

Wed Nov 1, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.6		Mars +1.8	
	v = -0.5' d = 1.2'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	199°40.6'	S 7°08.7'	187°43.9'	S 12°07.1'	136°18.0'	S 22°20.2'	214°40.3'	S 1°16.2'
1	214°40.1'	S 7°09.9'	202°45.8'	S 12°07.3'	151°20.2'	S 22°20.2'	229°41.3'	S 1°16.8'
2	229°39.7'	S 7°11.1'	217°47.7'	S 12°07.5'	166°22.4'	S 22°20.2'	244°42.3'	S 1°17.5'
3	244°39.2'	S 7°12.3'	232°49.7'	S 12°07.7'	181°24.6'	S 22°20.2'	259°43.3'	S 1°18.1'
4	259°38.8'	S 7°13.5'	247°51.6'	S 12°07.9'	196°26.8'	S 22°20.2'	274°44.3'	S 1°18.7'
5	274°38.3'	S 7°14.7'	262°53.6'	S 12°08.0'	211°29.0'	S 22°20.2'	289°45.3'	S 1°19.4'
6	289°37.9'	S 7°15.8'	277°55.5'	S 12°08.2'	226°31.2'	S 22°20.2'	304°46.4'	S 1°20.0'
7	304°37.4'	S 7°17.0'	292°57.4'	S 12°08.4'	241°33.4'	S 22°20.3'	319°47.4'	S 1°20.6'
8	319°37.0'	S 7°18.2'	307°59.4'	S 12°08.6'	256°35.7'	S 22°20.3'	334°48.4'	S 1°21.2'
9	334°36.5'	S 7°19.4'	323°01.3'	S 12°08.8'	271°37.9'	S 22°20.3'	349°49.4'	S 1°21.9'
10	349°36.1'	S 7°20.6'	338°03.3'	S 12°09.0'	286°40.1'	S 22°20.3'	4°50.4'	S 1°22.5'
11	4°35.6'	S 7°21.8'	353°05.2'	S 12°09.1'	301°42.3'	S 22°20.3'	19°51.4'	S 1°23.1'
12	19°35.2'	S 7°23.0'	8°07.1'	S 12°09.3'	316°44.5'	S 22°20.3'	34°52.5'	S 1°23.8'
13	34°34.7'	S 7°24.1'	23°09.1'	S 12°09.5'	331°46.7'	S 22°20.3'	49°53.5'	S 1°24.4'
14	49°34.3'	S 7°25.3'	38°11.0'	S 12°09.7'	346°48.9'	S 22°20.4'	64°54.5'	S 1°25.0'
15	64°33.8'	S 7°26.5'	53°13.0'	S 12°09.9'	1°51.1'	S 22°20.4'	79°55.5'	S 1°25.6'
16	79°33.4'	S 7°27.7'	68°14.9'	S 12°10.1'	16°53.3'	S 22°20.4'	94°56.5'	S 1°26.3'
17	94°32.9'	S 7°28.9'	83°16.8'	S 12°10.2'	31°55.5'	S 22°20.4'	109°57.5'	S 1°26.9'
18	109°32.5'	S 7°30.1'	98°18.8'	S 12°10.4'	46°57.8'	S 22°20.4'	124°58.6'	S 1°27.5'
19	124°32.0'	S 7°31.2'	113°20.7'	S 12°10.6'	61°60.0'	S 22°20.4'	139°59.6'	S 1°28.2'
20	139°31.6'	S 7°32.4'	128°22.6'	S 12°10.8'	77°02.2'	S 22°20.5'	155°00.6'	S 1°28.8'
21	154°31.1'	S 7°33.6'	143°24.6'	S 12°11.0'	92°04.4'	S 22°20.5'	170°01.6'	S 1°29.4'
22	169°30.7'	S 7°34.8'	158°26.5'	S 12°11.2'	107°06.6'	S 22°20.5'	185°02.6'	S 1°30.0'
23	184°30.2'	S 7°36.0'	173°28.5'	S 12°11.3'	122°08.8'	S 22°20.5'	200°03.6'	S 1°30.7'

Thu Nov 2, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.6		Mars +1.8	
	v = -0.5' d = 1.2'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	199°29.8'	S 7°37.1'	188°30.4'	S 12°11.5'	137°11.0'	S 22°20.5'	215°04.7'	S 1°31.3'
1	214°29.3'	S 7°38.3'	203°32.3'	S 12°11.7'	152°13.2'	S 22°20.5'	230°05.7'	S 1°31.9'
2	229°28.9'	S 7°39.5'	218°34.3'	S 12°11.9'	167°15.4'	S 22°20.5'	245°06.7'	S 1°32.6'
3	244°28.4'	S 7°40.7'	233°36.2'	S 12°12.1'	182°17.6'	S 22°20.6'	260°07.7'	S 1°33.2'
4	259°28.0'	S 7°41.9'	248°38.2'	S 12°12.3'	197°19.9'	S 22°20.6'	275°08.7'	S 1°33.8'
5	274°27.5'	S 7°43.0'	263°40.1'	S 12°12.4'	212°22.1'	S 22°20.6'	290°09.7'	S 1°34.4'
6	289°27.0'	S 7°44.2'	278°42.0'	S 12°12.6'	227°24.3'	S 22°20.6'	305°10.8'	S 1°35.1'
7	304°26.6'	S 7°45.4'	293°44.0'	S 12°12.8'	242°26.5'	S 22°20.6'	320°11.8'	S 1°35.7'
8	319°26.1'	S 7°46.6'	308°45.9'	S 12°13.0'	257°28.7'	S 22°20.6'	335°12.8'	S 1°36.3'
9	334°25.7'	S 7°47.8'	323°47.9'	S 12°13.2'	272°30.9'	S 22°20.6'	350°13.8'	S 1°37.0'
10	349°25.2'	S 7°48.9'	338°49.8'	S 12°13.3'	287°33.1'	S 22°20.7'	5°14.8'	S 1°37.6'
11	4°24.8'	S 7°50.1'	353°51.7'	S 12°13.5'	302°35.3'	S 22°20.7'	20°15.8'	S 1°38.2'
12	19°24.3'	S 7°51.3'	8°53.7'	S 12°13.7'	317°37.5'	S 22°20.7'	35°16.9'	S 1°38.8'
13	34°23.8'	S 7°52.5'	23°55.6'	S 12°13.9'	332°39.7'	S 22°20.7'	50°17.9'	S 1°39.5'
14	49°23.4'	S 7°53.6'	38°57.5'	S 12°14.1'	347°41.9'	S 22°20.7'	65°18.9'	S 1°40.1'
15	64°22.9'	S 7°54.8'	53°59.5'	S 12°14.3'	2°44.1'	S 22°20.7'	80°19.9'	S 1°40.7'
16	79°22.5'	S 7°56.0'	69°01.4'	S 12°14.4'	17°46.4'	S 22°20.7'	95°20.9'	S 1°41.3'
17	94°22.0'	S 7°57.2'	84°03.4'	S 12°14.6'	32°48.6'	S 22°20.8'	110°21.9'	S 1°42.0'
18	109°21.6'	S 7°58.4'	99°05.3'	S 12°14.8'	47°50.8'	S 22°20.8'	125°23.0'	S 1°42.6'
19	124°21.1'	S 7°59.5'	114°07.2'	S 12°15.0'	62°53.0'	S 22°20.8'	140°24.0'	S 1°43.2'
20	139°20.6'	S 8°00.7'	129°09.2'	S 12°15.2'	77°55.2'	S 22°20.8'	155°25.0'	S 1°43.9'
21	154°20.2'	S 8°01.9'	144°11.1'	S 12°15.4'	92°57.4'	S 22°20.8'	170°26.0'	S 1°44.5'
22	169°19.7'	S 8°03.1'	159°13.1'	S 12°15.5'	107°59.6'	S 22°20.8'	185°27.0'	S 1°45.1'
23	184°19.3'	S 8°04.2'	174°15.0'	S 12°15.7'	123°01.8'	S 22°20.9'	200°28.0'	S 1°45.7'

Fri Nov 3, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.6		Mars +1.8	
	v = -0.5' d = 1.2'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	199°18.8'	S 8°05.4'	189°16.9'	S 12°15.9'	138°04.0'	S 22°20.9'	215°29.1'	S 1°46.4'
1	214°18.3'	S 8°06.6'	204°18.9'	S 12°16.1'	153°06.2'	S 22°20.9'	230°30.1'	S 1°47.0'
2	229°17.9'	S 8°07.7'	219°20.8'	S 12°16.3'	168°08.4'	S 22°20.9'	245°31.1'	S 1°47.6'
3	244°17.4'	S 8°08.9'	234°22.8'	S 12°16.4'	183°10.6'	S 22°20.9'	260°32.1'	S 1°48.2'
4	259°17.0'	S 8°10.1'	249°24.7'	S 12°16.6'	198°12.8'	S 22°20.9'	275°33.1'	S 1°48.9'
5	274°16.5'	S 8°11.3'	264°26.6'	S 12°16.8'	213°15.0'	S 22°20.9'	290°34.1'	S 1°49.5'
6	289°16.0'	S 8°12.4'	279°28.6'	S 12°17.0'	228°17.2'	S 22°21.0'	305°35.2'	S 1°50.1'
7	304°15.6'	S 8°13.6'	294°30.5'	S 12°17.2'	243°19.5'	S 22°21.0'	320°36.2'	S 1°50.8'
8	319°15.1'	S 8°14.8'	309°32.4'	S 12°17.4'	258°21.7'	S 22°21.0'	335°37.2'	S 1°51.4'
9	334°14.6'	S 8°16.0'	324°34.4'	S 12°17.5'	273°23.9'	S 22°21.0'	350°38.2'	S 1°52.0'
10	349°14.2'	S 8°17.1'	339°36.3'	S 12°17.7'	288°26.1'	S 22°21.0'	5°39.2'	S 1°52.6'
11	4°13.7'	S 8°18.3'	354°38.3'	S 12°17.9'	303°28.3'	S 22°21.0'	20°40.2'	S 1°53.3'
12	19°13.2'	S 8°19.5'	9°40.2'	S 12°18.1'	318°30.5'	S 22°21.0'	35°41.2'	S 1°53.9'
13	34°12.8'	S 8°20.6'	24°42.1'	S 12°18.3'	333°32.7'	S 22°21.1'	50°42.3'	S 1°54.5'
14	49°12.3'	S 8°21.8'	39°44.1'	S 12°18.4'	348°34.9'	S 22°21.1'	65°43.3'	S 1°55.1'
15	64°11.8'	S 8°23.0'	54°46.0'	S 12°18.6'	3°37.1'	S 22°21.1'	80°44.3'	S 1°55.8'
16	79°11.4'	S 8°24.1'	69°48.0'	S 12°18.8'	18°39.3'	S 22°21.1'	95°45.3'	S 1°56.4'
17	94°10.9'	S 8°25.3'	84°49.9'	S 12°19.0'	33°41.5'	S 22°21.1'	110°46.3'	S 1°57.0'
18	109°10.5'	S 8°26.5'	99°51.8'	S 12°19.2'	48°43.7'	S 22°21.1'	125°47.3'	S 1°57.7'
19	124°10.0'	S 8°27.6'	114°53.8'	S 12°19.4'	63°45.9'	S 22°21.1'	140°48.4'	S 1°58.3'
20	139°09.5'	S 8°28.8'	129°55.7'	S 12°19.5'	78°48.1'	S 22°21.2'	155°49.4'	S 1°58.9'
21	154°09.1'	S 8°30.0'	144°57.7'	S 12°19.7'	93°50.3'	S 22°21.2'	170°50.4'	S 1°59.5'
22	169°08.6'	S 8°31.2'	159°59.6'	S 12°19.9'	108°52.5'	S 22°21.2'	185°51.4'	S 2°00.2'
23	184°08.1'	S 8°32.3'	175°01.5'	S 12°20.1'	123°54.7'	S 22°21.2'	200°52.4'	S 2°00.8'

Sat Nov 4, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.8	
	v = -0.5' d = 1.2'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	199°07.6'	S 8°33.5'	190°03.5'	S 12°20.3'	138°56.9'	S 22°21.2'	215°53.4'	S 2°01.4'
1	214°07.2'	S 8°34.7'	205°05.4'	S 12°20.4'	153°59.1'	S 22°21.2'	230°54.5'	S 2°02.0'
2	229°06.7'	S 8°35.8'	220°07.3'	S 12°20.6'	169°01.3'	S 22°21.2'	245°55.5'	S 2°02.7'
3	244°06.2'	S 8°37.0'	235°09.3'	S 12°20.8'	184°03.6'	S 22°21.3'	260°56.5'	S 2°03.3'
4	259°05.8'	S 8°38.1'	250°11.2'	S 12°21.0'	199°05.8'	S 22°21.3'	275°57.5'	S 2°03.9'
5	274°05.3'	S 8°39.3'	265°13.2'	S 12°21.2'	214°08.0'	S 22°21.3'	290°58.5'	S 2°04.5'
6	289°04.8'	S 8°40.5'	280°15.1'	S 12°21.3'	229°10.2'	S 22°21.3'	305°59.5'	S 2°05.2'
7	304°04.4'	S 8°41.6'	295°17.0'	S 12°21.5'	244°12.4'	S 22°21.3'	321°00.6'	S 2°05.8'
8	319°03.9'	S 8°42.8'	310°19.0'	S 12°21.7'	259°14.6'	S 22°21.3'	336°01.6'	S 2°06.4'
9	334°03.4'	S 8°44.0'	325°20.9'	S 12°21.9'	274°16.8'	S 22°21.3'	351°02.6'	S 2°07.1'
10	349°02.9'	S 8°45.1'	340°22.9'	S 12°22.1'	289°19.0'	S 22°21.4'	6°03.6'	S 2°07.7'
11	4°02.5'	S 8°46.3'	355°24.8'	S 12°22.3'	304°21.2'	S 22°21.4'	21°04.6'	S 2°08.3'
12	19°02.0'	S 8°47.5'	10°26.7'	S 12°22.4'	319°23.4'	S 22°21.4'	36°05.6'	S 2°08.9'
13	34°01.5'	S 8°48.6'	25°28.7'	S 12°22.6'	334°25.6'	S 22°21.4'	51°06.6'	S 2°09.6'
14	49°01.1'	S 8°49.8'	40°30.6'	S 12°22.8'	349°27.8'	S 22°21.4'	66°07.7'	S 2°10.2'
15	64°00.6'	S 8°50.9'	55°32.6'	S 12°23.0'	4°30.0'	S 22°21.4'	81°08.7'	S 2°10.8'
16	79°00.1'	S 8°52.1'	70°34.5'	S 12°23.2'	19°32.2'	S 22°21.4'	96°09.7'	S 2°11.4'
17	93°59.6'	S 8°53.3'	85°36.4'	S 12°23.3'	34°34.4'	S 22°21.5'	111°10.7'	S 2°12.1'
18	108°59.2'	S 8°54.4'	100°38.4'	S 12°23.5'	49°36.6'	S 22°21.5'	126°11.7'	S 2°12.7'
19	123°58.7'	S 8°55.6'	115°40.3'	S 12°23.7'	64°38.8'	S 22°21.5'	141°12.7'	S 2°13.3'
20	138°58.2'	S 8°56.8'	130°42.2'	S 12°23.9'	79°41.0'	S 22°21.5'	156°13.8'	S 2°13.9'
21	153°57.7'	S 8°57.9'	145°44.2'	S 12°24.1'	94°43.2'	S 22°21.5'	171°14.8'	S 2°14.6'
22	168°57.3'	S 8°59.1'	160°46.1'	S 12°24.2'	109°45.4'	S 22°21.5'	186°15.8'	S 2°15.2'
23	183°56.8'	S 9°00.2'	175°48.1'	S 12°24.4'	124°47.6'	S 22°21.5'	201°16.8'	S 2°15.8'

Sun Nov 5, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.8	
	v = -0.5' d = 1.2'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	198°56.3'	S 9°01.4'	190°50.0'	S 12°24.6'	139°49.8'	S 22°21.6'	216°17.8'	S 2°16.4'
1	213°55.8'	S 9°02.5'	205°51.9'	S 12°24.8'	154°52.0'	S 22°21.6'	231°18.8'	S 2°17.1'
2	228°55.4'	S 9°03.7'	220°53.9'	S 12°25.0'	169°54.2'	S 22°21.6'	246°19.9'	S 2°17.7'
3	243°54.9'	S 9°04.9'	235°55.8'	S 12°25.1'	184°56.4'	S 22°21.6'	261°20.9'	S 2°18.3'
4	258°54.4'	S 9°06.0'	250°57.8'	S 12°25.3'	199°58.6'	S 22°21.6'	276°21.9'	S 2°18.9'
5	273°53.9'	S 9°07.2'	265°59.7'	S 12°25.5'	215°00.8'	S 22°21.6'	291°22.9'	S 2°19.6'
6	288°53.4'	S 9°08.3'	281°01.6'	S 12°25.7'	230°03.0'	S 22°21.6'	306°23.9'	S 2°20.2'
7	303°53.0'	S 9°09.5'	296°03.6'	S 12°25.9'	245°05.2'	S 22°21.7'	321°24.9'	S 2°20.8'
8	318°52.5'	S 9°10.6'	311°05.5'	S 12°26.0'	260°07.4'	S 22°21.7'	336°25.9'	S 2°21.5'
9	333°52.0'	S 9°11.8'	326°07.5'	S 12°26.2'	275°09.6'	S 22°21.7'	351°27.0'	S 2°22.1'
10	348°51.5'	S 9°13.0'	341°09.4'	S 12°26.4'	290°11.8'	S 22°21.7'	6°28.0'	S 2°22.7'
11	3°51.0'	S 9°14.1'	356°11.3'	S 12°26.6'	305°14.0'	S 22°21.7'	21°29.0'	S 2°23.3'
12	18°50.6'	S 9°15.3'	11°13.3'	S 12°26.8'	320°16.2'	S 22°21.7'	36°30.0'	S 2°24.0'
13	33°50.1'	S 9°16.4'	26°15.2'	S 12°27.0'	335°18.4'	S 22°21.7'	51°31.0'	S 2°24.6'
14	48°49.6'	S 9°17.6'	41°17.1'	S 12°27.1'	350°20.6'	S 22°21.8'	66°32.0'	S 2°25.2'
15	63°49.1'	S 9°18.7'	56°19.1'	S 12°27.3'	5°22.8'	S 22°21.8'	81°33.1'	S 2°25.8'
16	78°48.6'	S 9°19.9'	71°21.0'	S 12°27.5'	20°25.0'	S 22°21.8'	96°34.1'	S 2°26.5'
17	93°48.2'	S 9°21.0'	86°23.0'	S 12°27.7'	35°27.2'	S 22°21.8'	111°35.1'	S 2°27.1'
18	108°47.7'	S 9°22.2'	101°24.9'	S 12°27.9'	50°29.4'	S 22°21.8'	126°36.1'	S 2°27.7'
19	123°47.2'	S 9°23.3'	116°26.8'	S 12°28.0'	65°31.6'	S 22°21.8'	141°37.1'	S 2°28.3'
20	138°46.7'	S 9°24.5'	131°28.8'	S 12°28.2'	80°33.8'	S 22°21.8'	156°38.1'	S 2°29.0'
21	153°46.2'	S 9°25.6'	146°30.7'	S 12°28.4'	95°36.0'	S 22°21.9'	171°39.1'	S 2°29.6'
22	168°45.7'	S 9°26.8'	161°32.7'	S 12°28.6'	110°38.2'	S 22°21.9'	186°40.2'	S 2°30.2'
23	183°45.3'	S 9°27.9'	176°34.6'	S 12°28.8'	125°40.4'	S 22°21.9'	201°41.2'	S 2°30.8'

Mon Nov 6, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.8	
	v = -0.5' d = 1.1'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	198°44.8'	S 9°29.1'	191°36.5'	S 12°28.9'	140°42.6'	S 22°21.9'	216°42.2'	S 2°31.5'
1	213°44.3'	S 9°30.2'	206°38.5'	S 12°29.1'	155°44.8'	S 22°21.9'	231°43.2'	S 2°32.1'
2	228°43.8'	S 9°31.4'	221°40.4'	S 12°29.3'	170°47.0'	S 22°21.9'	246°44.2'	S 2°32.7'
3	243°43.3'	S 9°32.5'	236°42.4'	S 12°29.5'	185°49.2'	S 22°21.9'	261°45.2'	S 2°33.3'
4	258°42.8'	S 9°33.7'	251°44.3'	S 12°29.7'	200°51.4'	S 22°22.0'	276°46.2'	S 2°34.0'
5	273°42.3'	S 9°34.8'	266°46.2'	S 12°29.8'	215°53.6'	S 22°22.0'	291°47.3'	S 2°34.6'
6	288°41.9'	S 9°36.0'	281°48.2'	S 12°30.0'	230°55.8'	S 22°22.0'	306°48.3'	S 2°35.2'
7	303°41.4'	S 9°37.1'	296°50.1'	S 12°30.2'	245°58.0'	S 22°22.0'	321°49.3'	S 2°35.8'
8	318°40.9'	S 9°38.3'	311°52.0'	S 12°30.4'	261°00.2'	S 22°22.0'	336°50.3'	S 2°36.5'
9	333°40.4'	S 9°39.4'	326°54.0'	S 12°30.6'	276°02.4'	S 22°22.0'	351°51.3'	S 2°37.1'
10	348°39.9'	S 9°40.6'	341°55.9'	S 12°30.7'	291°04.6'	S 22°22.0'	6°52.3'	S 2°37.7'
11	3°39.4'	S 9°41.7'	356°57.9'	S 12°30.9'	306°06.8'	S 22°22.1'	21°53.4'	S 2°38.3'
12	18°38.9'	S 9°42.9'	11°59.8'	S 12°31.1'	321°09.0'	S 22°22.1'	36°54.4'	S 2°39.0'
13	33°38.4'	S 9°44.0'	27°01.7'	S 12°31.3'	336°11.2'	S 22°22.1'	51°55.4'	S 2°39.6'
14	48°37.9'	S 9°45.2'	42°03.7'	S 12°31.5'	351°13.4'	S 22°22.1'	66°56.4'	S 2°40.2'
15	63°37.5'	S 9°46.3'	57°05.6'	S 12°31.6'	6°15.6'	S 22°22.1'	81°57.4'	S 2°40.8'
16	78°37.0'	S 9°47.5'	72°07.6'	S 12°31.8'	21°17.8'	S 22°22.1'	96°58.4'	S 2°41.5'
17	93°36.5'	S 9°48.6'	87°09.5'	S 12°32.0'	36°20.0'	S 22°22.1'	111°59.4'	S 2°42.1'
18	108°36.0'	S 9°49.7'	102°11.4'	S 12°32.2'	51°22.2'	S 22°22.2'	127°00.5'	S 2°42.7'
19	123°35.5'	S 9°50.9'	117°13.4'	S 12°32.4'	66°24.4'	S 22°22.2'	142°01.5'	S 2°43.3'
20	138°35.0'	S 9°52.0'	132°15.3'	S 12°32.5'	81°26.6'	S 22°22.2'	157°02.5'	S 2°44.0'
21	153°34.5'	S 9°53.2'	147°17.3'	S 12°32.7'	96°28.8'	S 22°22.2'	172°03.5'	S 2°44.6'
22	168°34.0'	S 9°54.3'	162°19.2'	S 12°32.9'	111°31.0'	S 22°22.2'	187°04.5'	S 2°45.2'
23	183°33.5'	S 9°55.5'	177°21.1'	S 12°33.1'	126°33.2'	S 22°22.2'	202°05.5'	S 2°45.8'

Tue Nov 7, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.8	
	v = -0.5' d = 1.1'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	198°33.0'	S 9°56.6'	192°23.1'	S 12°33.2'	141°35.4'	S 22°22.2'	217°06.5'	S 2°46.5'
1	213°32.5'	S 9°57.7'	207°25.0'	S 12°33.4'	156°37.6'	S 22°22.3'	232°07.6'	S 2°47.1'
2	228°32.0'	S 9°58.9'	222°27.0'	S 12°33.6'	171°39.8'	S 22°22.3'	247°08.6'	S 2°47.7'
3	243°31.5'	S 10°00.0'	237°28.9'	S 12°33.8'	186°42.0'	S 22°22.3'	262°09.6'	S 2°48.3'
4	258°31.1'	S 10°01.2'	252°30.8'	S 12°34.0'	201°44.2'	S 22°22.3'	277°10.6'	S 2°48.9'
5	273°30.6'	S 10°02.3'	267°32.8'	S 12°34.1'	216°46.4'	S 22°22.3'	292°11.6'	S 2°49.6'
6	288°30.1'	S 10°03.4'	282°34.7'	S 12°34.3'	231°48.6'	S 22°22.3'	307°12.6'	S 2°50.2'
7	303°29.6'	S 10°04.6'	297°36.6'	S 12°34.5'	246°50.8'	S 22°22.3'	322°13.6'	S 2°50.8'
8	318°29.1'	S 10°05.7'	312°38.6'	S 12°34.7'	261°53.0'	S 22°22.4'	337°14.7'	S 2°51.4'
9	333°28.6'	S 10°06.8'	327°40.5'	S 12°34.9'	276°55.2'	S 22°22.4'	352°15.7'	S 2°52.1'
10	348°28.1'	S 10°08.0'	342°42.5'	S 12°35.0'	291°57.4'	S 22°22.4'	7°16.7'	S 2°52.7'
11	3°27.6'	S 10°09.1'	357°44.4'	S 12°35.2'	306°59.6'	S 22°22.4'	22°17.7'	S 2°53.3'
12	18°27.1'	S 10°10.3'	12°46.3'	S 12°35.4'	322°01.8'	S 22°22.4'	37°18.7'	S 2°53.9'
13	33°26.6'	S 10°11.4'	27°48.3'	S 12°35.6'	337°03.9'	S 22°22.4'	52°19.7'	S 2°54.6'
14	48°26.1'	S 10°12.5'	42°50.2'	S 12°35.8'	352°06.1'	S 22°22.4'	67°20.7'	S 2°55.2'
15	63°25.6'	S 10°13.7'	57°52.2'	S 12°35.9'	7°08.3'	S 22°22.5'	82°21.8'	S 2°55.8'
16	78°25.1'	S 10°14.8'	72°54.1'	S 12°36.1'	22°10.5'	S 22°22.5'	97°22.8'	S 2°56.4'
17	93°24.6'	S 10°15.9'	87°56.0'	S 12°36.3'	37°12.7'	S 22°22.5'	112°23.8'	S 2°57.1'
18	108°24.1'	S 10°17.1'	102°58.0'	S 12°36.5'	52°14.9'	S 22°22.5'	127°24.8'	S 2°57.7'
19	123°23.6'	S 10°18.2'	117°59.9'	S 12°36.7'	67°17.1'	S 22°22.5'	142°25.8'	S 2°58.3'
20	138°23.1'	S 10°19.3'	133°01.9'	S 12°36.8'	82°19.3'	S 22°22.5'	157°26.8'	S 2°58.9'
21	153°22.6'	S 10°20.5'	148°03.8'	S 12°37.0'	97°21.5'	S 22°22.5'	172°27.8'	S 2°59.6'
22	168°22.1'	S 10°21.6'	163°05.7'	S 12°37.2'	112°23.7'	S 22°22.6'	187°28.8'	S 3°00.2'
23	183°21.6'	S 10°22.7'	178°07.7'	S 12°37.4'	127°25.9'	S 22°22.6'	202°29.9'	S 3°00.8'

Wed Nov 8, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.8	
	v = -0.5' d = 1.1'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	198°21.1'	S 10°23.9'	193°09.6'	S 12°37.5'	142°28.1'	S 22°22.6'	217°30.9'	S 3°01.4'
1	213°20.6'	S 10°25.0'	208°11.6'	S 12°37.7'	157°30.3'	S 22°22.6'	232°31.9'	S 3°02.0'
2	228°20.1'	S 10°26.1'	223°13.5'	S 12°37.9'	172°32.5'	S 22°22.6'	247°32.9'	S 3°02.7'
3	243°19.6'	S 10°27.3'	238°15.4'	S 12°38.1'	187°34.7'	S 22°22.6'	262°33.9'	S 3°03.3'
4	258°19.1'	S 10°28.4'	253°17.4'	S 12°38.3'	202°36.9'	S 22°22.6'	277°34.9'	S 3°03.9'
5	273°18.6'	S 10°29.5'	268°19.3'	S 12°38.4'	217°39.1'	S 22°22.7'	292°35.9'	S 3°04.5'
6	288°18.0'	S 10°30.7'	283°21.3'	S 12°38.6'	232°41.3'	S 22°22.7'	307°37.0'	S 3°05.2'
7	303°17.5'	S 10°31.8'	298°23.2'	S 12°38.8'	247°43.5'	S 22°22.7'	322°38.0'	S 3°05.8'
8	318°17.0'	S 10°32.9'	313°25.1'	S 12°39.0'	262°45.7'	S 22°22.7'	337°39.0'	S 3°06.4'
9	333°16.5'	S 10°34.0'	328°27.1'	S 12°39.2'	277°47.9'	S 22°22.7'	352°40.0'	S 3°07.0'
10	348°16.0'	S 10°35.2'	343°29.0'	S 12°39.3'	292°50.0'	S 22°22.7'	7°41.0'	S 3°07.7'
11	3°15.5'	S 10°36.3'	358°30.9'	S 12°39.5'	307°52.2'	S 22°22.7'	22°42.0'	S 3°08.3'
12	18°15.0'	S 10°37.4'	13°32.9'	S 12°39.7'	322°54.4'	S 22°22.7'	37°43.0'	S 3°08.9'
13	33°14.5'	S 10°38.5'	28°34.8'	S 12°39.9'	337°56.6'	S 22°22.8'	52°44.1'	S 3°09.5'
14	48°14.0'	S 10°39.7'	43°36.8'	S 12°40.0'	352°58.8'	S 22°22.8'	67°45.1'	S 3°10.1'
15	63°13.5'	S 10°40.8'	58°38.7'	S 12°40.2'	8°01.0'	S 22°22.8'	82°46.1'	S 3°10.8'
16	78°13.0'	S 10°41.9'	73°40.6'	S 12°40.4'	23°03.2'	S 22°22.8'	97°47.1'	S 3°11.4'
17	93°12.5'	S 10°43.1'	88°42.6'	S 12°40.6'	38°05.4'	S 22°22.8'	112°48.1'	S 3°12.0'
18	108°12.0'	S 10°44.2'	103°44.5'	S 12°40.8'	53°07.6'	S 22°22.8'	127°49.1'	S 3°12.6'
19	123°11.4'	S 10°45.3'	118°46.5'	S 12°40.9'	68°09.8'	S 22°22.8'	142°50.1'	S 3°13.3'
20	138°10.9'	S 10°46.4'	133°48.4'	S 12°41.1'	83°12.0'	S 22°22.9'	157°51.1'	S 3°13.9'
21	153°10.4'	S 10°47.5'	148°50.3'	S 12°41.3'	98°14.2'	S 22°22.9'	172°52.2'	S 3°14.5'
22	168°09.9'	S 10°48.7'	163°52.3'	S 12°41.5'	113°16.4'	S 22°22.9'	187°53.2'	S 3°15.1'
23	183°09.4'	S 10°49.8'	178°54.2'	S 12°41.7'	128°18.6'	S 22°22.9'	202°54.2'	S 3°15.7'

Thu Nov 9, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.8	
	v = -0.5' d = 1.1'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	198°08.9'	S 10°50.9'	193°56.2'	S 12°41.8'	143°20.8'	S 22°22.9'	217°55.2'	S 3°16.4'
1	213°08.4'	S 10°52.0'	208°58.1'	S 12°42.0'	158°22.9'	S 22°22.9'	232°56.2'	S 3°17.0'
2	228°07.9'	S 10°53.2'	224°00.0'	S 12°42.2'	173°25.1'	S 22°22.9'	247°57.2'	S 3°17.6'
3	243°07.4'	S 10°54.3'	239°02.0'	S 12°42.4'	188°27.3'	S 22°23.0'	262°58.2'	S 3°18.2'
4	258°06.8'	S 10°55.4'	254°03.9'	S 12°42.5'	203°29.5'	S 22°23.0'	277°59.2'	S 3°18.9'
5	273°06.3'	S 10°56.5'	269°05.9'	S 12°42.7'	218°31.7'	S 22°23.0'	293°00.3'	S 3°19.5'
6	288°05.8'	S 10°57.6'	284°07.8'	S 12°42.9'	233°33.9'	S 22°23.0'	308°01.3'	S 3°20.1'
7	303°05.3'	S 10°58.8'	299°09.7'	S 12°43.1'	248°36.1'	S 22°23.0'	323°02.3'	S 3°20.7'
8	318°04.8'	S 10°59.9'	314°11.7'	S 12°43.3'	263°38.3'	S 22°23.0'	338°03.3'	S 3°21.3'
9	333°04.3'	S 11°01.0'	329°13.6'	S 12°43.4'	278°40.5'	S 22°23.0'	353°04.3'	S 3°22.0'
10	348°03.8'	S 11°02.1'	344°15.6'	S 12°43.6'	293°42.7'	S 22°23.1'	8°05.3'	S 3°22.6'
11	3°03.2'	S 11°03.2'	359°17.5'	S 12°43.8'	308°44.9'	S 22°23.1'	23°06.3'	S 3°23.2'
12	18°02.7'	S 11°04.3'	14°19.4'	S 12°44.0'	323°47.1'	S 22°23.1'	38°07.3'	S 3°23.8'
13	33°02.2'	S 11°05.5'	29°21.4'	S 12°44.1'	338°49.2'	S 22°23.1'	53°08.4'	S 3°24.5'
14	48°01.7'	S 11°06.6'	44°23.3'	S 12°44.3'	353°51.4'	S 22°23.1'	68°09.4'	S 3°25.1'
15	63°01.2'	S 11°07.7'	59°25.3'	S 12°44.5'	8°53.6'	S 22°23.1'	83°10.4'	S 3°25.7'
16	78°00.6'	S 11°08.8'	74°27.2'	S 12°44.7'	23°55.8'	S 22°23.1'	98°11.4'	S 3°26.3'
17	93°00.1'	S 11°09.9'	89°29.1'	S 12°44.9'	38°58.0'	S 22°23.1'	113°12.4'	S 3°26.9'
18	107°59.6'	S 11°11.0'	104°31.1'	S 12°45.0'	54°00.2'	S 22°23.2'	128°13.4'	S 3°27.6'
19	122°59.1'	S 11°12.1'	119°33.0'	S 12°45.2'	69°02.4'	S 22°23.2'	143°14.4'	S 3°28.2'
20	137°58.6'	S 11°13.3'	134°35.0'	S 12°45.4'	84°04.6'	S 22°23.2'	158°15.4'	S 3°28.8'
21	152°58.0'	S 11°14.4'	149°36.9'	S 12°45.6'	99°06.8'	S 22°23.2'	173°16.5'	S 3°29.4'
22	167°57.5'	S 11°15.5'	164°38.8'	S 12°45.7'	114°09.0'	S 22°23.2'	188°17.5'	S 3°30.0'
23	182°57.0'	S 11°16.6'	179°40.8'	S 12°45.9'	129°11.2'	S 22°23.2'	203°18.5'	S 3°30.7'

Fri Nov 10, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.8	
	v = -0.5' d = 1.1'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	197°56.5'	S 11°17.7'	194°42.7'	S 12°46.1'	144°13.4'	S 22°23.2'	218°19.5'	S 3°31.3'
1	212°56.0'	S 11°18.8'	209°44.7'	S 12°46.3'	159°15.5'	S 22°23.3'	233°20.5'	S 3°31.9'
2	227°55.4'	S 11°19.9'	224°46.6'	S 12°46.4'	174°17.7'	S 22°23.3'	248°21.5'	S 3°32.5'
3	242°54.9'	S 11°21.0'	239°48.5'	S 12°46.6'	189°19.9'	S 22°23.3'	263°22.5'	S 3°33.2'
4	257°54.4'	S 11°22.1'	254°50.5'	S 12°46.8'	204°22.1'	S 22°23.3'	278°23.5'	S 3°33.8'
5	272°53.9'	S 11°23.3'	269°52.4'	S 12°47.0'	219°24.3'	S 22°23.3'	293°24.6'	S 3°34.4'
6	287°53.3'	S 11°24.4'	284°54.4'	S 12°47.2'	234°26.5'	S 22°23.3'	308°25.6'	S 3°35.0'
7	302°52.8'	S 11°25.5'	299°56.3'	S 12°47.3'	249°28.7'	S 22°23.3'	323°26.6'	S 3°35.6'
8	317°52.3'	S 11°26.6'	314°58.2'	S 12°47.5'	264°30.9'	S 22°23.4'	338°27.6'	S 3°36.3'
9	332°51.8'	S 11°27.7'	330°00.2'	S 12°47.7'	279°33.1'	S 22°23.4'	353°28.6'	S 3°36.9'
10	347°51.2'	S 11°28.8'	345°02.1'	S 12°47.9'	294°35.3'	S 22°23.4'	8°29.6'	S 3°37.5'
11	2°50.7'	S 11°29.9'	0°04.1'	S 12°48.0'	309°37.4'	S 22°23.4'	23°30.6'	S 3°38.1'
12	17°50.2'	S 11°31.0'	15°06.0'	S 12°48.2'	324°39.6'	S 22°23.4'	38°31.6'	S 3°38.7'
13	32°49.7'	S 11°32.1'	30°07.9'	S 12°48.4'	339°41.8'	S 22°23.4'	53°32.7'	S 3°39.4'
14	47°49.1'	S 11°33.2'	45°09.9'	S 12°48.6'	354°44.0'	S 22°23.4'	68°33.7'	S 3°40.0'
15	62°48.6'	S 11°34.3'	60°11.8'	S 12°48.7'	9°46.2'	S 22°23.4'	83°34.7'	S 3°40.6'
16	77°48.1'	S 11°35.4'	75°13.8'	S 12°48.9'	24°48.4'	S 22°23.5'	98°35.7'	S 3°41.2'
17	92°47.6'	S 11°36.5'	90°15.7'	S 12°49.1'	39°50.6'	S 22°23.5'	113°36.7'	S 3°41.8'
18	107°47.0'	S 11°37.6'	105°17.6'	S 12°49.3'	54°52.8'	S 22°23.5'	128°37.7'	S 3°42.5'
19	122°46.5'	S 11°38.7'	120°19.6'	S 12°49.5'	69°55.0'	S 22°23.5'	143°38.7'	S 3°43.1'
20	137°46.0'	S 11°39.8'	135°21.5'	S 12°49.6'	84°57.1'	S 22°23.5'	158°39.7'	S 3°43.7'
21	152°45.4'	S 11°40.9'	150°23.5'	S 12°49.8'	99°59.3'	S 22°23.5'	173°40.7'	S 3°44.3'
22	167°44.9'	S 11°42.0'	165°25.4'	S 12°50.0'	115°01.5'	S 22°23.5'	188°41.8'	S 3°44.9'
23	182°44.4'	S 11°43.1'	180°27.3'	S 12°50.2'	130°03.7'	S 22°23.6'	203°42.8'	S 3°45.6'

Sat Nov 11, 2017 UTC

UTC	Venus -3.8 v = -0.5' d = 1.1'		Jupiter -1.5 v = 1.9' d = 0.2'		Saturn +0.5 v = 2.2' d = 0.0'		Mars +1.8 v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	197°43.8'	S 11°44.2'	195°29.3'	S 12°50.3'	145°05.9'	S 22°23.6'	218°43.8'	S 3°46.2'
1	212°43.3'	S 11°45.3'	210°31.2'	S 12°50.5'	160°08.1'	S 22°23.6'	233°44.8'	S 3°46.8'
2	227°42.8'	S 11°46.4'	225°33.2'	S 12°50.7'	175°10.3'	S 22°23.6'	248°45.8'	S 3°47.4'
3	242°42.2'	S 11°47.5'	240°35.1'	S 12°50.9'	190°12.5'	S 22°23.6'	263°46.8'	S 3°48.0'
4	257°41.7'	S 11°48.6'	255°37.0'	S 12°51.0'	205°14.7'	S 22°23.6'	278°47.8'	S 3°48.7'
5	272°41.2'	S 11°49.7'	270°39.0'	S 12°51.2'	220°16.8'	S 22°23.6'	293°48.8'	S 3°49.3'
6	287°40.6'	S 11°50.8'	285°40.9'	S 12°51.4'	235°19.0'	S 22°23.6'	308°49.8'	S 3°49.9'
7	302°40.1'	S 11°51.9'	300°42.9'	S 12°51.6'	250°21.2'	S 22°23.7'	323°50.9'	S 3°50.5'
8	317°39.6'	S 11°53.0'	315°44.8'	S 12°51.7'	265°23.4'	S 22°23.7'	338°51.9'	S 3°51.1'
9	332°39.0'	S 11°54.1'	330°46.7'	S 12°51.9'	280°25.6'	S 22°23.7'	353°52.9'	S 3°51.8'
10	347°38.5'	S 11°55.2'	345°48.7'	S 12°52.1'	295°27.8'	S 22°23.7'	8°53.9'	S 3°52.4'
11	2°38.0'	S 11°56.3'	0°50.6'	S 12°52.3'	310°30.0'	S 22°23.7'	23°54.9'	S 3°53.0'
12	17°37.4'	S 11°57.4'	15°52.6'	S 12°52.5'	325°32.2'	S 22°23.7'	38°55.9'	S 3°53.6'
13	32°36.9'	S 11°58.5'	30°54.5'	S 12°52.6'	340°34.3'	S 22°23.7'	53°56.9'	S 3°54.2'
14	47°36.4'	S 11°59.6'	45°56.4'	S 12°52.8'	355°36.5'	S 22°23.8'	68°57.9'	S 3°54.9'
15	62°35.8'	S 12°00.7'	60°58.4'	S 12°53.0'	10°38.7'	S 22°23.8'	83°58.9'	S 3°55.5'
16	77°35.3'	S 12°01.8'	76°00.3'	S 12°53.2'	25°40.9'	S 22°23.8'	98°60.0'	S 3°56.1'
17	92°34.7'	S 12°02.9'	91°02.3'	S 12°53.3'	40°43.1'	S 22°23.8'	114°01.0'	S 3°56.7'
18	107°34.2'	S 12°04.0'	106°04.2'	S 12°53.5'	55°45.3'	S 22°23.8'	129°02.0'	S 3°57.3'
19	122°33.7'	S 12°05.1'	121°06.1'	S 12°53.7'	70°47.5'	S 22°23.8'	144°03.0'	S 3°58.0'
20	137°33.1'	S 12°06.1'	136°08.1'	S 12°53.9'	85°49.6'	S 22°23.8'	159°04.0'	S 3°58.6'
21	152°32.6'	S 12°07.2'	151°10.0'	S 12°54.0'	100°51.8'	S 22°23.8'	174°05.0'	S 3°59.2'
22	167°32.0'	S 12°08.3'	166°12.0'	S 12°54.2'	115°54.0'	S 22°23.9'	189°06.0'	S 3°59.8'
23	182°31.5'	S 12°09.4'	181°13.9'	S 12°54.4'	130°56.2'	S 22°23.9'	204°07.0'	S 4°00.4'

Sun Nov 12, 2017 UTC

UTC	Venus -3.8 v = -0.5' d = 1.1'		Jupiter -1.5 v = 1.9' d = 0.2'		Saturn +0.5 v = 2.2' d = 0.0'		Mars +1.8 v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	197°30.9'	S 12°10.5'	196°15.8'	S 12°54.6'	145°58.4'	S 22°23.9'	219°08.0'	S 4°01.0'
1	212°30.4'	S 12°11.6'	211°17.8'	S 12°54.7'	161°00.6'	S 22°23.9'	234°09.0'	S 4°01.7'
2	227°29.9'	S 12°12.7'	226°19.7'	S 12°54.9'	176°02.8'	S 22°23.9'	249°10.1'	S 4°02.3'
3	242°29.3'	S 12°13.8'	241°21.7'	S 12°55.1'	191°05.0'	S 22°23.9'	264°11.1'	S 4°02.9'
4	257°28.8'	S 12°14.8'	256°23.6'	S 12°55.3'	206°07.1'	S 22°23.9'	279°12.1'	S 4°03.5'
5	272°28.2'	S 12°15.9'	271°25.6'	S 12°55.4'	221°09.3'	S 22°24.0'	294°13.1'	S 4°04.1'
6	287°27.7'	S 12°17.0'	286°27.5'	S 12°55.6'	236°11.5'	S 22°24.0'	309°14.1'	S 4°04.8'
7	302°27.1'	S 12°18.1'	301°29.4'	S 12°55.8'	251°13.7'	S 22°24.0'	324°15.1'	S 4°05.4'
8	317°26.6'	S 12°19.2'	316°31.4'	S 12°56.0'	266°15.9'	S 22°24.0'	339°16.1'	S 4°06.0'
9	332°26.1'	S 12°20.3'	331°33.3'	S 12°56.1'	281°18.1'	S 22°24.0'	354°17.1'	S 4°06.6'
10	347°25.5'	S 12°21.4'	346°35.3'	S 12°56.3'	296°20.3'	S 22°24.0'	9°18.1'	S 4°07.2'
11	2°25.0'	S 12°22.4'	1°37.2'	S 12°56.5'	311°22.4'	S 22°24.0'	24°19.2'	S 4°07.9'
12	17°24.4'	S 12°23.5'	16°39.1'	S 12°56.7'	326°24.6'	S 22°24.0'	39°20.2'	S 4°08.5'
13	32°23.9'	S 12°24.6'	31°41.1'	S 12°56.8'	341°26.8'	S 22°24.1'	54°21.2'	S 4°09.1'
14	47°23.3'	S 12°25.7'	46°43.0'	S 12°57.0'	356°29.0'	S 22°24.1'	69°22.2'	S 4°09.7'
15	62°22.8'	S 12°26.8'	61°45.0'	S 12°57.2'	11°31.2'	S 22°24.1'	84°23.2'	S 4°10.3'
16	77°22.2'	S 12°27.8'	76°46.9'	S 12°57.4'	26°33.4'	S 22°24.1'	99°24.2'	S 4°10.9'
17	92°21.7'	S 12°28.9'	91°48.8'	S 12°57.5'	41°35.5'	S 22°24.1'	114°25.2'	S 4°11.6'
18	107°21.1'	S 12°30.0'	106°50.8'	S 12°57.7'	56°37.7'	S 22°24.1'	129°26.2'	S 4°12.2'
19	122°20.6'	S 12°31.1'	121°52.7'	S 12°57.9'	71°39.9'	S 22°24.1'	144°27.2'	S 4°12.8'
20	137°20.0'	S 12°32.2'	136°54.7'	S 12°58.1'	86°42.1'	S 22°24.1'	159°28.2'	S 4°13.4'
21	152°19.5'	S 12°33.2'	151°56.6'	S 12°58.2'	101°44.3'	S 22°24.2'	174°29.3'	S 4°14.0'
22	167°18.9'	S 12°34.3'	166°58.5'	S 12°58.4'	116°46.5'	S 22°24.2'	189°30.3'	S 4°14.7'
23	182°18.4'	S 12°35.4'	182°00.5'	S 12°58.6'	131°48.7'	S 22°24.2'	204°31.3'	S 4°15.3'

Mon Nov 13, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.8	
	v = -0.6' d = 1.1'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	197°17.8'	S 12°36.5'	197°02.4'	S 12°58.8'	146°50.8'	S 22°24.2'	219°32.3'	S 4°15.9'
1	212°17.3'	S 12°37.5'	212°04.4'	S 12°58.9'	161°53.0'	S 22°24.2'	234°33.3'	S 4°16.5'
2	227°16.7'	S 12°38.6'	227°06.3'	S 12°59.1'	176°55.2'	S 22°24.2'	249°34.3'	S 4°17.1'
3	242°16.1'	S 12°39.7'	242°08.3'	S 12°59.3'	191°57.4'	S 22°24.2'	264°35.3'	S 4°17.7'
4	257°15.6'	S 12°40.8'	257°10.2'	S 12°59.5'	206°59.6'	S 22°24.3'	279°36.3'	S 4°18.4'
5	272°15.0'	S 12°41.8'	272°12.1'	S 12°59.6'	222°01.8'	S 22°24.3'	294°37.3'	S 4°19.0'
6	287°14.5'	S 12°42.9'	287°14.1'	S 12°59.8'	237°03.9'	S 22°24.3'	309°38.3'	S 4°19.6'
7	302°13.9'	S 12°44.0'	302°16.0'	S 12°60.0'	252°06.1'	S 22°24.3'	324°39.3'	S 4°20.2'
8	317°13.4'	S 12°45.1'	317°18.0'	S 13°00.2'	267°08.3'	S 22°24.3'	339°40.4'	S 4°20.8'
9	332°12.8'	S 12°46.1'	332°19.9'	S 13°00.3'	282°10.5'	S 22°24.3'	354°41.4'	S 4°21.4'
10	347°12.3'	S 12°47.2'	347°21.8'	S 13°00.5'	297°12.7'	S 22°24.3'	9°42.4'	S 4°22.1'
11	2°11.7'	S 12°48.3'	2°23.8'	S 13°00.7'	312°14.9'	S 22°24.3'	24°43.4'	S 4°22.7'
12	17°11.1'	S 12°49.3'	17°25.7'	S 13°00.9'	327°17.0'	S 22°24.4'	39°44.4'	S 4°23.3'
13	32°10.6'	S 12°50.4'	32°27.7'	S 13°01.0'	342°19.2'	S 22°24.4'	54°45.4'	S 4°23.9'
14	47°10.0'	S 12°51.5'	47°29.6'	S 13°01.2'	357°21.4'	S 22°24.4'	69°46.4'	S 4°24.5'
15	62°09.5'	S 12°52.6'	62°31.5'	S 13°01.4'	12°23.6'	S 22°24.4'	84°47.4'	S 4°25.1'
16	77°08.9'	S 12°53.6'	77°33.5'	S 13°01.6'	27°25.8'	S 22°24.4'	99°48.4'	S 4°25.8'
17	92°08.3'	S 12°54.7'	92°35.4'	S 13°01.7'	42°28.0'	S 22°24.4'	114°49.4'	S 4°26.4'
18	107°07.8'	S 12°55.8'	107°37.4'	S 13°01.9'	57°30.1'	S 22°24.4'	129°50.4'	S 4°27.0'
19	122°07.2'	S 12°56.8'	122°39.3'	S 13°02.1'	72°32.3'	S 22°24.4'	144°51.5'	S 4°27.6'
20	137°06.7'	S 12°57.9'	137°41.3'	S 13°02.3'	87°34.5'	S 22°24.5'	159°52.5'	S 4°28.2'
21	152°06.1'	S 12°58.9'	152°43.2'	S 13°02.4'	102°36.7'	S 22°24.5'	174°53.5'	S 4°28.8'
22	167°05.5'	S 13°00.0'	167°45.1'	S 13°02.6'	117°38.9'	S 22°24.5'	189°54.5'	S 4°29.5'
23	182°05.0'	S 13°01.1'	182°47.1'	S 13°02.8'	132°41.1'	S 22°24.5'	204°55.5'	S 4°30.1'

Tue Nov 14, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.8	
	v = -0.6' d = 1.1'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	197°04.4'	S 13°02.1'	197°49.0'	S 13°03.0'	147°43.2'	S 22°24.5'	219°56.5'	S 4°30.7'
1	212°03.8'	S 13°03.2'	212°51.0'	S 13°03.1'	162°45.4'	S 22°24.5'	234°57.5'	S 4°31.3'
2	227°03.3'	S 13°04.3'	227°52.9'	S 13°03.3'	177°47.6'	S 22°24.5'	249°58.5'	S 4°31.9'
3	242°02.7'	S 13°05.3'	242°54.8'	S 13°03.5'	192°49.8'	S 22°24.5'	264°59.5'	S 4°32.5'
4	257°02.2'	S 13°06.4'	257°56.8'	S 13°03.7'	207°52.0'	S 22°24.6'	280°00.5'	S 4°33.2'
5	272°01.6'	S 13°07.4'	272°58.7'	S 13°03.8'	222°54.1'	S 22°24.6'	295°01.5'	S 4°33.8'
6	287°01.0'	S 13°08.5'	288°00.7'	S 13°04.0'	237°56.3'	S 22°24.6'	310°02.6'	S 4°34.4'
7	302°00.5'	S 13°09.6'	303°02.6'	S 13°04.2'	252°58.5'	S 22°24.6'	325°03.6'	S 4°35.0'
8	316°59.9'	S 13°10.6'	318°04.6'	S 13°04.4'	268°00.7'	S 22°24.6'	340°04.6'	S 4°35.6'
9	331°59.3'	S 13°11.7'	333°06.5'	S 13°04.5'	283°02.9'	S 22°24.6'	355°05.6'	S 4°36.2'
10	346°58.8'	S 13°12.7'	348°08.4'	S 13°04.7'	298°05.1'	S 22°24.6'	10°06.6'	S 4°36.8'
11	1°58.2'	S 13°13.8'	3°10.4'	S 13°04.9'	313°07.2'	S 22°24.7'	25°07.6'	S 4°37.5'
12	16°57.6'	S 13°14.9'	18°12.3'	S 13°05.1'	328°09.4'	S 22°24.7'	40°08.6'	S 4°38.1'
13	31°57.0'	S 13°15.9'	33°14.3'	S 13°05.2'	343°11.6'	S 22°24.7'	55°09.6'	S 4°38.7'
14	46°56.5'	S 13°17.0'	48°16.2'	S 13°05.4'	358°13.8'	S 22°24.7'	70°10.6'	S 4°39.3'
15	61°55.9'	S 13°18.0'	63°18.1'	S 13°05.6'	13°16.0'	S 22°24.7'	85°11.6'	S 4°39.9'
16	76°55.3'	S 13°19.1'	78°20.1'	S 13°05.7'	28°18.1'	S 22°24.7'	100°12.6'	S 4°40.5'
17	91°54.8'	S 13°20.1'	93°22.0'	S 13°05.9'	43°20.3'	S 22°24.7'	115°13.6'	S 4°41.2'
18	106°54.2'	S 13°21.2'	108°24.0'	S 13°06.1'	58°22.5'	S 22°24.7'	130°14.6'	S 4°41.8'
19	121°53.6'	S 13°22.2'	123°25.9'	S 13°06.3'	73°24.7'	S 22°24.8'	145°15.7'	S 4°42.4'
20	136°53.0'	S 13°23.3'	138°27.9'	S 13°06.4'	88°26.9'	S 22°24.8'	160°16.7'	S 4°43.0'
21	151°52.5'	S 13°24.3'	153°29.8'	S 13°06.6'	103°29.0'	S 22°24.8'	175°17.7'	S 4°43.6'
22	166°51.9'	S 13°25.4'	168°31.7'	S 13°06.8'	118°31.2'	S 22°24.8'	190°18.7'	S 4°44.2'
23	181°51.3'	S 13°26.4'	183°33.7'	S 13°07.0'	133°33.4'	S 22°24.8'	205°19.7'	S 4°44.8'

Wed Nov 15, 2017 UTC

UTC	Venus -3.8 v = -0.6' d = 1.0'		Jupiter -1.5 v = 1.9' d = 0.2'		Saturn +0.5 v = 2.2' d = 0.0'		Mars +1.8 v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	196°50.7'	S 13°27.5'	198°35.6'	S 13°07.1'	148°35.6'	S 22°24.8'	220°20.7'	S 4°45.5'
1	211°50.2'	S 13°28.5'	213°37.6'	S 13°07.3'	163°37.8'	S 22°24.8'	235°21.7'	S 4°46.1'
2	226°49.6'	S 13°29.6'	228°39.5'	S 13°07.5'	178°40.0'	S 22°24.8'	250°22.7'	S 4°46.7'
3	241°49.0'	S 13°30.6'	243°41.5'	S 13°07.7'	193°42.1'	S 22°24.9'	265°23.7'	S 4°47.3'
4	256°48.4'	S 13°31.7'	258°43.4'	S 13°07.8'	208°44.3'	S 22°24.9'	280°24.7'	S 4°47.9'
5	271°47.9'	S 13°32.7'	273°45.3'	S 13°08.0'	223°46.5'	S 22°24.9'	295°25.7'	S 4°48.5'
6	286°47.3'	S 13°33.8'	288°47.3'	S 13°08.2'	238°48.7'	S 22°24.9'	310°26.7'	S 4°49.1'
7	301°46.7'	S 13°34.8'	303°49.2'	S 13°08.3'	253°50.8'	S 22°24.9'	325°27.8'	S 4°49.8'
8	316°46.1'	S 13°35.9'	318°51.2'	S 13°08.5'	268°53.0'	S 22°24.9'	340°28.8'	S 4°50.4'
9	331°45.6'	S 13°36.9'	333°53.1'	S 13°08.7'	283°55.2'	S 22°24.9'	355°29.8'	S 4°51.0'
10	346°45.0'	S 13°38.0'	348°55.0'	S 13°08.9'	298°57.4'	S 22°24.9'	10°30.8'	S 4°51.6'
11	1°44.4'	S 13°39.0'	3°57.0'	S 13°09.0'	313°59.6'	S 22°25.0'	25°31.8'	S 4°52.2'
12	16°43.8'	S 13°40.0'	18°58.9'	S 13°09.2'	329°01.7'	S 22°25.0'	40°32.8'	S 4°52.8'
13	31°43.2'	S 13°41.1'	34°00.9'	S 13°09.4'	344°03.9'	S 22°25.0'	55°33.8'	S 4°53.4'
14	46°42.7'	S 13°42.1'	49°02.8'	S 13°09.6'	359°06.1'	S 22°25.0'	70°34.8'	S 4°54.1'
15	61°42.1'	S 13°43.2'	64°04.8'	S 13°09.7'	14°08.3'	S 22°25.0'	85°35.8'	S 4°54.7'
16	76°41.5'	S 13°44.2'	79°06.7'	S 13°09.9'	29°10.5'	S 22°25.0'	100°36.8'	S 4°55.3'
17	91°40.9'	S 13°45.3'	94°08.6'	S 13°10.1'	44°12.6'	S 22°25.0'	115°37.8'	S 4°55.9'
18	106°40.3'	S 13°46.3'	109°10.6'	S 13°10.2'	59°14.8'	S 22°25.0'	130°38.8'	S 4°56.5'
19	121°39.7'	S 13°47.3'	124°12.5'	S 13°10.4'	74°17.0'	S 22°25.1'	145°39.8'	S 4°57.1'
20	136°39.2'	S 13°48.4'	139°14.5'	S 13°10.6'	89°19.2'	S 22°25.1'	160°40.8'	S 4°57.7'
21	151°38.6'	S 13°49.4'	154°16.4'	S 13°10.8'	104°21.4'	S 22°25.1'	175°41.9'	S 4°58.4'
22	166°38.0'	S 13°50.4'	169°18.4'	S 13°10.9'	119°23.5'	S 22°25.1'	190°42.9'	S 4°59.0'
23	181°37.4'	S 13°51.5'	184°20.3'	S 13°11.1'	134°25.7'	S 22°25.1'	205°43.9'	S 4°59.6'

Thu Nov 16, 2017 UTC

UTC	Venus -3.8 v = -0.6' d = 1.0'		Jupiter -1.5 v = 1.9' d = 0.2'		Saturn +0.5 v = 2.2' d = 0.0'		Mars +1.8 v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	196°36.8'	S 13°52.5'	199°22.2'	S 13°11.3'	149°27.9'	S 22°25.1'	220°44.9'	S 5°00.2'
1	211°36.2'	S 13°53.6'	214°24.2'	S 13°11.5'	164°30.1'	S 22°25.1'	235°45.9'	S 5°00.8'
2	226°35.6'	S 13°54.6'	229°26.1'	S 13°11.6'	179°32.3'	S 22°25.1'	250°46.9'	S 5°01.4'
3	241°35.1'	S 13°55.6'	244°28.1'	S 13°11.8'	194°34.4'	S 22°25.2'	265°47.9'	S 5°02.0'
4	256°34.5'	S 13°56.7'	259°30.0'	S 13°12.0'	209°36.6'	S 22°25.2'	280°48.9'	S 5°02.6'
5	271°33.9'	S 13°57.7'	274°32.0'	S 13°12.1'	224°38.8'	S 22°25.2'	295°49.9'	S 5°03.3'
6	286°33.3'	S 13°58.7'	289°33.9'	S 13°12.3'	239°41.0'	S 22°25.2'	310°50.9'	S 5°03.9'
7	301°32.7'	S 13°59.8'	304°35.8'	S 13°12.5'	254°43.1'	S 22°25.2'	325°51.9'	S 5°04.5'
8	316°32.1'	S 14°00.8'	319°37.8'	S 13°12.7'	269°45.3'	S 22°25.2'	340°52.9'	S 5°05.1'
9	331°31.5'	S 14°01.8'	334°39.7'	S 13°12.8'	284°47.5'	S 22°25.2'	355°53.9'	S 5°05.7'
10	346°30.9'	S 14°02.8'	349°41.7'	S 13°13.0'	299°49.7'	S 22°25.2'	10°54.9'	S 5°06.3'
11	1°30.3'	S 14°03.9'	4°43.6'	S 13°13.2'	314°51.9'	S 22°25.3'	25°55.9'	S 5°06.9'
12	16°29.8'	S 14°04.9'	19°45.6'	S 13°13.3'	329°54.0'	S 22°25.3'	40°56.9'	S 5°07.6'
13	31°29.2'	S 14°05.9'	34°47.5'	S 13°13.5'	344°56.2'	S 22°25.3'	55°58.0'	S 5°08.2'
14	46°28.6'	S 14°07.0'	49°49.4'	S 13°13.7'	359°58.4'	S 22°25.3'	70°59.0'	S 5°08.8'
15	61°28.0'	S 14°08.0'	64°51.4'	S 13°13.9'	15°00.6'	S 22°25.3'	85°60.0'	S 5°09.4'
16	76°27.4'	S 14°09.0'	79°53.3'	S 13°14.0'	30°02.7'	S 22°25.3'	101°01.0'	S 5°10.0'
17	91°26.8'	S 14°10.0'	94°55.3'	S 13°14.2'	45°04.9'	S 22°25.3'	116°02.0'	S 5°10.6'
18	106°26.2'	S 14°11.1'	109°57.2'	S 13°14.4'	60°07.1'	S 22°25.3'	131°03.0'	S 5°11.2'
19	121°25.6'	S 14°12.1'	124°59.2'	S 13°14.6'	75°09.3'	S 22°25.3'	146°04.0'	S 5°11.8'
20	136°25.0'	S 14°13.1'	140°01.1'	S 13°14.7'	90°11.4'	S 22°25.4'	161°05.0'	S 5°12.4'
21	151°24.4'	S 14°14.1'	155°03.1'	S 13°14.9'	105°13.6'	S 22°25.4'	176°06.0'	S 5°13.1'
22	166°23.8'	S 14°15.2'	170°05.0'	S 13°15.1'	120°15.8'	S 22°25.4'	191°07.0'	S 5°13.7'
23	181°23.2'	S 14°16.2'	185°06.9'	S 13°15.2'	135°18.0'	S 22°25.4'	206°08.0'	S 5°14.3'

Fri Nov 17, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.8	
	v = -0.6' d = 1.0'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	196°22.6'	S 14°17.2'	200°08.9'	S 13°15.4'	150°20.2'	S 22°25.4'	221°09.0'	S 5°14.9'
1	211°22.0'	S 14°18.2'	215°10.8'	S 13°15.6'	165°22.3'	S 22°25.4'	236°10.0'	S 5°15.5'
2	226°21.4'	S 14°19.2'	230°12.8'	S 13°15.8'	180°24.5'	S 22°25.4'	251°11.0'	S 5°16.1'
3	241°20.8'	S 14°20.3'	245°14.7'	S 13°15.9'	195°26.7'	S 22°25.4'	266°12.0'	S 5°16.7'
4	256°20.2'	S 14°21.3'	260°16.7'	S 13°16.1'	210°28.9'	S 22°25.5'	281°13.0'	S 5°17.3'
5	271°19.6'	S 14°22.3'	275°18.6'	S 13°16.3'	225°31.0'	S 22°25.5'	296°14.1'	S 5°18.0'
6	286°19.0'	S 14°23.3'	290°20.5'	S 13°16.4'	240°33.2'	S 22°25.5'	311°15.1'	S 5°18.6'
7	301°18.4'	S 14°24.3'	305°22.5'	S 13°16.6'	255°35.4'	S 22°25.5'	326°16.1'	S 5°19.2'
8	316°17.8'	S 14°25.3'	320°24.4'	S 13°16.8'	270°37.6'	S 22°25.5'	341°17.1'	S 5°19.8'
9	331°17.2'	S 14°26.4'	335°26.4'	S 13°17.0'	285°39.7'	S 22°25.5'	356°18.1'	S 5°20.4'
10	346°16.6'	S 14°27.4'	350°28.3'	S 13°17.1'	300°41.9'	S 22°25.5'	11°19.1'	S 5°21.0'
11	1°16.0'	S 14°28.4'	5°30.3'	S 13°17.3'	315°44.1'	S 22°25.5'	26°20.1'	S 5°21.6'
12	16°15.4'	S 14°29.4'	20°32.2'	S 13°17.5'	330°46.3'	S 22°25.6'	41°21.1'	S 5°22.2'
13	31°14.8'	S 14°30.4'	35°34.2'	S 13°17.6'	345°48.4'	S 22°25.6'	56°22.1'	S 5°22.8'
14	46°14.2'	S 14°31.4'	50°36.1'	S 13°17.8'	0°50.6'	S 22°25.6'	71°23.1'	S 5°23.5'
15	61°13.6'	S 14°32.4'	65°38.0'	S 13°18.0'	15°52.8'	S 22°25.6'	86°24.1'	S 5°24.1'
16	76°13.0'	S 14°33.5'	80°40.0'	S 13°18.1'	30°55.0'	S 22°25.6'	101°25.1'	S 5°24.7'
17	91°12.4'	S 14°34.5'	95°41.9'	S 13°18.3'	45°57.1'	S 22°25.6'	116°26.1'	S 5°25.3'
18	106°11.8'	S 14°35.5'	110°43.9'	S 13°18.5'	60°59.3'	S 22°25.6'	131°27.1'	S 5°25.9'
19	121°11.2'	S 14°36.5'	125°45.8'	S 13°18.7'	76°01.5'	S 22°25.6'	146°28.1'	S 5°26.5'
20	136°10.6'	S 14°37.5'	140°47.8'	S 13°18.8'	91°03.7'	S 22°25.7'	161°29.1'	S 5°27.1'
21	151°10.0'	S 14°38.5'	155°49.7'	S 13°19.0'	106°05.8'	S 22°25.7'	176°30.1'	S 5°27.7'
22	166°09.4'	S 14°39.5'	170°51.6'	S 13°19.2'	121°08.0'	S 22°25.7'	191°31.1'	S 5°28.3'
23	181°08.7'	S 14°40.5'	185°53.6'	S 13°19.3'	136°10.2'	S 22°25.7'	206°32.1'	S 5°28.9'

Sat Nov 18, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.8	
	v = -0.6' d = 1.0'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	196°08.1'	S 14°41.5'	200°55.5'	S 13°19.5'	151°12.4'	S 22°25.7'	221°33.1'	S 5°29.6'
1	211°07.5'	S 14°42.5'	215°57.5'	S 13°19.7'	166°14.5'	S 22°25.7'	236°34.2'	S 5°30.2'
2	226°06.9'	S 14°43.5'	230°59.4'	S 13°19.9'	181°16.7'	S 22°25.7'	251°35.2'	S 5°30.8'
3	241°06.3'	S 14°44.5'	246°01.4'	S 13°20.0'	196°18.9'	S 22°25.7'	266°36.2'	S 5°31.4'
4	256°05.7'	S 14°45.5'	261°03.3'	S 13°20.2'	211°21.1'	S 22°25.7'	281°37.2'	S 5°32.0'
5	271°05.1'	S 14°46.5'	276°05.3'	S 13°20.4'	226°23.2'	S 22°25.8'	296°38.2'	S 5°32.6'
6	286°04.5'	S 14°47.6'	291°07.2'	S 13°20.5'	241°25.4'	S 22°25.8'	311°39.2'	S 5°33.2'
7	301°03.9'	S 14°48.6'	306°09.1'	S 13°20.7'	256°27.6'	S 22°25.8'	326°40.2'	S 5°33.8'
8	316°03.3'	S 14°49.6'	321°11.1'	S 13°20.9'	271°29.8'	S 22°25.8'	341°41.2'	S 5°34.4'
9	331°02.6'	S 14°50.6'	336°13.0'	S 13°21.1'	286°31.9'	S 22°25.8'	356°42.2'	S 5°35.0'
10	346°02.0'	S 14°51.6'	351°15.0'	S 13°21.2'	301°34.1'	S 22°25.8'	11°43.2'	S 5°35.7'
11	1°01.4'	S 14°52.6'	6°16.9'	S 13°21.4'	316°36.3'	S 22°25.8'	26°44.2'	S 5°36.3'
12	16°00.8'	S 14°53.6'	21°18.9'	S 13°21.6'	331°38.5'	S 22°25.8'	41°45.2'	S 5°36.9'
13	31°00.2'	S 14°54.6'	36°20.8'	S 13°21.7'	346°40.6'	S 22°25.9'	56°46.2'	S 5°37.5'
14	45°59.6'	S 14°55.5'	51°22.8'	S 13°21.9'	1°42.8'	S 22°25.9'	71°47.2'	S 5°38.1'
15	60°58.9'	S 14°56.5'	66°24.7'	S 13°22.1'	16°45.0'	S 22°25.9'	86°48.2'	S 5°38.7'
16	75°58.3'	S 14°57.5'	81°26.6'	S 13°22.2'	31°47.2'	S 22°25.9'	101°49.2'	S 5°39.3'
17	90°57.7'	S 14°58.5'	96°28.6'	S 13°22.4'	46°49.3'	S 22°25.9'	116°50.2'	S 5°39.9'
18	105°57.1'	S 14°59.5'	111°30.5'	S 13°22.6'	61°51.5'	S 22°25.9'	131°51.2'	S 5°40.5'
19	120°56.5'	S 15°00.5'	126°32.5'	S 13°22.8'	76°53.7'	S 22°25.9'	146°52.2'	S 5°41.1'
20	135°55.9'	S 15°01.5'	141°34.4'	S 13°22.9'	91°55.8'	S 22°25.9'	161°53.2'	S 5°41.7'
21	150°55.2'	S 15°02.5'	156°36.4'	S 13°23.1'	106°58.0'	S 22°25.9'	176°54.2'	S 5°42.4'
22	165°54.6'	S 15°03.5'	171°38.3'	S 13°23.3'	122°00.2'	S 22°26.0'	191°55.2'	S 5°43.0'
23	180°54.0'	S 15°04.5'	186°40.3'	S 13°23.4'	137°02.4'	S 22°26.0'	206°56.2'	S 5°43.6'

Sun Nov 19, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.7	
	v = -0.6' d = 1.0'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	195°53.4'	S 15°05.5'	201°42.2'	S 13°23.6'	152°04.5'	S 22°26.0'	221°57.2'	S 5°44.2'
1	210°52.8'	S 15°06.5'	216°44.2'	S 13°23.8'	167°06.7'	S 22°26.0'	236°58.3'	S 5°44.8'
2	225°52.1'	S 15°07.5'	231°46.1'	S 13°23.9'	182°08.9'	S 22°26.0'	251°59.3'	S 5°45.4'
3	240°51.5'	S 15°08.5'	246°48.0'	S 13°24.1'	197°11.1'	S 22°26.0'	267°00.3'	S 5°46.0'
4	255°50.9'	S 15°09.4'	261°50.0'	S 13°24.3'	212°13.2'	S 22°26.0'	282°01.3'	S 5°46.6'
5	270°50.3'	S 15°10.4'	276°51.9'	S 13°24.4'	227°15.4'	S 22°26.0'	297°02.3'	S 5°47.2'
6	285°49.6'	S 15°11.4'	291°53.9'	S 13°24.6'	242°17.6'	S 22°26.1'	312°03.3'	S 5°47.8'
7	300°49.0'	S 15°12.4'	306°55.8'	S 13°24.8'	257°19.8'	S 22°26.1'	327°04.3'	S 5°48.4'
8	315°48.4'	S 15°13.4'	321°57.8'	S 13°25.0'	272°21.9'	S 22°26.1'	342°05.3'	S 5°49.0'
9	330°47.8'	S 15°14.4'	336°59.7'	S 13°25.1'	287°24.1'	S 22°26.1'	357°06.3'	S 5°49.7'
10	345°47.1'	S 15°15.4'	352°01.7'	S 13°25.3'	302°26.3'	S 22°26.1'	12°07.3'	S 5°50.3'
11	0°46.5'	S 15°16.3'	7°03.6'	S 13°25.5'	317°28.4'	S 22°26.1'	27°08.3'	S 5°50.9'
12	15°45.9'	S 15°17.3'	22°05.6'	S 13°25.6'	332°30.6'	S 22°26.1'	42°09.3'	S 5°51.5'
13	30°45.3'	S 15°18.3'	37°07.5'	S 13°25.8'	347°32.8'	S 22°26.1'	57°10.3'	S 5°52.1'
14	45°44.6'	S 15°19.3'	52°09.4'	S 13°26.0'	2°35.0'	S 22°26.1'	72°11.3'	S 5°52.7'
15	60°44.0'	S 15°20.3'	67°11.4'	S 13°26.1'	17°37.1'	S 22°26.2'	87°12.3'	S 5°53.3'
16	75°43.4'	S 15°21.2'	82°13.3'	S 13°26.3'	32°39.3'	S 22°26.2'	102°13.3'	S 5°53.9'
17	90°42.8'	S 15°22.2'	97°15.3'	S 13°26.5'	47°41.5'	S 22°26.2'	117°14.3'	S 5°54.5'
18	105°42.1'	S 15°23.2'	112°17.2'	S 13°26.7'	62°43.6'	S 22°26.2'	132°15.3'	S 5°55.1'
19	120°41.5'	S 15°24.2'	127°19.2'	S 13°26.8'	77°45.8'	S 22°26.2'	147°16.3'	S 5°55.7'
20	135°40.9'	S 15°25.2'	142°21.1'	S 13°27.0'	92°48.0'	S 22°26.2'	162°17.3'	S 5°56.3'
21	150°40.2'	S 15°26.1'	157°23.1'	S 13°27.2'	107°50.2'	S 22°26.2'	177°18.3'	S 5°56.9'
22	165°39.6'	S 15°27.1'	172°25.0'	S 13°27.3'	122°52.3'	S 22°26.2'	192°19.3'	S 5°57.5'
23	180°39.0'	S 15°28.1'	187°27.0'	S 13°27.5'	137°54.5'	S 22°26.2'	207°20.3'	S 5°58.2'

Mon Nov 20, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.7	
	v = -0.6' d = 1.0'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	195°38.3'	S 15°29.1'	202°28.9'	S 13°27.7'	152°56.7'	S 22°26.3'	222°21.3'	S 5°58.8'
1	210°37.7'	S 15°30.0'	217°30.9'	S 13°27.8'	167°58.8'	S 22°26.3'	237°22.3'	S 5°59.4'
2	225°37.1'	S 15°31.0'	232°32.8'	S 13°28.0'	183°01.0'	S 22°26.3'	252°23.3'	S 5°60.0'
3	240°36.4'	S 15°32.0'	247°34.7'	S 13°28.2'	198°03.2'	S 22°26.3'	267°24.3'	S 5°60.6'
4	255°35.8'	S 15°33.0'	262°36.7'	S 13°28.3'	213°05.4'	S 22°26.3'	282°25.3'	S 5°61.2'
5	270°35.2'	S 15°33.9'	277°38.6'	S 13°28.5'	228°07.5'	S 22°26.3'	297°26.3'	S 5°61.8'
6	285°34.5'	S 15°34.9'	292°40.6'	S 13°28.7'	243°09.7'	S 22°26.3'	312°27.3'	S 5°62.4'
7	300°33.9'	S 15°35.9'	307°42.5'	S 13°28.8'	258°11.9'	S 22°26.3'	327°28.3'	S 5°63.0'
8	315°33.3'	S 15°36.8'	322°44.5'	S 13°29.0'	273°14.0'	S 22°26.4'	342°29.3'	S 5°63.6'
9	330°32.6'	S 15°37.8'	337°46.4'	S 13°29.2'	288°16.2'	S 22°26.4'	357°30.3'	S 5°64.2'
10	345°32.0'	S 15°38.8'	352°48.4'	S 13°29.4'	303°18.4'	S 22°26.4'	12°31.3'	S 5°64.8'
11	0°31.3'	S 15°39.7'	7°50.3'	S 13°29.5'	318°20.6'	S 22°26.4'	27°32.3'	S 5°65.4'
12	15°30.7'	S 15°40.7'	22°52.3'	S 13°29.7'	333°22.7'	S 22°26.4'	42°33.4'	S 5°66.0'
13	30°30.1'	S 15°41.7'	37°54.2'	S 13°29.9'	348°24.9'	S 22°26.4'	57°34.4'	S 5°66.6'
14	45°29.4'	S 15°42.6'	52°56.2'	S 13°30.0'	3°27.1'	S 22°26.4'	72°35.4'	S 5°67.2'
15	60°28.8'	S 15°43.6'	67°58.1'	S 13°30.2'	18°29.2'	S 22°26.4'	87°36.4'	S 5°67.9'
16	75°28.1'	S 15°44.6'	83°00.0'	S 13°30.4'	33°31.4'	S 22°26.4'	102°37.4'	S 5°68.5'
17	90°27.5'	S 15°45.5'	98°02.0'	S 13°30.5'	48°33.6'	S 22°26.5'	117°38.4'	S 5°69.1'
18	105°26.9'	S 15°46.5'	113°03.9'	S 13°30.7'	63°35.7'	S 22°26.5'	132°39.4'	S 5°69.7'
19	120°26.2'	S 15°47.4'	128°05.9'	S 13°30.9'	78°37.9'	S 22°26.5'	147°40.4'	S 5°70.3'
20	135°25.6'	S 15°48.4'	143°07.8'	S 13°31.0'	93°40.1'	S 22°26.5'	162°41.4'	S 5°70.9'
21	150°24.9'	S 15°49.4'	158°09.8'	S 13°31.2'	108°42.3'	S 22°26.5'	177°42.4'	S 5°71.5'
22	165°24.3'	S 15°50.3'	173°11.7'	S 13°31.4'	123°44.4'	S 22°26.5'	192°43.4'	S 5°72.1'
23	180°23.6'	S 15°51.3'	188°13.7'	S 13°31.5'	138°46.6'	S 22°26.5'	207°44.4'	S 5°72.7'

Tue Nov 21, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.7	
	v = -0.7' d = 0.9'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	195°23.0'	S 15°52.2'	203°15.6'	S 13°31.7'	153°48.8'	S 22°26.5'	222°45.4'	S 6°13.3'
1	210°22.4'	S 15°53.2'	218°17.6'	S 13°31.9'	168°50.9'	S 22°26.5'	237°46.4'	S 6°13.9'
2	225°21.7'	S 15°54.2'	233°19.5'	S 13°32.0'	183°53.1'	S 22°26.6'	252°47.4'	S 6°14.5'
3	240°21.1'	S 15°55.1'	248°21.5'	S 13°32.2'	198°55.3'	S 22°26.6'	267°48.4'	S 6°15.1'
4	255°20.4'	S 15°56.1'	263°23.4'	S 13°32.4'	213°57.4'	S 22°26.6'	282°49.4'	S 6°15.7'
5	270°19.8'	S 15°57.0'	278°25.4'	S 13°32.5'	228°59.6'	S 22°26.6'	297°50.4'	S 6°16.3'
6	285°19.1'	S 15°58.0'	293°27.3'	S 13°32.7'	244°01.8'	S 22°26.6'	312°51.4'	S 6°16.9'
7	300°18.5'	S 15°58.9'	308°29.3'	S 13°32.9'	259°03.9'	S 22°26.6'	327°52.4'	S 6°17.5'
8	315°17.8'	S 15°59.9'	323°31.2'	S 13°33.0'	274°06.1'	S 22°26.6'	342°53.4'	S 6°18.1'
9	330°17.2'	S 16°00.8'	338°33.1'	S 13°33.2'	289°08.3'	S 22°26.6'	357°54.4'	S 6°18.7'
10	345°16.5'	S 16°01.8'	353°35.1'	S 13°33.4'	304°10.5'	S 22°26.6'	12°55.4'	S 6°19.3'
11	0°15.9'	S 16°02.7'	8°37.0'	S 13°33.5'	319°12.6'	S 22°26.7'	27°56.4'	S 6°19.9'
12	15°15.2'	S 16°03.7'	23°39.0'	S 13°33.7'	334°14.8'	S 22°26.7'	42°57.4'	S 6°20.5'
13	30°14.6'	S 16°04.6'	38°40.9'	S 13°33.9'	349°17.0'	S 22°26.7'	57°58.4'	S 6°21.2'
14	45°13.9'	S 16°05.6'	53°42.9'	S 13°34.1'	4°19.1'	S 22°26.7'	72°59.4'	S 6°21.8'
15	60°13.3'	S 16°06.5'	68°44.8'	S 13°34.2'	19°21.3'	S 22°26.7'	88°00.4'	S 6°22.4'
16	75°12.6'	S 16°07.5'	83°46.8'	S 13°34.4'	34°23.5'	S 22°26.7'	103°01.4'	S 6°23.0'
17	90°12.0'	S 16°08.4'	98°48.7'	S 13°34.6'	49°25.6'	S 22°26.7'	118°02.4'	S 6°23.6'
18	105°11.3'	S 16°09.4'	113°50.7'	S 13°34.7'	64°27.8'	S 22°26.7'	133°03.4'	S 6°24.2'
19	120°10.7'	S 16°10.3'	128°52.6'	S 13°34.9'	79°30.0'	S 22°26.7'	148°04.4'	S 6°24.8'
20	135°10.0'	S 16°11.2'	143°54.6'	S 13°35.1'	94°32.1'	S 22°26.8'	163°05.4'	S 6°25.4'
21	150°09.3'	S 16°12.2'	158°56.5'	S 13°35.2'	109°34.3'	S 22°26.8'	178°06.4'	S 6°26.0'
22	165°08.7'	S 16°13.1'	173°58.5'	S 13°35.4'	124°36.5'	S 22°26.8'	193°07.4'	S 6°26.6'
23	180°08.0'	S 16°14.1'	189°00.4'	S 13°35.6'	139°38.6'	S 22°26.8'	208°08.4'	S 6°27.2'

Wed Nov 22, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.7	
	v = -0.7' d = 0.9'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	195°07.4'	S 16°15.0'	204°02.4'	S 13°35.7'	154°40.8'	S 22°26.8'	223°09.4'	S 6°27.8'
1	210°06.7'	S 16°15.9'	219°04.3'	S 13°35.9'	169°43.0'	S 22°26.8'	238°10.4'	S 6°28.4'
2	225°06.1'	S 16°16.9'	234°06.3'	S 13°36.1'	184°45.2'	S 22°26.8'	253°11.4'	S 6°29.0'
3	240°05.4'	S 16°17.8'	249°08.2'	S 13°36.2'	199°47.3'	S 22°26.8'	268°12.4'	S 6°29.6'
4	255°04.7'	S 16°18.8'	264°10.2'	S 13°36.4'	214°49.5'	S 22°26.8'	283°13.4'	S 6°30.2'
5	270°04.1'	S 16°19.7'	279°12.1'	S 13°36.6'	229°51.7'	S 22°26.9'	298°14.4'	S 6°30.8'
6	285°03.4'	S 16°20.6'	294°14.1'	S 13°36.7'	244°53.8'	S 22°26.9'	313°15.4'	S 6°31.4'
7	300°02.8'	S 16°21.6'	309°16.0'	S 13°36.9'	259°56.0'	S 22°26.9'	328°16.4'	S 6°32.0'
8	315°02.1'	S 16°22.5'	324°17.9'	S 13°37.1'	274°58.2'	S 22°26.9'	343°17.4'	S 6°32.6'
9	330°01.4'	S 16°23.4'	339°19.9'	S 13°37.2'	290°00.3'	S 22°26.9'	358°18.4'	S 6°33.2'
10	345°00.8'	S 16°24.4'	354°21.8'	S 13°37.4'	305°02.5'	S 22°26.9'	13°19.4'	S 6°33.8'
11	0°00.1'	S 16°25.3'	9°23.8'	S 13°37.6'	320°04.7'	S 22°26.9'	28°20.4'	S 6°34.4'
12	14°59.5'	S 16°26.2'	24°25.7'	S 13°37.7'	335°06.8'	S 22°26.9'	43°21.4'	S 6°35.0'
13	29°58.8'	S 16°27.2'	39°27.7'	S 13°37.9'	350°09.0'	S 22°26.9'	58°22.4'	S 6°35.6'
14	44°58.1'	S 16°28.1'	54°29.6'	S 13°38.1'	5°11.2'	S 22°27.0'	73°23.4'	S 6°36.2'
15	59°57.5'	S 16°29.0'	69°31.6'	S 13°38.2'	20°13.3'	S 22°27.0'	88°24.4'	S 6°36.8'
16	74°56.8'	S 16°30.0'	84°33.5'	S 13°38.4'	35°15.5'	S 22°27.0'	103°25.4'	S 6°37.4'
17	89°56.1'	S 16°30.9'	99°35.5'	S 13°38.6'	50°17.7'	S 22°27.0'	118°26.4'	S 6°38.0'
18	104°55.5'	S 16°31.8'	114°37.4'	S 13°38.7'	65°19.8'	S 22°27.0'	133°27.4'	S 6°38.6'
19	119°54.8'	S 16°32.7'	129°39.4'	S 13°38.9'	80°22.0'	S 22°27.0'	148°28.4'	S 6°39.2'
20	134°54.1'	S 16°33.7'	144°41.3'	S 13°39.1'	95°24.2'	S 22°27.0'	163°29.4'	S 6°39.8'
21	149°53.5'	S 16°34.6'	159°43.3'	S 13°39.2'	110°26.3'	S 22°27.0'	178°30.4'	S 6°40.4'
22	164°52.8'	S 16°35.5'	174°45.2'	S 13°39.4'	125°28.5'	S 22°27.0'	193°31.4'	S 6°41.0'
23	179°52.1'	S 16°36.4'	189°47.2'	S 13°39.6'	140°30.7'	S 22°27.1'	208°32.4'	S 6°41.6'

Thu Nov 23, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.7	
	v = -0.7' d = 0.9'		v = 1.9' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	194°51.5'	S 16°37.4'	204°49.1'	S 13°39.7'	155°32.8'	S 22°27.1'	223°33.4'	S 6°42.2'
1	209°50.8'	S 16°38.3'	219°51.1'	S 13°39.9'	170°35.0'	S 22°27.1'	238°34.4'	S 6°42.8'
2	224°50.1'	S 16°39.2'	234°53.0'	S 13°40.0'	185°37.2'	S 22°27.1'	253°35.4'	S 6°43.4'
3	239°49.4'	S 16°40.1'	249°55.0'	S 13°40.2'	200°39.3'	S 22°27.1'	268°36.4'	S 6°44.0'
4	254°48.8'	S 16°41.0'	264°56.9'	S 13°40.4'	215°41.5'	S 22°27.1'	283°37.4'	S 6°44.6'
5	269°48.1'	S 16°42.0'	279°58.9'	S 13°40.5'	230°43.7'	S 22°27.1'	298°38.4'	S 6°45.2'
6	284°47.4'	S 16°42.9'	295°00.8'	S 13°40.7'	245°45.8'	S 22°27.1'	313°39.4'	S 6°45.8'
7	299°46.8'	S 16°43.8'	310°02.8'	S 13°40.9'	260°48.0'	S 22°27.1'	328°40.4'	S 6°46.4'
8	314°46.1'	S 16°44.7'	325°04.7'	S 13°41.0'	275°50.2'	S 22°27.1'	343°41.4'	S 6°47.0'
9	329°45.4'	S 16°45.6'	340°06.7'	S 13°41.2'	290°52.3'	S 22°27.2'	358°42.4'	S 6°47.6'
10	344°44.7'	S 16°46.5'	355°08.6'	S 13°41.4'	305°54.5'	S 22°27.2'	13°43.4'	S 6°48.2'
11	359°44.1'	S 16°47.5'	10°10.6'	S 13°41.5'	320°56.7'	S 22°27.2'	28°44.4'	S 6°48.8'
12	14°43.4'	S 16°48.4'	25°12.5'	S 13°41.7'	335°58.8'	S 22°27.2'	43°45.4'	S 6°49.4'
13	29°42.7'	S 16°49.3'	40°14.5'	S 13°41.9'	351°01.0'	S 22°27.2'	58°46.4'	S 6°50.0'
14	44°42.0'	S 16°50.2'	55°16.4'	S 13°42.0'	6°03.2'	S 22°27.2'	73°47.4'	S 6°50.6'
15	59°41.4'	S 16°51.1'	70°18.4'	S 13°42.2'	21°05.3'	S 22°27.2'	88°48.4'	S 6°51.2'
16	74°40.7'	S 16°52.0'	85°20.3'	S 13°42.4'	36°07.5'	S 22°27.2'	103°49.4'	S 6°51.8'
17	89°40.0'	S 16°52.9'	100°22.3'	S 13°42.5'	51°09.7'	S 22°27.2'	118°50.4'	S 6°52.4'
18	104°39.3'	S 16°53.8'	115°24.2'	S 13°42.7'	66°11.8'	S 22°27.3'	133°51.4'	S 6°53.0'
19	119°38.6'	S 16°54.7'	130°26.2'	S 13°42.9'	81°14.0'	S 22°27.3'	148°52.4'	S 6°53.6'
20	134°38.0'	S 16°55.6'	145°28.1'	S 13°43.0'	96°16.2'	S 22°27.3'	163°53.4'	S 6°54.2'
21	149°37.3'	S 16°56.6'	160°30.1'	S 13°43.2'	111°18.3'	S 22°27.3'	178°54.4'	S 6°54.8'
22	164°36.6'	S 16°57.5'	175°32.0'	S 13°43.4'	126°20.5'	S 22°27.3'	193°55.3'	S 6°55.4'
23	179°35.9'	S 16°58.4'	190°34.0'	S 13°43.5'	141°22.6'	S 22°27.3'	208°56.3'	S 6°56.0'

Fri Nov 24, 2017 UTC

UTC	Venus -3.8		Jupiter -1.5		Saturn +0.5		Mars +1.7	
	v = -0.7' d = 0.9'		v = 2.0' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	194°35.2'	S 16°59.3'	205°35.9'	S 13°43.7'	156°24.8'	S 22°27.3'	223°57.3'	S 6°56.6'
1	209°34.6'	S 17°00.2'	220°37.9'	S 13°43.9'	171°27.0'	S 22°27.3'	238°58.3'	S 6°57.2'
2	224°33.9'	S 17°01.1'	235°39.8'	S 13°44.0'	186°29.1'	S 22°27.3'	253°59.3'	S 6°57.8'
3	239°33.2'	S 17°02.0'	250°41.8'	S 13°44.2'	201°31.3'	S 22°27.4'	269°00.3'	S 6°58.4'
4	254°32.5'	S 17°02.9'	265°43.7'	S 13°44.3'	216°33.5'	S 22°27.4'	284°01.3'	S 6°59.0'
5	269°31.8'	S 17°03.8'	280°45.7'	S 13°44.5'	231°35.6'	S 22°27.4'	299°02.3'	S 6°59.6'
6	284°31.1'	S 17°04.7'	295°47.6'	S 13°44.7'	246°37.8'	S 22°27.4'	314°03.3'	S 7°00.2'
7	299°30.5'	S 17°05.6'	310°49.6'	S 13°44.8'	261°40.0'	S 22°27.4'	329°04.3'	S 7°00.8'
8	314°29.8'	S 17°06.5'	325°51.5'	S 13°45.0'	276°42.1'	S 22°27.4'	344°05.3'	S 7°01.4'
9	329°29.1'	S 17°07.4'	340°53.5'	S 13°45.2'	291°44.3'	S 22°27.4'	359°06.3'	S 7°02.0'
10	344°28.4'	S 17°08.3'	355°55.4'	S 13°45.3'	306°46.5'	S 22°27.4'	14°07.3'	S 7°02.6'
11	359°27.7'	S 17°09.2'	10°57.4'	S 13°45.5'	321°48.6'	S 22°27.4'	29°08.3'	S 7°03.2'
12	14°27.0'	S 17°10.1'	25°59.3'	S 13°45.7'	336°50.8'	S 22°27.4'	44°09.3'	S 7°03.8'
13	29°26.3'	S 17°10.9'	41°01.3'	S 13°45.8'	351°53.0'	S 22°27.5'	59°10.3'	S 7°04.4'
14	44°25.6'	S 17°11.8'	56°03.2'	S 13°46.0'	6°55.1'	S 22°27.5'	74°11.3'	S 7°05.0'
15	59°25.0'	S 17°12.7'	71°05.2'	S 13°46.2'	21°57.3'	S 22°27.5'	89°12.3'	S 7°05.6'
16	74°24.3'	S 17°13.6'	86°07.1'	S 13°46.3'	36°59.4'	S 22°27.5'	104°13.3'	S 7°06.2'
17	89°23.6'	S 17°14.5'	101°09.1'	S 13°46.5'	52°01.6'	S 22°27.5'	119°14.3'	S 7°06.8'
18	104°22.9'	S 17°15.4'	116°11.0'	S 13°46.6'	67°03.8'	S 22°27.5'	134°15.3'	S 7°07.4'
19	119°22.2'	S 17°16.3'	131°13.0'	S 13°46.8'	82°05.9'	S 22°27.5'	149°16.3'	S 7°08.0'
20	134°21.5'	S 17°17.2'	146°14.9'	S 13°47.0'	97°08.1'	S 22°27.5'	164°17.3'	S 7°08.6'
21	149°20.8'	S 17°18.1'	161°16.9'	S 13°47.1'	112°10.3'	S 22°27.5'	179°18.3'	S 7°09.2'
22	164°20.1'	S 17°19.0'	176°18.8'	S 13°47.3'	127°12.4'	S 22°27.5'	194°19.3'	S 7°09.8'
23	179°19.4'	S 17°19.8'	191°20.8'	S 13°47.5'	142°14.6'	S 22°27.6'	209°20.3'	S 7°10.4'

Sat Nov 25, 2017 UTC

UTC	Venus -3.8 v = -0.7' d = 0.9'		Jupiter -1.5 v = 2.0' d = 0.2'		Saturn +0.5 v = 2.2' d = 0.0'		Mars +1.7 v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	194°18.7'	S 17°20.7'	206°22.7'	S 13°47.6'	157°16.8'	S 22°27.6'	224°21.3'	S 7°11.0'
1	209°18.0'	S 17°21.6'	221°24.7'	S 13°47.8'	172°18.9'	S 22°27.6'	239°22.3'	S 7°11.6'
2	224°17.3'	S 17°22.5'	236°26.7'	S 13°48.0'	187°21.1'	S 22°27.6'	254°23.3'	S 7°12.2'
3	239°16.6'	S 17°23.4'	251°28.6'	S 13°48.1'	202°23.2'	S 22°27.6'	269°24.3'	S 7°12.8'
4	254°15.9'	S 17°24.3'	266°30.6'	S 13°48.3'	217°25.4'	S 22°27.6'	284°25.3'	S 7°13.4'
5	269°15.2'	S 17°25.1'	281°32.5'	S 13°48.5'	232°27.6'	S 22°27.6'	299°26.3'	S 7°14.0'
6	284°14.6'	S 17°26.0'	296°34.5'	S 13°48.6'	247°29.7'	S 22°27.6'	314°27.3'	S 7°14.6'
7	299°13.9'	S 17°26.9'	311°36.4'	S 13°48.8'	262°31.9'	S 22°27.6'	329°28.3'	S 7°15.2'
8	314°13.2'	S 17°27.8'	326°38.4'	S 13°48.9'	277°34.1'	S 22°27.7'	344°29.2'	S 7°15.8'
9	329°12.5'	S 17°28.7'	341°40.3'	S 13°49.1'	292°36.2'	S 22°27.7'	359°30.2'	S 7°16.4'
10	344°11.8'	S 17°29.5'	356°42.3'	S 13°49.3'	307°38.4'	S 22°27.7'	14°31.2'	S 7°16.9'
11	359°11.1'	S 17°30.4'	11°44.2'	S 13°49.4'	322°40.6'	S 22°27.7'	29°32.2'	S 7°17.5'
12	14°10.4'	S 17°31.3'	26°46.2'	S 13°49.6'	337°42.7'	S 22°27.7'	44°33.2'	S 7°18.1'
13	29°09.7'	S 17°32.2'	41°48.1'	S 13°49.8'	352°44.9'	S 22°27.7'	59°34.2'	S 7°18.7'
14	44°09.0'	S 17°33.0'	56°50.1'	S 13°49.9'	7°47.0'	S 22°27.7'	74°35.2'	S 7°19.3'
15	59°08.3'	S 17°33.9'	71°52.0'	S 13°50.1'	22°49.2'	S 22°27.7'	89°36.2'	S 7°19.9'
16	74°07.6'	S 17°34.8'	86°54.0'	S 13°50.3'	37°51.4'	S 22°27.7'	104°37.2'	S 7°20.5'
17	89°06.8'	S 17°35.7'	101°55.9'	S 13°50.4'	52°53.5'	S 22°27.7'	119°38.2'	S 7°21.1'
18	104°06.1'	S 17°36.5'	116°57.9'	S 13°50.6'	67°55.7'	S 22°27.8'	134°39.2'	S 7°21.7'
19	119°05.4'	S 17°37.4'	131°59.8'	S 13°50.7'	82°57.9'	S 22°27.8'	149°40.2'	S 7°22.3'
20	134°04.7'	S 17°38.3'	147°01.8'	S 13°50.9'	98°00.0'	S 22°27.8'	164°41.2'	S 7°22.9'
21	149°04.0'	S 17°39.1'	162°03.7'	S 13°51.1'	113°02.2'	S 22°27.8'	179°42.2'	S 7°23.5'
22	164°03.3'	S 17°40.0'	177°05.7'	S 13°51.2'	128°04.3'	S 22°27.8'	194°43.2'	S 7°24.1'
23	179°02.6'	S 17°40.9'	192°07.6'	S 13°51.4'	143°06.5'	S 22°27.8'	209°44.2'	S 7°24.7'

Sun Nov 26, 2017 UTC

UTC	Venus -3.8 v = -0.7' d = 0.9'		Jupiter -1.6 v = 2.0' d = 0.2'		Saturn +0.5 v = 2.2' d = 0.0'		Mars +1.7 v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	194°01.9'	S 17°41.7'	207°09.6'	S 13°51.6'	158°08.7'	S 22°27.8'	224°45.2'	S 7°25.3'
1	209°01.2'	S 17°42.6'	222°11.6'	S 13°51.7'	173°10.8'	S 22°27.8'	239°46.2'	S 7°25.9'
2	224°00.5'	S 17°43.5'	237°13.5'	S 13°51.9'	188°13.0'	S 22°27.8'	254°47.2'	S 7°26.5'
3	238°59.8'	S 17°44.3'	252°15.5'	S 13°52.0'	203°15.2'	S 22°27.8'	269°48.2'	S 7°27.1'
4	253°59.1'	S 17°45.2'	267°17.4'	S 13°52.2'	218°17.3'	S 22°27.9'	284°49.2'	S 7°27.7'
5	268°58.4'	S 17°46.0'	282°19.4'	S 13°52.4'	233°19.5'	S 22°27.9'	299°50.2'	S 7°28.3'
6	283°57.7'	S 17°46.9'	297°21.3'	S 13°52.5'	248°21.6'	S 22°27.9'	314°51.1'	S 7°28.8'
7	298°57.0'	S 17°47.8'	312°23.3'	S 13°52.7'	263°23.8'	S 22°27.9'	329°52.1'	S 7°29.4'
8	313°56.2'	S 17°48.6'	327°25.2'	S 13°52.9'	278°26.0'	S 22°27.9'	344°53.1'	S 7°30.0'
9	328°55.5'	S 17°49.5'	342°27.2'	S 13°53.0'	293°28.1'	S 22°27.9'	359°54.1'	S 7°30.6'
10	343°54.8'	S 17°50.3'	357°29.1'	S 13°53.2'	308°30.3'	S 22°27.9'	14°55.1'	S 7°31.2'
11	358°54.1'	S 17°51.2'	12°31.1'	S 13°53.3'	323°32.4'	S 22°27.9'	29°56.1'	S 7°31.8'
12	13°53.4'	S 17°52.0'	27°33.0'	S 13°53.5'	338°34.6'	S 22°27.9'	44°57.1'	S 7°32.4'
13	28°52.7'	S 17°52.9'	42°35.0'	S 13°53.7'	353°36.8'	S 22°27.9'	59°58.1'	S 7°33.0'
14	43°52.0'	S 17°53.8'	57°36.9'	S 13°53.8'	8°38.9'	S 22°28.0'	74°59.1'	S 7°33.6'
15	58°51.3'	S 17°54.6'	72°38.9'	S 13°54.0'	23°41.1'	S 22°28.0'	90°00.1'	S 7°34.2'
16	73°50.5'	S 17°55.5'	87°40.9'	S 13°54.2'	38°43.3'	S 22°28.0'	105°01.1'	S 7°34.8'
17	88°49.8'	S 17°56.3'	102°42.8'	S 13°54.3'	53°45.4'	S 22°28.0'	120°02.1'	S 7°35.4'
18	103°49.1'	S 17°57.2'	117°44.8'	S 13°54.5'	68°47.6'	S 22°28.0'	135°03.1'	S 7°36.0'
19	118°48.4'	S 17°58.0'	132°46.7'	S 13°54.6'	83°49.7'	S 22°28.0'	150°04.1'	S 7°36.6'
20	133°47.7'	S 17°58.9'	147°48.7'	S 13°54.8'	98°51.9'	S 22°28.0'	165°05.1'	S 7°37.2'
21	148°47.0'	S 17°59.7'	162°50.6'	S 13°55.0'	113°54.1'	S 22°28.0'	180°06.1'	S 7°37.8'
22	163°46.2'	S 18°00.6'	177°52.6'	S 13°55.1'	128°56.2'	S 22°28.0'	195°07.1'	S 7°38.3'
23	178°45.5'	S 18°01.4'	192°54.5'	S 13°55.3'	143°58.4'	S 22°28.0'	210°08.1'	S 7°38.9'

Mon Nov 27, 2017 UTC

UTC	Venus -3.8		Jupiter -1.6		Saturn +0.5		Mars +1.7	
	v = -0.7' d = 0.8'		v = 2.0' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	193°44.8'	S 18°02.2'	207°56.5'	S 13°55.4'	159°00.5'	S 22°28.0'	225°09.0'	S 7°39.5'
1	208°44.1'	S 18°03.1'	222°58.4'	S 13°55.6'	174°02.7'	S 22°28.1'	240°10.0'	S 7°40.1'
2	223°43.4'	S 18°03.9'	238°00.4'	S 13°55.8'	189°04.9'	S 22°28.1'	255°11.0'	S 7°40.7'
3	238°42.6'	S 18°04.8'	253°02.3'	S 13°55.9'	204°07.0'	S 22°28.1'	270°12.0'	S 7°41.3'
4	253°41.9'	S 18°05.6'	268°04.3'	S 13°56.1'	219°09.2'	S 22°28.1'	285°13.0'	S 7°41.9'
5	268°41.2'	S 18°06.5'	283°06.3'	S 13°56.3'	234°11.4'	S 22°28.1'	300°14.0'	S 7°42.5'
6	283°40.5'	S 18°07.3'	298°08.2'	S 13°56.4'	249°13.5'	S 22°28.1'	315°15.0'	S 7°43.1'
7	298°39.8'	S 18°08.1'	313°10.2'	S 13°56.6'	264°15.7'	S 22°28.1'	330°16.0'	S 7°43.7'
8	313°39.0'	S 18°09.0'	328°12.1'	S 13°56.7'	279°17.8'	S 22°28.1'	345°17.0'	S 7°44.3'
9	328°38.3'	S 18°09.8'	343°14.1'	S 13°56.9'	294°20.0'	S 22°28.1'	0°18.0'	S 7°44.9'
10	343°37.6'	S 18°10.7'	358°16.0'	S 13°57.1'	309°22.2'	S 22°28.1'	15°19.0'	S 7°45.4'
11	358°36.9'	S 18°11.5'	13°18.0'	S 13°57.2'	324°24.3'	S 22°28.2'	30°20.0'	S 7°46.0'
12	13°36.1'	S 18°12.3'	28°19.9'	S 13°57.4'	339°26.5'	S 22°28.2'	45°21.0'	S 7°46.6'
13	28°35.4'	S 18°13.2'	43°21.9'	S 13°57.5'	354°28.6'	S 22°28.2'	60°22.0'	S 7°47.2'
14	43°34.7'	S 18°14.0'	58°23.8'	S 13°57.7'	9°30.8'	S 22°28.2'	75°23.0'	S 7°47.8'
15	58°34.0'	S 18°14.8'	73°25.8'	S 13°57.9'	24°33.0'	S 22°28.2'	90°23.9'	S 7°48.4'
16	73°33.2'	S 18°15.7'	88°27.8'	S 13°58.0'	39°35.1'	S 22°28.2'	105°24.9'	S 7°49.0'
17	88°32.5'	S 18°16.5'	103°29.7'	S 13°58.2'	54°37.3'	S 22°28.2'	120°25.9'	S 7°49.6'
18	103°31.8'	S 18°17.3'	118°31.7'	S 13°58.4'	69°39.4'	S 22°28.2'	135°26.9'	S 7°50.2'
19	118°31.0'	S 18°18.2'	133°33.6'	S 13°58.5'	84°41.6'	S 22°28.2'	150°27.9'	S 7°50.8'
20	133°30.3'	S 18°19.0'	148°35.6'	S 13°58.7'	99°43.8'	S 22°28.2'	165°28.9'	S 7°51.4'
21	148°29.6'	S 18°19.8'	163°37.5'	S 13°58.8'	114°45.9'	S 22°28.3'	180°29.9'	S 7°51.9'
22	163°28.9'	S 18°20.6'	178°39.5'	S 13°59.0'	129°48.1'	S 22°28.3'	195°30.9'	S 7°52.5'
23	178°28.1'	S 18°21.5'	193°41.4'	S 13°59.2'	144°50.2'	S 22°28.3'	210°31.9'	S 7°53.1'

Tue Nov 28, 2017 UTC

UTC	Venus -3.8		Jupiter -1.6		Saturn +0.5		Mars +1.7	
	v = -0.7' d = 0.8'		v = 2.0' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	193°27.4'	S 18°22.3'	208°43.4'	S 13°59.3'	159°52.4'	S 22°28.3'	225°32.9'	S 7°53.7'
1	208°26.7'	S 18°23.1'	223°45.4'	S 13°59.5'	174°54.6'	S 22°28.3'	240°33.9'	S 7°54.3'
2	223°25.9'	S 18°23.9'	238°47.3'	S 13°59.6'	189°56.7'	S 22°28.3'	255°34.9'	S 7°54.9'
3	238°25.2'	S 18°24.8'	253°49.3'	S 13°59.8'	204°58.9'	S 22°28.3'	270°35.9'	S 7°55.5'
4	253°24.5'	S 18°25.6'	268°51.2'	S 13°60.0'	220°01.0'	S 22°28.3'	285°36.8'	S 7°56.1'
5	268°23.7'	S 18°26.4'	283°53.2'	S 14°00.1'	235°03.2'	S 22°28.3'	300°37.8'	S 7°56.7'
6	283°23.0'	S 18°27.2'	298°55.1'	S 14°00.3'	250°05.4'	S 22°28.3'	315°38.8'	S 7°57.3'
7	298°22.3'	S 18°28.0'	313°57.1'	S 14°00.4'	265°07.5'	S 22°28.3'	330°39.8'	S 7°57.8'
8	313°21.5'	S 18°28.9'	328°59.0'	S 14°00.6'	280°09.7'	S 22°28.4'	345°40.8'	S 7°58.4'
9	328°20.8'	S 18°29.7'	344°01.0'	S 14°00.8'	295°11.8'	S 22°28.4'	0°41.8'	S 7°59.0'
10	343°20.1'	S 18°30.5'	359°03.0'	S 14°00.9'	310°14.0'	S 22°28.4'	15°42.8'	S 7°59.6'
11	358°19.3'	S 18°31.3'	14°04.9'	S 14°01.1'	325°16.1'	S 22°28.4'	30°43.8'	S 8°00.2'
12	13°18.6'	S 18°32.1'	29°06.9'	S 14°01.2'	340°18.3'	S 22°28.4'	45°44.8'	S 8°00.8'
13	28°17.8'	S 18°32.9'	44°08.8'	S 14°01.4'	355°20.5'	S 22°28.4'	60°45.8'	S 8°01.4'
14	43°17.1'	S 18°33.7'	59°10.8'	S 14°01.6'	10°22.6'	S 22°28.4'	75°46.8'	S 8°02.0'
15	58°16.4'	S 18°34.6'	74°12.7'	S 14°01.7'	25°24.8'	S 22°28.4'	90°47.8'	S 8°02.6'
16	73°15.6'	S 18°35.4'	89°14.7'	S 14°01.9'	40°26.9'	S 22°28.4'	105°48.7'	S 8°03.1'
17	88°14.9'	S 18°36.2'	104°16.7'	S 14°02.0'	55°29.1'	S 22°28.4'	120°49.7'	S 8°03.7'
18	103°14.1'	S 18°37.0'	119°18.6'	S 14°02.2'	70°31.3'	S 22°28.4'	135°50.7'	S 8°04.3'
19	118°13.4'	S 18°37.8'	134°20.6'	S 14°02.4'	85°33.4'	S 22°28.5'	150°51.7'	S 8°04.9'
20	133°12.7'	S 18°38.6'	149°22.5'	S 14°02.5'	100°35.6'	S 22°28.5'	165°52.7'	S 8°05.5'
21	148°11.9'	S 18°39.4'	164°24.5'	S 14°02.7'	115°37.7'	S 22°28.5'	180°53.7'	S 8°06.1'
22	163°11.2'	S 18°40.2'	179°26.4'	S 14°02.8'	130°39.9'	S 22°28.5'	195°54.7'	S 8°06.7'
23	178°10.4'	S 18°41.0'	194°28.4'	S 14°03.0'	145°42.1'	S 22°28.5'	210°55.7'	S 8°07.3'

Wed Nov 29, 2017 UTC

UTC	Venus -3.8		Jupiter -1.6		Saturn +0.5		Mars +1.7	
	v = -0.8' d = 0.8'		v = 2.0' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	193°09.7'	S 18°41.8'	209°30.4'	S 14°03.2'	160°44.2'	S 22°28.5'	225°56.7'	S 8°07.9'
1	208°08.9'	S 18°42.6'	224°32.3'	S 14°03.3'	175°46.4'	S 22°28.5'	240°57.7'	S 8°08.4'
2	223°08.2'	S 18°43.4'	239°34.3'	S 14°03.5'	190°48.5'	S 22°28.5'	255°58.7'	S 8°09.0'
3	238°07.5'	S 18°44.2'	254°36.2'	S 14°03.6'	205°50.7'	S 22°28.5'	270°59.6'	S 8°09.6'
4	253°06.7'	S 18°45.0'	269°38.2'	S 14°03.8'	220°52.8'	S 22°28.5'	286°00.6'	S 8°10.2'
5	268°06.0'	S 18°45.8'	284°40.1'	S 14°04.0'	235°55.0'	S 22°28.6'	301°01.6'	S 8°10.8'
6	283°05.2'	S 18°46.6'	299°42.1'	S 14°04.1'	250°57.2'	S 22°28.6'	316°02.6'	S 8°11.4'
7	298°04.5'	S 18°47.4'	314°44.1'	S 14°04.3'	265°59.3'	S 22°28.6'	331°03.6'	S 8°12.0'
8	313°03.7'	S 18°48.2'	329°46.0'	S 14°04.4'	281°01.5'	S 22°28.6'	346°04.6'	S 8°12.6'
9	328°03.0'	S 18°49.0'	344°48.0'	S 14°04.6'	296°03.6'	S 22°28.6'	1°05.6'	S 8°13.1'
10	343°02.2'	S 18°49.8'	359°49.9'	S 14°04.8'	311°05.8'	S 22°28.6'	16°06.6'	S 8°13.7'
11	358°01.5'	S 18°50.6'	14°51.9'	S 14°04.9'	326°08.0'	S 22°28.6'	31°07.6'	S 8°14.3'
12	13°00.7'	S 18°51.4'	29°53.8'	S 14°05.1'	341°10.1'	S 22°28.6'	46°08.6'	S 8°14.9'
13	27°60.0'	S 18°52.2'	44°55.8'	S 14°05.2'	356°12.3'	S 22°28.6'	61°09.6'	S 8°15.5'
14	42°59.2'	S 18°53.0'	59°57.8'	S 14°05.4'	11°14.4'	S 22°28.6'	76°10.5'	S 8°16.1'
15	57°58.5'	S 18°53.8'	74°59.7'	S 14°05.6'	26°16.6'	S 22°28.6'	91°11.5'	S 8°16.7'
16	72°57.7'	S 18°54.6'	90°01.7'	S 14°05.7'	41°18.7'	S 22°28.6'	106°12.5'	S 8°17.2'
17	87°57.0'	S 18°55.3'	105°03.6'	S 14°05.9'	56°20.9'	S 22°28.7'	121°13.5'	S 8°17.8'
18	102°56.2'	S 18°56.1'	120°05.6'	S 14°06.0'	71°23.1'	S 22°28.7'	136°14.5'	S 8°18.4'
19	117°55.5'	S 18°56.9'	135°07.5'	S 14°06.2'	86°25.2'	S 22°28.7'	151°15.5'	S 8°19.0'
20	132°54.7'	S 18°57.7'	150°09.5'	S 14°06.3'	101°27.4'	S 22°28.7'	166°16.5'	S 8°19.6'
21	147°53.9'	S 18°58.5'	165°11.5'	S 14°06.5'	116°29.5'	S 22°28.7'	181°17.5'	S 8°20.2'
22	162°53.2'	S 18°59.3'	180°13.4'	S 14°06.7'	131°31.7'	S 22°28.7'	196°18.5'	S 8°20.8'
23	177°52.4'	S 19°00.1'	195°15.4'	S 14°06.8'	146°33.8'	S 22°28.7'	211°19.4'	S 8°21.3'

Thu Nov 30, 2017 UTC

UTC	Venus -3.8		Jupiter -1.6		Saturn +0.5		Mars +1.7	
	v = -0.8' d = 0.8'		v = 2.0' d = 0.2'		v = 2.2' d = 0.0'		v = 1.0' d = 0.6'	
	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	192°51.7'	S 19°00.8'	210°17.3'	S 14°07.0'	161°36.0'	S 22°28.7'	226°20.4'	S 8°21.9'
1	207°50.9'	S 19°01.6'	225°19.3'	S 14°07.1'	176°38.2'	S 22°28.7'	241°21.4'	S 8°22.5'
2	222°50.2'	S 19°02.4'	240°21.3'	S 14°07.3'	191°40.3'	S 22°28.7'	256°22.4'	S 8°23.1'
3	237°49.4'	S 19°03.2'	255°23.2'	S 14°07.5'	206°42.5'	S 22°28.7'	271°23.4'	S 8°23.7'
4	252°48.7'	S 19°04.0'	270°25.2'	S 14°07.6'	221°44.6'	S 22°28.8'	286°24.4'	S 8°24.3'
5	267°47.9'	S 19°04.7'	285°27.1'	S 14°07.8'	236°46.8'	S 22°28.8'	301°25.4'	S 8°24.9'
6	282°47.1'	S 19°05.5'	300°29.1'	S 14°07.9'	251°48.9'	S 22°28.8'	316°26.4'	S 8°25.4'
7	297°46.4'	S 19°06.3'	315°31.1'	S 14°08.1'	266°51.1'	S 22°28.8'	331°27.4'	S 8°26.0'
8	312°45.6'	S 19°07.1'	330°33.0'	S 14°08.2'	281°53.3'	S 22°28.8'	346°28.3'	S 8°26.6'
9	327°44.9'	S 19°07.8'	345°35.0'	S 14°08.4'	296°55.4'	S 22°28.8'	1°29.3'	S 8°27.2'
10	342°44.1'	S 19°08.6'	0°36.9'	S 14°08.6'	311°57.6'	S 22°28.8'	16°30.3'	S 8°27.8'
11	357°43.3'	S 19°09.4'	15°38.9'	S 14°08.7'	326°59.7'	S 22°28.8'	31°31.3'	S 8°28.4'
12	12°42.6'	S 19°10.2'	30°40.8'	S 14°08.9'	342°01.9'	S 22°28.8'	46°32.3'	S 8°29.0'
13	27°41.8'	S 19°10.9'	45°42.8'	S 14°09.0'	357°04.0'	S 22°28.8'	61°33.3'	S 8°29.5'
14	42°41.0'	S 19°11.7'	60°44.8'	S 14°09.2'	12°06.2'	S 22°28.8'	76°34.3'	S 8°30.1'
15	57°40.3'	S 19°12.5'	75°46.7'	S 14°09.3'	27°08.4'	S 22°28.9'	91°35.3'	S 8°30.7'
16	72°39.5'	S 19°13.2'	90°48.7'	S 14°09.5'	42°10.5'	S 22°28.9'	106°36.3'	S 8°31.3'
17	87°38.7'	S 19°14.0'	105°50.6'	S 14°09.7'	57°12.7'	S 22°28.9'	121°37.2'	S 8°31.9'
18	102°38.0'	S 19°14.8'	120°52.6'	S 14°09.8'	72°14.8'	S 22°28.9'	136°38.2'	S 8°32.5'
19	117°37.2'	S 19°15.5'	135°54.6'	S 14°10.0'	87°17.0'	S 22°28.9'	151°39.2'	S 8°33.0'
20	132°36.5'	S 19°16.3'	150°56.5'	S 14°10.1'	102°19.1'	S 22°28.9'	166°40.2'	S 8°33.6'
21	147°35.7'	S 19°17.1'	165°58.5'	S 14°10.3'	117°21.3'	S 22°28.9'	181°41.2'	S 8°34.2'
22	162°34.9'	S 19°17.8'	181°00.4'	S 14°10.5'	132°23.5'	S 22°28.9'	196°42.2'	S 8°34.8'
23	177°34.1'	S 19°18.6'	196°02.4'	S 14°10.6'	147°25.6'	S 22°28.9'	211°43.2'	S 8°35.4'