

Sat Dec 1, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.4' SD = 16.2'		SD = 15.9'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	69°48.1'	182°47.9'	S 21°45.2'	255°59.3'	10.8'	N 7°10.5'	12.0'	58.6'
1	84°50.5'	197°47.6'	S 21°45.6'	270°29.0'	10.8'	N 6°58.4'	12.0'	58.6'
2	99°53.0'	212°47.4'	S 21°46.0'	284°58.9'	10.9'	N 6°46.4'	12.1'	58.5'
3	114°55.5'	227°47.2'	S 21°46.4'	299°28.7'	10.9'	N 6°34.3'	12.1'	58.5'
4	129°57.9'	242°46.9'	S 21°46.8'	313°58.6'	11.0'	N 6°22.2'	12.1'	58.5'
5	145°00.4'	257°46.7'	S 21°47.1'	328°28.6'	11.0'	N 6°10.1'	12.2'	58.5'
6	160°02.9'	272°46.5'	S 21°47.5'	342°58.6'	11.0'	N 5°57.9'	12.2'	58.5'
7	175°05.3'	287°46.2'	S 21°47.9'	357°28.6'	11.1'	N 5°45.7'	12.2'	58.4'
8	190°07.8'	302°46.0'	S 21°48.3'	11°58.7'	11.1'	N 5°33.5'	12.2'	58.4'
9	205°10.3'	317°45.8'	S 21°48.7'	26°28.9'	11.2'	N 5°21.3'	12.3'	58.4'
10	220°12.7'	332°45.5'	S 21°49.1'	40°59.0'	11.2'	N 5°09.0'	12.3'	58.4'
11	235°15.2'	347°45.3'	S 21°49.5'	55°29.2'	11.2'	N 4°56.8'	12.3'	58.4'
12	250°17.7'	2°45.1'	S 21°49.9'	69°59.5'	11.3'	N 4°44.5'	12.3'	58.4'
13	265°20.1'	17°44.8'	S 21°50.2'	84°29.8'	11.3'	N 4°32.2'	12.3'	58.3'
14	280°22.6'	32°44.6'	S 21°50.6'	99°00.1'	11.4'	N 4°19.9'	12.3'	58.3'
15	295°25.0'	47°44.4'	S 21°51.0'	113°30.5'	11.4'	N 4°07.5'	12.4'	58.3'
16	310°27.5'	62°44.1'	S 21°51.4'	128°00.8'	11.4'	N 3°55.2'	12.4'	58.3'
17	325°30.0'	77°43.9'	S 21°51.8'	142°31.3'	11.5'	N 3°42.8'	12.4'	58.3'
18	340°32.4'	92°43.7'	S 21°52.2'	157°01.7'	11.5'	N 3°30.4'	12.4'	58.2'
19	355°34.9'	107°43.4'	S 21°52.5'	171°32.2'	11.5'	N 3°18.0'	12.4'	58.2'
20	10°37.4'	122°43.2'	S 21°52.9'	186°02.8'	11.6'	N 3°05.6'	12.4'	58.2'
21	25°39.8'	137°42.9'	S 21°53.3'	200°33.3'	11.6'	N 2°53.2'	12.4'	58.2'
22	40°42.3'	152°42.7'	S 21°53.7'	215°03.9'	11.6'	N 2°40.8'	12.4'	58.2'
23	55°44.8'	167°42.5'	S 21°54.0'	229°34.5'	11.6'	N 2°28.4'	12.4'	58.2'

Sun Dec 2, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.4' SD = 16.2'		SD = 15.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	70°47.2'	182°42.2'	S 21°54.4'	244°05.2'	11.7'	N 2°15.9'	12.4'	58.1'
1	85°49.7'	197°42.0'	S 21°54.8'	258°35.8'	11.7'	N 2°03.5'	12.4'	58.1'
2	100°52.1'	212°41.8'	S 21°55.2'	273°06.5'	11.7'	N 1°51.1'	12.4'	58.1'
3	115°54.6'	227°41.5'	S 21°55.5'	287°37.3'	11.8'	N 1°38.6'	12.4'	58.1'
4	130°57.1'	242°41.3'	S 21°55.9'	302°08.0'	11.8'	N 1°26.2'	12.4'	58.1'
5	145°59.5'	257°41.0'	S 21°56.3'	316°38.8'	11.8'	N 1°13.7'	12.4'	58.0'
6	161°02.0'	272°40.8'	S 21°56.7'	331°09.6'	11.8'	N 1°01.3'	12.4'	58.0'
7	176°04.5'	287°40.6'	S 21°57.0'	345°40.4'	11.8'	N 0°48.9'	12.4'	58.0'
8	191°06.9'	302°40.3'	S 21°57.4'	0°11.2'	11.9'	N 0°36.4'	12.4'	58.0'
9	206°09.4'	317°40.1'	S 21°57.8'	14°42.1'	11.9'	N 0°24.0'	12.4'	58.0'
10	221°11.9'	332°39.8'	S 21°58.2'	29°13.0'	11.9'	N 0°11.6'	12.4'	57.9'
11	236°14.3'	347°39.6'	S 21°58.5'	43°43.9'	11.9'	S 0°00.9'	12.4'	57.9'
12	251°16.8'	2°39.4'	S 21°58.9'	58°14.8'	11.9'	S 0°13.3'	12.4'	57.9'
13	266°19.3'	17°39.1'	S 21°59.3'	72°45.8'	12.0'	S 0°25.7'	12.4'	57.9'
14	281°21.7'	32°38.9'	S 21°59.6'	87°16.7'	12.0'	S 0°38.1'	12.4'	57.9'
15	296°24.2'	47°38.6'	S 21°60.0'	101°47.7'	12.0'	S 0°50.5'	12.4'	57.9'
16	311°26.6'	62°38.4'	S 22°00.4'	116°18.7'	12.0'	S 1°02.8'	12.4'	57.8'
17	326°29.1'	77°38.2'	S 22°00.7'	130°49.7'	12.0'	S 1°15.2'	12.3'	57.8'
18	341°31.6'	92°37.9'	S 22°01.1'	145°20.7'	12.0'	S 1°27.6'	12.3'	57.8'
19	356°34.0'	107°37.7'	S 22°01.4'	159°51.7'	12.0'	S 1°39.9'	12.3'	57.8'
20	11°36.5'	122°37.4'	S 22°01.8'	174°22.8'	12.1'	S 1°52.2'	12.3'	57.8'
21	26°39.0'	137°37.2'	S 22°02.2'	188°53.8'	12.1'	S 2°04.5'	12.3'	57.7'
22	41°41.4'	152°36.9'	S 22°02.5'	203°24.9'	12.1'	S 2°16.8'	12.3'	57.7'
23	56°43.9'	167°36.7'	S 22°02.9'	217°55.9'	12.1'	S 2°29.1'	12.2'	57.7'

Mon Dec 3, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.3' SD = 16.2'		SD = 15.7'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	71°46.4'	182°36.4'	S 22°03.2'	232°27.0'	12.1'	S 2°41.3'	12.2'	57.7'
1	86°48.8'	197°36.2'	S 22°03.6'	246°58.1'	12.1'	S 2°53.5'	12.2'	57.7'
2	101°51.3'	212°36.0'	S 22°04.0'	261°29.2'	12.1'	S 3°05.7'	12.2'	57.6'
3	116°53.8'	227°35.7'	S 22°04.3'	276°00.3'	12.1'	S 3°17.9'	12.2'	57.6'
4	131°56.2'	242°35.5'	S 22°04.7'	290°31.4'	12.1'	S 3°30.1'	12.1'	57.6'
5	146°58.7'	257°35.2'	S 22°05.0'	305°02.5'	12.1'	S 3°42.2'	12.1'	57.6'
6	162°01.1'	272°35.0'	S 22°05.4'	319°33.7'	12.1'	S 3°54.3'	12.1'	57.6'
7	177°03.6'	287°34.7'	S 22°05.7'	334°04.8'	12.1'	S 4°06.4'	12.1'	57.5'
8	192°06.1'	302°34.5'	S 22°06.1'	348°35.9'	12.1'	S 4°18.5'	12.0'	57.5'
9	207°08.5'	317°34.2'	S 22°06.4'	3°07.0'	12.1'	S 4°30.5'	12.0'	57.5'
10	222°11.0'	332°34.0'	S 22°06.8'	17°38.2'	12.1'	S 4°42.5'	12.0'	57.5'
11	237°13.5'	347°33.7'	S 22°07.1'	32°09.3'	12.1'	S 4°54.5'	11.9'	57.5'
12	252°15.9'	2°33.5'	S 22°07.5'	46°40.4'	12.1'	S 5°06.4'	11.9'	57.4'
13	267°18.4'	17°33.2'	S 22°07.8'	61°11.6'	12.1'	S 5°18.3'	11.9'	57.4'
14	282°20.9'	32°33.0'	S 22°08.2'	75°42.7'	12.1'	S 5°30.2'	11.8'	57.4'
15	297°23.3'	47°32.8'	S 22°08.5'	90°13.8'	12.1'	S 5°42.0'	11.8'	57.4'
16	312°25.8'	62°32.5'	S 22°08.9'	104°44.9'	12.1'	S 5°53.8'	11.8'	57.4'
17	327°28.2'	77°32.3'	S 22°09.2'	119°16.1'	12.1'	S 6°05.6'	11.7'	57.3'
18	342°30.7'	92°32.0'	S 22°09.6'	133°47.2'	12.1'	S 6°17.3'	11.7'	57.3'
19	357°33.2'	107°31.8'	S 22°09.9'	148°18.3'	12.1'	S 6°29.0'	11.7'	57.3'
20	12°35.6'	122°31.5'	S 22°10.3'	162°49.4'	12.1'	S 6°40.7'	11.6'	57.3'
21	27°38.1'	137°31.3'	S 22°10.6'	177°20.5'	12.1'	S 6°52.3'	11.6'	57.3'
22	42°40.6'	152°31.0'	S 22°11.0'	191°51.6'	12.1'	S 7°03.9'	11.5'	57.2'
23	57°43.0'	167°30.8'	S 22°11.3'	206°22.7'	12.1'	S 7°15.4'	11.5'	57.2'

Tue Dec 4, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.3' SD = 16.2'		SD = 15.5'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	72°45.5'	182°30.5'	S 22°11.6'	220°53.8'	12.1'	S 7°26.9'	11.4'	57.2'
1	87°48.0'	197°30.3'	S 22°12.0'	235°24.8'	12.1'	S 7°38.3'	11.4'	57.2'
2	102°50.4'	212°30.0'	S 22°12.3'	249°55.9'	12.1'	S 7°49.7'	11.4'	57.2'
3	117°52.9'	227°29.8'	S 22°12.7'	264°26.9'	12.0'	S 8°01.1'	11.3'	57.1'
4	132°55.4'	242°29.5'	S 22°13.0'	278°58.0'	12.0'	S 8°12.4'	11.3'	57.1'
5	147°57.8'	257°29.2'	S 22°13.3'	293°29.0'	12.0'	S 8°23.6'	11.2'	57.1'
6	163°00.3'	272°29.0'	S 22°13.7'	308°00.1'	12.0'	S 8°34.8'	11.2'	57.1'
7	178°02.7'	287°28.7'	S 22°14.0'	322°31.1'	12.0'	S 8°46.0'	11.1'	57.1'
8	193°05.2'	302°28.5'	S 22°14.3'	337°02.1'	12.0'	S 8°57.1'	11.1'	57.0'
9	208°07.7'	317°28.2'	S 22°14.7'	351°33.1'	12.0'	S 9°08.2'	11.0'	57.0'
10	223°10.1'	332°28.0'	S 22°15.0'	6°04.0'	12.0'	S 9°19.2'	11.0'	57.0'
11	238°12.6'	347°27.7'	S 22°15.3'	20°35.0'	11.9'	S 9°30.2'	10.9'	57.0'
12	253°15.1'	2°27.5'	S 22°15.7'	35°05.9'	11.9'	S 9°41.1'	10.8'	57.0'
13	268°17.5'	17°27.2'	S 22°16.0'	49°36.9'	11.9'	S 9°51.9'	10.8'	56.9'
14	283°20.0'	32°27.0'	S 22°16.3'	64°07.8'	11.9'	S 10°02.7'	10.7'	56.9'
15	298°22.5'	47°26.7'	S 22°16.7'	78°38.7'	11.9'	S 10°13.4'	10.7'	56.9'
16	313°24.9'	62°26.5'	S 22°17.0'	93°09.6'	11.9'	S 10°24.1'	10.6'	56.9'
17	328°27.4'	77°26.2'	S 22°17.3'	107°40.5'	11.9'	S 10°34.7'	10.6'	56.9'
18	343°29.9'	92°26.0'	S 22°17.7'	122°11.3'	11.8'	S 10°45.3'	10.5'	56.8'
19	358°32.3'	107°25.7'	S 22°18.0'	136°42.2'	11.8'	S 10°55.8'	10.4'	56.8'
20	13°34.8'	122°25.4'	S 22°18.3'	151°13.0'	11.8'	S 11°06.3'	10.4'	56.8'
21	28°37.2'	137°25.2'	S 22°18.6'	165°43.8'	11.8'	S 11°16.6'	10.3'	56.8'
22	43°39.7'	152°24.9'	S 22°19.0'	180°14.6'	11.8'	S 11°27.0'	10.3'	56.8'
23	58°42.2'	167°24.7'	S 22°19.3'	194°45.3'	11.8'	S 11°37.2'	10.2'	56.7'

Wed Dec 5, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.3' SD = 16.2'		SD = 15.4'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	73°44.6'	182°24.4'	S 22°19.6'	209°16.1'	11.7'	S 11°47.4'	10.1'	56.7'
1	88°47.1'	197°24.2'	S 22°19.9'	223°46.8'	11.7'	S 11°57.5'	10.1'	56.7'
2	103°49.6'	212°23.9'	S 22°20.2'	238°17.5'	11.7'	S 12°07.6'	10.0'	56.7'
3	118°52.0'	227°23.6'	S 22°20.6'	252°48.2'	11.7'	S 12°17.6'	9.9'	56.7'
4	133°54.5'	242°23.4'	S 22°20.9'	267°18.9'	11.7'	S 12°27.5'	9.9'	56.6'
5	148°57.0'	257°23.1'	S 22°21.2'	281°49.6'	11.6'	S 12°37.4'	9.8'	56.6'
6	163°59.4'	272°22.9'	S 22°21.5'	296°20.2'	11.6'	S 12°47.2'	9.7'	56.6'
7	179°01.9'	287°22.6'	S 22°21.8'	310°50.8'	11.6'	S 12°56.9'	9.7'	56.6'
8	194°04.3'	302°22.4'	S 22°22.2'	325°21.4'	11.6'	S 13°06.6'	9.6'	56.6'
9	209°06.8'	317°22.1'	S 22°22.5'	339°52.0'	11.6'	S 13°16.1'	9.5'	56.5'
10	224°09.3'	332°21.8'	S 22°22.8'	354°22.5'	11.5'	S 13°25.6'	9.4'	56.5'
11	239°11.7'	347°21.6'	S 22°23.1'	8°53.1'	11.5'	S 13°35.1'	9.4'	56.5'
12	254°14.2'	2°21.3'	S 22°23.4'	23°23.6'	11.5'	S 13°44.4'	9.3'	56.5'
13	269°16.7'	17°21.1'	S 22°23.7'	37°54.1'	11.5'	S 13°53.7'	9.2'	56.5'
14	284°19.1'	32°20.8'	S 22°24.1'	52°24.5'	11.4'	S 14°02.9'	9.1'	56.4'
15	299°21.6'	47°20.5'	S 22°24.4'	66°55.0'	11.4'	S 14°12.1'	9.1'	56.4'
16	314°24.1'	62°20.3'	S 22°24.7'	81°25.4'	11.4'	S 14°21.1'	9.0'	56.4'
17	329°26.5'	77°20.0'	S 22°25.0'	95°55.8'	11.4'	S 14°30.1'	8.9'	56.4'
18	344°29.0'	92°19.8'	S 22°25.3'	110°26.2'	11.4'	S 14°39.0'	8.8'	56.4'
19	359°31.5'	107°19.5'	S 22°25.6'	124°56.6'	11.3'	S 14°47.9'	8.7'	56.3'
20	14°33.9'	122°19.2'	S 22°25.9'	139°26.9'	11.3'	S 14°56.6'	8.7'	56.3'
21	29°36.4'	137°19.0'	S 22°26.2'	153°57.2'	11.3'	S 15°05.3'	8.6'	56.3'
22	44°38.8'	152°18.7'	S 22°26.5'	168°27.5'	11.3'	S 15°13.9'	8.5'	56.3'
23	59°41.3'	167°18.4'	S 22°26.8'	182°57.8'	11.3'	S 15°22.4'	8.4'	56.3'

Thu Dec 6, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.3' SD = 16.2'		SD = 15.3'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	74°43.8'	182°18.2'	S 22°27.1'	197°28.0'	11.2'	S 15°30.8'	8.3'	56.2'
1	89°46.2'	197°17.9'	S 22°27.4'	211°58.2'	11.2'	S 15°39.1'	8.3'	56.2'
2	104°48.7'	212°17.7'	S 22°27.7'	226°28.5'	11.2'	S 15°47.4'	8.2'	56.2'
3	119°51.2'	227°17.4'	S 22°28.0'	240°58.6'	11.2'	S 15°55.5'	8.1'	56.2'
4	134°53.6'	242°17.1'	S 22°28.4'	255°28.8'	11.1'	S 16°03.6'	8.0'	56.2'
5	149°56.1'	257°16.9'	S 22°28.7'	269°58.9'	11.1'	S 16°11.6'	7.9'	56.1'
6	164°58.6'	272°16.6'	S 22°29.0'	284°29.1'	11.1'	S 16°19.5'	7.8'	56.1'
7	180°01.0'	287°16.3'	S 22°29.3'	298°59.2'	11.1'	S 16°27.4'	7.7'	56.1'
8	195°03.5'	302°16.1'	S 22°29.6'	313°29.2'	11.1'	S 16°35.1'	7.6'	56.1'
9	210°06.0'	317°15.8'	S 22°29.9'	327°59.3'	11.0'	S 16°42.7'	7.6'	56.1'
10	225°08.4'	332°15.5'	S 22°30.1'	342°29.3'	11.0'	S 16°50.3'	7.5'	56.0'
11	240°10.9'	347°15.3'	S 22°30.4'	356°59.4'	11.0'	S 16°57.8'	7.4'	56.0'
12	255°13.3'	2°15.0'	S 22°30.7'	11°29.4'	11.0'	S 17°05.1'	7.3'	56.0'
13	270°15.8'	17°14.7'	S 22°31.0'	25°59.3'	11.0'	S 17°12.4'	7.2'	56.0'
14	285°18.3'	32°14.5'	S 22°31.3'	40°29.3'	10.9'	S 17°19.6'	7.1'	56.0'
15	300°20.7'	47°14.2'	S 22°31.6'	54°59.2'	10.9'	S 17°26.7'	7.0'	55.9'
16	315°23.2'	62°13.9'	S 22°31.9'	69°29.1'	10.9'	S 17°33.7'	6.9'	55.9'
17	330°25.7'	77°13.7'	S 22°32.2'	83°59.0'	10.9'	S 17°40.7'	6.8'	55.9'
18	345°28.1'	92°13.4'	S 22°32.5'	98°28.9'	10.9'	S 17°47.5'	6.7'	55.9'
19	0°30.6'	107°13.1'	S 22°32.8'	112°58.8'	10.8'	S 17°54.2'	6.6'	55.9'
20	15°33.1'	122°12.9'	S 22°33.1'	127°28.6'	10.8'	S 18°00.9'	6.5'	55.8'
21	30°35.5'	137°12.6'	S 22°33.4'	141°58.4'	10.8'	S 18°07.4'	6.4'	55.8'
22	45°38.0'	152°12.3'	S 22°33.7'	156°28.2'	10.8'	S 18°13.8'	6.3'	55.8'
23	60°40.5'	167°12.1'	S 22°33.9'	170°58.0'	10.8'	S 18°20.2'	6.3'	55.8'

Fri Dec 7, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.3' SD = 16.2'		SD = 15.2'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	75°42.9'	182°11.8'	S 22°34.2'	185°27.8'	10.8'	S 18°26.4'	6.2'	55.8'
1	90°45.4'	197°11.5'	S 22°34.5'	199°57.6'	10.7'	S 18°32.6'	6.1'	55.7'
2	105°47.8'	212°11.3'	S 22°34.8'	214°27.3'	10.7'	S 18°38.7'	6.0'	55.7'
3	120°50.3'	227°11.0'	S 22°35.1'	228°57.0'	10.7'	S 18°44.6'	5.9'	55.7'
4	135°52.8'	242°10.7'	S 22°35.4'	243°26.7'	10.7'	S 18°50.5'	5.8'	55.7'
5	150°55.2'	257°10.5'	S 22°35.7'	257°56.4'	10.7'	S 18°56.2'	5.7'	55.7'
6	165°57.7'	272°10.2'	S 22°35.9'	272°26.1'	10.7'	S 19°01.9'	5.6'	55.6'
7	181°00.2'	287°09.9'	S 22°36.2'	286°55.8'	10.7'	S 19°07.4'	5.5'	55.6'
8	196°02.6'	302°09.7'	S 22°36.5'	301°25.4'	10.6'	S 19°12.9'	5.4'	55.6'
9	211°05.1'	317°09.4'	S 22°36.8'	315°55.1'	10.6'	S 19°18.3'	5.3'	55.6'
10	226°07.6'	332°09.1'	S 22°37.1'	330°24.7'	10.6'	S 19°23.5'	5.2'	55.6'
11	241°10.0'	347°08.9'	S 22°37.3'	344°54.3'	10.6'	S 19°28.7'	5.1'	55.5'
12	256°12.5'	2°08.6'	S 22°37.6'	359°23.9'	10.6'	S 19°33.7'	5.0'	55.5'
13	271°14.9'	17°08.3'	S 22°37.9'	13°53.5'	10.6'	S 19°38.7'	4.8'	55.5'
14	286°17.4'	32°08.0'	S 22°38.2'	28°23.1'	10.6'	S 19°43.5'	4.7'	55.5'
15	301°19.9'	47°07.8'	S 22°38.4'	42°52.6'	10.6'	S 19°48.3'	4.6'	55.5'
16	316°22.3'	62°07.5'	S 22°38.7'	57°22.2'	10.6'	S 19°52.9'	4.5'	55.4'
17	331°24.8'	77°07.2'	S 22°39.0'	71°51.8'	10.5'	S 19°57.5'	4.4'	55.4'
18	346°27.3'	92°07.0'	S 22°39.3'	86°21.3'	10.5'	S 20°01.9'	4.3'	55.4'
19	1°29.7'	107°06.7'	S 22°39.5'	100°50.8'	10.5'	S 20°06.2'	4.2'	55.4'
20	16°32.2'	122°06.4'	S 22°39.8'	115°20.4'	10.5'	S 20°10.5'	4.1'	55.4'
21	31°34.7'	137°06.1'	S 22°40.1'	129°49.9'	10.5'	S 20°14.6'	4.0'	55.4'
22	46°37.1'	152°05.9'	S 22°40.4'	144°19.4'	10.5'	S 20°18.6'	3.9'	55.3'
23	61°39.6'	167°05.6'	S 22°40.6'	158°48.9'	10.5'	S 20°22.5'	3.8'	55.3'

Sat Dec 8, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.3' SD = 16.2'		SD = 15.0'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	76°42.1'	182°05.3'	S 22°40.9'	173°18.4'	10.5'	S 20°26.3'	3.7'	55.3'
1	91°44.5'	197°05.0'	S 22°41.2'	187°47.9'	10.5'	S 20°30.0'	3.6'	55.3'
2	106°47.0'	212°04.8'	S 22°41.4'	202°17.4'	10.5'	S 20°33.6'	3.5'	55.3'
3	121°49.4'	227°04.5'	S 22°41.7'	216°46.9'	10.5'	S 20°37.1'	3.4'	55.2'
4	136°51.9'	242°04.2'	S 22°42.0'	231°16.4'	10.5'	S 20°40.5'	3.3'	55.2'
5	151°54.4'	257°03.9'	S 22°42.2'	245°45.9'	10.5'	S 20°43.8'	3.2'	55.2'
6	166°56.8'	272°03.7'	S 22°42.5'	260°15.4'	10.5'	S 20°46.9'	3.1'	55.2'
7	181°59.3'	287°03.4'	S 22°42.7'	274°44.9'	10.5'	S 20°50.0'	3.0'	55.2'
8	197°01.8'	302°03.1'	S 22°43.0'	289°14.4'	10.5'	S 20°53.0'	2.8'	55.2'
9	212°04.2'	317°02.8'	S 22°43.3'	303°43.9'	10.5'	S 20°55.8'	2.7'	55.1'
10	227°06.7'	332°02.6'	S 22°43.5'	318°13.4'	10.5'	S 20°58.5'	2.6'	55.1'
11	242°09.2'	347°02.3'	S 22°43.8'	332°42.9'	10.5'	S 21°01.2'	2.5'	55.1'
12	257°11.6'	2°02.0'	S 22°44.1'	347°12.4'	10.5'	S 21°03.7'	2.4'	55.1'
13	272°14.1'	17°01.7'	S 22°44.3'	1°41.9'	10.5'	S 21°06.1'	2.3'	55.1'
14	287°16.6'	32°01.5'	S 22°44.6'	16°11.4'	10.5'	S 21°08.4'	2.2'	55.0'
15	302°19.0'	47°01.2'	S 22°44.8'	30°41.0'	10.5'	S 21°10.6'	2.1'	55.0'
16	317°21.5'	62°00.9'	S 22°45.1'	45°10.5'	10.5'	S 21°12.7'	2.0'	55.0'
17	332°23.9'	77°00.6'	S 22°45.3'	59°40.0'	10.5'	S 21°14.7'	1.9'	55.0'
18	347°26.4'	92°00.4'	S 22°45.6'	74°09.6'	10.5'	S 21°16.6'	1.8'	55.0'
19	2°28.9'	107°00.1'	S 22°45.8'	88°39.1'	10.6'	S 21°18.4'	1.7'	55.0'
20	17°31.3'	121°59.8'	S 22°46.1'	103°08.7'	10.6'	S 21°20.1'	1.6'	54.9'
21	32°33.8'	136°59.5'	S 22°46.4'	117°38.2'	10.6'	S 21°21.6'	1.5'	54.9'
22	47°36.3'	151°59.3'	S 22°46.6'	132°07.8'	10.6'	S 21°23.1'	1.3'	54.9'
23	62°38.7'	166°59.0'	S 22°46.9'	146°37.4'	10.6'	S 21°24.4'	1.2'	54.9'

Sun Dec 9, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.2' SD = 16.2'		SD = 14.9'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	77°41.2'	181°58.7'	S 22°47.1'	161°07.0'	10.6'	S 21°25.7'	1.1'	54.9'
1	92°43.7'	196°58.4'	S 22°47.4'	175°36.6'	10.6'	S 21°26.8'	1.0'	54.9'
2	107°46.1'	211°58.1'	S 22°47.6'	190°06.2'	10.6'	S 21°27.8'	0.9'	54.8'
3	122°48.6'	226°57.9'	S 22°47.8'	204°35.9'	10.7'	S 21°28.7'	0.8'	54.8'
4	137°51.1'	241°57.6'	S 22°48.1'	219°05.5'	10.7'	S 21°29.5'	0.7'	54.8'
5	152°53.5'	256°57.3'	S 22°48.3'	233°35.2'	10.7'	S 21°30.2'	0.6'	54.8'
6	167°56.0'	271°57.0'	S 22°48.6'	248°04.9'	10.7'	S 21°30.8'	0.5'	54.8'
7	182°58.4'	286°56.7'	S 22°48.8'	262°34.6'	10.7'	S 21°31.3'	0.4'	54.8'
8	198°00.9'	301°56.5'	S 22°49.1'	277°04.3'	10.7'	S 21°31.7'	0.3'	54.8'
9	213°03.4'	316°56.2'	S 22°49.3'	291°34.1'	10.8'	S 21°32.0'	0.2'	54.7'
10	228°05.8'	331°55.9'	S 22°49.6'	306°03.8'	10.8'	S 21°32.2'	0.1'	54.7'
11	243°08.3'	346°55.6'	S 22°49.8'	320°33.6'	10.8'	S 21°32.2'	0.0'	54.7'
12	258°10.8'	1°55.3'	S 22°50.0'	335°03.4'	10.8'	S 21°32.2'	0.1'	54.7'
13	273°13.2'	16°55.1'	S 22°50.3'	349°33.2'	10.8'	S 21°32.0'	0.3'	54.7'
14	288°15.7'	31°54.8'	S 22°50.5'	4°03.0'	10.9'	S 21°31.8'	0.4'	54.7'
15	303°18.2'	46°54.5'	S 22°50.8'	18°32.9'	10.9'	S 21°31.4'	0.5'	54.7'
16	318°20.6'	61°54.2'	S 22°51.0'	33°02.8'	10.9'	S 21°31.0'	0.6'	54.6'
17	333°23.1'	76°53.9'	S 22°51.2'	47°32.7'	10.9'	S 21°30.4'	0.7'	54.6'
18	348°25.6'	91°53.7'	S 22°51.5'	62°02.6'	11.0'	S 21°29.7'	0.8'	54.6'
19	3°28.0'	106°53.4'	S 22°51.7'	76°32.6'	11.0'	S 21°29.0'	0.9'	54.6'
20	18°30.5'	121°53.1'	S 22°51.9'	91°02.6'	11.0'	S 21°28.1'	1.0'	54.6'
21	33°32.9'	136°52.8'	S 22°52.2'	105°32.6'	11.0'	S 21°27.1'	1.1'	54.6'
22	48°35.4'	151°52.5'	S 22°52.4'	120°02.6'	11.1'	S 21°26.0'	1.2'	54.6'
23	63°37.9'	166°52.3'	S 22°52.6'	134°32.7'	11.1'	S 21°24.8'	1.3'	54.5'

Mon Dec 10, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.2' SD = 16.2'		SD = 14.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	78°40.3'	181°52.0'	S 22°52.9'	149°02.7'	11.1'	S 21°23.5'	1.4'	54.5'
1	93°42.8'	196°51.7'	S 22°53.1'	163°32.9'	11.1'	S 21°22.1'	1.5'	54.5'
2	108°45.3'	211°51.4'	S 22°53.3'	178°03.0'	11.2'	S 21°20.6'	1.6'	54.5'
3	123°47.7'	226°51.1'	S 22°53.6'	192°33.2'	11.2'	S 21°19.0'	1.7'	54.5'
4	138°50.2'	241°50.8'	S 22°53.8'	207°03.4'	11.2'	S 21°17.3'	1.8'	54.5'
5	153°52.7'	256°50.6'	S 22°54.0'	221°33.6'	11.3'	S 21°15.5'	1.9'	54.5'
6	168°55.1'	271°50.3'	S 22°54.2'	236°03.9'	11.3'	S 21°13.6'	2.0'	54.5'
7	183°57.6'	286°50.0'	S 22°54.5'	250°34.2'	11.3'	S 21°11.6'	2.1'	54.4'
8	199°00.0'	301°49.7'	S 22°54.7'	265°04.5'	11.4'	S 21°09.5'	2.2'	54.4'
9	214°02.5'	316°49.4'	S 22°54.9'	279°34.8'	11.4'	S 21°07.3'	2.3'	54.4'
10	229°05.0'	331°49.1'	S 22°55.1'	294°05.2'	11.4'	S 21°05.0'	2.4'	54.4'
11	244°07.4'	346°48.9'	S 22°55.4'	308°35.7'	11.5'	S 21°02.6'	2.5'	54.4'
12	259°09.9'	1°48.6'	S 22°55.6'	323°06.1'	11.5'	S 21°00.1'	2.6'	54.4'
13	274°12.4'	16°48.3'	S 22°55.8'	337°36.6'	11.5'	S 20°57.5'	2.7'	54.4'
14	289°14.8'	31°48.0'	S 22°56.0'	352°07.1'	11.6'	S 20°54.8'	2.8'	54.4'
15	304°17.3'	46°47.7'	S 22°56.2'	6°37.7'	11.6'	S 20°52.1'	2.9'	54.4'
16	319°19.8'	61°47.4'	S 22°56.5'	21°08.3'	11.6'	S 20°49.2'	3.0'	54.3'
17	334°22.2'	76°47.1'	S 22°56.7'	35°38.9'	11.7'	S 20°46.2'	3.1'	54.3'
18	349°24.7'	91°46.9'	S 22°56.9'	50°09.6'	11.7'	S 20°43.1'	3.2'	54.3'
19	4°27.2'	106°46.6'	S 22°57.1'	64°40.3'	11.7'	S 20°39.9'	3.3'	54.3'
20	19°29.6'	121°46.3'	S 22°57.3'	79°11.0'	11.8'	S 20°36.7'	3.4'	54.3'
21	34°32.1'	136°46.0'	S 22°57.5'	93°41.8'	11.8'	S 20°33.3'	3.5'	54.3'
22	49°34.5'	151°45.7'	S 22°57.8'	108°12.6'	11.9'	S 20°29.8'	3.6'	54.3'
23	64°37.0'	166°45.4'	S 22°58.0'	122°43.4'	11.9'	S 20°26.3'	3.6'	54.3'

Tue Dec 11, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.2' SD = 16.2'		SD = 14.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	79°39.5'	181°45.1'	S 22°58.2'	137°14.3'	11.9'	S 20°22.6'	3.7'	54.3'
1	94°41.9'	196°44.9'	S 22°58.4'	151°45.3'	12.0'	S 20°18.9'	3.8'	54.3'
2	109°44.4'	211°44.6'	S 22°58.6'	166°16.2'	12.0'	S 20°15.0'	3.9'	54.3'
3	124°46.9'	226°44.3'	S 22°58.8'	180°47.2'	12.0'	S 20°11.1'	4.0'	54.2'
4	139°49.3'	241°44.0'	S 22°59.0'	195°18.3'	12.1'	S 20°07.1'	4.1'	54.2'
5	154°51.8'	256°43.7'	S 22°59.2'	209°49.4'	12.1'	S 20°03.0'	4.2'	54.2'
6	169°54.3'	271°43.4'	S 22°59.4'	224°20.5'	12.2'	S 19°58.8'	4.3'	54.2'
7	184°56.7'	286°43.1'	S 22°59.6'	238°51.6'	12.2'	S 19°54.5'	4.4'	54.2'
8	199°59.2'	301°42.8'	S 22°59.8'	253°22.8'	12.2'	S 19°50.1'	4.5'	54.2'
9	215°01.7'	316°42.6'	S 23°00.1'	267°54.1'	12.3'	S 19°45.7'	4.6'	54.2'
10	230°04.1'	331°42.3'	S 23°00.3'	282°25.4'	12.3'	S 19°41.1'	4.6'	54.2'
11	245°06.6'	346°42.0'	S 23°00.5'	296°56.7'	12.4'	S 19°36.5'	4.7'	54.2'
12	260°09.0'	1°41.7'	S 23°00.7'	311°28.0'	12.4'	S 19°31.8'	4.8'	54.2'
13	275°11.5'	16°41.4'	S 23°00.9'	325°59.4'	12.4'	S 19°26.9'	4.9'	54.2'
14	290°14.0'	31°41.1'	S 23°01.1'	340°30.9'	12.5'	S 19°22.0'	5.0'	54.2'
15	305°16.4'	46°40.8'	S 23°01.3'	355°02.4'	12.5'	S 19°17.0'	5.1'	54.2'
16	320°18.9'	61°40.5'	S 23°01.5'	9°33.9'	12.6'	S 19°12.0'	5.2'	54.2'
17	335°21.4'	76°40.2'	S 23°01.7'	24°05.4'	12.6'	S 19°06.8'	5.2'	54.2'
18	350°23.8'	91°40.0'	S 23°01.9'	38°37.0'	12.6'	S 19°01.6'	5.3'	54.2'
19	5°26.3'	106°39.7'	S 23°02.1'	53°08.7'	12.7'	S 18°56.2'	5.4'	54.2'
20	20°28.8'	121°39.4'	S 23°02.3'	67°40.4'	12.7'	S 18°50.8'	5.5'	54.1'
21	35°31.2'	136°39.1'	S 23°02.5'	82°12.1'	12.8'	S 18°45.3'	5.6'	54.1'
22	50°33.7'	151°38.8'	S 23°02.6'	96°43.9'	12.8'	S 18°39.8'	5.7'	54.1'
23	65°36.2'	166°38.5'	S 23°02.8'	111°15.7'	12.8'	S 18°34.1'	5.7'	54.1'

Wed Dec 12, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.2' SD = 16.2'		SD = 14.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	80°38.6'	181°38.2'	S 23°03.0'	125°47.5'	12.9'	S 18°28.4'	5.8'	54.1'
1	95°41.1'	196°37.9'	S 23°03.2'	140°19.4'	12.9'	S 18°22.6'	5.9'	54.1'
2	110°43.5'	211°37.6'	S 23°03.4'	154°51.3'	13.0'	S 18°16.7'	6.0'	54.1'
3	125°46.0'	226°37.3'	S 23°03.6'	169°23.3'	13.0'	S 18°10.7'	6.1'	54.1'
4	140°48.5'	241°37.0'	S 23°03.8'	183°55.3'	13.1'	S 18°04.6'	6.1'	54.1'
5	155°50.9'	256°36.8'	S 23°04.0'	198°27.4'	13.1'	S 17°58.5'	6.2'	54.1'
6	170°53.4'	271°36.5'	S 23°04.2'	212°59.5'	13.1'	S 17°52.3'	6.3'	54.1'
7	185°55.9'	286°36.2'	S 23°04.4'	227°31.6'	13.2'	S 17°46.0'	6.4'	54.1'
8	200°58.3'	301°35.9'	S 23°04.6'	242°03.8'	13.2'	S 17°39.6'	6.4'	54.1'
9	216°00.8'	316°35.6'	S 23°04.7'	256°36.0'	13.3'	S 17°33.2'	6.5'	54.1'
10	231°03.3'	331°35.3'	S 23°04.9'	271°08.2'	13.3'	S 17°26.7'	6.6'	54.1'
11	246°05.7'	346°35.0'	S 23°05.1'	285°40.5'	13.3'	S 17°20.1'	6.7'	54.1'
12	261°08.2'	1°34.7'	S 23°05.3'	300°12.8'	13.4'	S 17°13.4'	6.7'	54.1'
13	276°10.7'	16°34.4'	S 23°05.5'	314°45.2'	13.4'	S 17°06.7'	6.8'	54.1'
14	291°13.1'	31°34.1'	S 23°05.7'	329°17.6'	13.4'	S 16°59.9'	6.9'	54.1'
15	306°15.6'	46°33.8'	S 23°05.8'	343°50.1'	13.5'	S 16°53.0'	7.0'	54.1'
16	321°18.0'	61°33.5'	S 23°06.0'	358°22.5'	13.5'	S 16°46.0'	7.0'	54.1'
17	336°20.5'	76°33.3'	S 23°06.2'	12°55.1'	13.6'	S 16°39.0'	7.1'	54.1'
18	351°23.0'	91°33.0'	S 23°06.4'	27°27.6'	13.6'	S 16°31.9'	7.2'	54.1'
19	6°25.4'	106°32.7'	S 23°06.6'	42°00.2'	13.6'	S 16°24.7'	7.2'	54.1'
20	21°27.9'	121°32.4'	S 23°06.7'	56°32.9'	13.7'	S 16°17.5'	7.3'	54.1'
21	36°30.4'	136°32.1'	S 23°06.9'	71°05.5'	13.7'	S 16°10.2'	7.4'	54.1'
22	51°32.8'	151°31.8'	S 23°07.1'	85°38.2'	13.7'	S 16°02.8'	7.4'	54.1'
23	66°35.3'	166°31.5'	S 23°07.3'	100°11.0'	13.8'	S 15°55.4'	7.5'	54.1'

Thu Dec 13, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.2' SD = 16.2'		SD = 14.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	81°37.8'	181°31.2'	S 23°07.4'	114°43.8'	13.8'	S 15°47.8'	7.6'	54.1'
1	96°40.2'	196°30.9'	S 23°07.6'	129°16.6'	13.9'	S 15°40.3'	7.6'	54.1'
2	111°42.7'	211°30.6'	S 23°07.8'	143°49.4'	13.9'	S 15°32.6'	7.7'	54.1'
3	126°45.1'	226°30.3'	S 23°08.0'	158°22.3'	13.9'	S 15°24.9'	7.8'	54.1'
4	141°47.6'	241°30.0'	S 23°08.1'	172°55.2'	14.0'	S 15°17.1'	7.8'	54.2'
5	156°50.1'	256°29.7'	S 23°08.3'	187°28.2'	14.0'	S 15°09.3'	7.9'	54.2'
6	171°52.5'	271°29.4'	S 23°08.5'	202°01.2'	14.0'	S 15°01.4'	8.0'	54.2'
7	186°55.0'	286°29.1'	S 23°08.6'	216°34.2'	14.1'	S 14°53.4'	8.0'	54.2'
8	201°57.5'	301°28.8'	S 23°08.8'	231°07.3'	14.1'	S 14°45.4'	8.1'	54.2'
9	216°59.9'	316°28.5'	S 23°09.0'	245°40.3'	14.1'	S 14°37.3'	8.2'	54.2'
10	232°02.4'	331°28.3'	S 23°09.1'	260°13.5'	14.2'	S 14°29.1'	8.2'	54.2'
11	247°04.9'	346°28.0'	S 23°09.3'	274°46.6'	14.2'	S 14°20.9'	8.3'	54.2'
12	262°07.3'	1°27.7'	S 23°09.5'	289°19.8'	14.2'	S 14°12.6'	8.3'	54.2'
13	277°09.8'	16°27.4'	S 23°09.6'	303°53.0'	14.2'	S 14°04.2'	8.4'	54.2'
14	292°12.3'	31°27.1'	S 23°09.8'	318°26.3'	14.3'	S 13°55.8'	8.5'	54.2'
15	307°14.7'	46°26.8'	S 23°10.0'	332°59.5'	14.3'	S 13°47.4'	8.5'	54.2'
16	322°17.2'	61°26.5'	S 23°10.1'	347°32.8'	14.3'	S 13°38.8'	8.6'	54.2'
17	337°19.6'	76°26.2'	S 23°10.3'	2°06.2'	14.4'	S 13°30.3'	8.6'	54.2'
18	352°22.1'	91°25.9'	S 23°10.4'	16°39.5'	14.4'	S 13°21.6'	8.7'	54.2'
19	7°24.6'	106°25.6'	S 23°10.6'	31°12.9'	14.4'	S 13°12.9'	8.8'	54.3'
20	22°27.0'	121°25.3'	S 23°10.8'	45°46.3'	14.4'	S 13°04.2'	8.8'	54.3'
21	37°29.5'	136°25.0'	S 23°10.9'	60°19.8'	14.5'	S 12°55.3'	8.9'	54.3'
22	52°32.0'	151°24.7'	S 23°11.1'	74°53.2'	14.5'	S 12°46.5'	8.9'	54.3'
23	67°34.4'	166°24.4'	S 23°11.2'	89°26.7'	14.5'	S 12°37.6'	9.0'	54.3'

Fri Dec 14, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.1' SD = 16.2'		SD = 14.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	82°36.9'	181°24.1'	S 23°11.4'	104°00.2'	14.5'	S 12°28.6'	9.0'	54.3'
1	97°39.4'	196°23.8'	S 23°11.5'	118°33.8'	14.6'	S 12°19.5'	9.1'	54.3'
2	112°41.8'	211°23.5'	S 23°11.7'	133°07.3'	14.6'	S 12°10.5'	9.1'	54.3'
3	127°44.3'	226°23.2'	S 23°11.8'	147°40.9'	14.6'	S 12°01.3'	9.2'	54.3'
4	142°46.8'	241°22.9'	S 23°12.0'	162°14.5'	14.6'	S 11°52.1'	9.2'	54.3'
5	157°49.2'	256°22.6'	S 23°12.1'	176°48.2'	14.7'	S 11°42.9'	9.3'	54.4'
6	172°51.7'	271°22.3'	S 23°12.3'	191°21.8'	14.7'	S 11°33.6'	9.3'	54.4'
7	187°54.1'	286°22.0'	S 23°12.4'	205°55.5'	14.7'	S 11°24.2'	9.4'	54.4'
8	202°56.6'	301°21.7'	S 23°12.6'	220°29.2'	14.7'	S 11°14.9'	9.4'	54.4'
9	217°59.1'	316°21.4'	S 23°12.7'	235°02.9'	14.7'	S 11°05.4'	9.5'	54.4'
10	233°01.5'	331°21.1'	S 23°12.9'	249°36.6'	14.7'	S 10°55.9'	9.5'	54.4'
11	248°04.0'	346°20.8'	S 23°13.0'	264°10.4'	14.8'	S 10°46.4'	9.6'	54.4'
12	263°06.5'	1°20.5'	S 23°13.2'	278°44.1'	14.8'	S 10°36.8'	9.6'	54.4'
13	278°08.9'	16°20.2'	S 23°13.3'	293°17.9'	14.8'	S 10°27.1'	9.7'	54.5'
14	293°11.4'	31°19.9'	S 23°13.5'	307°51.7'	14.8'	S 10°17.4'	9.7'	54.5'
15	308°13.9'	46°19.6'	S 23°13.6'	322°25.5'	14.8'	S 10°07.7'	9.8'	54.5'
16	323°16.3'	61°19.3'	S 23°13.7'	336°59.4'	14.8'	S 9°57.9'	9.8'	54.5'
17	338°18.8'	76°19.0'	S 23°13.9'	351°33.2'	14.9'	S 9°48.1'	9.9'	54.5'
18	353°21.2'	91°18.7'	S 23°14.0'	6°07.0'	14.9'	S 9°38.2'	9.9'	54.5'
19	8°23.7'	106°18.4'	S 23°14.2'	20°40.9'	14.9'	S 9°28.3'	10.0'	54.6'
20	23°26.2'	121°18.1'	S 23°14.3'	35°14.8'	14.9'	S 9°18.4'	10.0'	54.6'
21	38°28.6'	136°17.8'	S 23°14.4'	49°48.7'	14.9'	S 9°08.4'	10.0'	54.6'
22	53°31.1'	151°17.5'	S 23°14.6'	64°22.6'	14.9'	S 8°58.3'	10.1'	54.6'
23	68°33.6'	166°17.2'	S 23°14.7'	78°56.5'	14.9'	S 8°48.2'	10.1'	54.6'

Sat Dec 15, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.1' SD = 16.3'		SD = 15.0'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	83°36.0'	181°16.9'	S 23°14.9'	93°30.4'	14.9'	S 8°38.1'	10.2'	54.6'
1	98°38.5'	196°16.6'	S 23°15.0'	108°04.3'	14.9'	S 8°27.9'	10.2'	54.7'
2	113°41.0'	211°16.3'	S 23°15.1'	122°38.3'	14.9'	S 8°17.7'	10.3'	54.7'
3	128°43.4'	226°16.0'	S 23°15.3'	137°12.2'	14.9'	S 8°07.4'	10.3'	54.7'
4	143°45.9'	241°15.7'	S 23°15.4'	151°46.2'	15.0'	S 7°57.2'	10.3'	54.7'
5	158°48.4'	256°15.4'	S 23°15.5'	166°20.1'	15.0'	S 7°46.8'	10.4'	54.7'
6	173°50.8'	271°15.1'	S 23°15.7'	180°54.1'	15.0'	S 7°36.4'	10.4'	54.7'
7	188°53.3'	286°14.8'	S 23°15.8'	195°28.0'	15.0'	S 7°26.0'	10.4'	54.8'
8	203°55.7'	301°14.5'	S 23°15.9'	210°02.0'	15.0'	S 7°15.6'	10.5'	54.8'
9	218°58.2'	316°14.2'	S 23°16.0'	224°36.0'	15.0'	S 7°05.1'	10.5'	54.8'
10	234°00.7'	331°13.9'	S 23°16.2'	239°09.9'	15.0'	S 6°54.6'	10.6'	54.8'
11	249°03.1'	346°13.6'	S 23°16.3'	253°43.9'	15.0'	S 6°44.0'	10.6'	54.8'
12	264°05.6'	1°13.3'	S 23°16.4'	268°17.9'	15.0'	S 6°33.4'	10.6'	54.9'
13	279°08.1'	16°13.0'	S 23°16.5'	282°51.8'	15.0'	S 6°22.8'	10.7'	54.9'
14	294°10.5'	31°12.7'	S 23°16.7'	297°25.8'	15.0'	S 6°12.1'	10.7'	54.9'
15	309°13.0'	46°12.4'	S 23°16.8'	311°59.7'	15.0'	S 6°01.5'	10.7'	54.9'
16	324°15.5'	61°12.1'	S 23°16.9'	326°33.7'	14.9'	S 5°50.7'	10.8'	55.0'
17	339°17.9'	76°11.8'	S 23°17.0'	341°07.6'	14.9'	S 5°40.0'	10.8'	55.0'
18	354°20.4'	91°11.5'	S 23°17.2'	355°41.6'	14.9'	S 5°29.2'	10.8'	55.0'
19	9°22.9'	106°11.2'	S 23°17.3'	10°15.5'	14.9'	S 5°18.3'	10.9'	55.0'
20	24°25.3'	121°10.9'	S 23°17.4'	24°49.5'	14.9'	S 5°07.5'	10.9'	55.0'
21	39°27.8'	136°10.6'	S 23°17.5'	39°23.4'	14.9'	S 4°56.6'	10.9'	55.1'
22	54°30.2'	151°10.3'	S 23°17.6'	53°57.3'	14.9'	S 4°45.7'	10.9'	55.1'
23	69°32.7'	166°10.0'	S 23°17.8'	68°31.2'	14.9'	S 4°34.7'	11.0'	55.1'

Sun Dec 16, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.1' SD = 16.3'		SD = 15.1'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	84°35.2'	181°09.7'	S 23°17.9'	83°05.1'	14.9'	S 4°23.8'	11.0'	55.1'
1	99°37.6'	196°09.4'	S 23°18.0'	97°39.0'	14.9'	S 4°12.8'	11.0'	55.2'
2	114°40.1'	211°09.1'	S 23°18.1'	112°12.8'	14.9'	S 4°01.7'	11.1'	55.2'
3	129°42.6'	226°08.8'	S 23°18.2'	126°46.7'	14.8'	S 3°50.7'	11.1'	55.2'
4	144°45.0'	241°08.5'	S 23°18.3'	141°20.5'	14.8'	S 3°39.6'	11.1'	55.2'
5	159°47.5'	256°08.2'	S 23°18.4'	155°54.4'	14.8'	S 3°28.5'	11.1'	55.3'
6	174°50.0'	271°07.9'	S 23°18.6'	170°28.2'	14.8'	S 3°17.4'	11.2'	55.3'
7	189°52.4'	286°07.6'	S 23°18.7'	185°02.0'	14.8'	S 3°06.2'	11.2'	55.3'
8	204°54.9'	301°07.3'	S 23°18.8'	199°35.7'	14.8'	S 2°55.0'	11.2'	55.3'
9	219°57.3'	316°07.0'	S 23°18.9'	214°09.5'	14.7'	S 2°43.8'	11.2'	55.4'
10	234°59.8'	331°06.7'	S 23°19.0'	228°43.2'	14.7'	S 2°32.6'	11.2'	55.4'
11	250°02.3'	346°06.4'	S 23°19.1'	243°16.9'	14.7'	S 2°21.4'	11.3'	55.4'
12	265°04.7'	1°06.1'	S 23°19.2'	257°50.6'	14.7'	S 2°10.1'	11.3'	55.5'
13	280°07.2'	16°05.8'	S 23°19.3'	272°24.3'	14.6'	S 1°58.8'	11.3'	55.5'
14	295°09.7'	31°05.5'	S 23°19.4'	286°58.0'	14.6'	S 1°47.5'	11.3'	55.5'
15	310°12.1'	46°05.2'	S 23°19.5'	301°31.6'	14.6'	S 1°36.1'	11.3'	55.5'
16	325°14.6'	61°04.9'	S 23°19.6'	316°05.2'	14.6'	S 1°24.8'	11.4'	55.6'
17	340°17.1'	76°04.6'	S 23°19.7'	330°38.8'	14.5'	S 1°13.4'	11.4'	55.6'
18	355°19.5'	91°04.3'	S 23°19.8'	345°12.3'	14.5'	S 1°02.0'	11.4'	55.6'
19	10°22.0'	106°04.0'	S 23°19.9'	359°45.8'	14.5'	S 0°50.6'	11.4'	55.7'
20	25°24.5'	121°03.7'	S 23°20.0'	14°19.3'	14.5'	S 0°39.2'	11.4'	55.7'
21	40°26.9'	136°03.3'	S 23°20.1'	28°52.8'	14.4'	S 0°27.8'	11.4'	55.7'
22	55°29.4'	151°03.0'	S 23°20.2'	43°26.2'	14.4'	S 0°16.3'	11.5'	55.7'
23	70°31.8'	166°02.7'	S 23°20.3'	57°59.6'	14.4'	S 0°04.9'	11.5'	55.8'

Mon Dec 17, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.1' SD = 16.3'		SD = 15.3'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	85°34.3'	181°02.4'	S 23°20.4'	72°33.0'	14.3'	N 0°06.6'	11.5'	55.8'
1	100°36.8'	196°02.1'	S 23°20.5'	87°06.3'	14.3'	N 0°18.1'	11.5'	55.8'
2	115°39.2'	211°01.8'	S 23°20.6'	101°39.6'	14.3'	N 0°29.6'	11.5'	55.9'
3	130°41.7'	226°01.5'	S 23°20.7'	116°12.9'	14.2'	N 0°41.1'	11.5'	55.9'
4	145°44.2'	241°01.2'	S 23°20.8'	130°46.1'	14.2'	N 0°52.6'	11.5'	55.9'
5	160°46.6'	256°00.9'	S 23°20.9'	145°19.3'	14.1'	N 1°04.1'	11.5'	56.0'
6	175°49.1'	271°00.6'	S 23°21.0'	159°52.4'	14.1'	N 1°15.7'	11.5'	56.0'
7	190°51.6'	286°00.3'	S 23°21.1'	174°25.5'	14.1'	N 1°27.2'	11.6'	56.0'
8	205°54.0'	300°60.0'	S 23°21.2'	188°58.6'	14.0'	N 1°38.8'	11.6'	56.1'
9	220°56.5'	315°59.7'	S 23°21.3'	203°31.6'	14.0'	N 1°50.4'	11.6'	56.1'
10	235°58.9'	330°59.4'	S 23°21.3'	218°04.6'	13.9'	N 2°01.9'	11.6'	56.1'
11	251°01.4'	345°59.1'	S 23°21.4'	232°37.6'	13.9'	N 2°13.5'	11.6'	56.2'
12	266°03.9'	0°58.8'	S 23°21.5'	247°10.5'	13.9'	N 2°25.1'	11.6'	56.2'
13	281°06.3'	15°58.5'	S 23°21.6'	261°43.3'	13.8'	N 2°36.7'	11.6'	56.2'
14	296°08.8'	30°58.2'	S 23°21.7'	276°16.1'	13.8'	N 2°48.2'	11.6'	56.3'
15	311°11.3'	45°57.9'	S 23°21.8'	290°48.9'	13.7'	N 2°59.8'	11.6'	56.3'
16	326°13.7'	60°57.6'	S 23°21.9'	305°21.6'	13.7'	N 3°11.4'	11.6'	56.3'
17	341°16.2'	75°57.2'	S 23°21.9'	319°54.3'	13.6'	N 3°23.0'	11.6'	56.4'
18	356°18.7'	90°56.9'	S 23°22.0'	334°26.9'	13.6'	N 3°34.6'	11.6'	56.4'
19	11°21.1'	105°56.6'	S 23°22.1'	348°59.4'	13.5'	N 3°46.2'	11.6'	56.4'
20	26°23.6'	120°56.3'	S 23°22.2'	3°31.9'	13.5'	N 3°57.8'	11.6'	56.5'
21	41°26.1'	135°56.0'	S 23°22.3'	18°04.4'	13.4'	N 4°09.4'	11.6'	56.5'
22	56°28.5'	150°55.7'	S 23°22.3'	32°36.8'	13.4'	N 4°20.9'	11.6'	56.5'
23	71°31.0'	165°55.4'	S 23°22.4'	47°09.2'	13.3'	N 4°32.5'	11.6'	56.6'

Tue Dec 18, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.1' SD = 16.3'		SD = 15.6'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	86°33.4'	180°55.1'	S 23°22.5'	61°41.5'	13.2'	N 4°44.1'	11.6'	56.6'
1	101°35.9'	195°54.8'	S 23°22.6'	76°13.7'	13.2'	N 4°55.7'	11.6'	56.6'
2	116°38.4'	210°54.5'	S 23°22.7'	90°45.9'	13.1'	N 5°07.2'	11.5'	56.7'
3	131°40.8'	225°54.2'	S 23°22.7'	105°18.0'	13.1'	N 5°18.8'	11.5'	56.7'
4	146°43.3'	240°53.9'	S 23°22.8'	119°50.1'	13.0'	N 5°30.3'	11.5'	56.7'
5	161°45.8'	255°53.6'	S 23°22.9'	134°22.1'	12.9'	N 5°41.8'	11.5'	56.8'
6	176°48.2'	270°53.3'	S 23°22.9'	148°54.0'	12.9'	N 5°53.3'	11.5'	56.8'
7	191°50.7'	285°53.0'	S 23°23.0'	163°25.9'	12.8'	N 6°04.8'	11.5'	56.9'
8	206°53.2'	300°52.7'	S 23°23.1'	177°57.7'	12.8'	N 6°16.3'	11.5'	56.9'
9	221°55.6'	315°52.4'	S 23°23.2'	192°29.5'	12.7'	N 6°27.8'	11.5'	56.9'
10	236°58.1'	330°52.0'	S 23°23.2'	207°01.1'	12.6'	N 6°39.3'	11.4'	57.0'
11	252°00.6'	345°51.7'	S 23°23.3'	221°32.8'	12.6'	N 6°50.7'	11.4'	57.0'
12	267°03.0'	0°51.4'	S 23°23.4'	236°04.3'	12.5'	N 7°02.1'	11.4'	57.0'
13	282°05.5'	15°51.1'	S 23°23.4'	250°35.8'	12.4'	N 7°13.6'	11.4'	57.1'
14	297°07.9'	30°50.8'	S 23°23.5'	265°07.2'	12.3'	N 7°25.0'	11.4'	57.1'
15	312°10.4'	45°50.5'	S 23°23.6'	279°38.6'	12.3'	N 7°36.3'	11.4'	57.1'
16	327°12.9'	60°50.2'	S 23°23.6'	294°09.8'	12.2'	N 7°47.7'	11.3'	57.2'
17	342°15.3'	75°49.9'	S 23°23.7'	308°41.1'	12.1'	N 7°59.0'	11.3'	57.2'
18	357°17.8'	90°49.6'	S 23°23.8'	323°12.2'	12.1'	N 8°10.3'	11.3'	57.3'
19	12°20.3'	105°49.3'	S 23°23.8'	337°43.2'	12.0'	N 8°21.6'	11.3'	57.3'
20	27°22.7'	120°49.0'	S 23°23.9'	352°14.2'	11.9'	N 8°32.8'	11.2'	57.3'
21	42°25.2'	135°48.7'	S 23°23.9'	6°45.2'	11.8'	N 8°44.1'	11.2'	57.4'
22	57°27.7'	150°48.4'	S 23°24.0'	21°16.0'	11.8'	N 8°55.3'	11.2'	57.4'
23	72°30.1'	165°48.1'	S 23°24.1'	35°46.7'	11.7'	N 9°06.4'	11.1'	57.4'

Wed Dec 19, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.0' SD = 16.3'		SD = 15.8'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	87°32.6'	180°47.7'	S 23°24.1'	50°17.4'	11.6'	N 9°17.6'	11.1'	57.5'
1	102°35.0'	195°47.4'	S 23°24.2'	64°48.0'	11.5'	N 9°28.7'	11.1'	57.5'
2	117°37.5'	210°47.1'	S 23°24.2'	79°18.6'	11.4'	N 9°39.8'	11.0'	57.6'
3	132°40.0'	225°46.8'	S 23°24.3'	93°49.0'	11.4'	N 9°50.8'	11.0'	57.6'
4	147°42.4'	240°46.5'	S 23°24.3'	108°19.4'	11.3'	N 10°01.8'	11.0'	57.6'
5	162°44.9'	255°46.2'	S 23°24.4'	122°49.7'	11.2'	N 10°12.8'	10.9'	57.7'
6	177°47.4'	270°45.9'	S 23°24.4'	137°19.9'	11.1'	N 10°23.7'	10.9'	57.7'
7	192°49.8'	285°45.6'	S 23°24.5'	151°50.0'	11.0'	N 10°34.6'	10.9'	57.8'
8	207°52.3'	300°45.3'	S 23°24.5'	166°20.0'	11.0'	N 10°45.5'	10.8'	57.8'
9	222°54.8'	315°45.0'	S 23°24.6'	180°50.0'	10.9'	N 10°56.3'	10.8'	57.8'
10	237°57.2'	330°44.7'	S 23°24.6'	195°19.8'	10.8'	N 11°07.1'	10.7'	57.9'
11	252°59.7'	345°44.4'	S 23°24.7'	209°49.6'	10.7'	N 11°17.8'	10.7'	57.9'
12	268°02.2'	0°44.0'	S 23°24.7'	224°19.3'	10.6'	N 11°28.5'	10.6'	57.9'
13	283°04.6'	15°43.7'	S 23°24.8'	238°48.9'	10.5'	N 11°39.2'	10.6'	58.0'
14	298°07.1'	30°43.4'	S 23°24.8'	253°18.5'	10.4'	N 11°49.7'	10.5'	58.0'
15	313°09.5'	45°43.1'	S 23°24.9'	267°47.9'	10.3'	N 12°00.3'	10.5'	58.1'
16	328°12.0'	60°42.8'	S 23°24.9'	282°17.2'	10.3'	N 12°10.8'	10.4'	58.1'
17	343°14.5'	75°42.5'	S 23°25.0'	296°46.5'	10.2'	N 12°21.2'	10.4'	58.1'
18	358°16.9'	90°42.2'	S 23°25.0'	311°15.7'	10.1'	N 12°31.6'	10.3'	58.2'
19	13°19.4'	105°41.9'	S 23°25.1'	325°44.7'	10.0'	N 12°42.0'	10.3'	58.2'
20	28°21.9'	120°41.6'	S 23°25.1'	340°13.7'	9.9'	N 12°52.2'	10.2'	58.2'
21	43°24.3'	135°41.3'	S 23°25.1'	354°42.6'	9.8'	N 13°02.5'	10.2'	58.3'
22	58°26.8'	150°41.0'	S 23°25.2'	9°11.4'	9.7'	N 13°12.6'	10.1'	58.3'
23	73°29.3'	165°40.7'	S 23°25.2'	23°40.1'	9.6'	N 13°22.7'	10.0'	58.4'

Thu Dec 20, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.0' SD = 16.3'		SD = 16.0'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	88°31.7'	180°40.3'	S 23°25.3'	38°08.7'	9.5'	N 13°32.8'	10.0'	58.4'
1	103°34.2'	195°40.0'	S 23°25.3'	52°37.2'	9.4'	N 13°42.8'	9.9'	58.4'
2	118°36.7'	210°39.7'	S 23°25.3'	67°05.7'	9.3'	N 13°52.7'	9.9'	58.5'
3	133°39.1'	225°39.4'	S 23°25.4'	81°34.0'	9.2'	N 14°02.5'	9.8'	58.5'
4	148°41.6'	240°39.1'	S 23°25.4'	96°02.2'	9.1'	N 14°12.3'	9.7'	58.5'
5	163°44.0'	255°38.8'	S 23°25.4'	110°30.4'	9.0'	N 14°22.1'	9.7'	58.6'
6	178°46.5'	270°38.5'	S 23°25.5'	124°58.4'	9.0'	N 14°31.7'	9.6'	58.6'
7	193°49.0'	285°38.2'	S 23°25.5'	139°26.4'	8.9'	N 14°41.3'	9.5'	58.7'
8	208°51.4'	300°37.9'	S 23°25.5'	153°54.2'	8.8'	N 14°50.8'	9.4'	58.7'
9	223°53.9'	315°37.6'	S 23°25.6'	168°22.0'	8.7'	N 15°00.2'	9.4'	58.7'
10	238°56.4'	330°37.3'	S 23°25.6'	182°49.7'	8.6'	N 15°09.6'	9.3'	58.8'
11	253°58.8'	345°37.0'	S 23°25.6'	197°17.2'	8.5'	N 15°18.9'	9.2'	58.8'
12	269°01.3'	0°36.6'	S 23°25.6'	211°44.7'	8.4'	N 15°28.1'	9.1'	58.8'
13	284°03.8'	15°36.3'	S 23°25.7'	226°12.1'	8.3'	N 15°37.2'	9.0'	58.9'
14	299°06.2'	30°36.0'	S 23°25.7'	240°39.4'	8.2'	N 15°46.2'	9.0'	58.9'
15	314°08.7'	45°35.7'	S 23°25.7'	255°06.5'	8.1'	N 15°55.2'	8.9'	58.9'
16	329°11.2'	60°35.4'	S 23°25.8'	269°33.6'	8.0'	N 16°04.1'	8.8'	59.0'
17	344°13.6'	75°35.1'	S 23°25.8'	284°00.6'	7.9'	N 16°12.9'	8.7'	59.0'
18	359°16.1'	90°34.8'	S 23°25.8'	298°27.5'	7.8'	N 16°21.6'	8.6'	59.0'
19	14°18.5'	105°34.5'	S 23°25.8'	312°54.3'	7.7'	N 16°30.2'	8.5'	59.1'
20	29°21.0'	120°34.2'	S 23°25.8'	327°21.0'	7.6'	N 16°38.7'	8.4'	59.1'
21	44°23.5'	135°33.9'	S 23°25.9'	341°47.6'	7.5'	N 16°47.1'	8.3'	59.1'
22	59°25.9'	150°33.6'	S 23°25.9'	356°14.1'	7.4'	N 16°55.5'	8.2'	59.2'
23	74°28.4'	165°33.2'	S 23°25.9'	10°40.5'	7.3'	N 17°03.7'	8.1'	59.2'

Fri Dec 21, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.0' SD = 16.3'		SD = 16.3'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	89°30.9'	180°32.9'	S 23°25.9'	25°06.8'	7.2'	N 17°11.9'	8.0'	59.2'
1	104°33.3'	195°32.6'	S 23°25.9'	39°33.0'	7.1'	N 17°19.9'	7.9'	59.3'
2	119°35.8'	210°32.3'	S 23°26.0'	53°59.1'	7.0'	N 17°27.8'	7.8'	59.3'
3	134°38.3'	225°32.0'	S 23°26.0'	68°25.1'	6.9'	N 17°35.7'	7.7'	59.3'
4	149°40.7'	240°31.7'	S 23°26.0'	82°51.1'	6.8'	N 17°43.4'	7.6'	59.4'
5	164°43.2'	255°31.4'	S 23°26.0'	97°16.9'	6.7'	N 17°51.1'	7.5'	59.4'
6	179°45.7'	270°31.1'	S 23°26.0'	111°42.6'	6.6'	N 17°58.6'	7.4'	59.4'
7	194°48.1'	285°30.8'	S 23°26.0'	126°08.3'	6.6'	N 18°06.1'	7.3'	59.5'
8	209°50.6'	300°30.5'	S 23°26.0'	140°33.8'	6.5'	N 18°13.4'	7.2'	59.5'
9	224°53.0'	315°30.1'	S 23°26.1'	154°59.3'	6.4'	N 18°20.6'	7.1'	59.5'
10	239°55.5'	330°29.8'	S 23°26.1'	169°24.7'	6.3'	N 18°27.7'	7.0'	59.6'
11	254°58.0'	345°29.5'	S 23°26.1'	183°49.9'	6.2'	N 18°34.7'	6.9'	59.6'
12	270°00.4'	0°29.2'	S 23°26.1'	198°15.1'	6.1'	N 18°41.6'	6.8'	59.6'
13	285°02.9'	15°28.9'	S 23°26.1'	212°40.2'	6.0'	N 18°48.3'	6.6'	59.7'
14	300°05.4'	30°28.6'	S 23°26.1'	227°05.2'	5.9'	N 18°55.0'	6.5'	59.7'
15	315°07.8'	45°28.3'	S 23°26.1'	241°30.2'	5.8'	N 19°01.5'	6.4'	59.7'
16	330°10.3'	60°28.0'	S 23°26.1'	255°55.0'	5.7'	N 19°07.9'	6.3'	59.7'
17	345°12.8'	75°27.7'	S 23°26.1'	270°19.7'	5.7'	N 19°14.2'	6.2'	59.8'
18	0°15.2'	90°27.4'	S 23°26.1'	284°44.4'	5.6'	N 19°20.3'	6.0'	59.8'
19	15°17.7'	105°27.1'	S 23°26.1'	299°09.0'	5.5'	N 19°26.4'	5.9'	59.8'
20	30°20.1'	120°26.7'	S 23°26.1'	313°33.5'	5.4'	N 19°32.3'	5.8'	59.9'
21	45°22.6'	135°26.4'	S 23°26.1'	327°57.9'	5.3'	N 19°38.0'	5.7'	59.9'
22	60°25.1'	150°26.1'	S 23°26.1'	342°22.2'	5.3'	N 19°43.7'	5.5'	59.9'
23	75°27.5'	165°25.8'	S 23°26.1'	356°46.5'	5.2'	N 19°49.2'	5.4'	59.9'

Sat Dec 22, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.0' SD = 16.3'		SD = 16.4'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	90°30.0'	180°25.5'	S 23°26.1'	11°10.7'	5.1'	N 19°54.6'	5.3'	60.0'
1	105°32.5'	195°25.2'	S 23°26.1'	25°34.8'	5.0'	N 19°59.9'	5.1'	60.0'
2	120°34.9'	210°24.9'	S 23°26.1'	39°58.8'	4.9'	N 20°05.0'	5.0'	60.0'
3	135°37.4'	225°24.6'	S 23°26.1'	54°22.7'	4.9'	N 20°10.0'	4.9'	60.0'
4	150°39.9'	240°24.3'	S 23°26.1'	68°46.6'	4.8'	N 20°14.9'	4.7'	60.1'
5	165°42.3'	255°24.0'	S 23°26.1'	83°10.4'	4.7'	N 20°19.6'	4.6'	60.1'
6	180°44.8'	270°23.6'	S 23°26.1'	97°34.1'	4.7'	N 20°24.2'	4.4'	60.1'
7	195°47.3'	285°23.3'	S 23°26.1'	111°57.8'	4.6'	N 20°28.6'	4.3'	60.1'
8	210°49.7'	300°23.0'	S 23°26.1'	126°21.4'	4.5'	N 20°32.9'	4.2'	60.2'
9	225°52.2'	315°22.7'	S 23°26.1'	140°44.9'	4.5'	N 20°37.1'	4.0'	60.2'
10	240°54.6'	330°22.4'	S 23°26.1'	155°08.3'	4.4'	N 20°41.1'	3.9'	60.2'
11	255°57.1'	345°22.1'	S 23°26.1'	169°31.7'	4.3'	N 20°45.0'	3.7'	60.2'
12	270°59.6'	0°21.8'	S 23°26.0'	183°55.1'	4.3'	N 20°48.8'	3.6'	60.2'
13	286°02.0'	15°21.5'	S 23°26.0'	198°18.3'	4.2'	N 20°52.3'	3.4'	60.3'
14	301°04.5'	30°21.2'	S 23°26.0'	212°41.6'	4.2'	N 20°55.8'	3.3'	60.3'
15	316°07.0'	45°20.9'	S 23°26.0'	227°04.7'	4.1'	N 20°59.1'	3.1'	60.3'
16	331°09.4'	60°20.5'	S 23°26.0'	241°27.8'	4.0'	N 21°02.2'	3.0'	60.3'
17	346°11.9'	75°20.2'	S 23°26.0'	255°50.9'	4.0'	N 21°05.2'	2.9'	60.3'
18	1°14.4'	90°19.9'	S 23°26.0'	270°13.9'	3.9'	N 21°08.1'	2.7'	60.4'
19	16°16.8'	105°19.6'	S 23°25.9'	284°36.8'	3.9'	N 21°10.8'	2.5'	60.4'
20	31°19.3'	120°19.3'	S 23°25.9'	298°59.7'	3.9'	N 21°13.3'	2.4'	60.4'
21	46°21.8'	135°19.0'	S 23°25.9'	313°22.6'	3.8'	N 21°15.7'	2.2'	60.4'
22	61°24.2'	150°18.7'	S 23°25.9'	327°45.4'	3.8'	N 21°18.0'	2.1'	60.4'
23	76°26.7'	165°18.4'	S 23°25.9'	342°08.2'	3.7'	N 21°20.1'	1.9'	60.5'

Sun Dec 23, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.0' SD = 16.3'		SD = 16.5'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	91°29.1'	180°18.1'	S 23°25.9'	356°30.9'	3.7'	N 21°22.0'	1.8'	60.5'
1	106°31.6'	195°17.8'	S 23°25.8'	10°53.6'	3.7'	N 21°23.8'	1.6'	60.5'
2	121°34.1'	210°17.4'	S 23°25.8'	25°16.2'	3.6'	N 21°25.4'	1.5'	60.5'
3	136°36.5'	225°17.1'	S 23°25.8'	39°38.9'	3.6'	N 21°26.9'	1.3'	60.5'
4	151°39.0'	240°16.8'	S 23°25.8'	54°01.4'	3.6'	N 21°28.2'	1.2'	60.5'
5	166°41.5'	255°16.5'	S 23°25.7'	68°24.0'	3.5'	N 21°29.4'	1.0'	60.5'
6	181°43.9'	270°16.2'	S 23°25.7'	82°46.5'	3.5'	N 21°30.4'	0.8'	60.6'
7	196°46.4'	285°15.9'	S 23°25.7'	97°09.1'	3.5'	N 21°31.2'	0.7'	60.6'
8	211°48.9'	300°15.6'	S 23°25.7'	111°31.5'	3.5'	N 21°31.9'	0.5'	60.6'
9	226°51.3'	315°15.3'	S 23°25.6'	125°54.0'	3.4'	N 21°32.4'	0.4'	60.6'
10	241°53.8'	330°15.0'	S 23°25.6'	140°16.5'	3.4'	N 21°32.8'	0.2'	60.6'
11	256°56.3'	345°14.7'	S 23°25.6'	154°38.9'	3.4'	N 21°33.0'	0.0'	60.6'
12	271°58.7'	0°14.3'	S 23°25.5'	169°01.3'	3.4'	N 21°33.0'	0.1'	60.6'
13	287°01.2'	15°14.0'	S 23°25.5'	183°23.7'	3.4'	N 21°32.9'	0.3'	60.6'
14	302°03.6'	30°13.7'	S 23°25.5'	197°46.1'	3.4'	N 21°32.7'	0.4'	60.6'
15	317°06.1'	45°13.4'	S 23°25.4'	212°08.5'	3.4'	N 21°32.2'	0.6'	60.7'
16	332°08.6'	60°13.1'	S 23°25.4'	226°30.8'	3.4'	N 21°31.6'	0.7'	60.7'
17	347°11.0'	75°12.8'	S 23°25.4'	240°53.2'	3.4'	N 21°30.9'	0.9'	60.7'
18	2°13.5'	90°12.5'	S 23°25.3'	255°15.6'	3.4'	N 21°30.0'	1.1'	60.7'
19	17°16.0'	105°12.2'	S 23°25.3'	269°38.0'	3.4'	N 21°28.9'	1.2'	60.7'
20	32°18.4'	120°11.9'	S 23°25.3'	284°00.3'	3.4'	N 21°27.7'	1.4'	60.7'
21	47°20.9'	135°11.6'	S 23°25.2'	298°22.7'	3.4'	N 21°26.3'	1.5'	60.7'
22	62°23.4'	150°11.2'	S 23°25.2'	312°45.1'	3.4'	N 21°24.8'	1.7'	60.7'
23	77°25.8'	165°10.9'	S 23°25.2'	327°07.5'	3.4'	N 21°23.1'	1.9'	60.7'

Mon Dec 24, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.1' SD = 16.3'		SD = 16.6'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	92°28.3'	180°10.6'	S 23°25.1'	341°29.9'	3.4'	N 21°21.2'	2.0'	60.7'
1	107°30.8'	195°10.3'	S 23°25.1'	355°52.3'	3.4'	N 21°19.2'	2.2'	60.7'
2	122°33.2'	210°10.0'	S 23°25.0'	10°14.7'	3.4'	N 21°17.0'	2.3'	60.7'
3	137°35.7'	225°09.7'	S 23°25.0'	24°37.2'	3.5'	N 21°14.7'	2.5'	60.7'
4	152°38.1'	240°09.4'	S 23°24.9'	38°59.7'	3.5'	N 21°12.2'	2.6'	60.7'
5	167°40.6'	255°09.1'	S 23°24.9'	53°22.1'	3.5'	N 21°09.5'	2.8'	60.7'
6	182°43.1'	270°08.8'	S 23°24.9'	67°44.7'	3.5'	N 21°06.7'	3.0'	60.7'
7	197°45.5'	285°08.5'	S 23°24.8'	82°07.2'	3.6'	N 21°03.8'	3.1'	60.7'
8	212°48.0'	300°08.1'	S 23°24.8'	96°29.8'	3.6'	N 21°00.6'	3.3'	60.7'
9	227°50.5'	315°07.8'	S 23°24.7'	110°52.4'	3.6'	N 20°57.4'	3.4'	60.7'
10	242°52.9'	330°07.5'	S 23°24.7'	125°15.0'	3.7'	N 20°53.9'	3.6'	60.7'
11	257°55.4'	345°07.2'	S 23°24.6'	139°37.6'	3.7'	N 20°50.4'	3.7'	60.7'
12	272°57.9'	0°06.9'	S 23°24.6'	154°00.3'	3.7'	N 20°46.6'	3.9'	60.7'
13	288°00.3'	15°06.6'	S 23°24.5'	168°23.1'	3.8'	N 20°42.8'	4.0'	60.7'
14	303°02.8'	30°06.3'	S 23°24.5'	182°45.8'	3.8'	N 20°38.7'	4.2'	60.7'
15	318°05.3'	45°06.0'	S 23°24.4'	197°08.7'	3.9'	N 20°34.5'	4.3'	60.7'
16	333°07.7'	60°05.7'	S 23°24.4'	211°31.5'	3.9'	N 20°30.2'	4.5'	60.7'
17	348°10.2'	75°05.4'	S 23°24.3'	225°54.4'	3.9'	N 20°25.7'	4.6'	60.7'
18	3°12.6'	90°05.0'	S 23°24.3'	240°17.3'	4.0'	N 20°21.1'	4.8'	60.7'
19	18°15.1'	105°04.7'	S 23°24.2'	254°40.3'	4.0'	N 20°16.3'	4.9'	60.7'
20	33°17.6'	120°04.4'	S 23°24.1'	269°03.4'	4.1'	N 20°11.4'	5.1'	60.7'
21	48°20.0'	135°04.1'	S 23°24.1'	283°26.5'	4.1'	N 20°06.3'	5.2'	60.7'
22	63°22.5'	150°03.8'	S 23°24.0'	297°49.6'	4.2'	N 20°01.1'	5.4'	60.7'
23	78°25.0'	165°03.5'	S 23°24.0'	312°12.8'	4.3'	N 19°55.7'	5.5'	60.7'

Tue Dec 25, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.1' SD = 16.3'		SD = 16.5'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	93°27.4'	180°03.2'	S 23°23.9'	326°36.1'	4.3'	N 19°50.2'	5.6'	60.7'
1	108°29.9'	195°02.9'	S 23°23.8'	340°59.4'	4.4'	N 19°44.6'	5.8'	60.7'
2	123°32.4'	210°02.6'	S 23°23.8'	355°22.7'	4.4'	N 19°38.8'	5.9'	60.7'
3	138°34.8'	225°02.3'	S 23°23.7'	9°46.2'	4.5'	N 19°32.9'	6.1'	60.7'
4	153°37.3'	240°02.0'	S 23°23.7'	24°09.7'	4.6'	N 19°26.9'	6.2'	60.6'
5	168°39.8'	255°01.6'	S 23°23.6'	38°33.2'	4.6'	N 19°20.7'	6.3'	60.6'
6	183°42.2'	270°01.3'	S 23°23.5'	52°56.8'	4.7'	N 19°14.3'	6.5'	60.6'
7	198°44.7'	285°01.0'	S 23°23.5'	67°20.5'	4.7'	N 19°07.9'	6.6'	60.6'
8	213°47.1'	300°00.7'	S 23°23.4'	81°44.2'	4.8'	N 19°01.3'	6.7'	60.6'
9	228°49.6'	315°00.4'	S 23°23.3'	96°08.1'	4.9'	N 18°54.6'	6.9'	60.6'
10	243°52.1'	330°00.1'	S 23°23.3'	110°31.9'	5.0'	N 18°47.7'	7.0'	60.6'
11	258°54.5'	344°59.8'	S 23°23.2'	124°55.9'	5.0'	N 18°40.7'	7.1'	60.6'
12	273°57.0'	359°59.5'	S 23°23.1'	139°19.9'	5.1'	N 18°33.6'	7.2'	60.6'
13	288°59.5'	14°59.2'	S 23°23.1'	153°44.0'	5.2'	N 18°26.4'	7.4'	60.5'
14	304°01.9'	29°58.9'	S 23°23.0'	168°08.2'	5.2'	N 18°19.0'	7.5'	60.5'
15	319°04.4'	44°58.6'	S 23°22.9'	182°32.4'	5.3'	N 18°11.6'	7.6'	60.5'
16	334°06.9'	59°58.2'	S 23°22.8'	196°56.7'	5.4'	N 18°03.9'	7.7'	60.5'
17	349°09.3'	74°57.9'	S 23°22.8'	211°21.1'	5.5'	N 17°56.2'	7.8'	60.5'
18	4°11.8'	89°57.6'	S 23°22.7'	225°45.6'	5.5'	N 17°48.4'	8.0'	60.5'
19	19°14.2'	104°57.3'	S 23°22.6'	240°10.1'	5.6'	N 17°40.4'	8.1'	60.5'
20	34°16.7'	119°57.0'	S 23°22.5'	254°34.7'	5.7'	N 17°32.3'	8.2'	60.4'
21	49°19.2'	134°56.7'	S 23°22.5'	268°59.4'	5.8'	N 17°24.1'	8.3'	60.4'
22	64°21.6'	149°56.4'	S 23°22.4'	283°24.2'	5.9'	N 17°15.8'	8.4'	60.4'
23	79°24.1'	164°56.1'	S 23°22.3'	297°49.0'	5.9'	N 17°07.4'	8.5'	60.4'

Wed Dec 26, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.1' SD = 16.3'		SD = 16.4'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	94°26.6'	179°55.8'	S 23°22.2'	312°14.0'	6.0'	N 16°58.9'	8.6'	60.4'
1	109°29.0'	194°55.5'	S 23°22.1'	326°39.0'	6.1'	N 16°50.3'	8.7'	60.4'
2	124°31.5'	209°55.2'	S 23°22.1'	341°04.1'	6.2'	N 16°41.5'	8.9'	60.4'
3	139°34.0'	224°54.8'	S 23°22.0'	355°29.2'	6.3'	N 16°32.7'	9.0'	60.3'
4	154°36.4'	239°54.5'	S 23°21.9'	9°54.5'	6.3'	N 16°23.7'	9.1'	60.3'
5	169°38.9'	254°54.2'	S 23°21.8'	24°19.8'	6.4'	N 16°14.6'	9.2'	60.3'
6	184°41.4'	269°53.9'	S 23°21.7'	38°45.3'	6.5'	N 16°05.5'	9.3'	60.3'
7	199°43.8'	284°53.6'	S 23°21.6'	53°10.8'	6.6'	N 15°56.2'	9.4'	60.3'
8	214°46.3'	299°53.3'	S 23°21.6'	67°36.3'	6.7'	N 15°46.9'	9.5'	60.2'
9	229°48.7'	314°53.0'	S 23°21.5'	82°02.0'	6.7'	N 15°37.4'	9.5'	60.2'
10	244°51.2'	329°52.7'	S 23°21.4'	96°27.8'	6.8'	N 15°27.9'	9.6'	60.2'
11	259°53.7'	344°52.4'	S 23°21.3'	110°53.6'	6.9'	N 15°18.2'	9.7'	60.2'
12	274°56.1'	359°52.1'	S 23°21.2'	125°19.5'	7.0'	N 15°08.5'	9.8'	60.2'
13	289°58.6'	14°51.8'	S 23°21.1'	139°45.5'	7.1'	N 14°58.7'	9.9'	60.1'
14	305°01.1'	29°51.5'	S 23°21.0'	154°11.6'	7.2'	N 14°48.8'	10.0'	60.1'
15	320°03.5'	44°51.2'	S 23°20.9'	168°37.7'	7.2'	N 14°38.8'	10.1'	60.1'
16	335°06.0'	59°50.8'	S 23°20.8'	183°04.0'	7.3'	N 14°28.7'	10.2'	60.1'
17	350°08.5'	74°50.5'	S 23°20.8'	197°30.3'	7.4'	N 14°18.5'	10.3'	60.1'
18	5°10.9'	89°50.2'	S 23°20.7'	211°56.7'	7.5'	N 14°08.3'	10.3'	60.0'
19	20°13.4'	104°49.9'	S 23°20.6'	226°23.2'	7.6'	N 13°57.9'	10.4'	60.0'
20	35°15.9'	119°49.6'	S 23°20.5'	240°49.8'	7.7'	N 13°47.5'	10.5'	60.0'
21	50°18.3'	134°49.3'	S 23°20.4'	255°16.5'	7.7'	N 13°37.0'	10.6'	60.0'
22	65°20.8'	149°49.0'	S 23°20.3'	269°43.2'	7.8'	N 13°26.4'	10.6'	59.9'
23	80°23.2'	164°48.7'	S 23°20.2'	284°10.1'	7.9'	N 13°15.8'	10.7'	59.9'

Thu Dec 27, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.1' SD = 16.3'		SD = 16.3'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	95°25.7'	179°48.4'	S 23°20.1'	298°37.0'	8.0'	N 13°05.1'	10.8'	59.9'
1	110°28.2'	194°48.1'	S 23°20.0'	313°04.0'	8.1'	N 12°54.3'	10.9'	59.9'
2	125°30.6'	209°47.8'	S 23°19.9'	327°31.0'	8.2'	N 12°43.4'	10.9'	59.9'
3	140°33.1'	224°47.5'	S 23°19.8'	341°58.2'	8.2'	N 12°32.5'	11.0'	59.8'
4	155°35.6'	239°47.2'	S 23°19.7'	356°25.4'	8.3'	N 12°21.5'	11.1'	59.8'
5	170°38.0'	254°46.8'	S 23°19.6'	10°52.7'	8.4'	N 12°10.5'	11.1'	59.8'
6	185°40.5'	269°46.5'	S 23°19.5'	25°20.1'	8.5'	N 11°59.3'	11.2'	59.8'
7	200°43.0'	284°46.2'	S 23°19.4'	39°47.6'	8.6'	N 11°48.2'	11.2'	59.7'
8	215°45.4'	299°45.9'	S 23°19.3'	54°15.2'	8.6'	N 11°36.9'	11.3'	59.7'
9	230°47.9'	314°45.6'	S 23°19.2'	68°42.8'	8.7'	N 11°25.6'	11.4'	59.7'
10	245°50.4'	329°45.3'	S 23°19.0'	83°10.5'	8.8'	N 11°14.2'	11.4'	59.7'
11	260°52.8'	344°45.0'	S 23°18.9'	97°38.3'	8.9'	N 11°02.8'	11.5'	59.6'
12	275°55.3'	359°44.7'	S 23°18.8'	112°06.1'	8.9'	N 10°51.4'	11.5'	59.6'
13	290°57.7'	14°44.4'	S 23°18.7'	126°34.1'	9.0'	N 10°39.8'	11.6'	59.6'
14	306°00.2'	29°44.1'	S 23°18.6'	141°02.1'	9.1'	N 10°28.2'	11.6'	59.5'
15	321°02.7'	44°43.8'	S 23°18.5'	155°30.2'	9.2'	N 10°16.6'	11.7'	59.5'
16	336°05.1'	59°43.5'	S 23°18.4'	169°58.4'	9.2'	N 10°04.9'	11.7'	59.5'
17	351°07.6'	74°43.2'	S 23°18.3'	184°26.6'	9.3'	N 9°53.2'	11.8'	59.5'
18	6°10.1'	89°42.9'	S 23°18.2'	198°54.9'	9.4'	N 9°41.4'	11.8'	59.4'
19	21°12.5'	104°42.5'	S 23°18.0'	213°23.3'	9.5'	N 9°29.6'	11.9'	59.4'
20	36°15.0'	119°42.2'	S 23°17.9'	227°51.7'	9.5'	N 9°17.7'	11.9'	59.4'
21	51°17.5'	134°41.9'	S 23°17.8'	242°20.3'	9.6'	N 9°05.8'	11.9'	59.4'
22	66°19.9'	149°41.6'	S 23°17.7'	256°48.9'	9.7'	N 8°53.9'	12.0'	59.3'
23	81°22.4'	164°41.3'	S 23°17.6'	271°17.5'	9.7'	N 8°41.9'	12.0'	59.3'

Fri Dec 28, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.1' SD = 16.3'		SD = 16.1'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	96°24.8'	179°41.0'	S 23°17.5'	285°46.3'	9.8'	N 8°29.9'	12.1'	59.3'
1	111°27.3'	194°40.7'	S 23°17.3'	300°15.1'	9.9'	N 8°17.8'	12.1'	59.3'
2	126°29.8'	209°40.4'	S 23°17.2'	314°43.9'	9.9'	N 8°05.7'	12.1'	59.2'
3	141°32.2'	224°40.1'	S 23°17.1'	329°12.9'	10.0'	N 7°53.6'	12.2'	59.2'
4	156°34.7'	239°39.8'	S 23°17.0'	343°41.9'	10.1'	N 7°41.4'	12.2'	59.2'
5	171°37.2'	254°39.5'	S 23°16.9'	358°10.9'	10.1'	N 7°29.2'	12.2'	59.1'
6	186°39.6'	269°39.2'	S 23°16.7'	12°40.1'	10.2'	N 7°17.0'	12.3'	59.1'
7	201°42.1'	284°38.9'	S 23°16.6'	27°09.3'	10.3'	N 7°04.8'	12.3'	59.1'
8	216°44.6'	299°38.6'	S 23°16.5'	41°38.5'	10.3'	N 6°52.5'	12.3'	59.1'
9	231°47.0'	314°38.3'	S 23°16.4'	56°07.8'	10.4'	N 6°40.2'	12.3'	59.0'
10	246°49.5'	329°38.0'	S 23°16.2'	70°37.2'	10.4'	N 6°27.9'	12.4'	59.0'
11	261°52.0'	344°37.7'	S 23°16.1'	85°06.7'	10.5'	N 6°15.5'	12.4'	59.0'
12	276°54.4'	359°37.3'	S 23°16.0'	99°36.2'	10.6'	N 6°03.1'	12.4'	58.9'
13	291°56.9'	14°37.0'	S 23°15.8'	114°05.7'	10.6'	N 5°50.7'	12.4'	58.9'
14	306°59.3'	29°36.7'	S 23°15.7'	128°35.3'	10.7'	N 5°38.3'	12.4'	58.9'
15	322°01.8'	44°36.4'	S 23°15.6'	143°05.0'	10.7'	N 5°25.9'	12.4'	58.9'
16	337°04.3'	59°36.1'	S 23°15.5'	157°34.7'	10.8'	N 5°13.5'	12.5'	58.8'
17	352°06.7'	74°35.8'	S 23°15.3'	172°04.5'	10.8'	N 5°01.0'	12.5'	58.8'
18	7°09.2'	89°35.5'	S 23°15.2'	186°34.3'	10.9'	N 4°48.5'	12.5'	58.8'
19	22°11.7'	104°35.2'	S 23°15.1'	201°04.2'	10.9'	N 4°36.0'	12.5'	58.7'
20	37°14.1'	119°34.9'	S 23°14.9'	215°34.1'	11.0'	N 4°23.5'	12.5'	58.7'
21	52°16.6'	134°34.6'	S 23°14.8'	230°04.1'	11.0'	N 4°11.0'	12.5'	58.7'
22	67°19.1'	149°34.3'	S 23°14.7'	244°34.2'	11.1'	N 3°58.5'	12.5'	58.7'
23	82°21.5'	164°34.0'	S 23°14.5'	259°04.3'	11.1'	N 3°45.9'	12.5'	58.6'

Sat Dec 29, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.1' SD = 16.3'		SD = 15.9'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	97°24.0'	179°33.7'	S 23°14.4'	273°34.4'	11.2'	N 3°33.4'	12.5'	58.6'
1	112°26.5'	194°33.4'	S 23°14.2'	288°04.6'	11.2'	N 3°20.9'	12.6'	58.6'
2	127°28.9'	209°33.1'	S 23°14.1'	302°34.8'	11.3'	N 3°08.3'	12.6'	58.5'
3	142°31.4'	224°32.8'	S 23°14.0'	317°05.1'	11.3'	N 2°55.8'	12.6'	58.5'
4	157°33.8'	239°32.5'	S 23°13.8'	331°35.4'	11.4'	N 2°43.2'	12.6'	58.5'
5	172°36.3'	254°32.2'	S 23°13.7'	346°05.7'	11.4'	N 2°30.6'	12.6'	58.5'
6	187°38.8'	269°31.9'	S 23°13.5'	0°36.2'	11.4'	N 2°18.1'	12.6'	58.4'
7	202°41.2'	284°31.6'	S 23°13.4'	15°06.6'	11.5'	N 2°05.5'	12.6'	58.4'
8	217°43.7'	299°31.3'	S 23°13.2'	29°37.1'	11.5'	N 1°53.0'	12.6'	58.4'
9	232°46.2'	314°30.9'	S 23°13.1'	44°07.6'	11.6'	N 1°40.4'	12.6'	58.3'
10	247°48.6'	329°30.6'	S 23°13.0'	58°38.2'	11.6'	N 1°27.8'	12.5'	58.3'
11	262°51.1'	344°30.3'	S 23°12.8'	73°08.8'	11.6'	N 1°15.3'	12.5'	58.3'
12	277°53.6'	359°30.0'	S 23°12.7'	87°39.4'	11.7'	N 1°02.8'	12.5'	58.2'
13	292°56.0'	14°29.7'	S 23°12.5'	102°10.1'	11.7'	N 0°50.2'	12.5'	58.2'
14	307°58.5'	29°29.4'	S 23°12.4'	116°40.8'	11.7'	N 0°37.7'	12.5'	58.2'
15	323°00.9'	44°29.1'	S 23°12.2'	131°11.5'	11.8'	N 0°25.2'	12.5'	58.2'
16	338°03.4'	59°28.8'	S 23°12.1'	145°42.3'	11.8'	N 0°12.7'	12.5'	58.1'
17	353°05.9'	74°28.5'	S 23°11.9'	160°13.1'	11.8'	N 0°00.2'	12.5'	58.1'
18	8°08.3'	89°28.2'	S 23°11.8'	174°43.9'	11.9'	S 0°12.3'	12.5'	58.1'
19	23°10.8'	104°27.9'	S 23°11.6'	189°14.8'	11.9'	S 0°24.8'	12.5'	58.0'
20	38°13.3'	119°27.6'	S 23°11.5'	203°45.7'	11.9'	S 0°37.2'	12.4'	58.0'
21	53°15.7'	134°27.3'	S 23°11.3'	218°16.6'	12.0'	S 0°49.7'	12.4'	58.0'
22	68°18.2'	149°27.0'	S 23°11.1'	232°47.6'	12.0'	S 1°02.1'	12.4'	58.0'
23	83°20.7'	164°26.7'	S 23°11.0'	247°18.6'	12.0'	S 1°14.5'	12.4'	57.9'

Sun Dec 30, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.2' SD = 16.3'		SD = 15.7'				
	GHA	GHA	dec	GHA	v	dec	d	HP
0	98°23.1'	179°26.4'	S 23°10.8'	261°49.6'	12.0'	S 1°26.9'	12.4'	57.9'
1	113°25.6'	194°26.1'	S 23°10.7'	276°20.6'	12.1'	S 1°39.2'	12.3'	57.9'
2	128°28.1'	209°25.8'	S 23°10.5'	290°51.7'	12.1'	S 1°51.6'	12.3'	57.8'
3	143°30.5'	224°25.5'	S 23°10.4'	305°22.7'	12.1'	S 2°03.9'	12.3'	57.8'
4	158°33.0'	239°25.2'	S 23°10.2'	319°53.8'	12.1'	S 2°16.2'	12.3'	57.8'
5	173°35.4'	254°24.9'	S 23°10.0'	334°25.0'	12.1'	S 2°28.5'	12.3'	57.8'
6	188°37.9'	269°24.6'	S 23°09.9'	348°56.1'	12.2'	S 2°40.8'	12.2'	57.7'
7	203°40.4'	284°24.3'	S 23°09.7'	3°27.3'	12.2'	S 2°53.0'	12.2'	57.7'
8	218°42.8'	299°24.0'	S 23°09.5'	17°58.4'	12.2'	S 3°05.2'	12.2'	57.7'
9	233°45.3'	314°23.7'	S 23°09.4'	32°29.6'	12.2'	S 3°17.4'	12.2'	57.6'
10	248°47.8'	329°23.4'	S 23°09.2'	47°00.8'	12.2'	S 3°29.5'	12.1'	57.6'
11	263°50.2'	344°23.1'	S 23°09.0'	61°32.1'	12.2'	S 3°41.7'	12.1'	57.6'
12	278°52.7'	359°22.8'	S 23°08.9'	76°03.3'	12.3'	S 3°53.8'	12.1'	57.6'
13	293°55.2'	14°22.5'	S 23°08.7'	90°34.6'	12.3'	S 4°05.8'	12.0'	57.5'
14	308°57.6'	29°22.2'	S 23°08.5'	105°05.8'	12.3'	S 4°17.9'	12.0'	57.5'
15	324°00.1'	44°21.9'	S 23°08.4'	119°37.1'	12.3'	S 4°29.9'	12.0'	57.5'
16	339°02.5'	59°21.6'	S 23°08.2'	134°08.4'	12.3'	S 4°41.8'	11.9'	57.5'
17	354°05.0'	74°21.3'	S 23°08.0'	148°39.7'	12.3'	S 4°53.8'	11.9'	57.4'
18	9°07.5'	89°21.0'	S 23°07.9'	163°11.0'	12.3'	S 5°05.7'	11.9'	57.4'
19	24°09.9'	104°20.7'	S 23°07.7'	177°42.3'	12.3'	S 5°17.5'	11.8'	57.4'
20	39°12.4'	119°20.4'	S 23°07.5'	192°13.7'	12.3'	S 5°29.4'	11.8'	57.3'
21	54°14.9'	134°20.1'	S 23°07.3'	206°45.0'	12.3'	S 5°41.1'	11.8'	57.3'
22	69°17.3'	149°19.8'	S 23°07.2'	221°16.4'	12.4'	S 5°52.9'	11.7'	57.3'
23	84°19.8'	164°19.5'	S 23°07.0'	235°47.7'	12.4'	S 6°04.6'	11.7'	57.3'

Mon Dec 31, 2018 UTC

UTC	Aries	Sun		Moon				
	GHA	d = 0.2' SD = 16.3'		GHA	v	SD = 15.5'	d	HP
		GHA	dec			dec		
0	99°22.3'	179°19.2'	S 23°06.8'	250°19.1'	12.4'	S 6°16.3'	11.6'	57.2'
1	114°24.7'	194°18.9'	S 23°06.6'	264°50.4'	12.4'	S 6°27.9'	11.6'	57.2'
2	129°27.2'	209°18.6'	S 23°06.5'	279°21.8'	12.4'	S 6°39.5'	11.5'	57.2'
3	144°29.7'	224°18.3'	S 23°06.3'	293°53.2'	12.4'	S 6°51.0'	11.5'	57.2'
4	159°32.1'	239°18.0'	S 23°06.1'	308°24.5'	12.4'	S 7°02.6'	11.5'	57.1'
5	174°34.6'	254°17.7'	S 23°05.9'	322°55.9'	12.4'	S 7°14.0'	11.4'	57.1'
6	189°37.0'	269°17.4'	S 23°05.7'	337°27.3'	12.4'	S 7°25.4'	11.4'	57.1'
7	204°39.5'	284°17.1'	S 23°05.6'	351°58.6'	12.4'	S 7°36.8'	11.3'	57.1'
8	219°42.0'	299°16.8'	S 23°05.4'	6°30.0'	12.4'	S 7°48.1'	11.3'	57.0'
9	234°44.4'	314°16.5'	S 23°05.2'	21°01.4'	12.4'	S 7°59.4'	11.2'	57.0'
10	249°46.9'	329°16.2'	S 23°05.0'	35°32.8'	12.4'	S 8°10.6'	11.2'	57.0'
11	264°49.4'	344°15.9'	S 23°04.8'	50°04.1'	12.4'	S 8°21.8'	11.1'	56.9'
12	279°51.8'	359°15.6'	S 23°04.6'	64°35.5'	12.4'	S 8°32.9'	11.1'	56.9'
13	294°54.3'	14°15.3'	S 23°04.4'	79°06.8'	12.4'	S 8°44.0'	11.0'	56.9'
14	309°56.8'	29°15.0'	S 23°04.3'	93°38.2'	12.3'	S 8°55.0'	11.0'	56.9'
15	324°59.2'	44°14.7'	S 23°04.1'	108°09.5'	12.3'	S 9°06.0'	10.9'	56.8'
16	340°01.7'	59°14.4'	S 23°03.9'	122°40.9'	12.3'	S 9°16.9'	10.9'	56.8'
17	355°04.2'	74°14.1'	S 23°03.7'	137°12.2'	12.3'	S 9°27.8'	10.8'	56.8'
18	10°06.6'	89°13.8'	S 23°03.5'	151°43.5'	12.3'	S 9°38.6'	10.8'	56.8'
19	25°09.1'	104°13.5'	S 23°03.3'	166°14.9'	12.3'	S 9°49.4'	10.7'	56.7'
20	40°11.5'	119°13.2'	S 23°03.1'	180°46.2'	12.3'	S 10°00.1'	10.6'	56.7'
21	55°14.0'	134°12.9'	S 23°02.9'	195°17.5'	12.3'	S 10°10.7'	10.6'	56.7'
22	70°16.5'	149°12.6'	S 23°02.7'	209°48.8'	12.3'	S 10°21.3'	10.5'	56.7'
23	85°18.9'	164°12.3'	S 23°02.5'	224°20.0'	12.3'	S 10°31.8'	10.5'	56.6'