

Fri Nov 1, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.8' SD = 16.1'		SD = 15.5'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	39°59.6'	184°06.1'	S 14°15.5'	131°33.6'	7.8'	S 22°23.4'	3.2'	57.3'
1	55°02.0'	199°06.1'	S 14°16.3'	146°00.4'	7.8'	S 22°26.5'	3.0'	57.3'
2	70°04.5'	214°06.2'	S 14°17.1'	160°27.2'	7.8'	S 22°29.6'	2.9'	57.2'
3	85°07.0'	229°06.2'	S 14°17.9'	174°54.0'	7.8'	S 22°32.5'	2.8'	57.2'
4	100°09.4'	244°06.2'	S 14°18.7'	189°20.8'	7.9'	S 22°35.2'	2.6'	57.1'
5	115°11.9'	259°06.2'	S 14°19.5'	203°47.7'	7.9'	S 22°37.9'	2.5'	57.1'
6	130°14.3'	274°06.2'	S 14°20.4'	218°14.6'	7.9'	S 22°40.4'	2.4'	57.1'
7	145°16.8'	289°06.3'	S 14°21.2'	232°41.5'	8.0'	S 22°42.7'	2.2'	57.0'
8	160°19.3'	304°06.3'	S 14°22.0'	247°08.5'	8.0'	S 22°45.0'	2.1'	57.0'
9	175°21.7'	319°06.3'	S 14°22.8'	261°35.5'	8.0'	S 22°47.1'	2.0'	57.0'
10	190°24.2'	334°06.3'	S 14°23.6'	276°02.5'	8.0'	S 22°49.0'	1.8'	56.9'
11	205°26.7'	349°06.3'	S 14°24.4'	290°29.5'	8.1'	S 22°50.8'	1.7'	56.9'
12	220°29.1'	4°06.4'	S 14°25.2'	304°56.6'	8.1'	S 22°52.5'	1.6'	56.8'
13	235°31.6'	19°06.4'	S 14°26.0'	319°23.7'	8.1'	S 22°54.1'	1.4'	56.8'
14	250°34.1'	34°06.4'	S 14°26.8'	333°50.8'	8.2'	S 22°55.5'	1.3'	56.8'
15	265°36.5'	49°06.4'	S 14°27.6'	348°18.0'	8.2'	S 22°56.8'	1.2'	56.7'
16	280°39.0'	64°06.4'	S 14°28.4'	2°45.2'	8.3'	S 22°58.0'	1.0'	56.7'
17	295°41.5'	79°06.4'	S 14°29.2'	17°12.5'	8.3'	S 22°59.1'	0.9'	56.7'
18	310°43.9'	94°06.4'	S 14°30.0'	31°39.8'	8.3'	S 22°60.0'	0.8'	56.6'
19	325°46.4'	109°06.5'	S 14°30.8'	46°07.1'	8.4'	S 23°00.7'	0.6'	56.6'
20	340°48.8'	124°06.5'	S 14°31.6'	60°34.5'	8.4'	S 23°01.4'	0.5'	56.6'
21	355°51.3'	139°06.5'	S 14°32.4'	75°01.9'	8.5'	S 23°01.9'	0.4'	56.5'
22	10°53.8'	154°06.5'	S 14°33.2'	89°29.3'	8.5'	S 23°02.3'	0.3'	56.5'
23	25°56.2'	169°06.5'	S 14°34.0'	103°56.8'	8.5'	S 23°02.6'	0.1'	56.5'

Sat Nov 2, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.8' SD = 16.1'		SD = 15.3'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	40°58.7'	184°06.5'	S 14°34.7'	118°24.4'	8.6'	S 23°02.7'	0.0'	56.4'
1	56°01.2'	199°06.5'	S 14°35.5'	132°52.0'	8.6'	S 23°02.7'	0.1'	56.4'
2	71°03.6'	214°06.6'	S 14°36.3'	147°19.6'	8.7'	S 23°02.6'	0.2'	56.4'
3	86°06.1'	229°06.6'	S 14°37.1'	161°47.3'	8.7'	S 23°02.3'	0.4'	56.3'
4	101°08.6'	244°06.6'	S 14°37.9'	176°15.0'	8.8'	S 23°02.0'	0.5'	56.3'
5	116°11.0'	259°06.6'	S 14°38.7'	190°42.7'	8.8'	S 23°01.5'	0.6'	56.3'
6	131°13.5'	274°06.6'	S 14°39.5'	205°10.6'	8.9'	S 23°00.8'	0.7'	56.2'
7	146°15.9'	289°06.6'	S 14°40.3'	219°38.4'	8.9'	S 23°00.1'	0.9'	56.2'
8	161°18.4'	304°06.6'	S 14°41.1'	234°06.3'	9.0'	S 22°59.2'	1.0'	56.2'
9	176°20.9'	319°06.6'	S 14°41.9'	248°34.3'	9.0'	S 22°58.2'	1.1'	56.1'
10	191°23.3'	334°06.7'	S 14°42.7'	263°02.3'	9.1'	S 22°57.1'	1.2'	56.1'
11	206°25.8'	349°06.7'	S 14°43.5'	277°30.4'	9.1'	S 22°55.9'	1.4'	56.1'
12	221°28.3'	4°06.7'	S 14°44.3'	291°58.5'	9.2'	S 22°54.5'	1.5'	56.0'
13	236°30.7'	19°06.7'	S 14°45.1'	306°26.7'	9.2'	S 22°53.0'	1.6'	56.0'
14	251°33.2'	34°06.7'	S 14°45.9'	320°54.9'	9.3'	S 22°51.4'	1.7'	56.0'
15	266°35.7'	49°06.7'	S 14°46.6'	335°23.2'	9.3'	S 22°49.7'	1.8'	55.9'
16	281°38.1'	64°06.7'	S 14°47.4'	349°51.5'	9.4'	S 22°47.9'	2.0'	55.9'
17	296°40.6'	79°06.7'	S 14°48.2'	4°19.9'	9.5'	S 22°45.9'	2.1'	55.9'
18	311°43.1'	94°06.7'	S 14°49.0'	18°48.4'	9.5'	S 22°43.8'	2.2'	55.8'
19	326°45.5'	109°06.7'	S 14°49.8'	33°16.9'	9.6'	S 22°41.6'	2.3'	55.8'
20	341°48.0'	124°06.7'	S 14°50.6'	47°45.5'	9.6'	S 22°39.3'	2.4'	55.8'
21	356°50.4'	139°06.7'	S 14°51.4'	62°14.1'	9.7'	S 22°36.9'	2.5'	55.8'
22	11°52.9'	154°06.7'	S 14°52.2'	76°42.8'	9.7'	S 22°34.3'	2.7'	55.7'
23	26°55.4'	169°06.8'	S 14°53.0'	91°11.5'	9.8'	S 22°31.7'	2.8'	55.7'

Sun Nov 3, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.8' SD = 16.1'		SD = 15.1'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	41°57.8'	184°06.8'	S 14°53.7'	105°40.3'	9.9'	S 22°28.9'	2.9'	55.7'
1	57°00.3'	199°06.8'	S 14°54.5'	120°09.2'	9.9'	S 22°26.0'	3.0'	55.6'
2	72°02.8'	214°06.8'	S 14°55.3'	134°38.1'	10.0'	S 22°23.0'	3.1'	55.6'
3	87°05.2'	229°06.8'	S 14°56.1'	149°07.1'	10.0'	S 22°19.9'	3.2'	55.6'
4	102°07.7'	244°06.8'	S 14°56.9'	163°36.1'	10.1'	S 22°16.7'	3.3'	55.5'
5	117°10.2'	259°06.8'	S 14°57.7'	178°05.2'	10.2'	S 22°13.4'	3.4'	55.5'
6	132°12.6'	274°06.8'	S 14°58.4'	192°34.4'	10.2'	S 22°09.9'	3.5'	55.5'
7	147°15.1'	289°06.8'	S 14°59.2'	207°03.6'	10.3'	S 22°06.4'	3.7'	55.5'
8	162°17.6'	304°06.8'	S 15°00.0'	221°32.9'	10.4'	S 22°02.7'	3.8'	55.4'
9	177°20.0'	319°06.8'	S 15°00.8'	236°02.3'	10.4'	S 21°59.0'	3.9'	55.4'
10	192°22.5'	334°06.8'	S 15°01.6'	250°31.7'	10.5'	S 21°55.1'	4.0'	55.4'
11	207°24.9'	349°06.8'	S 15°02.4'	265°01.2'	10.5'	S 21°51.1'	4.1'	55.4'
12	222°27.4'	4°06.8'	S 15°03.1'	279°30.7'	10.6'	S 21°47.1'	4.2'	55.3'
13	237°29.9'	19°06.8'	S 15°03.9'	294°00.3'	10.7'	S 21°42.9'	4.3'	55.3'
14	252°32.3'	34°06.8'	S 15°04.7'	308°30.0'	10.7'	S 21°38.6'	4.4'	55.3'
15	267°34.8'	49°06.8'	S 15°05.5'	322°59.7'	10.8'	S 21°34.2'	4.5'	55.3'
16	282°37.3'	64°06.8'	S 15°06.3'	337°29.5'	10.9'	S 21°29.7'	4.6'	55.2'
17	297°39.7'	79°06.8'	S 15°07.0'	351°59.4'	10.9'	S 21°25.1'	4.7'	55.2'
18	312°42.2'	94°06.8'	S 15°07.8'	6°29.4'	11.0'	S 21°20.4'	4.8'	55.2'
19	327°44.7'	109°06.8'	S 15°08.6'	20°59.3'	11.1'	S 21°15.6'	4.9'	55.2'
20	342°47.1'	124°06.8'	S 15°09.4'	35°29.4'	11.1'	S 21°10.7'	5.0'	55.1'
21	357°49.6'	139°06.8'	S 15°10.2'	49°59.5'	11.2'	S 21°05.7'	5.1'	55.1'
22	12°52.1'	154°06.8'	S 15°10.9'	64°29.7'	11.3'	S 21°00.7'	5.2'	55.1'
23	27°54.5'	169°06.8'	S 15°11.7'	78°60.0'	11.3'	S 20°55.5'	5.3'	55.1'

Mon Nov 4, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.8' SD = 16.1'		SD = 14.9'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	42°57.0'	184°06.8'	S 15°12.5'	93°30.3'	11.4'	S 20°50.2'	5.4'	55.0'
1	57°59.4'	199°06.8'	S 15°13.3'	108°00.7'	11.5'	S 20°44.8'	5.5'	55.0'
2	73°01.9'	214°06.8'	S 15°14.0'	122°31.2'	11.5'	S 20°39.4'	5.6'	55.0'
3	88°04.4'	229°06.8'	S 15°14.8'	137°01.7'	11.6'	S 20°33.8'	5.7'	55.0'
4	103°06.8'	244°06.8'	S 15°15.6'	151°32.3'	11.7'	S 20°28.1'	5.7'	54.9'
5	118°09.3'	259°06.8'	S 15°16.4'	166°02.9'	11.7'	S 20°22.4'	5.8'	54.9'
6	133°11.8'	274°06.8'	S 15°17.1'	180°33.6'	11.8'	S 20°16.5'	5.9'	54.9'
7	148°14.2'	289°06.8'	S 15°17.9'	195°04.4'	11.8'	S 20°10.6'	6.0'	54.9'
8	163°16.7'	304°06.7'	S 15°18.7'	209°35.3'	11.9'	S 20°04.6'	6.1'	54.9'
9	178°19.2'	319°06.7'	S 15°19.4'	224°06.2'	12.0'	S 19°58.5'	6.2'	54.8'
10	193°21.6'	334°06.7'	S 15°20.2'	238°37.2'	12.0'	S 19°52.3'	6.3'	54.8'
11	208°24.1'	349°06.7'	S 15°21.0'	253°08.2'	12.1'	S 19°46.0'	6.4'	54.8'
12	223°26.5'	4°06.7'	S 15°21.8'	267°39.3'	12.2'	S 19°39.6'	6.5'	54.8'
13	238°29.0'	19°06.7'	S 15°22.5'	282°10.5'	12.2'	S 19°33.2'	6.5'	54.8'
14	253°31.5'	34°06.7'	S 15°23.3'	296°41.7'	12.3'	S 19°26.6'	6.6'	54.7'
15	268°33.9'	49°06.7'	S 15°24.1'	311°13.0'	12.4'	S 19°20.0'	6.7'	54.7'
16	283°36.4'	64°06.7'	S 15°24.8'	325°44.4'	12.4'	S 19°13.3'	6.8'	54.7'
17	298°38.9'	79°06.7'	S 15°25.6'	340°15.8'	12.5'	S 19°06.5'	6.9'	54.7'
18	313°41.3'	94°06.7'	S 15°26.4'	354°47.3'	12.6'	S 18°59.6'	7.0'	54.7'
19	328°43.8'	109°06.7'	S 15°27.1'	9°18.8'	12.6'	S 18°52.7'	7.0'	54.7'
20	343°46.3'	124°06.6'	S 15°27.9'	23°50.5'	12.7'	S 18°45.7'	7.1'	54.6'
21	358°48.7'	139°06.6'	S 15°28.7'	38°22.1'	12.7'	S 18°38.5'	7.2'	54.6'
22	13°51.2'	154°06.6'	S 15°29.4'	52°53.9'	12.8'	S 18°31.3'	7.3'	54.6'
23	28°53.7'	169°06.6'	S 15°30.2'	67°25.7'	12.9'	S 18°24.1'	7.3'	54.6'

Tue Nov 5, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.8' SD = 16.1'		SD = 14.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	43°56.1'	184°06.6'	S 15°31.0'	81°57.5'	12.9'	S 18°16.7'	7.4'	54.6'
1	58°58.6'	199°06.6'	S 15°31.7'	96°29.5'	13.0'	S 18°09.3'	7.5'	54.6'
2	74°01.0'	214°06.6'	S 15°32.5'	111°01.4'	13.0'	S 18°01.8'	7.6'	54.5'
3	89°03.5'	229°06.6'	S 15°33.3'	125°33.5'	13.1'	S 17°54.2'	7.7'	54.5'
4	104°06.0'	244°06.6'	S 15°34.0'	140°05.6'	13.2'	S 17°46.6'	7.7'	54.5'
5	119°08.4'	259°06.5'	S 15°34.8'	154°37.8'	13.2'	S 17°38.8'	7.8'	54.5'
6	134°10.9'	274°06.5'	S 15°35.6'	169°10.0'	13.3'	S 17°31.0'	7.9'	54.5'
7	149°13.4'	289°06.5'	S 15°36.3'	183°42.3'	13.3'	S 17°23.2'	7.9'	54.5'
8	164°15.8'	304°06.5'	S 15°37.1'	198°14.6'	13.4'	S 17°15.2'	8.0'	54.4'
9	179°18.3'	319°06.5'	S 15°37.8'	212°47.0'	13.5'	S 17°07.2'	8.1'	54.4'
10	194°20.8'	334°06.5'	S 15°38.6'	227°19.5'	13.5'	S 16°59.1'	8.2'	54.4'
11	209°23.2'	349°06.5'	S 15°39.4'	241°52.0'	13.6'	S 16°51.0'	8.2'	54.4'
12	224°25.7'	4°06.4'	S 15°40.1'	256°24.5'	13.6'	S 16°42.8'	8.3'	54.4'
13	239°28.2'	19°06.4'	S 15°40.9'	270°57.2'	13.7'	S 16°34.5'	8.4'	54.4'
14	254°30.6'	34°06.4'	S 15°41.6'	285°29.8'	13.7'	S 16°26.1'	8.4'	54.4'
15	269°33.1'	49°06.4'	S 15°42.4'	300°02.6'	13.8'	S 16°17.7'	8.5'	54.4'
16	284°35.5'	64°06.4'	S 15°43.2'	314°35.4'	13.8'	S 16°09.2'	8.6'	54.3'
17	299°38.0'	79°06.4'	S 15°43.9'	329°08.2'	13.9'	S 16°00.6'	8.6'	54.3'
18	314°40.5'	94°06.3'	S 15°44.7'	343°41.1'	13.9'	S 15°52.0'	8.7'	54.3'
19	329°42.9'	109°06.3'	S 15°45.4'	358°14.0'	14.0'	S 15°43.3'	8.7'	54.3'
20	344°45.4'	124°06.3'	S 15°46.2'	12°47.0'	14.1'	S 15°34.6'	8.8'	54.3'
21	359°47.9'	139°06.3'	S 15°46.9'	27°20.1'	14.1'	S 15°25.8'	8.9'	54.3'
22	14°50.3'	154°06.3'	S 15°47.7'	41°53.2'	14.2'	S 15°16.9'	8.9'	54.3'
23	29°52.8'	169°06.2'	S 15°48.5'	56°26.4'	14.2'	S 15°08.0'	9.0'	54.3'

Wed Nov 6, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.7' SD = 16.1'		SD = 14.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	44°55.3'	184°06.2'	S 15°49.2'	70°59.6'	14.3'	S 14°59.0'	9.1'	54.3'
1	59°57.7'	199°06.2'	S 15°50.0'	85°32.8'	14.3'	S 14°49.9'	9.1'	54.3'
2	75°00.2'	214°06.2'	S 15°50.7'	100°06.1'	14.4'	S 14°40.8'	9.2'	54.3'
3	90°02.6'	229°06.2'	S 15°51.5'	114°39.5'	14.4'	S 14°31.7'	9.2'	54.2'
4	105°05.1'	244°06.1'	S 15°52.2'	129°12.9'	14.4'	S 14°22.4'	9.3'	54.2'
5	120°07.6'	259°06.1'	S 15°53.0'	143°46.3'	14.5'	S 14°13.1'	9.3'	54.2'
6	135°10.0'	274°06.1'	S 15°53.7'	158°19.8'	14.5'	S 14°03.8'	9.4'	54.2'
7	150°12.5'	289°06.1'	S 15°54.5'	172°53.4'	14.6'	S 13°54.4'	9.4'	54.2'
8	165°15.0'	304°06.1'	S 15°55.2'	187°26.9'	14.6'	S 13°45.0'	9.5'	54.2'
9	180°17.4'	319°06.0'	S 15°56.0'	202°00.6'	14.7'	S 13°35.5'	9.6'	54.2'
10	195°19.9'	334°06.0'	S 15°56.7'	216°34.2'	14.7'	S 13°25.9'	9.6'	54.2'
11	210°22.4'	349°06.0'	S 15°57.5'	231°08.0'	14.8'	S 13°16.3'	9.7'	54.2'
12	225°24.8'	4°06.0'	S 15°58.2'	245°41.7'	14.8'	S 13°06.6'	9.7'	54.2'
13	240°27.3'	19°05.9'	S 15°59.0'	260°15.5'	14.8'	S 12°56.9'	9.8'	54.2'
14	255°29.8'	34°05.9'	S 15°59.7'	274°49.3'	14.9'	S 12°47.1'	9.8'	54.2'
15	270°32.2'	49°05.9'	S 16°00.5'	289°23.2'	14.9'	S 12°37.3'	9.9'	54.2'
16	285°34.7'	64°05.9'	S 16°01.2'	303°57.2'	15.0'	S 12°27.5'	9.9'	54.2'
17	300°37.1'	79°05.8'	S 16°02.0'	318°31.1'	15.0'	S 12°17.5'	10.0'	54.2'
18	315°39.6'	94°05.8'	S 16°02.7'	333°05.1'	15.0'	S 12°07.6'	10.0'	54.2'
19	330°42.1'	109°05.8'	S 16°03.5'	347°39.1'	15.1'	S 11°57.6'	10.1'	54.2'
20	345°44.5'	124°05.8'	S 16°04.2'	2°13.2'	15.1'	S 11°47.5'	10.1'	54.1'
21	0°47.0'	139°05.7'	S 16°05.0'	16°47.3'	15.1'	S 11°37.4'	10.2'	54.1'
22	15°49.5'	154°05.7'	S 16°05.7'	31°21.5'	15.2'	S 11°27.3'	10.2'	54.1'
23	30°51.9'	169°05.7'	S 16°06.4'	45°55.7'	15.2'	S 11°17.1'	10.2'	54.1'

Thu Nov 7, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.7' SD = 16.1'		SD = 14.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	45°54.4'	184°05.6'	S 16°07.2'	60°29.9'	15.2'	S 11°06.8'	10.3'	54.1'
1	60°56.9'	199°05.6'	S 16°07.9'	75°04.1'	15.3'	S 10°56.5'	10.3'	54.1'
2	75°59.3'	214°05.6'	S 16°08.7'	89°38.4'	15.3'	S 10°46.2'	10.4'	54.1'
3	91°01.8'	229°05.6'	S 16°09.4'	104°12.7'	15.3'	S 10°35.8'	10.4'	54.1'
4	106°04.3'	244°05.5'	S 16°10.2'	118°47.1'	15.4'	S 10°25.4'	10.5'	54.1'
5	121°06.7'	259°05.5'	S 16°10.9'	133°21.4'	15.4'	S 10°15.0'	10.5'	54.1'
6	136°09.2'	274°05.5'	S 16°11.6'	147°55.8'	15.4'	S 10°04.5'	10.5'	54.1'
7	151°11.6'	289°05.4'	S 16°12.4'	162°30.3'	15.5'	S 9°54.0'	10.6'	54.1'
8	166°14.1'	304°05.4'	S 16°13.1'	177°04.7'	15.5'	S 9°43.4'	10.6'	54.1'
9	181°16.6'	319°05.4'	S 16°13.9'	191°39.2'	15.5'	S 9°32.8'	10.7'	54.1'
10	196°19.0'	334°05.3'	S 16°14.6'	206°13.7'	15.5'	S 9°22.1'	10.7'	54.1'
11	211°21.5'	349°05.3'	S 16°15.3'	220°48.3'	15.6'	S 9°11.4'	10.7'	54.1'
12	226°24.0'	4°05.3'	S 16°16.1'	235°22.8'	15.6'	S 9°00.7'	10.8'	54.1'
13	241°26.4'	19°05.2'	S 16°16.8'	249°57.4'	15.6'	S 8°49.9'	10.8'	54.1'
14	256°28.9'	34°05.2'	S 16°17.5'	264°32.0'	15.6'	S 8°39.1'	10.8'	54.1'
15	271°31.4'	49°05.2'	S 16°18.3'	279°06.7'	15.7'	S 8°28.3'	10.9'	54.1'
16	286°33.8'	64°05.1'	S 16°19.0'	293°41.3'	15.7'	S 8°17.4'	10.9'	54.1'
17	301°36.3'	79°05.1'	S 16°19.8'	308°16.0'	15.7'	S 8°06.5'	10.9'	54.1'
18	316°38.7'	94°05.1'	S 16°20.5'	322°50.7'	15.7'	S 7°55.6'	11.0'	54.1'
19	331°41.2'	109°05.0'	S 16°21.2'	337°25.4'	15.7'	S 7°44.6'	11.0'	54.1'
20	346°43.7'	124°05.0'	S 16°22.0'	352°00.2'	15.8'	S 7°33.6'	11.0'	54.2'
21	1°46.1'	139°05.0'	S 16°22.7'	6°34.9'	15.8'	S 7°22.6'	11.1'	54.2'
22	16°48.6'	154°04.9'	S 16°23.4'	21°09.7'	15.8'	S 7°11.5'	11.1'	54.2'
23	31°51.1'	169°04.9'	S 16°24.2'	35°44.5'	15.8'	S 7°00.4'	11.1'	54.2'

Fri Nov 8, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.7' SD = 16.1'		SD = 14.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	46°53.5'	184°04.9'	S 16°24.9'	50°19.3'	15.8'	S 6°49.3'	11.2'	54.2'
1	61°56.0'	199°04.8'	S 16°25.6'	64°54.1'	15.8'	S 6°38.2'	11.2'	54.2'
2	76°58.5'	214°04.8'	S 16°26.4'	79°29.0'	15.9'	S 6°27.0'	11.2'	54.2'
3	92°00.9'	229°04.7'	S 16°27.1'	94°03.8'	15.9'	S 6°15.8'	11.2'	54.2'
4	107°03.4'	244°04.7'	S 16°27.8'	108°38.7'	15.9'	S 6°04.6'	11.3'	54.2'
5	122°05.9'	259°04.7'	S 16°28.5'	123°13.6'	15.9'	S 5°53.3'	11.3'	54.2'
6	137°08.3'	274°04.6'	S 16°29.3'	137°48.5'	15.9'	S 5°42.0'	11.3'	54.2'
7	152°10.8'	289°04.6'	S 16°30.0'	152°23.4'	15.9'	S 5°30.7'	11.3'	54.2'
8	167°13.2'	304°04.5'	S 16°30.7'	166°58.3'	15.9'	S 5°19.4'	11.4'	54.2'
9	182°15.7'	319°04.5'	S 16°31.5'	181°33.2'	15.9'	S 5°08.0'	11.4'	54.2'
10	197°18.2'	334°04.5'	S 16°32.2'	196°08.1'	15.9'	S 4°56.6'	11.4'	54.2'
11	212°20.6'	349°04.4'	S 16°32.9'	210°43.0'	15.9'	S 4°45.2'	11.4'	54.2'
12	227°23.1'	4°04.4'	S 16°33.6'	225°18.0'	15.9'	S 4°33.8'	11.5'	54.2'
13	242°25.6'	19°04.3'	S 16°34.4'	239°52.9'	15.9'	S 4°22.3'	11.5'	54.2'
14	257°28.0'	34°04.3'	S 16°35.1'	254°27.9'	16.0'	S 4°10.8'	11.5'	54.2'
15	272°30.5'	49°04.3'	S 16°35.8'	269°02.8'	16.0'	S 3°59.3'	11.5'	54.3'
16	287°33.0'	64°04.2'	S 16°36.5'	283°37.8'	16.0'	S 3°47.8'	11.5'	54.3'
17	302°35.4'	79°04.2'	S 16°37.3'	298°12.7'	16.0'	S 3°36.3'	11.6'	54.3'
18	317°37.9'	94°04.1'	S 16°38.0'	312°47.7'	16.0'	S 3°24.8'	11.6'	54.3'
19	332°40.3'	109°04.1'	S 16°38.7'	327°22.6'	16.0'	S 3°13.2'	11.6'	54.3'
20	347°42.8'	124°04.0'	S 16°39.4'	341°57.6'	16.0'	S 3°01.6'	11.6'	54.3'
21	2°45.3'	139°04.0'	S 16°40.2'	356°32.6'	16.0'	S 2°50.0'	11.6'	54.3'
22	17°47.7'	154°04.0'	S 16°40.9'	11°07.5'	16.0'	S 2°38.4'	11.6'	54.3'
23	32°50.2'	169°03.9'	S 16°41.6'	25°42.5'	15.9'	S 2°26.7'	11.6'	54.3'

Sat Nov 9, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.7' SD = 16.1'		SD = 14.9'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	47°52.7'	184°03.9'	S 16°42.3'	40°17.4'	15.9'	S 2°15.1'	11.7'	54.3'
1	62°55.1'	199°03.8'	S 16°43.0'	54°52.4'	15.9'	S 2°03.4'	11.7'	54.3'
2	77°57.6'	214°03.8'	S 16°43.8'	69°27.3'	15.9'	S 1°51.8'	11.7'	54.4'
3	93°00.1'	229°03.7'	S 16°44.5'	84°02.2'	15.9'	S 1°40.1'	11.7'	54.4'
4	108°02.5'	244°03.7'	S 16°45.2'	98°37.2'	15.9'	S 1°28.4'	11.7'	54.4'
5	123°05.0'	259°03.6'	S 16°45.9'	113°12.1'	15.9'	S 1°16.7'	11.7'	54.4'
6	138°07.5'	274°03.6'	S 16°46.6'	127°47.0'	15.9'	S 1°04.9'	11.7'	54.4'
7	153°09.9'	289°03.5'	S 16°47.3'	142°21.9'	15.9'	S 0°53.2'	11.7'	54.4'
8	168°12.4'	304°03.5'	S 16°48.1'	156°56.8'	15.9'	S 0°41.5'	11.7'	54.4'
9	183°14.8'	319°03.4'	S 16°48.8'	171°31.6'	15.9'	S 0°29.7'	11.8'	54.4'
10	198°17.3'	334°03.4'	S 16°49.5'	186°06.5'	15.9'	S 0°18.0'	11.8'	54.4'
11	213°19.8'	349°03.3'	S 16°50.2'	200°41.4'	15.8'	S 0°06.2'	11.8'	54.4'
12	228°22.2'	4°03.3'	S 16°50.9'	215°16.2'	15.8'	N 0°05.6'	11.8'	54.5'
13	243°24.7'	19°03.2'	S 16°51.6'	229°51.0'	15.8'	N 0°17.3'	11.8'	54.5'
14	258°27.2'	34°03.2'	S 16°52.4'	244°25.9'	15.8'	N 0°29.1'	11.8'	54.5'
15	273°29.6'	49°03.1'	S 16°53.1'	259°00.6'	15.8'	N 0°40.9'	11.8'	54.5'
16	288°32.1'	64°03.1'	S 16°53.8'	273°35.4'	15.8'	N 0°52.7'	11.8'	54.5'
17	303°34.6'	79°03.0'	S 16°54.5'	288°10.2'	15.7'	N 1°04.5'	11.8'	54.5'
18	318°37.0'	94°03.0'	S 16°55.2'	302°44.9'	15.7'	N 1°16.3'	11.8'	54.5'
19	333°39.5'	109°02.9'	S 16°55.9'	317°19.7'	15.7'	N 1°28.1'	11.8'	54.5'
20	348°41.9'	124°02.9'	S 16°56.6'	331°54.4'	15.7'	N 1°39.9'	11.8'	54.6'
21	3°44.4'	139°02.8'	S 16°57.3'	346°29.0'	15.7'	N 1°51.7'	11.8'	54.6'
22	18°46.9'	154°02.8'	S 16°58.0'	1°03.7'	15.6'	N 2°03.5'	11.8'	54.6'
23	33°49.3'	169°02.7'	S 16°58.8'	15°38.4'	15.6'	N 2°15.3'	11.8'	54.6'

Sun Nov 10, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.7' SD = 16.2'		SD = 14.9'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	48°51.8'	184°02.7'	S 16°59.5'	30°13.0'	15.6'	N 2°27.1'	11.8'	54.6'
1	63°54.3'	199°02.6'	S 17°00.2'	44°47.6'	15.6'	N 2°38.9'	11.8'	54.6'
2	78°56.7'	214°02.5'	S 17°00.9'	59°22.1'	15.5'	N 2°50.7'	11.8'	54.6'
3	93°59.2'	229°02.5'	S 17°01.6'	73°56.7'	15.5'	N 3°02.4'	11.8'	54.7'
4	109°01.7'	244°02.4'	S 17°02.3'	88°31.2'	15.5'	N 3°14.2'	11.8'	54.7'
5	124°04.1'	259°02.4'	S 17°03.0'	103°05.7'	15.5'	N 3°26.0'	11.8'	54.7'
6	139°06.6'	274°02.3'	S 17°03.7'	117°40.1'	15.4'	N 3°37.8'	11.8'	54.7'
7	154°09.1'	289°02.3'	S 17°04.4'	132°14.6'	15.4'	N 3°49.5'	11.8'	54.7'
8	169°11.5'	304°02.2'	S 17°05.1'	146°49.0'	15.4'	N 4°01.3'	11.7'	54.7'
9	184°14.0'	319°02.2'	S 17°05.8'	161°23.3'	15.3'	N 4°13.0'	11.7'	54.7'
10	199°16.4'	334°02.1'	S 17°06.5'	175°57.7'	15.3'	N 4°24.8'	11.7'	54.8'
11	214°18.9'	349°02.0'	S 17°07.2'	190°32.0'	15.3'	N 4°36.5'	11.7'	54.8'
12	229°21.4'	4°02.0'	S 17°07.9'	205°06.3'	15.2'	N 4°48.2'	11.7'	54.8'
13	244°23.8'	19°01.9'	S 17°08.6'	219°40.5'	15.2'	N 4°59.9'	11.7'	54.8'
14	259°26.3'	34°01.9'	S 17°09.3'	234°14.7'	15.2'	N 5°11.6'	11.7'	54.8'
15	274°28.8'	49°01.8'	S 17°10.0'	248°48.9'	15.1'	N 5°23.3'	11.7'	54.8'
16	289°31.2'	64°01.7'	S 17°10.7'	263°23.0'	15.1'	N 5°34.9'	11.6'	54.8'
17	304°33.7'	79°01.7'	S 17°11.4'	277°57.1'	15.1'	N 5°46.6'	11.6'	54.9'
18	319°36.2'	94°01.6'	S 17°12.1'	292°31.2'	15.0'	N 5°58.2'	11.6'	54.9'
19	334°38.6'	109°01.6'	S 17°12.8'	307°05.2'	15.0'	N 6°09.8'	11.6'	54.9'
20	349°41.1'	124°01.5'	S 17°13.5'	321°39.2'	14.9'	N 6°21.4'	11.6'	54.9'
21	4°43.6'	139°01.4'	S 17°14.2'	336°13.1'	14.9'	N 6°33.0'	11.6'	54.9'
22	19°46.0'	154°01.4'	S 17°14.9'	350°47.0'	14.9'	N 6°44.6'	11.5'	54.9'
23	34°48.5'	169°01.3'	S 17°15.6'	5°20.9'	14.8'	N 6°56.1'	11.5'	55.0'

Mon Nov 11, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.7' SD = 16.2'		SD = 15.1'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	49°50.9'	184°01.2'	S 17°16.3'	19°54.7'	14.8'	N 7°07.7'	11.5'	55.0'
1	64°53.4'	199°01.2'	S 17°17.0'	34°28.5'	14.7'	N 7°19.2'	11.5'	55.0'
2	79°55.9'	214°01.1'	S 17°17.7'	49°02.2'	14.7'	N 7°30.6'	11.5'	55.0'
3	94°58.3'	229°01.1'	S 17°18.4'	63°35.9'	14.6'	N 7°42.1'	11.4'	55.0'
4	110°00.8'	244°01.0'	S 17°19.1'	78°09.6'	14.6'	N 7°53.5'	11.4'	55.0'
5	125°03.3'	259°00.9'	S 17°19.8'	92°43.2'	14.6'	N 8°04.9'	11.4'	55.1'
6	140°05.7'	274°00.9'	S 17°20.5'	107°16.7'	14.5'	N 8°16.3'	11.4'	55.1'
7	155°08.2'	289°00.8'	S 17°21.2'	121°50.2'	14.5'	N 8°27.7'	11.3'	55.1'
8	170°10.7'	304°00.7'	S 17°21.9'	136°23.7'	14.4'	N 8°39.0'	11.3'	55.1'
9	185°13.1'	319°00.7'	S 17°22.6'	150°57.1'	14.4'	N 8°50.3'	11.3'	55.1'
10	200°15.6'	334°00.6'	S 17°23.2'	165°30.5'	14.3'	N 9°01.6'	11.2'	55.2'
11	215°18.0'	349°00.5'	S 17°23.9'	180°03.8'	14.3'	N 9°12.8'	11.2'	55.2'
12	230°20.5'	4°00.5'	S 17°24.6'	194°37.0'	14.2'	N 9°24.0'	11.2'	55.2'
13	245°23.0'	19°00.4'	S 17°25.3'	209°10.2'	14.2'	N 9°35.2'	11.1'	55.2'
14	260°25.4'	34°00.3'	S 17°26.0'	223°43.4'	14.1'	N 9°46.3'	11.1'	55.2'
15	275°27.9'	49°00.3'	S 17°26.7'	238°16.5'	14.0'	N 9°57.4'	11.1'	55.2'
16	290°30.4'	64°00.2'	S 17°27.4'	252°49.5'	14.0'	N 10°08.5'	11.0'	55.3'
17	305°32.8'	79°00.1'	S 17°28.1'	267°22.5'	13.9'	N 10°19.5'	11.0'	55.3'
18	320°35.3'	94°00.0'	S 17°28.8'	281°55.5'	13.9'	N 10°30.5'	11.0'	55.3'
19	335°37.8'	108°60.0'	S 17°29.4'	296°28.4'	13.8'	N 10°41.5'	10.9'	55.3'
20	350°40.2'	123°59.9'	S 17°30.1'	311°01.2'	13.8'	N 10°52.4'	10.9'	55.3'
21	5°42.7'	138°59.8'	S 17°30.8'	325°34.0'	13.7'	N 11°03.3'	10.8'	55.4'
22	20°45.2'	153°59.8'	S 17°31.5'	340°06.7'	13.7'	N 11°14.2'	10.8'	55.4'
23	35°47.6'	168°59.7'	S 17°32.2'	354°39.3'	13.6'	N 11°25.0'	10.8'	55.4'

Tue Nov 12, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.7' SD = 16.2'		SD = 15.2'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	50°50.1'	183°59.6'	S 17°32.9'	9°11.9'	13.5'	N 11°35.7'	10.7'	55.4'
1	65°52.5'	198°59.5'	S 17°33.6'	23°44.5'	13.5'	N 11°46.4'	10.7'	55.4'
2	80°55.0'	213°59.5'	S 17°34.2'	38°16.9'	13.4'	N 11°57.1'	10.6'	55.5'
3	95°57.5'	228°59.4'	S 17°34.9'	52°49.4'	13.4'	N 12°07.7'	10.6'	55.5'
4	110°59.9'	243°59.3'	S 17°35.6'	67°21.7'	13.3'	N 12°18.3'	10.5'	55.5'
5	126°02.4'	258°59.3'	S 17°36.3'	81°54.0'	13.2'	N 12°28.9'	10.5'	55.5'
6	141°04.9'	273°59.2'	S 17°37.0'	96°26.3'	13.2'	N 12°39.3'	10.4'	55.5'
7	156°07.3'	288°59.1'	S 17°37.6'	110°58.4'	13.1'	N 12°49.8'	10.4'	55.5'
8	171°09.8'	303°59.0'	S 17°38.3'	125°30.5'	13.0'	N 13°00.2'	10.3'	55.6'
9	186°12.3'	318°59.0'	S 17°39.0'	140°02.6'	13.0'	N 13°10.5'	10.3'	55.6'
10	201°14.7'	333°58.9'	S 17°39.7'	154°34.6'	12.9'	N 13°20.8'	10.2'	55.6'
11	216°17.2'	348°58.8'	S 17°40.4'	169°06.5'	12.9'	N 13°31.0'	10.2'	55.6'
12	231°19.7'	3°58.7'	S 17°41.0'	183°38.3'	12.8'	N 13°41.2'	10.1'	55.6'
13	246°22.1'	18°58.7'	S 17°41.7'	198°10.1'	12.7'	N 13°51.3'	10.1'	55.7'
14	261°24.6'	33°58.6'	S 17°42.4'	212°41.8'	12.7'	N 14°01.4'	10.0'	55.7'
15	276°27.0'	48°58.5'	S 17°43.1'	227°13.5'	12.6'	N 14°11.4'	9.9'	55.7'
16	291°29.5'	63°58.4'	S 17°43.7'	241°45.1'	12.5'	N 14°21.3'	9.9'	55.7'
17	306°32.0'	78°58.3'	S 17°44.4'	256°16.6'	12.5'	N 14°31.2'	9.8'	55.7'
18	321°34.4'	93°58.3'	S 17°45.1'	270°48.0'	12.4'	N 14°41.1'	9.8'	55.8'
19	336°36.9'	108°58.2'	S 17°45.8'	285°19.4'	12.3'	N 14°50.8'	9.7'	55.8'
20	351°39.4'	123°58.1'	S 17°46.4'	299°50.7'	12.2'	N 15°00.5'	9.6'	55.8'
21	6°41.8'	138°58.0'	S 17°47.1'	314°22.0'	12.2'	N 15°10.2'	9.6'	55.8'
22	21°44.3'	153°57.9'	S 17°47.8'	328°53.2'	12.1'	N 15°19.7'	9.5'	55.8'
23	36°46.8'	168°57.9'	S 17°48.5'	343°24.3'	12.0'	N 15°29.3'	9.4'	55.9'

Wed Nov 13, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.7' SD = 16.2'		SD = 15.3'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	51°49.2'	183°57.8'	S 17°49.1'	357°55.3'	12.0'	N 15°38.7'	9.4'	55.9'
1	66°51.7'	198°57.7'	S 17°49.8'	12°26.3'	11.9'	N 15°48.1'	9.3'	55.9'
2	81°54.1'	213°57.6'	S 17°50.5'	26°57.2'	11.8'	N 15°57.4'	9.2'	55.9'
3	96°56.6'	228°57.5'	S 17°51.1'	41°28.0'	11.8'	N 16°06.6'	9.2'	55.9'
4	111°59.1'	243°57.5'	S 17°51.8'	55°58.7'	11.7'	N 16°15.8'	9.1'	56.0'
5	127°01.5'	258°57.4'	S 17°52.5'	70°29.4'	11.6'	N 16°24.9'	9.0'	56.0'
6	142°04.0'	273°57.3'	S 17°53.1'	85°00.0'	11.5'	N 16°33.9'	8.9'	56.0'
7	157°06.5'	288°57.2'	S 17°53.8'	99°30.6'	11.5'	N 16°42.9'	8.9'	56.0'
8	172°08.9'	303°57.1'	S 17°54.5'	114°01.1'	11.4'	N 16°51.7'	8.8'	56.0'
9	187°11.4'	318°57.0'	S 17°55.1'	128°31.4'	11.3'	N 17°00.5'	8.7'	56.1'
10	202°13.9'	333°57.0'	S 17°55.8'	143°01.8'	11.3'	N 17°09.2'	8.6'	56.1'
11	217°16.3'	348°56.9'	S 17°56.5'	157°32.0'	11.2'	N 17°17.9'	8.6'	56.1'
12	232°18.8'	3°56.8'	S 17°57.1'	172°02.2'	11.1'	N 17°26.4'	8.5'	56.1'
13	247°21.3'	18°56.7'	S 17°57.8'	186°32.3'	11.0'	N 17°34.9'	8.4'	56.1'
14	262°23.7'	33°56.6'	S 17°58.5'	201°02.3'	11.0'	N 17°43.3'	8.3'	56.2'
15	277°26.2'	48°56.5'	S 17°59.1'	215°32.3'	10.9'	N 17°51.6'	8.2'	56.2'
16	292°28.6'	63°56.4'	S 17°59.8'	230°02.2'	10.8'	N 17°59.9'	8.1'	56.2'
17	307°31.1'	78°56.4'	S 18°00.4'	244°32.0'	10.7'	N 18°08.0'	8.1'	56.2'
18	322°33.6'	93°56.3'	S 18°01.1'	259°01.8'	10.7'	N 18°16.1'	8.0'	56.2'
19	337°36.0'	108°56.2'	S 18°01.8'	273°31.4'	10.6'	N 18°24.0'	7.9'	56.3'
20	352°38.5'	123°56.1'	S 18°02.4'	288°01.0'	10.5'	N 18°31.9'	7.8'	56.3'
21	7°41.0'	138°56.0'	S 18°03.1'	302°30.5'	10.5'	N 18°39.7'	7.7'	56.3'
22	22°43.4'	153°55.9'	S 18°03.7'	316°60.0'	10.4'	N 18°47.4'	7.6'	56.3'
23	37°45.9'	168°55.8'	S 18°04.4'	331°29.4'	10.3'	N 18°55.0'	7.5'	56.3'

Thu Nov 14, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.7' SD = 16.2'		SD = 15.4'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	52°48.4'	183°55.7'	S 18°05.1'	345°58.7'	10.2'	N 19°02.6'	7.4'	56.4'
1	67°50.8'	198°55.6'	S 18°05.7'	0°27.9'	10.2'	N 19°10.0'	7.3'	56.4'
2	82°53.3'	213°55.6'	S 18°06.4'	14°57.1'	10.1'	N 19°17.3'	7.2'	56.4'
3	97°55.8'	228°55.5'	S 18°07.0'	29°26.2'	10.0'	N 19°24.6'	7.1'	56.4'
4	112°58.2'	243°55.4'	S 18°07.7'	43°55.2'	9.9'	N 19°31.7'	7.0'	56.4'
5	128°00.7'	258°55.3'	S 18°08.3'	58°24.1'	9.9'	N 19°38.7'	6.9'	56.5'
6	143°03.1'	273°55.2'	S 18°09.0'	72°53.0'	9.8'	N 19°45.7'	6.8'	56.5'
7	158°05.6'	288°55.1'	S 18°09.7'	87°21.8'	9.7'	N 19°52.5'	6.7'	56.5'
8	173°08.1'	303°55.0'	S 18°10.3'	101°50.6'	9.7'	N 19°59.3'	6.6'	56.5'
9	188°10.5'	318°54.9'	S 18°11.0'	116°19.2'	9.6'	N 20°05.9'	6.5'	56.6'
10	203°13.0'	333°54.8'	S 18°11.6'	130°47.8'	9.5'	N 20°12.5'	6.4'	56.6'
11	218°15.5'	348°54.7'	S 18°12.3'	145°16.4'	9.5'	N 20°18.9'	6.3'	56.6'
12	233°17.9'	3°54.6'	S 18°12.9'	159°44.8'	9.4'	N 20°25.2'	6.2'	56.6'
13	248°20.4'	18°54.5'	S 18°13.6'	174°13.2'	9.3'	N 20°31.5'	6.1'	56.6'
14	263°22.9'	33°54.4'	S 18°14.2'	188°41.5'	9.3'	N 20°37.6'	6.0'	56.7'
15	278°25.3'	48°54.3'	S 18°14.9'	203°09.8'	9.2'	N 20°43.6'	5.9'	56.7'
16	293°27.8'	63°54.2'	S 18°15.5'	217°38.0'	9.1'	N 20°49.5'	5.8'	56.7'
17	308°30.3'	78°54.2'	S 18°16.2'	232°06.1'	9.1'	N 20°55.3'	5.7'	56.7'
18	323°32.7'	93°54.1'	S 18°16.8'	246°34.1'	9.0'	N 21°01.0'	5.6'	56.7'
19	338°35.2'	108°54.0'	S 18°17.5'	261°02.1'	8.9'	N 21°06.5'	5.5'	56.8'
20	353°37.6'	123°53.9'	S 18°18.1'	275°30.0'	8.9'	N 21°12.0'	5.3'	56.8'
21	8°40.1'	138°53.8'	S 18°18.8'	289°57.9'	8.8'	N 21°17.3'	5.2'	56.8'
22	23°42.6'	153°53.7'	S 18°19.4'	304°25.7'	8.7'	N 21°22.6'	5.1'	56.8'
23	38°45.0'	168°53.6'	S 18°20.1'	318°53.4'	8.7'	N 21°27.7'	5.0'	56.8'

Fri Nov 15, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.6' SD = 16.2'		SD = 15.6'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	53°47.5'	183°53.5'	S 18°20.7'	333°21.1'	8.6'	N 21°32.7'	4.9'	56.9'
1	68°50.0'	198°53.4'	S 18°21.3'	347°48.7'	8.5'	N 21°37.6'	4.8'	56.9'
2	83°52.4'	213°53.3'	S 18°22.0'	2°16.2'	8.5'	N 21°42.3'	4.6'	56.9'
3	98°54.9'	228°53.2'	S 18°22.6'	16°43.7'	8.4'	N 21°47.0'	4.5'	56.9'
4	113°57.4'	243°53.1'	S 18°23.3'	31°11.1'	8.4'	N 21°51.5'	4.4'	56.9'
5	128°59.8'	258°53.0'	S 18°23.9'	45°38.5'	8.3'	N 21°55.9'	4.3'	57.0'
6	144°02.3'	273°52.9'	S 18°24.6'	60°05.8'	8.3'	N 22°00.2'	4.2'	57.0'
7	159°04.7'	288°52.8'	S 18°25.2'	74°33.1'	8.2'	N 22°04.4'	4.0'	57.0'
8	174°07.2'	303°52.7'	S 18°25.8'	89°00.3'	8.1'	N 22°08.4'	3.9'	57.0'
9	189°09.7'	318°52.6'	S 18°26.5'	103°27.4'	8.1'	N 22°12.3'	3.8'	57.0'
10	204°12.1'	333°52.5'	S 18°27.1'	117°54.5'	8.0'	N 22°16.1'	3.7'	57.1'
11	219°14.6'	348°52.4'	S 18°27.8'	132°21.5'	8.0'	N 22°19.8'	3.5'	57.1'
12	234°17.1'	3°52.3'	S 18°28.4'	146°48.5'	7.9'	N 22°23.3'	3.4'	57.1'
13	249°19.5'	18°52.2'	S 18°29.0'	161°15.4'	7.9'	N 22°26.7'	3.3'	57.1'
14	264°22.0'	33°52.1'	S 18°29.7'	175°42.3'	7.8'	N 22°30.0'	3.2'	57.1'
15	279°24.5'	48°51.9'	S 18°30.3'	190°09.1'	7.8'	N 22°33.2'	3.0'	57.2'
16	294°26.9'	63°51.8'	S 18°30.9'	204°35.9'	7.7'	N 22°36.2'	2.9'	57.2'
17	309°29.4'	78°51.7'	S 18°31.6'	219°02.6'	7.7'	N 22°39.1'	2.8'	57.2'
18	324°31.9'	93°51.6'	S 18°32.2'	233°29.3'	7.6'	N 22°41.9'	2.6'	57.2'
19	339°34.3'	108°51.5'	S 18°32.8'	247°55.9'	7.6'	N 22°44.5'	2.5'	57.2'
20	354°36.8'	123°51.4'	S 18°33.5'	262°22.5'	7.5'	N 22°47.0'	2.4'	57.3'
21	9°39.2'	138°51.3'	S 18°34.1'	276°49.1'	7.5'	N 22°49.4'	2.2'	57.3'
22	24°41.7'	153°51.2'	S 18°34.7'	291°15.6'	7.5'	N 22°51.6'	2.1'	57.3'
23	39°44.2'	168°51.1'	S 18°35.4'	305°42.0'	7.4'	N 22°53.7'	2.0'	57.3'

Sat Nov 16, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.6' SD = 16.2'		SD = 15.7'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	54°46.6'	183°51.0'	S 18°36.0'	320°08.5'	7.4'	N 22°55.7'	1.8'	57.3'
1	69°49.1'	198°50.9'	S 18°36.6'	334°34.9'	7.3'	N 22°57.5'	1.7'	57.4'
2	84°51.6'	213°50.8'	S 18°37.3'	349°01.2'	7.3'	N 22°59.2'	1.6'	57.4'
3	99°54.0'	228°50.7'	S 18°37.9'	3°27.5'	7.3'	N 23°00.8'	1.4'	57.4'
4	114°56.5'	243°50.6'	S 18°38.5'	17°53.8'	7.2'	N 23°02.2'	1.3'	57.4'
5	129°59.0'	258°50.4'	S 18°39.2'	32°20.0'	7.2'	N 23°03.5'	1.2'	57.4'
6	145°01.4'	273°50.3'	S 18°39.8'	46°46.2'	7.2'	N 23°04.7'	1.0'	57.5'
7	160°03.9'	288°50.2'	S 18°40.4'	61°12.4'	7.1'	N 23°05.7'	0.9'	57.5'
8	175°06.4'	303°50.1'	S 18°41.0'	75°38.6'	7.1'	N 23°06.6'	0.7'	57.5'
9	190°08.8'	318°50.0'	S 18°41.7'	90°04.7'	7.1'	N 23°07.4'	0.6'	57.5'
10	205°11.3'	333°49.9'	S 18°42.3'	104°30.8'	7.1'	N 23°08.0'	0.5'	57.5'
11	220°13.7'	348°49.8'	S 18°42.9'	118°56.8'	7.0'	N 23°08.5'	0.3'	57.6'
12	235°16.2'	3°49.7'	S 18°43.5'	133°22.9'	7.0'	N 23°08.8'	0.2'	57.6'
13	250°18.7'	18°49.6'	S 18°44.2'	147°48.9'	7.0'	N 23°09.0'	0.1'	57.6'
14	265°21.1'	33°49.4'	S 18°44.8'	162°14.9'	7.0'	N 23°09.0'	0.1'	57.6'
15	280°23.6'	48°49.3'	S 18°45.4'	176°40.8'	6.9'	N 23°09.0'	0.2'	57.6'
16	295°26.1'	63°49.2'	S 18°46.0'	191°06.8'	6.9'	N 23°08.7'	0.4'	57.6'
17	310°28.5'	78°49.1'	S 18°46.7'	205°32.7'	6.9'	N 23°08.4'	0.5'	57.7'
18	325°31.0'	93°49.0'	S 18°47.3'	219°58.6'	6.9'	N 23°07.9'	0.6'	57.7'
19	340°33.5'	108°48.9'	S 18°47.9'	234°24.5'	6.9'	N 23°07.2'	0.8'	57.7'
20	355°35.9'	123°48.8'	S 18°48.5'	248°50.4'	6.9'	N 23°06.4'	0.9'	57.7'
21	10°38.4'	138°48.6'	S 18°49.1'	263°16.3'	6.9'	N 23°05.5'	1.1'	57.7'
22	25°40.9'	153°48.5'	S 18°49.8'	277°42.1'	6.8'	N 23°04.4'	1.2'	57.8'
23	40°43.3'	168°48.4'	S 18°50.4'	292°08.0'	6.8'	N 23°03.2'	1.4'	57.8'

Sun Nov 17, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.6' SD = 16.2'		SD = 15.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	55°45.8'	183°48.3'	S 18°51.0'	306°33.8'	6.8'	N 23°01.9'	1.5'	57.8'
1	70°48.2'	198°48.2'	S 18°51.6'	320°59.6'	6.8'	N 23°00.4'	1.6'	57.8'
2	85°50.7'	213°48.1'	S 18°52.2'	335°25.4'	6.8'	N 22°58.7'	1.8'	57.8'
3	100°53.2'	228°48.0'	S 18°52.8'	349°51.2'	6.8'	N 22°57.0'	1.9'	57.9'
4	115°55.6'	243°47.8'	S 18°53.5'	4°17.1'	6.8'	N 22°55.1'	2.1'	57.9'
5	130°58.1'	258°47.7'	S 18°54.1'	18°42.9'	6.8'	N 22°53.0'	2.2'	57.9'
6	146°00.6'	273°47.6'	S 18°54.7'	33°08.7'	6.8'	N 22°50.8'	2.3'	57.9'
7	161°03.0'	288°47.5'	S 18°55.3'	47°34.4'	6.8'	N 22°48.5'	2.5'	57.9'
8	176°05.5'	303°47.4'	S 18°55.9'	62°00.2'	6.8'	N 22°46.0'	2.6'	58.0'
9	191°08.0'	318°47.2'	S 18°56.5'	76°26.0'	6.8'	N 22°43.4'	2.8'	58.0'
10	206°10.4'	333°47.1'	S 18°57.1'	90°51.8'	6.8'	N 22°40.6'	2.9'	58.0'
11	221°12.9'	348°47.0'	S 18°57.7'	105°17.7'	6.8'	N 22°37.7'	3.0'	58.0'
12	236°15.4'	3°46.9'	S 18°58.4'	119°43.5'	6.8'	N 22°34.7'	3.2'	58.0'
13	251°17.8'	18°46.8'	S 18°59.0'	134°09.3'	6.8'	N 22°31.5'	3.3'	58.1'
14	266°20.3'	33°46.6'	S 18°59.6'	148°35.1'	6.8'	N 22°28.1'	3.5'	58.1'
15	281°22.7'	48°46.5'	S 19°00.2'	163°00.9'	6.8'	N 22°24.7'	3.6'	58.1'
16	296°25.2'	63°46.4'	S 19°00.8'	177°26.8'	6.9'	N 22°21.1'	3.7'	58.1'
17	311°27.7'	78°46.3'	S 19°01.4'	191°52.6'	6.9'	N 22°17.3'	3.9'	58.1'
18	326°30.1'	93°46.1'	S 19°02.0'	206°18.5'	6.9'	N 22°13.5'	4.0'	58.1'
19	341°32.6'	108°46.0'	S 19°02.6'	220°44.4'	6.9'	N 22°09.4'	4.2'	58.2'
20	356°35.1'	123°45.9'	S 19°03.2'	235°10.3'	6.9'	N 22°05.3'	4.3'	58.2'
21	11°37.5'	138°45.8'	S 19°03.8'	249°36.2'	6.9'	N 22°01.0'	4.4'	58.2'
22	26°40.0'	153°45.6'	S 19°04.4'	264°02.1'	6.9'	N 21°56.6'	4.6'	58.2'
23	41°42.5'	168°45.5'	S 19°05.0'	278°28.1'	7.0'	N 21°52.0'	4.7'	58.2'

Mon Nov 18, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.6' SD = 16.2'		SD = 15.9'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	56°44.9'	183°45.4'	S 19°05.6'	292°54.0'	7.0'	N 21°47.3'	4.8'	58.3'
1	71°47.4'	198°45.3'	S 19°06.2'	307°20.0'	7.0'	N 21°42.4'	5.0'	58.3'
2	86°49.9'	213°45.1'	S 19°06.8'	321°46.0'	7.0'	N 21°37.5'	5.1'	58.3'
3	101°52.3'	228°45.0'	S 19°07.4'	336°12.0'	7.0'	N 21°32.4'	5.2'	58.3'
4	116°54.8'	243°44.9'	S 19°08.0'	350°38.1'	7.1'	N 21°27.1'	5.4'	58.3'
5	131°57.2'	258°44.8'	S 19°08.6'	5°04.1'	7.1'	N 21°21.7'	5.5'	58.3'
6	146°59.7'	273°44.6'	S 19°09.2'	19°30.2'	7.1'	N 21°16.2'	5.6'	58.4'
7	162°02.2'	288°44.5'	S 19°09.8'	33°56.4'	7.1'	N 21°10.6'	5.8'	58.4'
8	177°04.6'	303°44.4'	S 19°10.4'	48°22.5'	7.2'	N 21°04.8'	5.9'	58.4'
9	192°07.1'	318°44.3'	S 19°11.0'	62°48.7'	7.2'	N 20°58.9'	6.0'	58.4'
10	207°09.6'	333°44.1'	S 19°11.6'	77°14.9'	7.2'	N 20°52.8'	6.2'	58.4'
11	222°12.0'	348°44.0'	S 19°12.2'	91°41.1'	7.3'	N 20°46.7'	6.3'	58.5'
12	237°14.5'	3°43.9'	S 19°12.8'	106°07.3'	7.3'	N 20°40.4'	6.4'	58.5'
13	252°17.0'	18°43.7'	S 19°13.4'	120°33.6'	7.3'	N 20°33.9'	6.6'	58.5'
14	267°19.4'	33°43.6'	S 19°14.0'	134°60.0'	7.3'	N 20°27.4'	6.7'	58.5'
15	282°21.9'	48°43.5'	S 19°14.6'	149°26.3'	7.4'	N 20°20.7'	6.8'	58.5'
16	297°24.3'	63°43.3'	S 19°15.2'	163°52.7'	7.4'	N 20°13.9'	6.9'	58.5'
17	312°26.8'	78°43.2'	S 19°15.8'	178°19.1'	7.4'	N 20°06.9'	7.1'	58.6'
18	327°29.3'	93°43.1'	S 19°16.4'	192°45.5'	7.5'	N 19°59.8'	7.2'	58.6'
19	342°31.7'	108°42.9'	S 19°17.0'	207°12.0'	7.5'	N 19°52.6'	7.3'	58.6'
20	357°34.2'	123°42.8'	S 19°17.6'	221°38.5'	7.6'	N 19°45.3'	7.4'	58.6'
21	12°36.7'	138°42.7'	S 19°18.2'	236°05.1'	7.6'	N 19°37.9'	7.6'	58.6'
22	27°39.1'	153°42.5'	S 19°18.8'	250°31.7'	7.6'	N 19°30.3'	7.7'	58.7'
23	42°41.6'	168°42.4'	S 19°19.4'	264°58.3'	7.7'	N 19°22.6'	7.8'	58.7'

Tue Nov 19, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.6' SD = 16.2'		SD = 16.1'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	57°44.1'	183°42.3'	S 19°19.9'	279°25.0'	7.7'	N 19°14.8'	7.9'	58.7'
1	72°46.5'	198°42.1'	S 19°20.5'	293°51.6'	7.7'	N 19°06.9'	8.0'	58.7'
2	87°49.0'	213°42.0'	S 19°21.1'	308°18.4'	7.8'	N 18°58.8'	8.2'	58.7'
3	102°51.5'	228°41.9'	S 19°21.7'	322°45.2'	7.8'	N 18°50.7'	8.3'	58.7'
4	117°53.9'	243°41.7'	S 19°22.3'	337°12.0'	7.8'	N 18°42.4'	8.4'	58.8'
5	132°56.4'	258°41.6'	S 19°22.9'	351°38.8'	7.9'	N 18°34.0'	8.5'	58.8'
6	147°58.8'	273°41.5'	S 19°23.5'	6°05.7'	7.9'	N 18°25.5'	8.6'	58.8'
7	163°01.3'	288°41.3'	S 19°24.1'	20°32.6'	8.0'	N 18°16.8'	8.7'	58.8'
8	178°03.8'	303°41.2'	S 19°24.6'	34°59.6'	8.0'	N 18°08.1'	8.9'	58.8'
9	193°06.2'	318°41.1'	S 19°25.2'	49°26.6'	8.0'	N 17°59.2'	9.0'	58.8'
10	208°08.7'	333°40.9'	S 19°25.8'	63°53.6'	8.1'	N 17°50.3'	9.1'	58.9'
11	223°11.2'	348°40.8'	S 19°26.4'	78°20.7'	8.1'	N 17°41.2'	9.2'	58.9'
12	238°13.6'	3°40.6'	S 19°27.0'	92°47.9'	8.2'	N 17°32.0'	9.3'	58.9'
13	253°16.1'	18°40.5'	S 19°27.6'	107°15.0'	8.2'	N 17°22.7'	9.4'	58.9'
14	268°18.6'	33°40.4'	S 19°28.1'	121°42.2'	8.2'	N 17°13.3'	9.5'	58.9'
15	283°21.0'	48°40.2'	S 19°28.7'	136°09.5'	8.3'	N 17°03.8'	9.6'	58.9'
16	298°23.5'	63°40.1'	S 19°29.3'	150°36.8'	8.3'	N 16°54.1'	9.7'	59.0'
17	313°26.0'	78°39.9'	S 19°29.9'	165°04.1'	8.4'	N 16°44.4'	9.8'	59.0'
18	328°28.4'	93°39.8'	S 19°30.5'	179°31.5'	8.4'	N 16°34.6'	9.9'	59.0'
19	343°30.9'	108°39.7'	S 19°31.0'	193°58.9'	8.5'	N 16°24.6'	10.0'	59.0'
20	358°33.3'	123°39.5'	S 19°31.6'	208°26.3'	8.5'	N 16°14.6'	10.1'	59.0'
21	13°35.8'	138°39.4'	S 19°32.2'	222°53.8'	8.5'	N 16°04.5'	10.2'	59.0'
22	28°38.3'	153°39.2'	S 19°32.8'	237°21.4'	8.6'	N 15°54.2'	10.3'	59.0'
23	43°40.7'	168°39.1'	S 19°33.3'	251°49.0'	8.6'	N 15°43.9'	10.4'	59.1'

Wed Nov 20, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.6' SD = 16.2'		SD = 16.2'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	58°43.2'	183°39.0'	S 19°33.9'	266°16.6'	8.7'	N 15°33.4'	10.5'	59.1'
1	73°45.7'	198°38.8'	S 19°34.5'	280°44.2'	8.7'	N 15°22.9'	10.6'	59.1'
2	88°48.1'	213°38.7'	S 19°35.1'	295°11.9'	8.7'	N 15°12.3'	10.7'	59.1'
3	103°50.6'	228°38.5'	S 19°35.6'	309°39.7'	8.8'	N 15°01.6'	10.8'	59.1'
4	118°53.1'	243°38.4'	S 19°36.2'	324°07.5'	8.8'	N 14°50.7'	10.9'	59.1'
5	133°55.5'	258°38.2'	S 19°36.8'	338°35.3'	8.9'	N 14°39.8'	11.0'	59.2'
6	148°58.0'	273°38.1'	S 19°37.3'	353°03.1'	8.9'	N 14°28.8'	11.1'	59.2'
7	164°00.4'	288°37.9'	S 19°37.9'	7°31.0'	8.9'	N 14°17.7'	11.2'	59.2'
8	179°02.9'	303°37.8'	S 19°38.5'	21°59.0'	9.0'	N 14°06.6'	11.3'	59.2'
9	194°05.4'	318°37.6'	S 19°39.1'	36°27.0'	9.0'	N 13°55.3'	11.4'	59.2'
10	209°07.8'	333°37.5'	S 19°39.6'	50°55.0'	9.1'	N 13°43.9'	11.4'	59.2'
11	224°10.3'	348°37.4'	S 19°40.2'	65°23.0'	9.1'	N 13°32.5'	11.5'	59.2'
12	239°12.8'	3°37.2'	S 19°40.8'	79°51.1'	9.1'	N 13°21.0'	11.6'	59.3'
13	254°15.2'	18°37.1'	S 19°41.3'	94°19.2'	9.2'	N 13°09.4'	11.7'	59.3'
14	269°17.7'	33°36.9'	S 19°41.9'	108°47.4'	9.2'	N 12°57.7'	11.8'	59.3'
15	284°20.2'	48°36.8'	S 19°42.5'	123°15.6'	9.2'	N 12°45.9'	11.8'	59.3'
16	299°22.6'	63°36.6'	S 19°43.0'	137°43.9'	9.3'	N 12°34.1'	11.9'	59.3'
17	314°25.1'	78°36.5'	S 19°43.6'	152°12.1'	9.3'	N 12°22.1'	12.0'	59.3'
18	329°27.6'	93°36.3'	S 19°44.1'	166°40.5'	9.3'	N 12°10.1'	12.1'	59.3'
19	344°30.0'	108°36.2'	S 19°44.7'	181°08.8'	9.4'	N 11°58.1'	12.2'	59.4'
20	359°32.5'	123°36.0'	S 19°45.3'	195°37.2'	9.4'	N 11°45.9'	12.2'	59.4'
21	14°34.9'	138°35.9'	S 19°45.8'	210°05.6'	9.5'	N 11°33.7'	12.3'	59.4'
22	29°37.4'	153°35.7'	S 19°46.4'	224°34.1'	9.5'	N 11°21.4'	12.4'	59.4'
23	44°39.9'	168°35.6'	S 19°47.0'	239°02.5'	9.5'	N 11°09.0'	12.4'	59.4'

Thu Nov 21, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.6' SD = 16.2'		SD = 16.2'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	59°42.3'	183°35.4'	S 19°47.5'	253°31.1'	9.5'	N 10°56.6'	12.5'	59.4'
1	74°44.8'	198°35.3'	S 19°48.1'	267°59.6'	9.6'	N 10°44.1'	12.6'	59.4'
2	89°47.3'	213°35.1'	S 19°48.6'	282°28.2'	9.6'	N 10°31.5'	12.6'	59.4'
3	104°49.7'	228°35.0'	S 19°49.2'	296°56.8'	9.6'	N 10°18.9'	12.7'	59.5'
4	119°52.2'	243°34.8'	S 19°49.8'	311°25.4'	9.7'	N 10°06.2'	12.8'	59.5'
5	134°54.7'	258°34.7'	S 19°50.3'	325°54.1'	9.7'	N 9°53.4'	12.8'	59.5'
6	149°57.1'	273°34.5'	S 19°50.9'	340°22.8'	9.7'	N 9°40.6'	12.9'	59.5'
7	164°59.6'	288°34.3'	S 19°51.4'	354°51.5'	9.8'	N 9°27.7'	12.9'	59.5'
8	180°02.1'	303°34.2'	S 19°52.0'	9°20.3'	9.8'	N 9°14.7'	13.0'	59.5'
9	195°04.5'	318°34.0'	S 19°52.5'	23°49.1'	9.8'	N 9°01.7'	13.1'	59.5'
10	210°07.0'	333°33.9'	S 19°53.1'	38°17.9'	9.8'	N 8°48.7'	13.1'	59.5'
11	225°09.4'	348°33.7'	S 19°53.6'	52°46.7'	9.9'	N 8°35.5'	13.2'	59.5'
12	240°11.9'	3°33.6'	S 19°54.2'	67°15.6'	9.9'	N 8°22.4'	13.2'	59.6'
13	255°14.4'	18°33.4'	S 19°54.7'	81°44.5'	9.9'	N 8°09.1'	13.3'	59.6'
14	270°16.8'	33°33.3'	S 19°55.3'	96°13.4'	9.9'	N 7°55.9'	13.3'	59.6'
15	285°19.3'	48°33.1'	S 19°55.8'	110°42.3'	10.0'	N 7°42.5'	13.4'	59.6'
16	300°21.8'	63°32.9'	S 19°56.4'	125°11.3'	10.0'	N 7°29.2'	13.4'	59.6'
17	315°24.2'	78°32.8'	S 19°56.9'	139°40.2'	10.0'	N 7°15.7'	13.5'	59.6'
18	330°26.7'	93°32.6'	S 19°57.5'	154°09.2'	10.0'	N 7°02.3'	13.5'	59.6'
19	345°29.2'	108°32.5'	S 19°58.0'	168°38.2'	10.0'	N 6°48.8'	13.6'	59.6'
20	0°31.6'	123°32.3'	S 19°58.6'	183°07.3'	10.1'	N 6°35.2'	13.6'	59.6'
21	15°34.1'	138°32.1'	S 19°59.1'	197°36.3'	10.1'	N 6°21.6'	13.6'	59.6'
22	30°36.5'	153°32.0'	S 19°59.7'	212°05.4'	10.1'	N 6°08.0'	13.7'	59.6'
23	45°39.0'	168°31.8'	S 20°00.2'	226°34.5'	10.1'	N 5°54.3'	13.7'	59.7'

Fri Nov 22, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.5' SD = 16.2'		SD = 16.3'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	60°41.5'	183°31.7'	S 20°00.8'	241°03.6'	10.1'	N 5°40.6'	13.8'	59.7'
1	75°43.9'	198°31.5'	S 20°01.3'	255°32.7'	10.1'	N 5°26.8'	13.8'	59.7'
2	90°46.4'	213°31.3'	S 20°01.9'	270°01.8'	10.1'	N 5°13.0'	13.8'	59.7'
3	105°48.9'	228°31.2'	S 20°02.4'	284°31.0'	10.2'	N 4°59.2'	13.9'	59.7'
4	120°51.3'	243°31.0'	S 20°02.9'	299°00.2'	10.2'	N 4°45.3'	13.9'	59.7'
5	135°53.8'	258°30.9'	S 20°03.5'	313°29.3'	10.2'	N 4°31.5'	13.9'	59.7'
6	150°56.3'	273°30.7'	S 20°04.0'	327°58.5'	10.2'	N 4°17.5'	13.9'	59.7'
7	165°58.7'	288°30.5'	S 20°04.6'	342°27.7'	10.2'	N 4°03.6'	14.0'	59.7'
8	181°01.2'	303°30.4'	S 20°05.1'	356°56.9'	10.2'	N 3°49.6'	14.0'	59.7'
9	196°03.7'	318°30.2'	S 20°05.6'	11°26.1'	10.2'	N 3°35.6'	14.0'	59.7'
10	211°06.1'	333°30.0'	S 20°06.2'	25°55.3'	10.2'	N 3°21.6'	14.0'	59.7'
11	226°08.6'	348°29.9'	S 20°06.7'	40°24.6'	10.2'	N 3°07.6'	14.1'	59.7'
12	241°11.0'	3°29.7'	S 20°07.3'	54°53.8'	10.2'	N 2°53.5'	14.1'	59.7'
13	256°13.5'	18°29.6'	S 20°07.8'	69°23.0'	10.2'	N 2°39.4'	14.1'	59.7'
14	271°16.0'	33°29.4'	S 20°08.3'	83°52.3'	10.2'	N 2°25.3'	14.1'	59.8'
15	286°18.4'	48°29.2'	S 20°08.9'	98°21.5'	10.3'	N 2°11.2'	14.1'	59.8'
16	301°20.9'	63°29.1'	S 20°09.4'	112°50.8'	10.3'	N 1°57.1'	14.1'	59.8'
17	316°23.4'	78°28.9'	S 20°09.9'	127°20.0'	10.3'	N 1°42.9'	14.2'	59.8'
18	331°25.8'	93°28.7'	S 20°10.5'	141°49.3'	10.3'	N 1°28.8'	14.2'	59.8'
19	346°28.3'	108°28.6'	S 20°11.0'	156°18.6'	10.3'	N 1°14.6'	14.2'	59.8'
20	1°30.8'	123°28.4'	S 20°11.5'	170°47.8'	10.3'	N 1°00.4'	14.2'	59.8'
21	16°33.2'	138°28.2'	S 20°12.1'	185°17.1'	10.3'	N 0°46.2'	14.2'	59.8'
22	31°35.7'	153°28.1'	S 20°12.6'	199°46.3'	10.2'	N 0°32.0'	14.2'	59.8'
23	46°38.2'	168°27.9'	S 20°13.1'	214°15.6'	10.2'	N 0°17.8'	14.2'	59.8'

Sat Nov 23, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.5' SD = 16.2'		SD = 16.3'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	61°40.6'	183°27.7'	S 20°13.7'	228°44.8'	10.2'	N 0°03.6'	14.2'	59.8'
1	76°43.1'	198°27.5'	S 20°14.2'	243°14.1'	10.2'	S 0°10.6'	14.2'	59.8'
2	91°45.5'	213°27.4'	S 20°14.7'	257°43.3'	10.2'	S 0°24.8'	14.2'	59.8'
3	106°48.0'	228°27.2'	S 20°15.2'	272°12.5'	10.2'	S 0°39.0'	14.2'	59.8'
4	121°50.5'	243°27.0'	S 20°15.8'	286°41.7'	10.2'	S 0°53.3'	14.2'	59.8'
5	136°52.9'	258°26.9'	S 20°16.3'	301°11.0'	10.2'	S 1°07.5'	14.2'	59.8'
6	151°55.4'	273°26.7'	S 20°16.8'	315°40.2'	10.2'	S 1°21.7'	14.2'	59.8'
7	166°57.9'	288°26.5'	S 20°17.3'	330°09.4'	10.2'	S 1°35.9'	14.2'	59.8'
8	182°00.3'	303°26.4'	S 20°17.9'	344°38.5'	10.2'	S 1°50.1'	14.2'	59.8'
9	197°02.8'	318°26.2'	S 20°18.4'	359°07.7'	10.2'	S 2°04.2'	14.2'	59.8'
10	212°05.3'	333°26.0'	S 20°18.9'	13°36.9'	10.1'	S 2°18.4'	14.2'	59.8'
11	227°07.7'	348°25.8'	S 20°19.4'	28°06.0'	10.1'	S 2°32.6'	14.1'	59.8'
12	242°10.2'	3°25.7'	S 20°20.0'	42°35.2'	10.1'	S 2°46.7'	14.1'	59.8'
13	257°12.6'	18°25.5'	S 20°20.5'	57°04.3'	10.1'	S 3°00.8'	14.1'	59.8'
14	272°15.1'	33°25.3'	S 20°21.0'	71°33.4'	10.1'	S 3°14.9'	14.1'	59.8'
15	287°17.6'	48°25.1'	S 20°21.5'	86°02.5'	10.1'	S 3°29.0'	14.1'	59.8'
16	302°20.0'	63°25.0'	S 20°22.0'	100°31.6'	10.1'	S 3°43.1'	14.1'	59.8'
17	317°22.5'	78°24.8'	S 20°22.6'	115°00.6'	10.0'	S 3°57.2'	14.0'	59.8'
18	332°25.0'	93°24.6'	S 20°23.1'	129°29.7'	10.0'	S 4°11.2'	14.0'	59.8'
19	347°27.4'	108°24.4'	S 20°23.6'	143°58.7'	10.0'	S 4°25.2'	14.0'	59.8'
20	2°29.9'	123°24.3'	S 20°24.1'	158°27.7'	10.0'	S 4°39.2'	14.0'	59.8'
21	17°32.4'	138°24.1'	S 20°24.6'	172°56.7'	10.0'	S 4°53.1'	13.9'	59.8'
22	32°34.8'	153°23.9'	S 20°25.1'	187°25.6'	9.9'	S 5°07.1'	13.9'	59.8'
23	47°37.3'	168°23.7'	S 20°25.7'	201°54.5'	9.9'	S 5°21.0'	13.9'	59.8'

Sun Nov 24, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.5' SD = 16.2'		SD = 16.3'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	62°39.8'	183°23.6'	S 20°26.2'	216°23.5'	9.9'	S 5°34.8'	13.8'	59.7'
1	77°42.2'	198°23.4'	S 20°26.7'	230°52.4'	9.9'	S 5°48.7'	13.8'	59.7'
2	92°44.7'	213°23.2'	S 20°27.2'	245°21.2'	9.8'	S 6°02.5'	13.8'	59.7'
3	107°47.1'	228°23.0'	S 20°27.7'	259°50.1'	9.8'	S 6°16.2'	13.7'	59.7'
4	122°49.6'	243°22.9'	S 20°28.2'	274°18.9'	9.8'	S 6°30.0'	13.7'	59.7'
5	137°52.1'	258°22.7'	S 20°28.7'	288°47.7'	9.8'	S 6°43.6'	13.6'	59.7'
6	152°54.5'	273°22.5'	S 20°29.2'	303°16.4'	9.7'	S 6°57.3'	13.6'	59.7'
7	167°57.0'	288°22.3'	S 20°29.8'	317°45.2'	9.7'	S 7°10.9'	13.6'	59.7'
8	182°59.5'	303°22.1'	S 20°30.3'	332°13.9'	9.7'	S 7°24.5'	13.5'	59.7'
9	198°01.9'	318°22.0'	S 20°30.8'	346°42.6'	9.7'	S 7°38.0'	13.5'	59.7'
10	213°04.4'	333°21.8'	S 20°31.3'	1°11.2'	9.6'	S 7°51.4'	13.4'	59.7'
11	228°06.9'	348°21.6'	S 20°31.8'	15°39.9'	9.6'	S 8°04.9'	13.4'	59.7'
12	243°09.3'	3°21.4'	S 20°32.3'	30°08.5'	9.6'	S 8°18.2'	13.3'	59.7'
13	258°11.8'	18°21.2'	S 20°32.8'	44°37.0'	9.5'	S 8°31.6'	13.3'	59.6'
14	273°14.2'	33°21.1'	S 20°33.3'	59°05.6'	9.5'	S 8°44.8'	13.2'	59.6'
15	288°16.7'	48°20.9'	S 20°33.8'	73°34.1'	9.5'	S 8°58.1'	13.2'	59.6'
16	303°19.2'	63°20.7'	S 20°34.3'	88°02.5'	9.4'	S 9°11.2'	13.1'	59.6'
17	318°21.6'	78°20.5'	S 20°34.8'	102°31.0'	9.4'	S 9°24.3'	13.0'	59.6'
18	333°24.1'	93°20.3'	S 20°35.3'	116°59.4'	9.4'	S 9°37.4'	13.0'	59.6'
19	348°26.6'	108°20.1'	S 20°35.8'	131°27.7'	9.3'	S 9°50.4'	12.9'	59.6'
20	3°29.0'	123°20.0'	S 20°36.3'	145°56.1'	9.3'	S 10°03.3'	12.9'	59.6'
21	18°31.5'	138°19.8'	S 20°36.8'	160°24.4'	9.3'	S 10°16.2'	12.8'	59.6'
22	33°34.0'	153°19.6'	S 20°37.3'	174°52.7'	9.2'	S 10°29.0'	12.7'	59.6'
23	48°36.4'	168°19.4'	S 20°37.8'	189°20.9'	9.2'	S 10°41.7'	12.7'	59.5'

Mon Nov 25, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.5' SD = 16.2'		SD = 16.2'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	63°38.9'	183°19.2'	S 20°38.3'	203°49.1'	9.2'	S 10°54.4'	12.6'	59.5'
1	78°41.4'	198°19.0'	S 20°38.8'	218°17.3'	9.1'	S 11°07.0'	12.5'	59.5'
2	93°43.8'	213°18.8'	S 20°39.3'	232°45.4'	9.1'	S 11°19.5'	12.5'	59.5'
3	108°46.3'	228°18.7'	S 20°39.8'	247°13.5'	9.1'	S 11°32.0'	12.4'	59.5'
4	123°48.7'	243°18.5'	S 20°40.3'	261°41.5'	9.0'	S 11°44.4'	12.3'	59.5'
5	138°51.2'	258°18.3'	S 20°40.8'	276°09.6'	9.0'	S 11°56.7'	12.2'	59.5'
6	153°53.7'	273°18.1'	S 20°41.3'	290°37.5'	8.9'	S 12°08.9'	12.2'	59.4'
7	168°56.1'	288°17.9'	S 20°41.8'	305°05.5'	8.9'	S 12°21.1'	12.1'	59.4'
8	183°58.6'	303°17.7'	S 20°42.3'	319°33.4'	8.9'	S 12°33.2'	12.0'	59.4'
9	199°01.1'	318°17.5'	S 20°42.8'	334°01.3'	8.8'	S 12°45.2'	11.9'	59.4'
10	214°03.5'	333°17.3'	S 20°43.3'	348°29.1'	8.8'	S 12°57.1'	11.8'	59.4'
11	229°06.0'	348°17.2'	S 20°43.8'	2°56.9'	8.8'	S 13°08.9'	11.8'	59.4'
12	244°08.5'	3°17.0'	S 20°44.2'	17°24.7'	8.7'	S 13°20.7'	11.7'	59.3'
13	259°10.9'	18°16.8'	S 20°44.7'	31°52.4'	8.7'	S 13°32.4'	11.6'	59.3'
14	274°13.4'	33°16.6'	S 20°45.2'	46°20.1'	8.6'	S 13°44.0'	11.5'	59.3'
15	289°15.9'	48°16.4'	S 20°45.7'	60°47.7'	8.6'	S 13°55.5'	11.4'	59.3'
16	304°18.3'	63°16.2'	S 20°46.2'	75°15.3'	8.6'	S 14°06.9'	11.3'	59.3'
17	319°20.8'	78°16.0'	S 20°46.7'	89°42.9'	8.5'	S 14°18.2'	11.2'	59.3'
18	334°23.2'	93°15.8'	S 20°47.2'	104°10.4'	8.5'	S 14°29.5'	11.1'	59.2'
19	349°25.7'	108°15.6'	S 20°47.7'	118°37.9'	8.5'	S 14°40.6'	11.0'	59.2'
20	4°28.2'	123°15.4'	S 20°48.1'	133°05.4'	8.4'	S 14°51.6'	11.0'	59.2'
21	19°30.6'	138°15.2'	S 20°48.6'	147°32.8'	8.4'	S 15°02.6'	10.9'	59.2'
22	34°33.1'	153°15.1'	S 20°49.1'	162°00.2'	8.3'	S 15°13.5'	10.8'	59.2'
23	49°35.6'	168°14.9'	S 20°49.6'	176°27.5'	8.3'	S 15°24.2'	10.7'	59.1'

Tue Nov 26, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.5' SD = 16.2'		SD = 16.1'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	64°38.0'	183°14.7'	S 20°50.1'	190°54.8'	8.3'	S 15°34.9'	10.6'	59.1'
1	79°40.5'	198°14.5'	S 20°50.6'	205°22.1'	8.2'	S 15°45.4'	10.5'	59.1'
2	94°43.0'	213°14.3'	S 20°51.0'	219°49.3'	8.2'	S 15°55.9'	10.4'	59.1'
3	109°45.4'	228°14.1'	S 20°51.5'	234°16.5'	8.2'	S 16°06.3'	10.3'	59.1'
4	124°47.9'	243°13.9'	S 20°52.0'	248°43.6'	8.1'	S 16°16.5'	10.1'	59.0'
5	139°50.4'	258°13.7'	S 20°52.5'	263°10.8'	8.1'	S 16°26.7'	10.0'	59.0'
6	154°52.8'	273°13.5'	S 20°53.0'	277°37.8'	8.0'	S 16°36.7'	9.9'	59.0'
7	169°55.3'	288°13.3'	S 20°53.4'	292°04.9'	8.0'	S 16°46.6'	9.8'	59.0'
8	184°57.7'	303°13.1'	S 20°53.9'	306°31.9'	8.0'	S 16°56.5'	9.7'	58.9'
9	200°00.2'	318°12.9'	S 20°54.4'	320°58.9'	7.9'	S 17°06.2'	9.6'	58.9'
10	215°02.7'	333°12.7'	S 20°54.9'	335°25.8'	7.9'	S 17°15.8'	9.5'	58.9'
11	230°05.1'	348°12.5'	S 20°55.3'	349°52.7'	7.9'	S 17°25.3'	9.4'	58.9'
12	245°07.6'	3°12.3'	S 20°55.8'	4°19.6'	7.8'	S 17°34.7'	9.3'	58.9'
13	260°10.1'	18°12.1'	S 20°56.3'	18°46.5'	7.8'	S 17°44.0'	9.2'	58.8'
14	275°12.5'	33°11.9'	S 20°56.8'	33°13.3'	7.8'	S 17°53.1'	9.0'	58.8'
15	290°15.0'	48°11.7'	S 20°57.2'	47°40.1'	7.7'	S 18°02.2'	8.9'	58.8'
16	305°17.5'	63°11.5'	S 20°57.7'	62°06.8'	7.7'	S 18°11.1'	8.8'	58.8'
17	320°19.9'	78°11.3'	S 20°58.2'	76°33.5'	7.7'	S 18°19.9'	8.7'	58.7'
18	335°22.4'	93°11.1'	S 20°58.6'	91°00.2'	7.7'	S 18°28.6'	8.6'	58.7'
19	350°24.8'	108°10.9'	S 20°59.1'	105°26.9'	7.6'	S 18°37.2'	8.5'	58.7'
20	5°27.3'	123°10.7'	S 20°59.6'	119°53.5'	7.6'	S 18°45.6'	8.3'	58.7'
21	20°29.8'	138°10.5'	S 21°00.0'	134°20.1'	7.6'	S 18°53.9'	8.2'	58.6'
22	35°32.2'	153°10.3'	S 21°00.5'	148°46.7'	7.5'	S 19°02.1'	8.1'	58.6'
23	50°34.7'	168°10.1'	S 21°01.0'	163°13.2'	7.5'	S 19°10.2'	8.0'	58.6'

Wed Nov 27, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.5' SD = 16.2'		SD = 15.9'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	65°37.2'	183°09.9'	S 21°01.4'	177°39.8'	7.5'	S 19°18.2'	7.8'	58.5'
1	80°39.6'	198°09.7'	S 21°01.9'	192°06.3'	7.5'	S 19°26.0'	7.7'	58.5'
2	95°42.1'	213°09.5'	S 21°02.4'	206°32.7'	7.5'	S 19°33.8'	7.6'	58.5'
3	110°44.6'	228°09.3'	S 21°02.8'	220°59.2'	7.4'	S 19°41.3'	7.5'	58.5'
4	125°47.0'	243°09.1'	S 21°03.3'	235°25.6'	7.4'	S 19°48.8'	7.3'	58.4'
5	140°49.5'	258°08.9'	S 21°03.8'	249°52.0'	7.4'	S 19°56.1'	7.2'	58.4'
6	155°52.0'	273°08.7'	S 21°04.2'	264°18.4'	7.4'	S 20°03.3'	7.1'	58.4'
7	170°54.4'	288°08.5'	S 21°04.7'	278°44.8'	7.3'	S 20°10.4'	6.9'	58.4'
8	185°56.9'	303°08.3'	S 21°05.1'	293°11.1'	7.3'	S 20°17.4'	6.8'	58.3'
9	200°59.3'	318°08.1'	S 21°05.6'	307°37.4'	7.3'	S 20°24.2'	6.7'	58.3'
10	216°01.8'	333°07.9'	S 21°06.1'	322°03.8'	7.3'	S 20°30.9'	6.6'	58.3'
11	231°04.3'	348°07.7'	S 21°06.5'	336°30.1'	7.3'	S 20°37.4'	6.4'	58.2'
12	246°06.7'	3°07.5'	S 21°07.0'	350°56.3'	7.3'	S 20°43.9'	6.3'	58.2'
13	261°09.2'	18°07.3'	S 21°07.4'	5°22.6'	7.3'	S 20°50.2'	6.2'	58.2'
14	276°11.7'	33°07.1'	S 21°07.9'	19°48.9'	7.2'	S 20°56.3'	6.0'	58.2'
15	291°14.1'	48°06.9'	S 21°08.3'	34°15.1'	7.2'	S 21°02.3'	5.9'	58.1'
16	306°16.6'	63°06.7'	S 21°08.8'	48°41.3'	7.2'	S 21°08.2'	5.8'	58.1'
17	321°19.1'	78°06.5'	S 21°09.3'	63°07.6'	7.2'	S 21°14.0'	5.6'	58.1'
18	336°21.5'	93°06.3'	S 21°09.7'	77°33.8'	7.2'	S 21°19.6'	5.5'	58.0'
19	351°24.0'	108°06.1'	S 21°10.2'	91°60.0'	7.2'	S 21°25.1'	5.4'	58.0'
20	6°26.5'	123°05.9'	S 21°10.6'	106°26.2'	7.2'	S 21°30.5'	5.2'	58.0'
21	21°28.9'	138°05.7'	S 21°11.1'	120°52.4'	7.2'	S 21°35.7'	5.1'	58.0'
22	36°31.4'	153°05.4'	S 21°11.5'	135°18.6'	7.2'	S 21°40.8'	4.9'	57.9'
23	51°33.8'	168°05.2'	S 21°12.0'	149°44.7'	7.2'	S 21°45.7'	4.8'	57.9'

Thu Nov 28, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.4' SD = 16.2'		SD = 15.7'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	66°36.3'	183°05.0'	S 21°12.4'	164°10.9'	7.2'	S 21°50.5'	4.7'	57.9'
1	81°38.8'	198°04.8'	S 21°12.9'	178°37.1'	7.2'	S 21°55.2'	4.5'	57.8'
2	96°41.2'	213°04.6'	S 21°13.3'	193°03.3'	7.2'	S 21°59.7'	4.4'	57.8'
3	111°43.7'	228°04.4'	S 21°13.8'	207°29.5'	7.2'	S 22°04.1'	4.3'	57.8'
4	126°46.2'	243°04.2'	S 21°14.2'	221°55.7'	7.2'	S 22°08.4'	4.1'	57.7'
5	141°48.6'	258°04.0'	S 21°14.7'	236°21.9'	7.2'	S 22°12.5'	4.0'	57.7'
6	156°51.1'	273°03.8'	S 21°15.1'	250°48.1'	7.2'	S 22°16.5'	3.8'	57.7'
7	171°53.6'	288°03.6'	S 21°15.5'	265°14.3'	7.2'	S 22°20.3'	3.7'	57.6'
8	186°56.0'	303°03.4'	S 21°16.0'	279°40.5'	7.2'	S 22°24.0'	3.6'	57.6'
9	201°58.5'	318°03.1'	S 21°16.4'	294°06.7'	7.2'	S 22°27.6'	3.4'	57.6'
10	217°01.0'	333°02.9'	S 21°16.9'	308°33.0'	7.3'	S 22°31.0'	3.3'	57.6'
11	232°03.4'	348°02.7'	S 21°17.3'	322°59.2'	7.3'	S 22°34.3'	3.2'	57.5'
12	247°05.9'	3°02.5'	S 21°17.8'	337°25.5'	7.3'	S 22°37.5'	3.0'	57.5'
13	262°08.3'	18°02.3'	S 21°18.2'	351°51.8'	7.3'	S 22°40.5'	2.9'	57.5'
14	277°10.8'	33°02.1'	S 21°18.6'	6°18.1'	7.3'	S 22°43.3'	2.7'	57.4'
15	292°13.3'	48°01.9'	S 21°19.1'	20°44.4'	7.3'	S 22°46.1'	2.6'	57.4'
16	307°15.7'	63°01.7'	S 21°19.5'	35°10.7'	7.4'	S 22°48.7'	2.5'	57.4'
17	322°18.2'	78°01.4'	S 21°20.0'	49°37.1'	7.4'	S 22°51.1'	2.3'	57.3'
18	337°20.7'	93°01.2'	S 21°20.4'	64°03.4'	7.4'	S 22°53.5'	2.2'	57.3'
19	352°23.1'	108°01.0'	S 21°20.8'	78°29.8'	7.4'	S 22°55.6'	2.0'	57.3'
20	7°25.6'	123°00.8'	S 21°21.3'	92°56.2'	7.4'	S 22°57.7'	1.9'	57.2'
21	22°28.1'	138°00.6'	S 21°21.7'	107°22.7'	7.5'	S 22°59.6'	1.8'	57.2'
22	37°30.5'	153°00.4'	S 21°22.1'	121°49.2'	7.5'	S 23°01.4'	1.6'	57.2'
23	52°33.0'	168°00.2'	S 21°22.6'	136°15.7'	7.5'	S 23°03.0'	1.5'	57.1'

Fri Nov 29, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.4' SD = 16.2'		SD = 15.5'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	67°35.5'	182°59.9'	S 21°23.0'	150°42.2'	7.6'	S 23°04.5'	1.4'	57.1'
1	82°37.9'	197°59.7'	S 21°23.4'	165°08.7'	7.6'	S 23°05.8'	1.2'	57.1'
2	97°40.4'	212°59.5'	S 21°23.9'	179°35.3'	7.6'	S 23°07.1'	1.1'	57.0'
3	112°42.8'	227°59.3'	S 21°24.3'	194°01.9'	7.7'	S 23°08.1'	0.9'	57.0'
4	127°45.3'	242°59.1'	S 21°24.7'	208°28.6'	7.7'	S 23°09.1'	0.8'	57.0'
5	142°47.8'	257°58.9'	S 21°25.1'	222°55.3'	7.7'	S 23°09.9'	0.7'	56.9'
6	157°50.2'	272°58.6'	S 21°25.6'	237°22.0'	7.8'	S 23°10.6'	0.5'	56.9'
7	172°52.7'	287°58.4'	S 21°26.0'	251°48.8'	7.8'	S 23°11.1'	0.4'	56.9'
8	187°55.2'	302°58.2'	S 21°26.4'	266°15.6'	7.8'	S 23°11.5'	0.3'	56.9'
9	202°57.6'	317°58.0'	S 21°26.9'	280°42.4'	7.9'	S 23°11.8'	0.1'	56.8'
10	218°00.1'	332°57.8'	S 21°27.3'	295°09.3'	7.9'	S 23°12.0'	0.0'	56.8'
11	233°02.6'	347°57.5'	S 21°27.7'	309°36.2'	8.0'	S 23°12.0'	0.1'	56.8'
12	248°05.0'	2°57.3'	S 21°28.1'	324°03.2'	8.0'	S 23°11.8'	0.3'	56.7'
13	263°07.5'	17°57.1'	S 21°28.6'	338°30.2'	8.1'	S 23°11.6'	0.4'	56.7'
14	278°10.0'	32°56.9'	S 21°29.0'	352°57.2'	8.1'	S 23°11.2'	0.5'	56.7'
15	293°12.4'	47°56.7'	S 21°29.4'	7°24.3'	8.1'	S 23°10.7'	0.6'	56.6'
16	308°14.9'	62°56.4'	S 21°29.8'	21°51.5'	8.2'	S 23°10.0'	0.8'	56.6'
17	323°17.3'	77°56.2'	S 21°30.2'	36°18.6'	8.2'	S 23°09.2'	0.9'	56.6'
18	338°19.8'	92°56.0'	S 21°30.7'	50°45.9'	8.3'	S 23°08.3'	1.0'	56.5'
19	353°22.3'	107°55.8'	S 21°31.1'	65°13.2'	8.3'	S 23°07.3'	1.2'	56.5'
20	8°24.7'	122°55.6'	S 21°31.5'	79°40.5'	8.4'	S 23°06.1'	1.3'	56.5'
21	23°27.2'	137°55.3'	S 21°31.9'	94°07.9'	8.4'	S 23°04.8'	1.4'	56.4'
22	38°29.7'	152°55.1'	S 21°32.3'	108°35.4'	8.5'	S 23°03.4'	1.5'	56.4'
23	53°32.1'	167°54.9'	S 21°32.8'	123°02.9'	8.6'	S 23°01.9'	1.7'	56.4'

Sat Nov 30, 2019 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.4' SD = 16.2'		SD = 15.3'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	68°34.6'	182°54.7'	S 21°33.2'	137°30.4'	8.6'	S 23°00.2'	1.8'	56.4'
1	83°37.1'	197°54.5'	S 21°33.6'	151°58.0'	8.7'	S 22°58.4'	1.9'	56.3'
2	98°39.5'	212°54.2'	S 21°34.0'	166°25.7'	8.7'	S 22°56.5'	2.0'	56.3'
3	113°42.0'	227°54.0'	S 21°34.4'	180°53.4'	8.8'	S 22°54.4'	2.2'	56.3'
4	128°44.4'	242°53.8'	S 21°34.8'	195°21.2'	8.8'	S 22°52.3'	2.3'	56.2'
5	143°46.9'	257°53.6'	S 21°35.2'	209°49.1'	8.9'	S 22°50.0'	2.4'	56.2'
6	158°49.4'	272°53.3'	S 21°35.6'	224°17.0'	9.0'	S 22°47.6'	2.5'	56.2'
7	173°51.8'	287°53.1'	S 21°36.1'	238°45.0'	9.0'	S 22°45.0'	2.7'	56.1'
8	188°54.3'	302°52.9'	S 21°36.5'	253°13.0'	9.1'	S 22°42.4'	2.8'	56.1'
9	203°56.8'	317°52.7'	S 21°36.9'	267°41.1'	9.2'	S 22°39.6'	2.9'	56.1'
10	218°59.2'	332°52.4'	S 21°37.3'	282°09.2'	9.2'	S 22°36.7'	3.0'	56.1'
11	234°01.7'	347°52.2'	S 21°37.7'	296°37.4'	9.3'	S 22°33.7'	3.1'	56.0'
12	249°04.2'	2°52.0'	S 21°38.1'	311°05.7'	9.3'	S 22°30.6'	3.2'	56.0'
13	264°06.6'	17°51.8'	S 21°38.5'	325°34.1'	9.4'	S 22°27.3'	3.4'	56.0'
14	279°09.1'	32°51.5'	S 21°38.9'	340°02.5'	9.5'	S 22°24.0'	3.5'	55.9'
15	294°11.6'	47°51.3'	S 21°39.3'	354°31.0'	9.5'	S 22°20.5'	3.6'	55.9'
16	309°14.0'	62°51.1'	S 21°39.7'	8°59.5'	9.6'	S 22°16.9'	3.7'	55.9'
17	324°16.5'	77°50.8'	S 21°40.1'	23°28.1'	9.7'	S 22°13.2'	3.8'	55.9'
18	339°18.9'	92°50.6'	S 21°40.5'	37°56.8'	9.7'	S 22°09.4'	3.9'	55.8'
19	354°21.4'	107°50.4'	S 21°40.9'	52°25.5'	9.8'	S 22°05.5'	4.0'	55.8'
20	9°23.9'	122°50.2'	S 21°41.3'	66°54.4'	9.9'	S 22°01.4'	4.1'	55.8'
21	24°26.3'	137°49.9'	S 21°41.7'	81°23.2'	10.0'	S 21°57.3'	4.3'	55.7'
22	39°28.8'	152°49.7'	S 21°42.1'	95°52.2'	10.0'	S 21°53.0'	4.4'	55.7'
23	54°31.3'	167°49.5'	S 21°42.5'	110°21.2'	10.1'	S 21°48.7'	4.5'	55.7'