'	N 13°49.2'
10	328°49.3'	N 16°19.5'	217°19.7'	S 22°08.3'	184°21.6'	S 22°20.0'	321°37.1'	N 13°48.6'
11	343°48.7'	N 16°18.6'	232°22.1'	S 22°08.3'	199°24.3'	S 22°20.1'	336°38.1'	N 13°48.1'
12	358°48.1'	N 16°17.7'	247°24.6'	S 22°08.3'	214°26.9'	S 22°20.1'	351°39.0'	N 13°47.6'
13	13°47.5'	N 16°16.8'	262°27.1'	S 22°08.3'	229°29.5'	S 22°20.1'	6°39.9'	N 13°47.0'
14	28°46.9'	N 16°15.9'	277°29.5'	S 22°08.3'	244°32.1'	S 22°20.1'	21°40.9'	N 13°46.5'
15	43°46.3'	N 16°14.9'	292°32.0'	S 22°08.3'	259°34.7'	S 22°20.1'	36°41.8'	N 13°45.9'
16	58°45.7'	N 16°14.0'	307°34.4'	S 22°08.3'	274°37.3'	S 22°20.2'	51°42.7'	N 13°45.4'
17	73°45.1'	N 16°13.1'	322°36.9'	S 22°08.3'	289°39.9'	S 22°20.2'	66°43.7'	N 13°44.8'
18	88°44.5'	N 16°12.2'	337°39.3'	S 22°08.3'	304°42.5'	S 22°20.2'	81°44.6'	N 13°44.3'
19	103°43.9'	N 16°11.2'	352°41.8'	S 22°08.3'	319°45.1'	S 22°20.2'	96°45.5'	N 13°43.7'
20	118°43.3'	N 16°10.3'	7°44.2'	S 22°08.4'	334°47.7'	S 22°20.2'	111°46.4'	N 13°43.2'
21	133°42.7'	N 16°09.4'	22°46.7'	S 22°08.4'	349°50.3'	S 22°20.3'	126°47.4'	N 13°42.6'
22	148°42.1'	N 16°08.5'	37°49.2'	S 22°08.4'	4°52.9'	S 22°20.3'	141°48.3'	N 13°42.1'
23	163°41.5'	N 16°07.5'	52°51.6'	S 22°08.4'	19°55.5'	S 22°20.3'	156°49.2'	N 13°41.5'

Tue Aug 13, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.7	
	v = -0.6' d = 0.9'		v = 2.4' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.5'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	178°40.9'	N 16°06.6'	67°54.1'	S 22°08.4'	34°58.1'	S 22°20.3'	171°50.2'	N 13°41.0'
1	193°40.3'	N 16°05.7'	82°56.5'	S 22°08.4'	50°00.8'	S 22°20.3'	186°51.1'	N 13°40.4'
2	208°39.7'	N 16°04.7'	97°59.0'	S 22°08.4'	65°03.4'	S 22°20.3'	201°52.0'	N 13°39.9'
3	223°39.1'	N 16°03.8'	113°01.4'	S 22°08.4'	80°06.0'	S 22°20.4'	216°53.0'	N 13°39.3'
4	238°38.5'	N 16°02.9'	128°03.9'	S 22°08.4'	95°08.6'	S 22°20.4'	231°53.9'	N 13°38.8'
5	253°37.9'	N 16°01.9'	143°06.3'	S 22°08.4'	110°11.2'	S 22°20.4'	246°54.8'	N 13°38.2'
6	268°37.3'	N 16°01.0'	158°08.8'	S 22°08.4'	125°13.8'	S 22°20.4'	261°55.8'	N 13°37.7'
7	283°36.7'	N 16°00.1'	173°11.2'	S 22°08.5'	140°16.4'	S 22°20.4'	276°56.7'	N 13°37.2'
8	298°36.1'	N 15°59.1'	188°13.7'	S 22°08.5'	155°19.0'	S 22°20.5'	291°57.6'	N 13°36.6'
9	313°35.5'	N 15°58.2'	203°16.1'	S 22°08.5'	170°21.6'	S 22°20.5'	306°58.6'	N 13°36.1'
10	328°34.9'	N 15°57.3'	218°18.6'	S 22°08.5'	185°24.2'	S 22°20.5'	321°59.5'	N 13°35.5'
11	343°34.3'	N 15°56.3'	233°21.0'	S 22°08.5'	200°26.8'	S 22°20.5'	337°00.4'	N 13°35.0'
12	358°33.7'	N 15°55.4'	248°23.5'	S 22°08.5'	215°29.4'	S 22°20.5'	352°01.4'	N 13°34.4'
13	13°33.1'	N 15°54.4'	263°25.9'	S 22°08.5'	230°32.0'	S 22°20.6'	7°02.3'	N 13°33.9'
14	28°32.5'	N 15°53.5'	278°28.4'	S 22°08.5'	245°34.6'	S 22°20.6'	22°03.2'	N 13°33.3'
15	43°31.9'	N 15°52.6'	293°30.8'	S 22°08.5'	260°37.2'	S 22°20.6'	37°04.2'	N 13°32.8'
16	58°31.3'	N 15°51.6'	308°33.3'	S 22°08.5'	275°39.8'	S 22°20.6'	52°05.1'	N 13°32.2'
17	73°30.7'	N 15°50.7'	323°35.7'	S 22°08.5'	290°42.4'	S 22°20.6'	67°06.0'	N 13°31.7'
18	88°30.1'	N 15°49.7'	338°38.2'	S 22°08.6'	305°45.0'	S 22°20.6'	82°07.0'	N 13°31.1'
19	103°29.5'	N 15°48.8'	353°40.6'	S 22°08.6'	320°47.6'	S 22°20.7'	97°07.9'	N 13°30.6'
20	118°28.9'	N 15°47.8'	8°43.1'	S 22°08.6'	335°50.2'	S 22°20.7'	112°08.8'	N 13°30.0'
21	133°28.4'	N 15°46.9'	23°45.5'	S 22°08.6'	350°52.8'	S 22°20.7'	127°09.8'	N 13°29.5'
22	148°27.8'	N 15°46.0'	38°48.0'	S 22°08.6'	5°55.4'	S 22°20.7'	142°10.7'	N 13°28.9'
23	163°27.2'	N 15°45.0'	53°50.4'	S 22°08.6'	20°58.1'	S 22°20.7'	157°11.6'	N 13°28.4'

Wed Aug 14, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.7	
	v = -0.6' d = 1.0'		v = 2.4' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	178°26.6'	N 15°44.1'	68°52.8'	S 22°08.6'	36°00.7'	S 22°20.8'	172°12.6'	N 13°27.8'
1	193°26.0'	N 15°43.1'	83°55.3'	S 22°08.6'	51°03.3'	S 22°20.8'	187°13.5'	N 13°27.3'
2	208°25.4'	N 15°42.2'	98°57.7'	S 22°08.6'	66°05.9'	S 22°20.8'	202°14.4'	N 13°26.7'
3	223°24.8'	N 15°41.2'	114°00.2'	S 22°08.6'	81°08.5'	S 22°20.8'	217°15.4'	N 13°26.1'
4	238°24.2'	N 15°40.3'	129°02.6'	S 22°08.7'	96°11.1'	S 22°20.8'	232°16.3'	N 13°25.6'
5	253°23.6'	N 15°39.3'	144°05.1'	S 22°08.7'	111°13.7'	S 22°20.9'	247°17.2'	N 13°25.0'
6	268°23.1'	N 15°38.4'	159°07.5'	S 22°08.7'	126°16.3'	S 22°20.9'	262°18.2'	N 13°24.5'
7	283°22.5'	N 15°37.4'	174°10.0'	S 22°08.7'	141°18.9'	S 22°20.9'	277°19.1'	N 13°23.9'
8	298°21.9'	N 15°36.4'	189°12.4'	S 22°08.7'	156°21.5'	S 22°20.9'	292°20.0'	N 13°23.4'
9	313°21.3'	N 15°35.5'	204°14.8'	S 22°08.7'	171°24.1'	S 22°20.9'	307°21.0'	N 13°22.8'
10	328°20.7'	N 15°34.5'	219°17.3'	S 22°08.7'	186°26.7'	S 22°20.9'	322°21.9'	N 13°22.3'
11	343°20.1'	N 15°33.6'	234°19.7'	S 22°08.7'	201°29.3'	S 22°21.0'	337°22.8'	N 13°21.7'
12	358°19.5'	N 15°32.6'	249°22.2'	S 22°08.7'	216°31.9'	S 22°21.0'	352°23.8'	N 13°21.2'
13	13°19.0'	N 15°31.7'	264°24.6'	S 22°08.7'	231°34.5'	S 22°21.0'	7°24.7'	N 13°20.6'
14	28°18.4'	N 15°30.7'	279°27.0'	S 22°08.8'	246°37.1'	S 22°21.0'	22°25.6'	N 13°20.1'
15	43°17.8'	N 15°29.8'	294°29.5'	S 22°08.8'	261°39.7'	S 22°21.0'	37°26.6'	N 13°19.5'
16	58°17.2'	N 15°28.8'	309°31.9'	S 22°08.8'	276°42.3'	S 22°21.1'	52°27.5'	N 13°19.0'
17	73°16.6'	N 15°27.8'	324°34.4'	S 22°08.8'	291°44.9'	S 22°21.1'	67°28.4'	N 13°18.4'
18	88°16.0'	N 15°26.9'	339°36.8'	S 22°08.8'	306°47.5'	S 22°21.1'	82°29.4'	N 13°17.9'
19	103°15.5'	N 15°25.9'	354°39.2'	S 22°08.8'	321°50.1'	S 22°21.1'	97°30.3'	N 13°17.3'
20	118°14.9'	N 15°24.9'	9°41.7'	S 22°08.8'	336°52.7'	S 22°21.1'	112°31.3'	N 13°16.8'
21	133°14.3'	N 15°24.0'	24°44.1'	S 22°08.8'	351°55.3'	S 22°21.1'	127°32.2'	N 13°16.2'
22	148°13.7'	N 15°23.0'	39°46.6'	S 22°08.8'	6°57.9'	S 22°21.2'	142°33.1'	N 13°15.6'
23	163°13.1'	N 15°22.1'	54°49.0'	S 22°08.9'	22°00.5'	S 22°21.2'	157°34.1'	N 13°15.1'

Thu Aug 15, 2019 UTC

UTC	Venus -3.8 v = -0.6' d = 1.0'		Jupiter -2.2 v = 2.4' d = 0.0'		Saturn +0.2 v = 2.6' d = 0.0'		Mars +1.7 v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	178°12.6'	N 15°21.1'	69°51.4'	S 22°08.9'	37°03.1'	S 22°21.2'	172°35.0'	N 13°14.5'
1	193°12.0'	N 15°20.1'	84°53.9'	S 22°08.9'	52°05.7'	S 22°21.2'	187°35.9'	N 13°14.0'
2	208°11.4'	N 15°19.2'	99°56.3'	S 22°08.9'	67°08.3'	S 22°21.2'	202°36.9'	N 13°13.4'
3	223°10.8'	N 15°18.2'	114°58.7'	S 22°08.9'	82°10.9'	S 22°21.3'	217°37.8'	N 13°12.9'
4	238°10.2'	N 15°17.2'	130°01.2'	S 22°08.9'	97°13.5'	S 22°21.3'	232°38.7'	N 13°12.3'
5	253°09.7'	N 15°16.2'	145°03.6'	S 22°08.9'	112°16.1'	S 22°21.3'	247°39.7'	N 13°11.8'
6	268°09.1'	N 15°15.3'	160°06.0'	S 22°08.9'	127°18.7'	S 22°21.3'	262°40.6'	N 13°11.2'
7	283°08.5'	N 15°14.3'	175°08.5'	S 22°08.9'	142°21.3'	S 22°21.3'	277°41.6'	N 13°10.6'
8	298°07.9'	N 15°13.3'	190°10.9'	S 22°09.0'	157°23.9'	S 22°21.3'	292°42.5'	N 13°10.1'
9	313°07.4'	N 15°12.4'	205°13.3'	S 22°09.0'	172°26.5'	S 22°21.4'	307°43.4'	N 13°09.5'
10	328°06.8'	N 15°11.4'	220°15.8'	S 22°09.0'	187°29.1'	S 22°21.4'	322°44.4'	N 13°09.0'
11	343°06.2'	N 15°10.4'	235°18.2'	S 22°09.0'	202°31.7'	S 22°21.4'	337°45.3'	N 13°08.4'
12	358°05.6'	N 15°09.4'	250°20.6'	S 22°09.0'	217°34.3'	S 22°21.4'	352°46.2'	N 13°07.9'
13	13°05.1'	N 15°08.5'	265°23.1'	S 22°09.0'	232°36.9'	S 22°21.4'	7°47.2'	N 13°07.3'
14	28°04.5'	N 15°07.5'	280°25.5'	S 22°09.0'	247°39.5'	S 22°21.5'	22°48.1'	N 13°06.8'
15	43°03.9'	N 15°06.5'	295°27.9'	S 22°09.0'	262°42.1'	S 22°21.5'	37°49.1'	N 13°06.2'
16	58°03.4'	N 15°05.5'	310°30.4'	S 22°09.0'	277°44.7'	S 22°21.5'	52°50.0'	N 13°05.6'
17	73°02.8'	N 15°04.6'	325°32.8'	S 22°09.1'	292°47.3'	S 22°21.5'	67°50.9'	N 13°05.1'
18	88°02.2'	N 15°03.6'	340°35.2'	S 22°09.1'	307°49.9'	S 22°21.5'	82°51.9'	N 13°04.5'
19	103°01.6'	N 15°02.6'	355°37.7'	S 22°09.1'	322°52.5'	S 22°21.5'	97°52.8'	N 13°04.0'
20	118°01.1'	N 15°01.6'	10°40.1'	S 22°09.1'	337°55.1'	S 22°21.6'	112°53.7'	N 13°03.4'
21	133°00.5'	N 15°00.6'	25°42.5'	S 22°09.1'	352°57.7'	S 22°21.6'	127°54.7'	N 13°02.9'
22	147°59.9'	N 14°59.7'	40°45.0'	S 22°09.1'	8°00.3'	S 22°21.6'	142°55.6'	N 13°02.3'
23	162°59.4'	N 14°58.7'	55°47.4'	S 22°09.1'	23°02.8'	S 22°21.6'	157°56.6'	N 13°01.7'

Fri Aug 16, 2019 UTC

UTC	Venus -3.8 v = -0.6' d = 1.0'		Jupiter -2.2 v = 2.4' d = 0.0'		Saturn +0.2 v = 2.6' d = 0.0'		Mars +1.7 v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	177°58.8'	N 14°57.7'	70°49.8'	S 22°09.1'	38°05.4'	S 22°21.6'	172°57.5'	N 13°01.2'
1	192°58.2'	N 14°56.7'	85°52.2'	S 22°09.1'	53°08.0'	S 22°21.7'	187°58.4'	N 13°00.6'
2	207°57.7'	N 14°55.7'	100°54.7'	S 22°09.2'	68°10.6'	S 22°21.7'	202°59.4'	N 13°00.1'
3	222°57.1'	N 14°54.7'	115°57.1'	S 22°09.2'	83°13.2'	S 22°21.7'	218°00.3'	N 12°59.5'
4	237°56.5'	N 14°53.8'	130°59.5'	S 22°09.2'	98°15.8'	S 22°21.7'	233°01.3'	N 12°58.9'
5	252°56.0'	N 14°52.8'	146°01.9'	S 22°09.2'	113°18.4'	S 22°21.7'	248°02.2'	N 12°58.4'
6	267°55.4'	N 14°51.8'	161°04.4'	S 22°09.2'	128°21.0'	S 22°21.7'	263°03.1'	N 12°57.8'
7	282°54.8'	N 14°50.8'	176°06.8'	S 22°09.2'	143°23.6'	S 22°21.8'	278°04.1'	N 12°57.3'
8	297°54.3'	N 14°49.8'	191°09.2'	S 22°09.2'	158°26.2'	S 22°21.8'	293°05.0'	N 12°56.7'
9	312°53.7'	N 14°48.8'	206°11.7'	S 22°09.2'	173°28.8'	S 22°21.8'	308°06.0'	N 12°56.2'
10	327°53.1'	N 14°47.8'	221°14.1'	S 22°09.3'	188°31.4'	S 22°21.8'	323°06.9'	N 12°55.6'
11	342°52.6'	N 14°46.8'	236°16.5'	S 22°09.3'	203°34.0'	S 22°21.8'	338°07.8'	N 12°55.0'
12	357°52.0'	N 14°45.8'	251°18.9'	S 22°09.3'	218°36.6'	S 22°21.9'	353°08.8'	N 12°54.5'
13	12°51.4'	N 14°44.8'	266°21.4'	S 22°09.3'	233°39.2'	S 22°21.9'	8°09.7'	N 12°53.9'
14	27°50.9'	N 14°43.9'	281°23.8'	S 22°09.3'	248°41.8'	S 22°21.9'	23°10.7'	N 12°53.4'
15	42°50.3'	N 14°42.9'	296°26.2'	S 22°09.3'	263°44.4'	S 22°21.9'	38°11.6'	N 12°52.8'
16	57°49.8'	N 14°41.9'	311°28.6'	S 22°09.3'	278°47.0'	S 22°21.9'	53°12.5'	N 12°52.2'
17	72°49.2'	N 14°40.9'	326°31.0'	S 22°09.3'	293°49.6'	S 22°21.9'	68°13.5'	N 12°51.7'
18	87°48.6'	N 14°39.9'	341°33.5'	S 22°09.4'	308°52.2'	S 22°22.0'	83°14.4'	N 12°51.1'
19	102°48.1'	N 14°38.9'	356°35.9'	S 22°09.4'	323°54.8'	S 22°22.0'	98°15.4'	N 12°50.6'
20	117°47.5'	N 14°37.9'	11°38.3'	S 22°09.4'	338°57.4'	S 22°22.0'	113°16.3'	N 12°50.0'
21	132°47.0'	N 14°36.9'	26°40.7'	S 22°09.4'	353°59.9'	S 22°22.0'	128°17.2'	N 12°49.4'
22	147°46.4'	N 14°35.9'	41°43.2'	S 22°09.4'	9°02.5'	S 22°22.0'	143°18.2'	N 12°48.9'
23	162°45.8'	N 14°34.9'	56°45.6'	S 22°09.4'	24°05.1'	S 22°22.0'	158°19.1'	N 12°48.3'



Sat Aug 17, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.7	
	v = -0.6' d = 1.0'		v = 2.4' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	177°45.3'	N 14°33.9'	71°48.0'	S 22°09.4'	39°07.7'	S 22°22.1'	173°20.1'	N 12°47.7'
1	192°44.7'	N 14°32.9'	86°50.4'	S 22°09.4'	54°10.3'	S 22°22.1'	188°21.0'	N 12°47.2'
2	207°44.2'	N 14°31.9'	101°52.8'	S 22°09.4'	69°12.9'	S 22°22.1'	203°22.0'	N 12°46.6'
3	222°43.6'	N 14°30.9'	116°55.3'	S 22°09.5'	84°15.5'	S 22°22.1'	218°22.9'	N 12°46.1'
4	237°43.1'	N 14°29.9'	131°57.7'	S 22°09.5'	99°18.1'	S 22°22.1'	233°23.8'	N 12°45.5'
5	252°42.5'	N 14°28.9'	147°00.1'	S 22°09.5'	114°20.7'	S 22°22.1'	248°24.8'	N 12°44.9'
6	267°42.0'	N 14°27.9'	162°02.5'	S 22°09.5'	129°23.3'	S 22°22.2'	263°25.7'	N 12°44.4'
7	282°41.4'	N 14°26.9'	177°04.9'	S 22°09.5'	144°25.9'	S 22°22.2'	278°26.7'	N 12°43.8'
8	297°40.8'	N 14°25.9'	192°07.3'	S 22°09.5'	159°28.5'	S 22°22.2'	293°27.6'	N 12°43.3'
9	312°40.3'	N 14°24.9'	207°09.8'	S 22°09.5'	174°31.1'	S 22°22.2'	308°28.5'	N 12°42.7'
10	327°39.7'	N 14°23.9'	222°12.2'	S 22°09.6'	189°33.7'	S 22°22.2'	323°29.5'	N 12°42.1'
11	342°39.2'	N 14°22.8'	237°14.6'	S 22°09.6'	204°36.2'	S 22°22.3'	338°30.4'	N 12°41.6'
12	357°38.6'	N 14°21.8'	252°17.0'	S 22°09.6'	219°38.8'	S 22°22.3'	353°31.4'	N 12°41.0'
13	12°38.1'	N 14°20.8'	267°19.4'	S 22°09.6'	234°41.4'	S 22°22.3'	8°32.3'	N 12°40.4'
14	27°37.5'	N 14°19.8'	282°21.8'	S 22°09.6'	249°44.0'	S 22°22.3'	23°33.3'	N 12°39.9'
15	42°37.0'	N 14°18.8'	297°24.3'	S 22°09.6'	264°46.6'	S 22°22.3'	38°34.2'	N 12°39.3'
16	57°36.4'	N 14°17.8'	312°26.7'	S 22°09.6'	279°49.2'	S 22°22.3'	53°35.1'	N 12°38.7'
17	72°35.9'	N 14°16.8'	327°29.1'	S 22°09.6'	294°51.8'	S 22°22.4'	68°36.1'	N 12°38.2'
18	87°35.3'	N 14°15.8'	342°31.5'	S 22°09.7'	309°54.4'	S 22°22.4'	83°37.0'	N 12°37.6'
19	102°34.8'	N 14°14.8'	357°33.9'	S 22°09.7'	324°57.0'	S 22°22.4'	98°38.0'	N 12°37.1'
20	117°34.2'	N 14°13.7'	12°36.3'	S 22°09.7'	339°59.6'	S 22°22.4'	113°38.9'	N 12°36.5'
21	132°33.7'	N 14°12.7'	27°38.7'	S 22°09.7'	355°02.2'	S 22°22.4'	128°39.9'	N 12°35.9'
22	147°33.1'	N 14°11.7'	42°41.2'	S 22°09.7'	10°04.7'	S 22°22.4'	143°40.8'	N 12°35.4'
23	162°32.6'	N 14°10.7'	57°43.6'	S 22°09.7'	25°07.3'	S 22°22.5'	158°41.7'	N 12°34.8'

Sun Aug 18, 2019 UTC

UTC	Venus -3.8		Jupiter -2.2		Saturn +0.2		Mars +1.7	
	v = -0.5' d = 1.0'		v = 2.4' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	177°32.0'	N 14°09.7'	72°46.0'	S 22°09.7'	40°09.9'	S 22°22.5'	173°42.7'	N 12°34.2'
1	192°31.5'	N 14°08.7'	87°48.4'	S 22°09.7'	55°12.5'	S 22°22.5'	188°43.6'	N 12°33.7'
2	207°31.0'	N 14°07.6'	102°50.8'	S 22°09.8'	70°15.1'	S 22°22.5'	203°44.6'	N 12°33.1'
3	222°30.4'	N 14°06.6'	117°53.2'	S 22°09.8'	85°17.7'	S 22°22.5'	218°45.5'	N 12°32.5'
4	237°29.9'	N 14°05.6'	132°55.6'	S 22°09.8'	100°20.3'	S 22°22.5'	233°46.5'	N 12°32.0'
5	252°29.3'	N 14°04.6'	147°58.0'	S 22°09.8'	115°22.9'	S 22°22.6'	248°47.4'	N 12°31.4'
6	267°28.8'	N 14°03.6'	163°00.5'	S 22°09.8'	130°25.5'	S 22°22.6'	263°48.4'	N 12°30.8'
7	282°28.2'	N 14°02.6'	178°02.9'	S 22°09.8'	145°28.1'	S 22°22.6'	278°49.3'	N 12°30.3'
8	297°27.7'	N 14°01.5'	193°05.3'	S 22°09.8'	160°30.6'	S 22°22.6'	293°50.2'	N 12°29.7'
9	312°27.1'	N 14°00.5'	208°07.7'	S 22°09.9'	175°33.2'	S 22°22.6'	308°51.2'	N 12°29.1'
10	327°26.6'	N 13°59.5'	223°10.1'	S 22°09.9'	190°35.8'	S 22°22.6'	323°52.1'	N 12°28.6'
11	342°26.1'	N 13°58.5'	238°12.5'	S 22°09.9'	205°38.4'	S 22°22.7'	338°53.1'	N 12°28.0'
12	357°25.5'	N 13°57.4'	253°14.9'	S 22°09.9'	220°41.0'	S 22°22.7'	353°54.0'	N 12°27.4'
13	12°25.0'	N 13°56.4'	268°17.3'	S 22°09.9'	235°43.6'	S 22°22.7'	8°55.0'	N 12°26.9'
14	27°24.4'	N 13°55.4'	283°19.7'	S 22°09.9'	250°46.2'	S 22°22.7'	23°55.9'	N 12°26.3'
15	42°23.9'	N 13°54.4'	298°22.1'	S 22°09.9'	265°48.8'	S 22°22.7'	38°56.9'	N 12°25.7'
16	57°23.4'	N 13°53.3'	313°24.5'	S 22°10.0'	280°51.4'	S 22°22.7'	53°57.8'	N 12°25.2'
17	72°22.8'	N 13°52.3'	328°26.9'	S 22°10.0'	295°53.9'	S 22°22.8'	68°58.7'	N 12°24.6'
18	87°22.3'	N 13°51.3'	343°29.3'	S 22°10.0'	310°56.5'	S 22°22.8'	83°59.7'	N 12°24.0'
19	102°21.7'	N 13°50.2'	358°31.8'	S 22°10.0'	325°59.1'	S 22°22.8'	99°00.6'	N 12°23.5'
20	117°21.2'	N 13°49.2'	13°34.2'	S 22°10.0'	341°01.7'	S 22°22.8'	114°01.6'	N 12°22.9'
21	132°20.7'	N 13°48.2'	28°36.6'	S 22°10.0'	356°04.3'	S 22°22.8'	129°02.5'	N 12°22.3'
22	147°20.1'	N 13°47.2'	43°39.0'	S 22°10.0'	11°06.9'	S 22°22.8'	144°03.5'	N 12°21.8'
23	162°19.6'	N 13°46.1'	58°41.4'	S 22°10.1'	26°09.5'	S 22°22.9'	159°04.4'	N 12°21.2'

Mon Aug 19, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.2		Mars +1.7	
	v = -0.5' d = 1.0'		v = 2.4' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	177°19.1'	N 13°45.1'	73°43.8'	S 22°10.1'	41°12.1'	S 22°22.9'	174°05.4'	N 12°20.6'
1	192°18.5'	N 13°44.1'	88°46.2'	S 22°10.1'	56°14.6'	S 22°22.9'	189°06.3'	N 12°20.1'
2	207°18.0'	N 13°43.0'	103°48.6'	S 22°10.1'	71°17.2'	S 22°22.9'	204°07.3'	N 12°19.5'
3	222°17.4'	N 13°42.0'	118°51.0'	S 22°10.1'	86°19.8'	S 22°22.9'	219°08.2'	N 12°18.9'
4	237°16.9'	N 13°41.0'	133°53.4'	S 22°10.1'	101°22.4'	S 22°22.9'	234°09.2'	N 12°18.4'
5	252°16.4'	N 13°39.9'	148°55.8'	S 22°10.1'	116°25.0'	S 22°23.0'	249°10.1'	N 12°17.8'
6	267°15.8'	N 13°38.9'	163°58.2'	S 22°10.2'	131°27.6'	S 22°23.0'	264°11.0'	N 12°17.2'
7	282°15.3'	N 13°37.8'	179°00.6'	S 22°10.2'	146°30.2'	S 22°23.0'	279°12.0'	N 12°16.7'
8	297°14.8'	N 13°36.8'	194°03.0'	S 22°10.2'	161°32.7'	S 22°23.0'	294°12.9'	N 12°16.1'
9	312°14.2'	N 13°35.8'	209°05.4'	S 22°10.2'	176°35.3'	S 22°23.0'	309°13.9'	N 12°15.5'
10	327°13.7'	N 13°34.7'	224°07.8'	S 22°10.2'	191°37.9'	S 22°23.0'	324°14.8'	N 12°15.0'
11	342°13.2'	N 13°33.7'	239°10.2'	S 22°10.2'	206°40.5'	S 22°23.1'	339°15.8'	N 12°14.4'
12	357°12.6'	N 13°32.7'	254°12.6'	S 22°10.2'	221°43.1'	S 22°23.1'	354°16.7'	N 12°13.8'
13	12°12.1'	N 13°31.6'	269°15.0'	S 22°10.3'	236°45.7'	S 22°23.1'	9°17.7'	N 12°13.2'
14	27°11.6'	N 13°30.6'	284°17.4'	S 22°10.3'	251°48.3'	S 22°23.1'	24°18.6'	N 12°12.7'
15	42°11.1'	N 13°29.5'	299°19.8'	S 22°10.3'	266°50.8'	S 22°23.1'	39°19.6'	N 12°12.1'
16	57°10.5'	N 13°28.5'	314°22.2'	S 22°10.3'	281°53.4'	S 22°23.1'	54°20.5'	N 12°11.5'
17	72°10.0'	N 13°27.4'	329°24.6'	S 22°10.3'	296°56.0'	S 22°23.2'	69°21.5'	N 12°11.0'
18	87°09.5'	N 13°26.4'	344°27.0'	S 22°10.3'	311°58.6'	S 22°23.2'	84°22.4'	N 12°10.4'
19	102°08.9'	N 13°25.4'	359°29.4'	S 22°10.3'	327°01.2'	S 22°23.2'	99°23.4'	N 12°09.8'
20	117°08.4'	N 13°24.3'	14°31.8'	S 22°10.4'	342°03.8'	S 22°23.2'	114°24.3'	N 12°09.3'
21	132°07.9'	N 13°23.3'	29°34.2'	S 22°10.4'	357°06.3'	S 22°23.2'	129°25.3'	N 12°08.7'
22	147°07.4'	N 13°22.2'	44°36.6'	S 22°10.4'	12°08.9'	S 22°23.2'	144°26.2'	N 12°08.1'
23	162°06.8'	N 13°21.2'	59°39.0'	S 22°10.4'	27°11.5'	S 22°23.3'	159°27.2'	N 12°07.5'

Tue Aug 20, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.3		Mars +1.7	
	v = -0.5' d = 1.1'		v = 2.4' d = 0.0'		v = 2.6' d = 0.0'		v = 0.9' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	177°06.3'	N 13°20.1'	74°41.4'	S 22°10.4'	42°14.1'	S 22°23.3'	174°28.1'	N 12°07.0'
1	192°05.8'	N 13°19.1'	89°43.8'	S 22°10.4'	57°16.7'	S 22°23.3'	189°29.1'	N 12°06.4'
2	207°05.3'	N 13°18.0'	104°46.2'	S 22°10.4'	72°19.3'	S 22°23.3'	204°30.0'	N 12°05.8'
3	222°04.7'	N 13°17.0'	119°48.6'	S 22°10.5'	87°21.8'	S 22°23.3'	219°30.9'	N 12°05.3'
4	237°04.2'	N 13°15.9'	134°51.0'	S 22°10.5'	102°24.4'	S 22°23.3'	234°31.9'	N 12°04.7'
5	252°03.7'	N 13°14.9'	149°53.3'	S 22°10.5'	117°27.0'	S 22°23.4'	249°32.8'	N 12°04.1'
6	267°03.2'	N 13°13.8'	164°55.7'	S 22°10.5'	132°29.6'	S 22°23.4'	264°33.8'	N 12°03.5'
7	282°02.6'	N 13°12.8'	179°58.1'	S 22°10.5'	147°32.2'	S 22°23.4'	279°34.7'	N 12°03.0'
8	297°02.1'	N 13°11.7'	195°00.5'	S 22°10.5'	162°34.8'	S 22°23.4'	294°35.7'	N 12°02.4'
9	312°01.6'	N 13°10.7'	210°02.9'	S 22°10.6'	177°37.3'	S 22°23.4'	309°36.6'	N 12°01.8'
10	327°01.1'	N 13°09.6'	225°05.3'	S 22°10.6'	192°39.9'	S 22°23.4'	324°37.6'	N 12°01.2'
11	342°00.5'	N 13°08.6'	240°07.7'	S 22°10.6'	207°42.5'	S 22°23.5'	339°38.5'	N 12°00.7'
12	357°00.0'	N 13°07.5'	255°10.1'	S 22°10.6'	222°45.1'	S 22°23.5'	354°39.5'	N 12°00.1'
13	11°59.5'	N 13°06.4'	270°12.5'	S 22°10.6'	237°47.7'	S 22°23.5'	9°40.4'	N 11°59.5'
14	26°59.0'	N 13°05.4'	285°14.9'	S 22°10.6'	252°50.2'	S 22°23.5'	24°41.4'	N 11°59.0'
15	41°58.5'	N 13°04.3'	300°17.3'	S 22°10.6'	267°52.8'	S 22°23.5'	39°42.3'	N 11°58.4'
16	56°57.9'	N 13°03.3'	315°19.7'	S 22°10.7'	282°55.4'	S 22°23.5'	54°43.3'	N 11°57.8'
17	71°57.4'	N 13°02.2'	330°22.1'	S 22°10.7'	297°58.0'	S 22°23.6'	69°44.2'	N 11°57.2'
18	86°56.9'	N 13°01.2'	345°24.4'	S 22°10.7'	313°00.6'	S 22°23.6'	84°45.2'	N 11°56.7'
19	101°56.4'	N 13°00.1'	0°26.8'	S 22°10.7'	328°03.1'	S 22°23.6'	99°46.1'	N 11°56.1'
20	116°55.9'	N 12°59.0'	15°29.2'	S 22°10.7'	343°05.7'	S 22°23.6'	114°47.1'	N 11°55.5'
21	131°55.4'	N 12°58.0'	30°31.6'	S 22°10.7'	358°08.3'	S 22°23.6'	129°48.0'	N 11°54.9'
22	146°54.8'	N 12°56.9'	45°34.0'	S 22°10.8'	13°10.9'	S 22°23.6'	144°49.0'	N 11°54.4'
23	161°54.3'	N 12°55.9'	60°36.4'	S 22°10.8'	28°13.5'	S 22°23.7'	159°49.9'	N 11°53.8'

Wed Aug 21, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.3		Mars +1.7	
	v = -0.5' d = 1.1'		v = 2.4' d = 0.0'		v = 2.6' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	176°53.8'	N 12°54.8'	75°38.8'	S 22°10.8'	43°16.0'	S 22°23.7'	174°50.9'	N 11°53.2'
1	191°53.3'	N 12°53.7'	90°41.2'	S 22°10.8'	58°18.6'	S 22°23.7'	189°51.8'	N 11°52.6'
2	206°52.8'	N 12°52.7'	105°43.5'	S 22°10.8'	73°21.2'	S 22°23.7'	204°52.8'	N 11°52.1'
3	221°52.3'	N 12°51.6'	120°45.9'	S 22°10.8'	88°23.8'	S 22°23.7'	219°53.7'	N 11°51.5'
4	236°51.7'	N 12°50.5'	135°48.3'	S 22°10.8'	103°26.4'	S 22°23.7'	234°54.7'	N 11°50.9'
5	251°51.2'	N 12°49.5'	150°50.7'	S 22°10.9'	118°28.9'	S 22°23.7'	249°55.6'	N 11°50.3'
6	266°50.7'	N 12°48.4'	165°53.1'	S 22°10.9'	133°31.5'	S 22°23.8'	264°56.6'	N 11°49.8'
7	281°50.2'	N 12°47.3'	180°55.5'	S 22°10.9'	148°34.1'	S 22°23.8'	279°57.5'	N 11°49.2'
8	296°49.7'	N 12°46.3'	195°57.9'	S 22°10.9'	163°36.7'	S 22°23.8'	294°58.5'	N 11°48.6'
9	311°49.2'	N 12°45.2'	211°00.2'	S 22°10.9'	178°39.3'	S 22°23.8'	309°59.5'	N 11°48.0'
10	326°48.7'	N 12°44.1'	226°02.6'	S 22°10.9'	193°41.8'	S 22°23.8'	325°00.4'	N 11°47.5'
11	341°48.2'	N 12°43.1'	241°05.0'	S 22°11.0'	208°44.4'	S 22°23.8'	340°01.4'	N 11°46.9'
12	356°47.6'	N 12°42.0'	256°07.4'	S 22°11.0'	223°47.0'	S 22°23.9'	355°02.3'	N 11°46.3'
13	11°47.1'	N 12°40.9'	271°09.8'	S 22°11.0'	238°49.6'	S 22°23.9'	10°03.3'	N 11°45.7'
14	26°46.6'	N 12°39.9'	286°12.2'	S 22°11.0'	253°52.2'	S 22°23.9'	25°04.2'	N 11°45.2'
15	41°46.1'	N 12°38.8'	301°14.5'	S 22°11.0'	268°54.7'	S 22°23.9'	40°05.2'	N 11°44.6'
16	56°45.6'	N 12°37.7'	316°16.9'	S 22°11.0'	283°57.3'	S 22°23.9'	55°06.1'	N 11°44.0'
17	71°45.1'	N 12°36.6'	331°19.3'	S 22°11.1'	298°59.9'	S 22°23.9'	70°07.1'	N 11°43.4'
18	86°44.6'	N 12°35.6'	346°21.7'	S 22°11.1'	314°02.5'	S 22°24.0'	85°08.0'	N 11°42.9'
19	101°44.1'	N 12°34.5'	1°24.1'	S 22°11.1'	329°05.0'	S 22°24.0'	100°09.0'	N 11°42.3'
20	116°43.6'	N 12°33.4'	16°26.5'	S 22°11.1'	344°07.6'	S 22°24.0'	115°09.9'	N 11°41.7'
21	131°43.1'	N 12°32.3'	31°28.8'	S 22°11.1'	359°10.2'	S 22°24.0'	130°10.9'	N 11°41.1'
22	146°42.5'	N 12°31.3'	46°31.2'	S 22°11.1'	14°12.8'	S 22°24.0'	145°11.8'	N 11°40.6'
23	161°42.0'	N 12°30.2'	61°33.6'	S 22°11.2'	29°15.3'	S 22°24.0'	160°12.8'	N 11°40.0'

Thu Aug 22, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.3		Mars +1.7	
	v = -0.5' d = 1.1'		v = 2.4' d = 0.0'		v = 2.6' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	176°41.5'	N 12°29.1'	76°36.0'	S 22°11.2'	44°17.9'	S 22°24.0'	175°13.7'	N 11°39.4'
1	191°41.0'	N 12°28.0'	91°38.4'	S 22°11.2'	59°20.5'	S 22°24.1'	190°14.7'	N 11°38.8'
2	206°40.5'	N 12°27.0'	106°40.7'	S 22°11.2'	74°23.1'	S 22°24.1'	205°15.6'	N 11°38.2'
3	221°40.0'	N 12°25.9'	121°43.1'	S 22°11.2'	89°25.6'	S 22°24.1'	220°16.6'	N 11°37.7'
4	236°39.5'	N 12°24.8'	136°45.5'	S 22°11.2'	104°28.2'	S 22°24.1'	235°17.5'	N 11°37.1'
5	251°39.0'	N 12°23.7'	151°47.9'	S 22°11.3'	119°30.8'	S 22°24.1'	250°18.5'	N 11°36.5'
6	266°38.5'	N 12°22.6'	166°50.2'	S 22°11.3'	134°33.4'	S 22°24.1'	265°19.4'	N 11°35.9'
7	281°38.0'	N 12°21.6'	181°52.6'	S 22°11.3'	149°36.0'	S 22°24.2'	280°20.4'	N 11°35.4'
8	296°37.5'	N 12°20.5'	196°55.0'	S 22°11.3'	164°38.5'	S 22°24.2'	295°21.4'	N 11°34.8'
9	311°37.0'	N 12°19.4'	211°57.4'	S 22°11.3'	179°41.1'	S 22°24.2'	310°22.3'	N 11°34.2'
10	326°36.5'	N 12°18.3'	226°59.8'	S 22°11.3'	194°43.7'	S 22°24.2'	325°23.3'	N 11°33.6'
11	341°36.0'	N 12°17.2'	242°02.1'	S 22°11.4'	209°46.3'	S 22°24.2'	340°24.2'	N 11°33.0'
12	356°35.5'	N 12°16.1'	257°04.5'	S 22°11.4'	224°48.8'	S 22°24.2'	355°25.2'	N 11°32.5'
13	11°35.0'	N 12°15.1'	272°06.9'	S 22°11.4'	239°51.4'	S 22°24.2'	10°26.1'	N 11°31.9'
14	26°34.5'	N 12°14.0'	287°09.3'	S 22°11.4'	254°54.0'	S 22°24.3'	25°27.1'	N 11°31.3'
15	41°34.0'	N 12°12.9'	302°11.6'	S 22°11.4'	269°56.5'	S 22°24.3'	40°28.0'	N 11°30.7'
16	56°33.5'	N 12°11.8'	317°14.0'	S 22°11.4'	284°59.1'	S 22°24.3'	55°29.0'	N 11°30.1'
17	71°33.0'	N 12°10.7'	332°16.4'	S 22°11.5'	300°01.7'	S 22°24.3'	70°29.9'	N 11°29.6'
18	86°32.5'	N 12°09.6'	347°18.8'	S 22°11.5'	315°04.3'	S 22°24.3'	85°30.9'	N 11°29.0'
19	101°32.0'	N 12°08.5'	2°21.1'	S 22°11.5'	330°06.8'	S 22°24.3'	100°31.8'	N 11°28.4'
20	116°31.5'	N 12°07.5'	17°23.5'	S 22°11.5'	345°09.4'	S 22°24.4'	115°32.8'	N 11°27.8'
21	131°31.0'	N 12°06.4'	32°25.9'	S 22°11.5'	0°12.0'	S 22°24.4'	130°33.8'	N 11°27.2'
22	146°30.5'	N 12°05.3'	47°28.2'	S 22°11.5'	15°14.6'	S 22°24.4'	145°34.7'	N 11°26.7'
23	161°30.0'	N 12°04.2'	62°30.6'	S 22°11.6'	30°17.1'	S 22°24.4'	160°35.7'	N 11°26.1'

Fri Aug 23, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.3		Mars +1.7	
	v = -0.5' d = 1.1'		v = 2.4' d = 0.0'		v = 2.6' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	176°29.5'	N 12°03.1'	77°33.0'	S 22°11.6'	45°19.7'	S 22°24.4'	175°36.6'	N 11°25.5'
1	191°29.0'	N 12°02.0'	92°35.4'	S 22°11.6'	60°22.3'	S 22°24.4'	190°37.6'	N 11°24.9'
2	206°28.5'	N 12°00.9'	107°37.7'	S 22°11.6'	75°24.9'	S 22°24.4'	205°38.5'	N 11°24.3'
3	221°28.0'	N 11°59.8'	122°40.1'	S 22°11.6'	90°27.4'	S 22°24.5'	220°39.5'	N 11°23.8'
4	236°27.5'	N 11°58.7'	137°42.5'	S 22°11.6'	105°30.0'	S 22°24.5'	235°40.4'	N 11°23.2'
5	251°27.0'	N 11°57.6'	152°44.8'	S 22°11.7'	120°32.6'	S 22°24.5'	250°41.4'	N 11°22.6'
6	266°26.5'	N 11°56.5'	167°47.2'	S 22°11.7'	135°35.1'	S 22°24.5'	265°42.4'	N 11°22.0'
7	281°26.0'	N 11°55.4'	182°49.6'	S 22°11.7'	150°37.7'	S 22°24.5'	280°43.3'	N 11°21.4'
8	296°25.5'	N 11°54.3'	197°51.9'	S 22°11.7'	165°40.3'	S 22°24.5'	295°44.3'	N 11°20.9'
9	311°25.0'	N 11°53.2'	212°54.3'	S 22°11.7'	180°42.9'	S 22°24.5'	310°45.2'	N 11°20.3'
10	326°24.6'	N 11°52.1'	227°56.7'	S 22°11.8'	195°45.4'	S 22°24.6'	325°46.2'	N 11°19.7'
11	341°24.1'	N 11°51.1'	242°59.1'	S 22°11.8'	210°48.0'	S 22°24.6'	340°47.1'	N 11°19.1'
12	356°23.6'	N 11°50.0'	258°01.4'	S 22°11.8'	225°50.6'	S 22°24.6'	355°48.1'	N 11°18.5'
13	11°23.1'	N 11°48.9'	273°03.8'	S 22°11.8'	240°53.1'	S 22°24.6'	10°49.0'	N 11°17.9'
14	26°22.6'	N 11°47.8'	288°06.2'	S 22°11.8'	255°55.7'	S 22°24.6'	25°50.0'	N 11°17.4'
15	41°22.1'	N 11°46.7'	303°08.5'	S 22°11.8'	270°58.3'	S 22°24.6'	40°51.0'	N 11°16.8'
16	56°21.6'	N 11°45.6'	318°10.9'	S 22°11.9'	286°00.9'	S 22°24.7'	55°51.9'	N 11°16.2'
17	71°21.1'	N 11°44.5'	333°13.3'	S 22°11.9'	301°03.4'	S 22°24.7'	70°52.9'	N 11°15.6'
18	86°20.6'	N 11°43.4'	348°15.6'	S 22°11.9'	316°06.0'	S 22°24.7'	85°53.8'	N 11°15.0'
19	101°20.1'	N 11°42.3'	3°18.0'	S 22°11.9'	331°08.6'	S 22°24.7'	100°54.8'	N 11°14.4'
20	116°19.6'	N 11°41.2'	18°20.3'	S 22°11.9'	346°11.1'	S 22°24.7'	115°55.7'	N 11°13.9'
21	131°19.2'	N 11°40.1'	33°22.7'	S 22°12.0'	1°13.7'	S 22°24.7'	130°56.7'	N 11°13.3'
22	146°18.7'	N 11°38.9'	48°25.1'	S 22°12.0'	16°16.3'	S 22°24.7'	145°57.6'	N 11°12.7'
23	161°18.2'	N 11°37.8'	63°27.4'	S 22°12.0'	31°18.8'	S 22°24.8'	160°58.6'	N 11°12.1'

Sat Aug 24, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.3		Mars +1.7	
	v = -0.5' d = 1.1'		v = 2.4' d = 0.0'		v = 2.6' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	176°17.7'	N 11°36.7'	78°29.8'	S 22°12.0'	46°21.4'	S 22°24.8'	175°59.6'	N 11°11.5'
1	191°17.2'	N 11°35.6'	93°32.2'	S 22°12.0'	61°24.0'	S 22°24.8'	191°00.5'	N 11°10.9'
2	206°16.7'	N 11°34.5'	108°34.5'	S 22°12.0'	76°26.5'	S 22°24.8'	206°01.5'	N 11°10.4'
3	221°16.2'	N 11°33.4'	123°36.9'	S 22°12.1'	91°29.1'	S 22°24.8'	221°02.4'	N 11°09.8'
4	236°15.7'	N 11°32.3'	138°39.3'	S 22°12.1'	106°31.7'	S 22°24.8'	236°03.4'	N 11°09.2'
5	251°15.3'	N 11°31.2'	153°41.6'	S 22°12.1'	121°34.3'	S 22°24.8'	251°04.3'	N 11°08.6'
6	266°14.8'	N 11°30.1'	168°44.0'	S 22°12.1'	136°36.8'	S 22°24.9'	266°05.3'	N 11°08.0'
7	281°14.3'	N 11°29.0'	183°46.3'	S 22°12.1'	151°39.4'	S 22°24.9'	281°06.3'	N 11°07.4'
8	296°13.8'	N 11°27.9'	198°48.7'	S 22°12.2'	166°42.0'	S 22°24.9'	296°07.2'	N 11°06.9'
9	311°13.3'	N 11°26.8'	213°51.1'	S 22°12.2'	181°44.5'	S 22°24.9'	311°08.2'	N 11°06.3'
10	326°12.8'	N 11°25.7'	228°53.4'	S 22°12.2'	196°47.1'	S 22°24.9'	326°09.1'	N 11°05.7'
11	341°12.4'	N 11°24.6'	243°55.8'	S 22°12.2'	211°49.7'	S 22°24.9'	341°10.1'	N 11°05.1'
12	356°11.9'	N 11°23.4'	258°58.1'	S 22°12.2'	226°52.2'	S 22°24.9'	356°11.0'	N 11°04.5'
13	11°11.4'	N 11°22.3'	274°00.5'	S 22°12.2'	241°54.8'	S 22°25.0'	11°12.0'	N 11°03.9'
14	26°10.9'	N 11°21.2'	289°02.9'	S 22°12.3'	256°57.4'	S 22°25.0'	26°13.0'	N 11°03.4'
15	41°10.4'	N 11°20.1'	304°05.2'	S 22°12.3'	271°59.9'	S 22°25.0'	41°13.9'	N 11°02.8'
16	56°09.9'	N 11°19.0'	319°07.6'	S 22°12.3'	287°02.5'	S 22°25.0'	56°14.9'	N 11°02.2'
17	71°09.5'	N 11°17.9'	334°09.9'	S 22°12.3'	302°05.1'	S 22°25.0'	71°15.8'	N 11°01.6'
18	86°09.0'	N 11°16.8'	349°12.3'	S 22°12.3'	317°07.6'	S 22°25.0'	86°16.8'	N 11°01.0'
19	101°08.5'	N 11°15.7'	4°14.6'	S 22°12.4'	332°10.2'	S 22°25.0'	101°17.8'	N 11°00.4'
20	116°08.0'	N 11°14.5'	19°17.0'	S 22°12.4'	347°12.8'	S 22°25.1'	116°18.7'	N 10°59.8'
21	131°07.5'	N 11°13.4'	34°19.4'	S 22°12.4'	2°15.3'	S 22°25.1'	131°19.7'	N 10°59.3'
22	146°07.1'	N 11°12.3'	49°21.7'	S 22°12.4'	17°17.9'	S 22°25.1'	146°20.6'	N 10°58.7'
23	161°06.6'	N 11°11.2'	64°24.1'	S 22°12.4'	32°20.5'	S 22°25.1'	161°21.6'	N 10°58.1'

Sun Aug 25, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.3		Mars +1.7	
	v = -0.5' d = 1.1'		v = 2.4' d = 0.0'		v = 2.6' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	176°06.1'	N 11°10.1'	79°26.4'	S 22°12.5'	47°23.0'	S 22°25.1'	176°22.5'	N 10°57.5'
1	191°05.6'	N 11°09.0'	94°28.8'	S 22°12.5'	62°25.6'	S 22°25.1'	191°23.5'	N 10°56.9'
2	206°05.1'	N 11°07.8'	109°31.1'	S 22°12.5'	77°28.1'	S 22°25.1'	206°24.5'	N 10°56.3'
3	221°04.7'	N 11°06.7'	124°33.5'	S 22°12.5'	92°30.7'	S 22°25.2'	221°25.4'	N 10°55.7'
4	236°04.2'	N 11°05.6'	139°35.8'	S 22°12.5'	107°33.3'	S 22°25.2'	236°26.4'	N 10°55.1'
5	251°03.7'	N 11°04.5'	154°38.2'	S 22°12.5'	122°35.8'	S 22°25.2'	251°27.3'	N 10°54.6'
6	266°03.2'	N 11°03.4'	169°40.6'	S 22°12.6'	137°38.4'	S 22°25.2'	266°28.3'	N 10°54.0'
7	281°02.8'	N 11°02.2'	184°42.9'	S 22°12.6'	152°41.0'	S 22°25.2'	281°29.3'	N 10°53.4'
8	296°02.3'	N 11°01.1'	199°45.3'	S 22°12.6'	167°43.5'	S 22°25.2'	296°30.2'	N 10°52.8'
9	311°01.8'	N 10°60.0'	214°47.6'	S 22°12.6'	182°46.1'	S 22°25.2'	311°31.2'	N 10°52.2'
10	326°01.3'	N 10°58.9'	229°50.0'	S 22°12.6'	197°48.7'	S 22°25.3'	326°32.1'	N 10°51.6'
11	341°00.9'	N 10°57.7'	244°52.3'	S 22°12.7'	212°51.2'	S 22°25.3'	341°33.1'	N 10°51.0'
12	356°00.4'	N 10°56.6'	259°54.7'	S 22°12.7'	227°53.8'	S 22°25.3'	356°34.1'	N 10°50.4'
13	10°59.9'	N 10°55.5'	274°57.0'	S 22°12.7'	242°56.4'	S 22°25.3'	11°35.0'	N 10°49.9'
14	25°59.4'	N 10°54.4'	289°59.4'	S 22°12.7'	257°58.9'	S 22°25.3'	26°36.0'	N 10°49.3'
15	40°59.0'	N 10°53.2'	305°01.7'	S 22°12.7'	273°01.5'	S 22°25.3'	41°36.9'	N 10°48.7'
16	55°58.5'	N 10°52.1'	320°04.1'	S 22°12.8'	288°04.0'	S 22°25.3'	56°37.9'	N 10°48.1'
17	70°58.0'	N 10°51.0'	335°06.4'	S 22°12.8'	303°06.6'	S 22°25.4'	71°38.9'	N 10°47.5'
18	85°57.5'	N 10°49.9'	350°08.8'	S 22°12.8'	318°09.2'	S 22°25.4'	86°39.8'	N 10°46.9'
19	100°57.1'	N 10°48.7'	5°11.1'	S 22°12.8'	333°11.7'	S 22°25.4'	101°40.8'	N 10°46.3'
20	115°56.6'	N 10°47.6'	20°13.5'	S 22°12.8'	348°14.3'	S 22°25.4'	116°41.7'	N 10°45.7'
21	130°56.1'	N 10°46.5'	35°15.8'	S 22°12.9'	3°16.9'	S 22°25.4'	131°42.7'	N 10°45.2'
22	145°55.7'	N 10°45.4'	50°18.2'	S 22°12.9'	18°19.4'	S 22°25.4'	146°43.7'	N 10°44.6'
23	160°55.2'	N 10°44.2'	65°20.5'	S 22°12.9'	33°22.0'	S 22°25.4'	161°44.6'	N 10°44.0'

Mon Aug 26, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.3		Mars +1.7	
	v = -0.5' d = 1.1'		v = 2.3' d = 0.0'		v = 2.6' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	175°54.7'	N 10°43.1'	80°22.9'	S 22°12.9'	48°24.5'	S 22°25.5'	176°45.6'	N 10°43.4'
1	190°54.3'	N 10°42.0'	95°25.2'	S 22°12.9'	63°27.1'	S 22°25.5'	191°46.5'	N 10°42.8'
2	205°53.8'	N 10°40.8'	110°27.5'	S 22°13.0'	78°29.7'	S 22°25.5'	206°47.5'	N 10°42.2'
3	220°53.3'	N 10°39.7'	125°29.9'	S 22°13.0'	93°32.2'	S 22°25.5'	221°48.5'	N 10°41.6'
4	235°52.8'	N 10°38.6'	140°32.2'	S 22°13.0'	108°34.8'	S 22°25.5'	236°49.4'	N 10°41.0'
5	250°52.4'	N 10°37.4'	155°34.6'	S 22°13.0'	123°37.3'	S 22°25.5'	251°50.4'	N 10°40.4'
6	265°51.9'	N 10°36.3'	170°36.9'	S 22°13.0'	138°39.9'	S 22°25.5'	266°51.3'	N 10°39.9'
7	280°51.4'	N 10°35.2'	185°39.3'	S 22°13.1'	153°42.5'	S 22°25.6'	281°52.3'	N 10°39.3'
8	295°51.0'	N 10°34.0'	200°41.6'	S 22°13.1'	168°45.0'	S 22°25.6'	296°53.3'	N 10°38.7'
9	310°50.5'	N 10°32.9'	215°44.0'	S 22°13.1'	183°47.6'	S 22°25.6'	311°54.2'	N 10°38.1'
10	325°50.0'	N 10°31.8'	230°46.3'	S 22°13.1'	198°50.1'	S 22°25.6'	326°55.2'	N 10°37.5'
11	340°49.6'	N 10°30.6'	245°48.7'	S 22°13.1'	213°52.7'	S 22°25.6'	341°56.2'	N 10°36.9'
12	355°49.1'	N 10°29.5'	260°51.0'	S 22°13.2'	228°55.3'	S 22°25.6'	356°57.1'	N 10°36.3'
13	10°48.6'	N 10°28.4'	275°53.3'	S 22°13.2'	243°57.8'	S 22°25.6'	11°58.1'	N 10°35.7'
14	25°48.2'	N 10°27.2'	290°55.7'	S 22°13.2'	259°00.4'	S 22°25.7'	26°59.0'	N 10°35.1'
15	40°47.7'	N 10°26.1'	305°58.0'	S 22°13.2'	274°02.9'	S 22°25.7'	42°00.0'	N 10°34.5'
16	55°47.3'	N 10°25.0'	321°00.4'	S 22°13.2'	289°05.5'	S 22°25.7'	57°01.0'	N 10°33.9'
17	70°46.8'	N 10°23.8'	336°02.7'	S 22°13.3'	304°08.1'	S 22°25.7'	72°01.9'	N 10°33.4'
18	85°46.3'	N 10°22.7'	351°05.0'	S 22°13.3'	319°10.6'	S 22°25.7'	87°02.9'	N 10°32.8'
19	100°45.9'	N 10°21.5'	6°07.4'	S 22°13.3'	334°13.2'	S 22°25.7'	102°03.9'	N 10°32.2'
20	115°45.4'	N 10°20.4'	21°09.7'	S 22°13.3'	349°15.7'	S 22°25.7'	117°04.8'	N 10°31.6'
21	130°44.9'	N 10°19.3'	36°12.1'	S 22°13.3'	4°18.3'	S 22°25.8'	132°05.8'	N 10°31.0'
22	145°44.5'	N 10°18.1'	51°14.4'	S 22°13.4'	19°20.9'	S 22°25.8'	147°06.7'	N 10°30.4'
23	160°44.0'	N 10°17.0'	66°16.7'	S 22°13.4'	34°23.4'	S 22°25.8'	162°07.7'	N 10°29.8'

Tue Aug 27, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.3		Mars +1.7	
	v = -0.5' d = 1.1'		v = 2.3' d = 0.0'		v = 2.6' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	175°43.6'	N 10°15.8'	81°19.1'	S 22°13.4'	49°26.0'	S 22°25.8'	177°08.7'	N 10°29.2'
1	190°43.1'	N 10°14.7'	96°21.4'	S 22°13.4'	64°28.5'	S 22°25.8'	192°09.6'	N 10°28.6'
2	205°42.6'	N 10°13.6'	111°23.8'	S 22°13.4'	79°31.1'	S 22°25.8'	207°10.6'	N 10°28.0'
3	220°42.2'	N 10°12.4'	126°26.1'	S 22°13.5'	94°33.6'	S 22°25.8'	222°11.6'	N 10°27.4'
4	235°41.7'	N 10°11.3'	141°28.4'	S 22°13.5'	109°36.2'	S 22°25.8'	237°12.5'	N 10°26.8'
5	250°41.2'	N 10°10.1'	156°30.8'	S 22°13.5'	124°38.8'	S 22°25.9'	252°13.5'	N 10°26.3'
6	265°40.8'	N 10°09.0'	171°33.1'	S 22°13.5'	139°41.3'	S 22°25.9'	267°14.4'	N 10°25.7'
7	280°40.3'	N 10°07.8'	186°35.5'	S 22°13.5'	154°43.9'	S 22°25.9'	282°15.4'	N 10°25.1'
8	295°39.9'	N 10°06.7'	201°37.8'	S 22°13.6'	169°46.4'	S 22°25.9'	297°16.4'	N 10°24.5'
9	310°39.4'	N 10°05.5'	216°40.1'	S 22°13.6'	184°49.0'	S 22°25.9'	312°17.3'	N 10°23.9'
10	325°39.0'	N 10°04.4'	231°42.5'	S 22°13.6'	199°51.5'	S 22°25.9'	327°18.3'	N 10°23.3'
11	340°38.5'	N 10°03.2'	246°44.8'	S 22°13.6'	214°54.1'	S 22°25.9'	342°19.3'	N 10°22.7'
12	355°38.0'	N 10°02.1'	261°47.1'	S 22°13.7'	229°56.6'	S 22°26.0'	357°20.2'	N 10°22.1'
13	10°37.6'	N 10°01.0'	276°49.5'	S 22°13.7'	244°59.2'	S 22°26.0'	12°21.2'	N 10°21.5'
14	25°37.1'	N 9°59.8'	291°51.8'	S 22°13.7'	260°01.8'	S 22°26.0'	27°22.1'	N 10°20.9'
15	40°36.7'	N 9°58.7'	306°54.1'	S 22°13.7'	275°04.3'	S 22°26.0'	42°23.1'	N 10°20.3'
16	55°36.2'	N 9°57.5'	321°56.5'	S 22°13.7'	290°06.9'	S 22°26.0'	57°24.1'	N 10°19.7'
17	70°35.8'	N 9°56.4'	336°58.8'	S 22°13.8'	305°09.4'	S 22°26.0'	72°25.0'	N 10°19.1'
18	85°35.3'	N 9°55.2'	352°01.1'	S 22°13.8'	320°12.0'	S 22°26.0'	87°26.0'	N 10°18.5'
19	100°34.8'	N 9°54.1'	7°03.5'	S 22°13.8'	335°14.5'	S 22°26.0'	102°27.0'	N 10°17.9'
20	115°34.4'	N 9°52.9'	22°05.8'	S 22°13.8'	350°17.1'	S 22°26.1'	117°27.9'	N 10°17.4'
21	130°33.9'	N 9°51.8'	37°08.1'	S 22°13.8'	5°19.6'	S 22°26.1'	132°28.9'	N 10°16.8'
22	145°33.5'	N 9°50.6'	52°10.5'	S 22°13.9'	20°22.2'	S 22°26.1'	147°29.9'	N 10°16.2'
23	160°33.0'	N 9°49.4'	67°12.8'	S 22°13.9'	35°24.8'	S 22°26.1'	162°30.8'	N 10°15.6'

Wed Aug 28, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.3		Mars +1.7	
	v = -0.4' d = 1.2'		v = 2.3' d = 0.0'		v = 2.6' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	175°32.6'	N 9°48.3'	82°15.1'	S 22°13.9'	50°27.3'	S 22°26.1'	177°31.8'	N 10°15.0'
1	190°32.1'	N 9°47.1'	97°17.5'	S 22°13.9'	65°29.9'	S 22°26.1'	192°32.8'	N 10°14.4'
2	205°31.7'	N 9°46.0'	112°19.8'	S 22°13.9'	80°32.4'	S 22°26.1'	207°33.7'	N 10°13.8'
3	220°31.2'	N 9°44.8'	127°22.1'	S 22°14.0'	95°35.0'	S 22°26.2'	222°34.7'	N 10°13.2'
4	235°30.8'	N 9°43.7'	142°24.5'	S 22°14.0'	110°37.5'	S 22°26.2'	237°35.6'	N 10°12.6'
5	250°30.3'	N 9°42.5'	157°26.8'	S 22°14.0'	125°40.1'	S 22°26.2'	252°36.6'	N 10°12.0'
6	265°29.9'	N 9°41.4'	172°29.1'	S 22°14.0'	140°42.6'	S 22°26.2'	267°37.6'	N 10°11.4'
7	280°29.4'	N 9°40.2'	187°31.4'	S 22°14.1'	155°45.2'	S 22°26.2'	282°38.5'	N 10°10.8'
8	295°29.0'	N 9°39.1'	202°33.8'	S 22°14.1'	170°47.7'	S 22°26.2'	297°39.5'	N 10°10.2'
9	310°28.5'	N 9°37.9'	217°36.1'	S 22°14.1'	185°50.3'	S 22°26.2'	312°40.5'	N 10°09.6'
10	325°28.1'	N 9°36.7'	232°38.4'	S 22°14.1'	200°52.8'	S 22°26.2'	327°41.4'	N 10°09.0'
11	340°27.6'	N 9°35.6'	247°40.8'	S 22°14.1'	215°55.4'	S 22°26.3'	342°42.4'	N 10°08.4'
12	355°27.2'	N 9°34.4'	262°43.1'	S 22°14.2'	230°57.9'	S 22°26.3'	357°43.4'	N 10°07.8'
13	10°26.7'	N 9°33.3'	277°45.4'	S 22°14.2'	246°00.5'	S 22°26.3'	12°44.3'	N 10°07.2'
14	25°26.3'	N 9°32.1'	292°47.7'	S 22°14.2'	261°03.0'	S 22°26.3'	27°45.3'	N 10°06.6'
15	40°25.8'	N 9°30.9'	307°50.1'	S 22°14.2'	276°05.6'	S 22°26.3'	42°46.3'	N 10°06.0'
16	55°25.4'	N 9°29.8'	322°52.4'	S 22°14.2'	291°08.1'	S 22°26.3'	57°47.2'	N 10°05.4'
17	70°24.9'	N 9°28.6'	337°54.7'	S 22°14.3'	306°10.7'	S 22°26.3'	72°48.2'	N 10°04.8'
18	85°24.5'	N 9°27.5'	352°57.0'	S 22°14.3'	321°13.2'	S 22°26.3'	87°49.2'	N 10°04.3'
19	100°24.0'	N 9°26.3'	7°59.4'	S 22°14.3'	336°15.8'	S 22°26.4'	102°50.1'	N 10°03.7'
20	115°23.6'	N 9°25.1'	23°01.7'	S 22°14.3'	351°18.3'	S 22°26.4'	117°51.1'	N 10°03.1'
21	130°23.1'	N 9°24.0'	38°04.0'	S 22°14.4'	6°20.9'	S 22°26.4'	132°52.1'	N 10°02.5'
22	145°22.7'	N 9°22.8'	53°06.3'	S 22°14.4'	21°23.5'	S 22°26.4'	147°53.0'	N 10°01.9'
23	160°22.2'	N 9°21.6'	68°08.7'	S 22°14.4'	36°26.0'	S 22°26.4'	162°54.0'	N 10°01.3'

Thu Aug 29, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.3		Mars +1.7	
	v = -0.4' d = 1.2'		v = 2.3' d = 0.0'		v = 2.5' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	175°21.8'	N 9°20.5'	83°11.0'	S 22°14.4'	51°28.6'	S 22°26.4'	177°55.0'	N 10°00.7'
1	190°21.3'	N 9°19.3'	98°13.3'	S 22°14.4'	66°31.1'	S 22°26.4'	192°55.9'	N 10°00.1'
2	205°20.9'	N 9°18.2'	113°15.6'	S 22°14.5'	81°33.7'	S 22°26.5'	207°56.9'	N 9°59.5'
3	220°20.5'	N 9°17.0'	128°18.0'	S 22°14.5'	96°36.2'	S 22°26.5'	222°57.9'	N 9°58.9'
4	235°20.0'	N 9°15.8'	143°20.3'	S 22°14.5'	111°38.7'	S 22°26.5'	237°58.8'	N 9°58.3'
5	250°19.6'	N 9°14.7'	158°22.6'	S 22°14.5'	126°41.3'	S 22°26.5'	252°59.8'	N 9°57.7'
6	265°19.1'	N 9°13.5'	173°24.9'	S 22°14.6'	141°43.8'	S 22°26.5'	268°00.8'	N 9°57.1'
7	280°18.7'	N 9°12.3'	188°27.2'	S 22°14.6'	156°46.4'	S 22°26.5'	283°01.7'	N 9°56.5'
8	295°18.2'	N 9°11.2'	203°29.6'	S 22°14.6'	171°48.9'	S 22°26.5'	298°02.7'	N 9°55.9'
9	310°17.8'	N 9°10.0'	218°31.9'	S 22°14.6'	186°51.5'	S 22°26.5'	313°03.7'	N 9°55.3'
10	325°17.4'	N 9°08.8'	233°34.2'	S 22°14.6'	201°54.0'	S 22°26.6'	328°04.6'	N 9°54.7'
11	340°16.9'	N 9°07.7'	248°36.5'	S 22°14.7'	216°56.6'	S 22°26.6'	343°05.6'	N 9°54.1'
12	355°16.5'	N 9°06.5'	263°38.8'	S 22°14.7'	231°59.1'	S 22°26.6'	358°06.6'	N 9°53.5'
13	10°16.0'	N 9°05.3'	278°41.2'	S 22°14.7'	247°01.7'	S 22°26.6'	13°07.5'	N 9°52.9'
14	25°15.6'	N 9°04.1'	293°43.5'	S 22°14.7'	262°04.2'	S 22°26.6'	28°08.5'	N 9°52.3'
15	40°15.1'	N 9°03.0'	308°45.8'	S 22°14.8'	277°06.8'	S 22°26.6'	43°09.5'	N 9°51.7'
16	55°14.7'	N 9°01.8'	323°48.1'	S 22°14.8'	292°09.3'	S 22°26.6'	58°10.4'	N 9°51.1'
17	70°14.3'	N 9°00.6'	338°50.4'	S 22°14.8'	307°11.9'	S 22°26.6'	73°11.4'	N 9°50.5'
18	85°13.8'	N 8°59.5'	353°52.8'	S 22°14.8'	322°14.4'	S 22°26.7'	88°12.4'	N 9°49.9'
19	100°13.4'	N 8°58.3'	8°55.1'	S 22°14.9'	337°17.0'	S 22°26.7'	103°13.3'	N 9°49.3'
20	115°12.9'	N 8°57.1'	23°57.4'	S 22°14.9'	352°19.5'	S 22°26.7'	118°14.3'	N 9°48.7'
21	130°12.5'	N 8°55.9'	38°59.7'	S 22°14.9'	7°22.1'	S 22°26.7'	133°15.3'	N 9°48.1'
22	145°12.1'	N 8°54.8'	54°02.0'	S 22°14.9'	22°24.6'	S 22°26.7'	148°16.2'	N 9°47.5'
23	160°11.6'	N 8°53.6'	69°04.3'	S 22°14.9'	37°27.2'	S 22°26.7'	163°17.2'	N 9°46.9'

Fri Aug 30, 2019 UTC

UTC	Venus -3.8		Jupiter -2.1		Saturn +0.3		Mars +1.7	
	v = -0.4' d = 1.2'		v = 2.3' d = 0.0'		v = 2.5' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	175°11.2'	N 8°52.4'	84°06.6'	S 22°15.0'	52°29.7'	S 22°26.7'	178°18.2'	N 9°46.3'
1	190°10.8'	N 8°51.2'	99°09.0'	S 22°15.0'	67°32.2'	S 22°26.7'	193°19.1'	N 9°45.7'
2	205°10.3'	N 8°50.1'	114°11.3'	S 22°15.0'	82°34.8'	S 22°26.8'	208°20.1'	N 9°45.1'
3	220°09.9'	N 8°48.9'	129°13.6'	S 22°15.0'	97°37.3'	S 22°26.8'	223°21.1'	N 9°44.5'
4	235°09.4'	N 8°47.7'	144°15.9'	S 22°15.1'	112°39.9'	S 22°26.8'	238°22.0'	N 9°43.9'
5	250°09.0'	N 8°46.5'	159°18.2'	S 22°15.1'	127°42.4'	S 22°26.8'	253°23.0'	N 9°43.3'
6	265°08.6'	N 8°45.4'	174°20.5'	S 22°15.1'	142°45.0'	S 22°26.8'	268°24.0'	N 9°42.7'
7	280°08.1'	N 8°44.2'	189°22.8'	S 22°15.1'	157°47.5'	S 22°26.8'	283°24.9'	N 9°42.1'
8	295°07.7'	N 8°43.0'	204°25.2'	S 22°15.1'	172°50.1'	S 22°26.8'	298°25.9'	N 9°41.5'
9	310°07.3'	N 8°41.8'	219°27.5'	S 22°15.2'	187°52.6'	S 22°26.8'	313°26.9'	N 9°40.9'
10	325°06.8'	N 8°40.7'	234°29.8'	S 22°15.2'	202°55.2'	S 22°26.9'	328°27.9'	N 9°40.3'
11	340°06.4'	N 8°39.5'	249°32.1'	S 22°15.2'	217°57.7'	S 22°26.9'	343°28.8'	N 9°39.7'
12	355°06.0'	N 8°38.3'	264°34.4'	S 22°15.2'	233°00.2'	S 22°26.9'	358°29.8'	N 9°39.1'
13	10°05.5'	N 8°37.1'	279°36.7'	S 22°15.3'	248°02.8'	S 22°26.9'	13°30.8'	N 9°38.5'
14	25°05.1'	N 8°35.9'	294°39.0'	S 22°15.3'	263°05.3'	S 22°26.9'	28°31.7'	N 9°37.9'
15	40°04.7'	N 8°34.8'	309°41.3'	S 22°15.3'	278°07.9'	S 22°26.9'	43°32.7'	N 9°37.3'
16	55°04.2'	N 8°33.6'	324°43.7'	S 22°15.3'	293°10.4'	S 22°26.9'	58°33.7'	N 9°36.7'
17	70°03.8'	N 8°32.4'	339°46.0'	S 22°15.4'	308°13.0'	S 22°26.9'	73°34.6'	N 9°36.1'
18	85°03.4'	N 8°31.2'	354°48.3'	S 22°15.4'	323°15.5'	S 22°26.9'	88°35.6'	N 9°35.5'
19	100°02.9'	N 8°30.0'	9°50.6'	S 22°15.4'	338°18.0'	S 22°27.0'	103°36.6'	N 9°34.9'
20	115°02.5'	N 8°28.8'	24°52.9'	S 22°15.4'	353°20.6'	S 22°27.0'	118°37.5'	N 9°34.3'
21	130°02.1'	N 8°27.7'	39°55.2'	S 22°15.4'	8°23.1'	S 22°27.0'	133°38.5'	N 9°33.7'
22	145°01.6'	N 8°26.5'	54°57.5'	S 22°15.5'	23°25.7'	S 22°27.0'	148°39.5'	N 9°33.1'
23	160°01.2'	N 8°25.3'	69°59.8'	S 22°15.5'	38°28.2'	S 22°27.0'	163°40.4'	N 9°32.5'

Sat Aug 31, 2019 UTC

UTC	Venus -3.8 v = -0.4' d = 1.2'		Jupiter -2.1 v = 2.3' d = 0.0'		Saturn +0.3 v = 2.5' d = 0.0'		Mars +1.7 v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	175°00.8'	N 8°24.1'	85°02.1'	S 22°15.5'	53°30.8'	S 22°27.0'	178°41.4'	N 9°31.9'
1	190°00.3'	N 8°22.9'	100°04.4'	S 22°15.5'	68°33.3'	S 22°27.0'	193°42.4'	N 9°31.3'
2	204°59.9'	N 8°21.7'	115°06.7'	S 22°15.6'	83°35.8'	S 22°27.0'	208°43.4'	N 9°30.7'
3	219°59.5'	N 8°20.6'	130°09.0'	S 22°15.6'	98°38.4'	S 22°27.1'	223°44.3'	N 9°30.1'
4	234°59.1'	N 8°19.4'	145°11.3'	S 22°15.6'	113°40.9'	S 22°27.1'	238°45.3'	N 9°29.5'
5	249°58.6'	N 8°18.2'	160°13.7'	S 22°15.6'	128°43.5'	S 22°27.1'	253°46.3'	N 9°28.9'
6	264°58.2'	N 8°17.0'	175°16.0'	S 22°15.7'	143°46.0'	S 22°27.1'	268°47.2'	N 9°28.3'
7	279°57.8'	N 8°15.8'	190°18.3'	S 22°15.7'	158°48.5'	S 22°27.1'	283°48.2'	N 9°27.7'
8	294°57.3'	N 8°14.6'	205°20.6'	S 22°15.7'	173°51.1'	S 22°27.1'	298°49.2'	N 9°27.1'
9	309°56.9'	N 8°13.4'	220°22.9'	S 22°15.7'	188°53.6'	S 22°27.1'	313°50.1'	N 9°26.5'
10	324°56.5'	N 8°12.2'	235°25.2'	S 22°15.8'	203°56.2'	S 22°27.1'	328°51.1'	N 9°25.8'
11	339°56.1'	N 8°11.1'	250°27.5'	S 22°15.8'	218°58.7'	S 22°27.2'	343°52.1'	N 9°25.2'
12	354°55.6'	N 8°09.9'	265°29.8'	S 22°15.8'	234°01.2'	S 22°27.2'	358°53.1'	N 9°24.6'
13	9°55.2'	N 8°08.7'	280°32.1'	S 22°15.8'	249°03.8'	S 22°27.2'	13°54.0'	N 9°24.0'
14	24°54.8'	N 8°07.5'	295°34.4'	S 22°15.9'	264°06.3'	S 22°27.2'	28°55.0'	N 9°23.4'
15	39°54.3'	N 8°06.3'	310°36.7'	S 22°15.9'	279°08.9'	S 22°27.2'	43°56.0'	N 9°22.8'
16	54°53.9'	N 8°05.1'	325°39.0'	S 22°15.9'	294°11.4'	S 22°27.2'	58°56.9'	N 9°22.2'
17	69°53.5'	N 8°03.9'	340°41.3'	S 22°15.9'	309°13.9'	S 22°27.2'	73°57.9'	N 9°21.6'
18	84°53.1'	N 8°02.7'	355°43.6'	S 22°15.9'	324°16.5'	S 22°27.2'	88°58.9'	N 9°21.0'
19	99°52.6'	N 8°01.5'	10°45.9'	S 22°16.0'	339°19.0'	S 22°27.2'	103°59.9'	N 9°20.4'
20	114°52.2'	N 8°00.3'	25°48.2'	S 22°16.0'	354°21.6'	S 22°27.3'	119°00.8'	N 9°19.8'
21	129°51.8'	N 7°59.2'	40°50.5'	S 22°16.0'	9°24.1'	S 22°27.3'	134°01.8'	N 9°19.2'
22	144°51.4'	N 7°58.0'	55°52.8'	S 22°16.0'	24°26.6'	S 22°27.3'	149°02.8'	N 9°18.6'
23	159°50.9'	N 7°56.8'	70°55.1'	S 22°16.1'	39°29.2'	S 22°27.3'	164°03.7'	N 9°18.0'