Tuesday 01 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	158°46.8′	176°54.0′	S 7°40.7′	222°01.8′	S 16°52.8′	173°16.1′	S 7°14.8′	197°16.0′	S 16°01.8′	220°32.3′	S 21°45.2′
1	173°49.3′	191°54.1′	S 7°39.8′	237°02.2′	S 16°52.7′	188°18.0′	S 7°14.6′	212°18.2′	S 16°01.7′	235°32.8′	S 21°44.9′
2	188°51.7′	206°54.2′	S 7°38.8′	252°02.5′	S 16°52.7′	203°19.9′	S 7°14.4′	227°20.4′	S 16°01.6′	250°33.3′	S 21°44.6′
3	203°54.2′	221°54.3′	S 7°37.9′	267°02.8′	S 16°52.6′	218°21.8′	S 7°14.2′	242°22.6′	S 16°01.5′	265°33.8′	S 21°44.2′
4	218°56.7′	236°54.4′	S 7°36.9′	282°03.2′	S 16°52.5′	233°23.7′	S 7°13.9′	257°24.8′	S 16°01.4′	280°34.3′	S 21°43.9′
5	233°59.1′	251°54.6′	S 7°36.0′	297°03.5′	S 16°52.4′	248°25.6′	S 7°13.7′	272°26.9′	S 16°01.3′	295°34.8′	S 21°43.6′
6	249°01.6′	266°54.7′	S 7°35.0′	312°03.9′	S 16°52.3′	263°27.5′	S 7°13.5′	287°29.1′	S 16°01.2′	310°35.3′	S 21°43.3′
7	264°04.0′	281°54.8′	S 7°34.1′	327°04.2′	S 16°52.2′	278°29.4′	S 7°13.2′	302°31.3′	S 16°01.2′	325°35.7′	S 21°42.9′
8	279°06.5′	296°54.9′	S 7°33.1′	342°04.6′	S 16°52.1′	293°31.3′	S 7°13.0′	317°33.5′	S 16°01.1′	340°36.2′	S 21°42.6′
9	294°09.0′	311°55.0′	S 7°32.2′	357°04.9′	S 16°52.1′	308°33.2′	S 7°12.8′	332°35.7′	S 16°01.0′	355°36.7′	S 21°42.3′
10	309°11.4′	326°55.2′	S 7°31.2′	12°05.2′	S 16°52.0′	323°35.1′	S 7°12.5′	347°37.8′	S 16°00.9′	10°37.2′	S 21°42.0′
11	324°13.9′	341°55.3′	S 7°30.3′	27°05.6′	S 16°51.9′	338°37.0′	S 7°12.3′	2°40.0′	S 16°00.8′	25°37.7′	S 21°41.7′
12	339°16.4′	356°55.4′	S 7°29.3′	42°05.9′	S 16°51.8′	353°38.9′	S 7°12.1′	17°42.2′	S 16°00.7′	40°38.2′	S 21°41.3′
13	354°18.8′	11°55.5′	S 7°28.4′	57°06.2′	S 16°51.7′	8°40.8′	S 7°11.8′	32°44.4′	S 16°00.6′	55°38.7′	S 21°41.0′
14	9°21.3′	26°55.6′	S 7°27.4′	72°06.6′	S 16°51.6′	23°42.7′	S 7°11.6′	47°46.6′	S 16°00.6′	70°39.2′	S 21°40.7′
15	24°23.8′	41°55.8′	S 7°26.5′	87°06.9′	S 16°51.5′	38°44.6′	S 7°11.4′	62°48.7′	S 16°00.5′	85°39.7′	S 21°40.4′
16	39°26.2′	56°55.9′	S 7°25.5′	102°07.2′	S 16°51.4′	53°46.5′	S 7°11.1′	77°50.9′	S 16°00.4′	100°40.2′	S 21°40.0′
17	54°28.7′	71°56.0′	S 7°24.6′	117°07.6′	S 16°51.3′	68°48.4′	S 7°10.9′	92°53.1′	S 16°00.3′	115°40.7′	S 21°39.7′
18	69°31.2′	86°56.1′	S 7°23.6′	132°07.9′	S 16°51.3′	83°50.3′	S 7°10.7′	107°55.3′	S 16°00.2′	130°41.1′	S 21°39.4′
19	84°33.6′	101°56.3′	S 7°22.7′	147°08.2′	S 16°51.2′	98°52.2′	S 7°10.4′	122°57.5′	S 16°00.1′	145°41.6′	S 21°39.1′
20	99°36.1′	116°56.4′	S 7°21.7′	162°08.5′	S 16°51.1′	113°54.1′	S 7°10.2′	137°59.6′	S 16°00.0′	160°42.1′	S 21°38.7′
21	114°38.5′	131°56.5′	S 7°20.8′	177°08.8′	S 16°51.0′	128°56.0′	S 7°10.0′	153°01.8′	S 15°60.0′	175°42.6′	S 21°38.4′
22	129°41.0′	146°56.6′	S 7°19.8′	192°09.2′	S 16°50.9′	143°57.9′	S 7°09.8′	168°04.0′	S 15°59.9′	190°43.1′	S 21°38.1′
23	144°43.5′	161°56.7′	S 7°18.9′	207°09.5′	S 16°50.8′	158°59.8′	S 7°09.5′	183°06.2′	S 15°59.8′	205°43.6′	S 21°37.7′
		SD 16.1′ *d* 1.0′		*v* 0.3′ *d* 0.1′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.3′	
Mer. pass.		12 h 12 m 18 s		9 h 12 m		12 h 25 m		10 h 49 m		9 h 18 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Saturn	+Mars	+Venus	+Altair	+Antares	+Rigil Kent	+Hadar	+Acrux
0	197°07.0′	S 20°16.9′	7.3′	10.8′	59.2′		21°53.5′	23°50.1′		67°16.4′	77°42.2′	81°53.1′	89°18.1′
1	211°33.3′	S 20°06.1′	7.4′	10.9′	59.2′		22°26.9′	24°21.3′		67°52.0′	78°08.2′	82°18.5′	89°39.2′
2	225°59.7′	S 19°55.2′	7.5′	11.0′	59.2′		23°00.2′	24°52.6′	37°51.4′	68°27.5′	78°34.2′	82°43.9′	90°00.3′
3	240°26.2′	S 19°44.1′	7.6′	11.2′	59.2′		23°33.5′	25°24.0′	38°06.5′	69°03.1′	79°00.2′	83°09.3′	90°21.3′
4	254°52.7′	S 19°33.0′	7.7′	11.3′	59.2′		24°06.9′	25°55.5′	38°22.0′	69°38.6′	79°26.2′	83°34.7′	90°42.3′
5	269°19.4′	S 19°21.7′	7.8′	11.4′	59.1′		24°40.2′	26°27.0′	38°37.8′	70°14.1′	79°52.3′	84°00.1′	91°03.4′
6	283°46.2′	S 19°10.3′	7.9′	11.5′	59.1′		25°13.6′	26°58.6′	38°54.0′	70°49.6′	80°18.3′	84°25.5′	91°24.4′
7	298°13.1′	S 18°58.8′	8.0′	11.6′	59.1′		25°46.9′	27°30.2′	39°10.5′	71°25.0′	80°44.4′	84°50.9′	91°45.3′
8	312°40.0′	S 18°47.2′	8.1′	11.7′	59.1′		26°20.2′	28°01.9′	39°27.4′	72°00.5′	81°10.5′	85°16.4′	92°06.3′
9	327°07.1′	S 18°35.5′	8.2′	11.8′	59.1′		26°53.6′	28°33.6′	39°44.6′	72°35.9′	81°36.7′	85°41.8′	92°27.3′
10	341°34.3′	S 18°23.7′	8.3′	11.9′	59.1′		27°26.9′	29°05.4′	40°02.2′	73°11.4′	82°02.8′	86°07.3′	92°48.2′
11	356°01.6′	S 18°11.8′	8.4′	12.0′	59.0′		28°00.2′	29°37.2′	40°20.0′	73°46.8′	82°28.9′	86°32.7′	93°09.1′
12	10°28.9′	S 17°59.8′	8.5′	12.1′	59.0′		28°33.5′	30°09.0′	40°38.2′	74°22.2′	82°55.1′	86°58.1′	93°30.0′
13	24°56.4′	S 17°47.7′	8.6′	12.2′	59.0′	7°40.3′	29°06.8′	30°40.9′	40°56.7′	74°57.5′	83°21.2′	87°23.6′	93°50.9′
14	39°24.0′	S 17°35.5′	8.7′	12.3′	59.0′	8°10.4′	29°40.1′	31°12.8′	41°15.5′	75°32.9′	83°47.4′	87°49.0′	94°11.7′
15	53°51.6′	S 17°23.2′	8.8′	12.4′	59.0′	8°41.0′	30°13.3′	31°44.7′	41°34.5′	76°08.2′	84°13.6′	88°14.4′	94°32.5′
16	68°19.4′	S 17°10.8′	8.9′	12.5′	59.0′	9°12.2′	30°46.6′	32°16.6′	41°53.9′	76°43.5′	84°39.7′	88°39.8′	94°53.3′
17	82°47.3′	S 16°58.3′	9.0′	12.6′	58.9′	9°43.7′	31°19.9′	32°48.6′	42°13.5′	77°18.8′	85°05.9′	89°05.2′	95°14.0′
18	97°15.2′	S 16°45.8′	9.1′	12.7′	58.9′	10°15.7′	31°53.1′	33°20.6′	42°33.3′	77°54.1′	85°32.1′	89°30.6′	95°34.7′
19	111°43.3′	S 16°33.1′	9.2′	12.7′	58.9′	10°47.9′	32°26.3′	33°52.6′	42°53.4′	78°29.3′	85°58.2′	89°56.0′	95°55.4′
20	126°11.5′	S 16°20.4′	9.3′	12.8′	58.9′	11°20.4′	32°59.5′	34°24.6′	43°13.8′	79°04.5′	86°24.4′	90°21.3′	96°16.1′
21	140°39.7′	S 16°07.5′	9.4′	12.9′	58.9′	11°53.1′	33°32.7′	34°56.6′	43°34.4′	79°39.7′	86°50.6′	90°46.7′	96°36.7′
22	155°08.1′	S 15°54.6′	9.4′	13.0′	58.8′	12°26.0′	34°05.9′	35°28.6′	43°55.3′	80°14.9′	87°16.7′	91°12.0′	96°57.2′
23	169°36.5′	S 15°41.6′	9.5′	13.1′	58.8′	12°59.0′	34°39.0′	36°00.6′	44°16.4′	80°50.1′	87°42.8′	91°37.3′	97°17.7′
Mer. pass. 11 h 17 m SD 16.1′ phase 4%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.5′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.5′	N 7°24.6′
Deneb	+1.2	49°27.8′	N 45°21.3′	Acrux	+0.8	173°02.1′	S 63°13.1′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.5′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°35.0′	N 38°48.0′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.3′	N 16°33.1′
Antares	+1.1	112°18.7′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°19.3′	N 89°21.7′
Rigil Kent	−0.0	139°43.2′	S 60°55.3′	Adhara	+1.5	255°07.5′	S 29°00.3′	Achernar	+0.5	335°22.4′	S 57°07.8′
Arcturus	−0.1	145°49.9′	N 19°03.9′	Sirius	−1.4	258°28.1′	S 16°45.0′				
Hadar	+0.6	148°38.9′	S 60°28.5′	Canopus	−0.6	263°53.2′	S 52°42.7′				

Wednesday 02 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	159°45.9′	176°56.9′	S 7°17.9′	222°09.8′	S 16°50.7′	174°01.7′	S 7°09.3′	198°08.4′	S 15°59.7′	220°44.1′	S 21°37.4′
1	174°48.4′	191°57.0′	S 7°16.9′	237°10.1′	S 16°50.6′	189°03.6′	S 7°09.1′	213°10.6′	S 15°59.6′	235°44.6′	S 21°37.1′
2	189°50.9′	206°57.1′	S 7°16.0′	252°10.4′	S 16°50.5′	204°05.5′	S 7°08.8′	228°12.7′	S 15°59.5′	250°45.1′	S 21°36.8′
3	204°53.3′	221°57.2′	S 7°15.0′	267°10.7′	S 16°50.4′	219°07.4′	S 7°08.6′	243°14.9′	S 15°59.5′	265°45.6′	S 21°36.4′
4	219°55.8′	236°57.4′	S 7°14.1′	282°11.1′	S 16°50.3′	234°09.3′	S 7°08.4′	258°17.1′	S 15°59.4′	280°46.1′	S 21°36.1′
5	234°58.3′	251°57.5′	S 7°13.1′	297°11.4′	S 16°50.2′	249°11.2′	S 7°08.1′	273°19.3′	S 15°59.3′	295°46.6′	S 21°35.8′
6	250°00.7′	266°57.6′	S 7°12.2′	312°11.7′	S 16°50.1′	264°13.1′	S 7°07.9′	288°21.5′	S 15°59.2′	310°47.1′	S 21°35.4′
7	265°03.2′	281°57.7′	S 7°11.2′	327°12.0′	S 16°50.0′	279°15.0′	S 7°07.7′	303°23.6′	S 15°59.1′	325°47.5′	S 21°35.1′
8	280°05.6′	296°57.9′	S 7°10.3′	342°12.3′	S 16°49.9′	294°16.9′	S 7°07.4′	318°25.8′	S 15°59.0′	340°48.0′	S 21°34.8′
9	295°08.1′	311°58.0′	S 7°09.3′	357°12.6′	S 16°49.8′	309°18.8′	S 7°07.2′	333°28.0′	S 15°58.9′	355°48.5′	S 21°34.4′
10	310°10.6′	326°58.1′	S 7°08.3′	12°12.9′	S 16°49.7′	324°20.7′	S 7°07.0′	348°30.2′	S 15°58.9′	10°49.0′	S 21°34.1′
11	325°13.0′	341°58.2′	S 7°07.4′	27°13.2′	S 16°49.6′	339°22.6′	S 7°06.7′	3°32.4′	S 15°58.8′	25°49.5′	S 21°33.8′
12	340°15.5′	356°58.4′	S 7°06.4′	42°13.5′	S 16°49.5′	354°24.5′	S 7°06.5′	18°34.5′	S 15°58.7′	40°50.0′	S 21°33.4′
13	355°18.0′	11°58.5′	S 7°05.5′	57°13.8′	S 16°49.4′	9°26.4′	S 7°06.3′	33°36.7′	S 15°58.6′	55°50.5′	S 21°33.1′
14	10°20.4′	26°58.6′	S 7°04.5′	72°14.1′	S 16°49.3′	24°28.3′	S 7°06.0′	48°38.9′	S 15°58.5′	70°51.0′	S 21°32.8′
15	25°22.9′	41°58.7′	S 7°03.6′	87°14.4′	S 16°49.2′	39°30.2′	S 7°05.8′	63°41.1′	S 15°58.4′	85°51.5′	S 21°32.4′
16	40°25.4′	56°58.9′	S 7°02.6′	102°14.7′	S 16°49.0′	54°32.1′	S 7°05.6′	78°43.3′	S 15°58.4′	100°52.0′	S 21°32.1′
17	55°27.8′	71°59.0′	S 7°01.7′	117°15.0′	S 16°48.9′	69°34.0′	S 7°05.3′	93°45.5′	S 15°58.3′	115°52.5′	S 21°31.8′
18	70°30.3′	86°59.1′	S 7°00.7′	132°15.3′	S 16°48.8′	84°35.9′	S 7°05.1′	108°47.6′	S 15°58.2′	130°53.0′	S 21°31.4′
19	85°32.8′	101°59.2′	S 6°59.7′	147°15.6′	S 16°48.7′	99°37.8′	S 7°04.9′	123°49.8′	S 15°58.1′	145°53.5′	S 21°31.1′
20	100°35.2′	116°59.4′	S 6°58.8′	162°15.9′	S 16°48.6′	114°39.7′	S 7°04.7′	138°52.0′	S 15°58.0′	160°54.0′	S 21°30.8′
21	115°37.7′	131°59.5′	S 6°57.8′	177°16.1′	S 16°48.5′	129°41.6′	S 7°04.4′	153°54.2′	S 15°57.9′	175°54.5′	S 21°30.4′
22	130°40.1′	146°59.6′	S 6°56.9′	192°16.4′	S 16°48.4′	144°43.5′	S 7°04.2′	168°56.4′	S 15°57.8′	190°55.0′	S 21°30.1′
23	145°42.6′	161°59.8′	S 6°55.9′	207°16.7′	S 16°48.3′	159°45.4′	S 7°04.0′	183°58.6′	S 15°57.8′	205°55.5′	S 21°29.7′
		SD 16.1′ *d* 1.0′		*v* 0.3′ *d* 0.1′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.3′	
Mer. pass.		12 h 12 m 6 s		9 h 11 m		12 h 22 m		10 h 46 m		9 h 17 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	+Saturn	+Mars	+Venus	+Altair	+Antares	+Rigil Kent	+Hadar	+Acrux
0	184°05.1′	S 15°28.6′	9.6′	13.2′	58.8′	13°32.2′	35°12.2′	36°32.7′	44°37.7′	81°25.2′	88°09.0′	92°02.6′	97°38.2′
1	198°33.7′	S 15°15.4′	9.7′	13.2′	58.8′	14°05.4′	35°45.3′	37°04.7′	44°59.2′	82°00.3′	88°35.1′	92°27.9′	97°58.6′
2	213°02.4′	S 15°02.2′	9.8′	13.3′	58.8′								
3	227°31.2′	S 14°48.9′	9.9′	13.4′	58.7′								
4	242°00.2′	S 14°35.5′	10.0′	13.4′	58.7′								
5	256°29.2′	S 14°22.1′	10.1′	13.5′	58.7′								
6	270°58.3′	S 14°08.5′	10.2′	13.6′	58.7′								
7	285°27.5′	S 13°55.0′	10.3′	13.6′	58.6′								
8	299°56.7′	S 13°41.3′	10.4′	13.7′	58.6′								
9	314°26.1′	S 13°27.6′	10.5′	13.8′	58.6′								
10	328°55.6′	S 13°13.8′	10.5′	13.8′	58.6′								
11	343°25.1′	S 13°00.0′	10.6′	13.9′	58.6′								
12	357°54.7′	S 12°46.1′	10.7′	13.9′	58.5′								
13	12°24.5′	S 12°32.2′	10.8′	14.0′	58.5′								
14	26°54.3′	S 12°18.2′	10.9′	14.1′	58.5′								
15	41°24.2′	S 12°04.1′	11.0′	14.1′	58.5′								
16	55°54.1′	S 11°50.0′	11.1′	14.2′	58.4′								
17	70°24.2′	S 11°35.8′	11.1′	14.2′	58.4′								
18	84°54.3′	S 11°21.6′	11.2′	14.3′	58.4′								
19	99°24.6′	S 11°07.4′	11.3′	14.3′	58.4′								
20	113°54.9′	S 10°53.1′	11.4′	14.3′	58.3′								
21	128°25.2′	S 10°38.8′	11.5′	14.4′	58.3′								
22	142°55.7′	S 10°24.4′	11.5′	14.4′	58.3′								
23	157°26.2′	S 10°09.9′	11.6′	14.5′	58.3′								
Mer. pass. 12 h 9 m SD 16.0′ phase 1%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.5′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.5′	N 7°24.6′
Deneb	+1.2	49°27.8′	N 45°21.3′	Acrux	+0.8	173°02.1′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.5′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°35.0′	N 38°47.9′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.3′	N 16°33.1′
Antares	+1.1	112°18.7′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°19.8′	N 89°21.7′
Rigil Kent	−0.0	139°43.2′	S 60°55.3′	Adhara	+1.5	255°07.5′	S 29°00.3′	Achernar	+0.5	335°22.4′	S 57°07.8′
Arcturus	−0.1	145°49.9′	N 19°03.9′	Sirius	−1.4	258°28.1′	S 16°45.0′				
Hadar	+0.6	148°38.9′	S 60°28.5′	Canopus	−0.6	263°53.2′	S 52°42.7′				

Thursday 03 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	160°45.1′	176°59.9′	S 6°55.0′	222°17.0′	S 16°48.2′	174°47.3′	S 7°03.7′	199°00.7′	S 15°57.7′	220°55.9′	S 21°29.4′
1	175°47.5′	192°00.0′	S 6°54.0′	237°17.3′	S 16°48.0′	189°49.2′	S 7°03.5′	214°02.9′	S 15°57.6′	235°56.4′	S 21°29.1′
2	190°50.0′	207°00.1′	S 6°53.0′	252°17.6′	S 16°47.9′	204°51.1′	S 7°03.3′	229°05.1′	S 15°57.5′	250°56.9′	S 21°28.7′
3	205°52.5′	222°00.3′	S 6°52.1′	267°17.9′	S 16°47.8′	219°53.0′	S 7°03.0′	244°07.3′	S 15°57.4′	265°57.4′	S 21°28.4′
4	220°54.9′	237°00.4′	S 6°51.1′	282°18.1′	S 16°47.7′	234°54.9′	S 7°02.8′	259°09.5′	S 15°57.3′	280°57.9′	S 21°28.1′
5	235°57.4′	252°00.5′	S 6°50.2′	297°18.4′	S 16°47.6′	249°56.8′	S 7°02.6′	274°11.6′	S 15°57.3′	295°58.4′	S 21°27.7′
6	250°59.9′	267°00.7′	S 6°49.2′	312°18.7′	S 16°47.5′	264°58.7′	S 7°02.3′	289°13.8′	S 15°57.2′	310°58.9′	S 21°27.4′
7	266°02.3′	282°00.8′	S 6°48.2′	327°19.0′	S 16°47.3′	280°00.6′	S 7°02.1′	304°16.0′	S 15°57.1′	325°59.4′	S 21°27.0′
8	281°04.8′	297°00.9′	S 6°47.3′	342°19.2′	S 16°47.2′	295°02.5′	S 7°01.9′	319°18.2′	S 15°57.0′	340°59.9′	S 21°26.7′
9	296°07.2′	312°01.1′	S 6°46.3′	357°19.5′	S 16°47.1′	310°04.4′	S 7°01.6′	334°20.4′	S 15°56.9′	356°00.4′	S 21°26.4′
10	311°09.7′	327°01.2′	S 6°45.4′	12°19.8′	S 16°47.0′	325°06.3′	S 7°01.4′	349°22.6′	S 15°56.8′	11°00.9′	S 21°26.0′
11	326°12.2′	342°01.3′	S 6°44.4′	27°20.1′	S 16°46.9′	340°08.2′	S 7°01.2′	4°24.7′	S 15°56.7′	26°01.4′	S 21°25.7′
12	341°14.6′	357°01.4′	S 6°43.4′	42°20.3′	S 16°46.7′	355°10.1′	S 7°00.9′	19°26.9′	S 15°56.7′	41°01.9′	S 21°25.3′
13	356°17.1′	12°01.6′	S 6°42.5′	57°20.6′	S 16°46.6′	10°12.0′	S 7°00.7′	34°29.1′	S 15°56.6′	56°02.4′	S 21°25.0′
14	11°19.6′	27°01.7′	S 6°41.5′	72°20.9′	S 16°46.5′	25°13.9′	S 7°00.5′	49°31.3′	S 15°56.5′	71°02.9′	S 21°24.6′
15	26°22.0′	42°01.8′	S 6°40.6′	87°21.1′	S 16°46.4′	40°15.8′	S 7°00.2′	64°33.5′	S 15°56.4′	86°03.4′	S 21°24.3′
16	41°24.5′	57°02.0′	S 6°39.6′	102°21.4′	S 16°46.2′	55°17.7′	S 7°00.0′	79°35.7′	S 15°56.3′	101°03.9′	S 21°24.0′
17	56°27.0′	72°02.1′	S 6°38.6′	117°21.7′	S 16°46.1′	70°19.6′	S 6°59.8′	94°37.8′	S 15°56.2′	116°04.4′	S 21°23.6′
18	71°29.4′	87°02.2′	S 6°37.7′	132°21.9′	S 16°46.0′	85°21.5′	S 6°59.5′	109°40.0′	S 15°56.2′	131°04.9′	S 21°23.3′
19	86°31.9′	102°02.4′	S 6°36.7′	147°22.2′	S 16°45.9′	100°23.4′	S 6°59.3′	124°42.2′	S 15°56.1′	146°05.4′	S 21°22.9′
20	101°34.4′	117°02.5′	S 6°35.8′	162°22.4′	S 16°45.7′	115°25.3′	S 6°59.1′	139°44.4′	S 15°56.0′	161°05.9′	S 21°22.6′
21	116°36.8′	132°02.6′	S 6°34.8′	177°22.7′	S 16°45.6′	130°27.2′	S 6°58.9′	154°46.6′	S 15°55.9′	176°06.4′	S 21°22.2′
22	131°39.3′	147°02.8′	S 6°33.8′	192°23.0′	S 16°45.5′	145°29.1′	S 6°58.6′	169°48.8′	S 15°55.8′	191°06.9′	S 21°21.9′
23	146°41.7′	162°02.9′	S 6°32.9′	207°23.2′	S 16°45.4′	160°31.0′	S 6°58.4′	184°50.9′	S 15°55.7′	206°07.4′	S 21°21.5′
		SD 16.1′ *d* 1.0′		*v* 0.3′ *d* 0.1′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.3′	
Mer. pass.		12 h 11 m 54 s		9 h 11 m		12 h 19 m		10 h 42 m		9 h 16 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Pollux	−Procyon	−Sirius	−Polaris	−Capella	−Rigel	−Aldebaran	+Fomalhaut
0	171°56.8′	S 9°55.5′	11.7′	14.5′	58.2′								
1	186°27.5′	S 9°41.0′	11.8′	14.5′	58.2′								
2	200°58.3′	S 9°26.4′	11.8′	14.6′	58.2′								
3	215°29.1′	S 9°11.9′	11.9′	14.6′	58.2′								
4	230°00.0′	S 8°57.3′	12.0′	14.6′	58.1′								
5	244°31.0′	S 8°42.6′	12.1′	14.7′	58.1′								
6	259°02.1′	S 8°28.0′	12.1′	14.7′	58.1′								
7	273°33.2′	S 8°13.3′	12.2′	14.7′	58.1′								
8	288°04.4′	S 7°58.6′	12.3′	14.7′	58.0′								
9	302°35.6′	S 7°43.8′	12.3′	14.8′	58.0′								
10	317°07.0′	S 7°29.0′	12.4′	14.8′	58.0′								
11	331°38.3′	S 7°14.3′	12.5′	14.8′	57.9′			103°56.4′	96°49.7′	91°45.9′	83°24.3′	77°36.7′	24°07.4′
12	346°09.8′	S 6°59.4′	12.5′	14.8′	57.9′			103°32.2′	96°34.6′	91°13.9′	82°55.7′	77°02.8′	24°32.6′
13	0°41.3′	S 6°44.6′	12.6′	14.8′	57.9′		119°51.6′	103°08.0′	96°19.5′	90°42.0′	82°27.1′	76°28.9′	24°58.1′
14	15°12.9′	S 6°29.8′	12.6′	14.9′	57.9′	119°56.7′	119°20.4′	102°43.8′	96°04.4′	90°10.0′	81°58.6′	75°55.1′	25°23.8′
15	29°44.5′	S 6°14.9′	12.7′	14.9′	57.8′	119°22.7′	118°49.2′	102°19.6′	95°49.3′	89°38.1′	81°30.2′	75°21.3′	25°49.9′
16	44°16.2′	S 6°00.0′	12.8′	14.9′	57.8′	118°48.8′	118°18.0′	101°55.4′	95°34.1′	89°06.3′	81°01.7′	74°47.5′	26°16.2′
17	58°48.0′	S 5°45.1′	12.8′	14.9′	57.8′	118°14.8′	117°46.7′	101°31.2′	95°19.0′	88°34.5′	80°33.3′	74°13.8′	26°42.7′
18	73°19.8′	S 5°30.2′	12.9′	14.9′	57.7′	117°40.9′	117°15.5′	101°06.9′	95°03.8′	88°02.7′	80°05.0′	73°40.1′	27°09.5′
19	87°51.7′	S 5°15.3′	12.9′	14.9′	57.7′	117°07.0′	116°44.3′	100°42.7′	94°48.7′	87°30.9′	79°36.7′	73°06.5′	27°36.5′
20	102°23.6′	S 5°00.4′	13.0′	14.9′	57.7′	116°33.2′	116°13.1′	100°18.4′	94°33.5′	86°59.2′	79°08.5′	72°32.8′	28°03.7′
21	116°55.6′	S 4°45.4′	13.0′	14.9′	57.7′	115°59.4′	115°41.9′	99°54.1′	94°18.3′	86°27.5′	78°40.3′	71°59.2′	28°31.1′
22	131°27.7′	S 4°30.5′	13.1′	15.0′	57.6′	115°25.6′	115°10.7′	99°29.9′	94°03.1′	85°55.9′	78°12.2′	71°25.7′	28°58.6′
23	145°59.7′	S 4°15.5′	13.1′	15.0′	57.6′	114°51.9′	114°39.6′	99°05.6′	93°47.9′	85°24.2′	77°44.1′	70°52.2′	29°26.4′
Mer. pass. 12 h 57 m SD 15.9′ phase 0%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.5′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.5′	N 7°24.6′
Deneb	+1.2	49°27.8′	N 45°21.3′	Acrux	+0.8	173°02.1′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.5′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°35.0′	N 38°47.9′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.3′	N 16°33.1′
Antares	+1.1	112°18.7′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°20.3′	N 89°21.7′
Rigil Kent	−0.0	139°43.2′	S 60°55.3′	Adhara	+1.5	255°07.5′	S 29°00.3′	Achernar	+0.5	335°22.4′	S 57°07.8′
Arcturus	−0.1	145°49.9′	N 19°03.9′	Sirius	−1.4	258°28.1′	S 16°45.0′				
Hadar	+0.6	148°38.9′	S 60°28.6′	Canopus	−0.6	263°53.2′	S 52°42.7′				

Friday 04 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	161°44.2′	177°03.0′	S 6°31.9′	222°23.5′	S 16°45.2′	175°33.0′	S 6°58.2′	199°53.1′	S 15°55.6′	221°07.9′	S 21°21.2′
1	176°46.7′	192°03.2′	S 6°31.0′	237°23.7′	S 16°45.1′	190°34.9′	S 6°57.9′	214°55.3′	S 15°55.6′	236°08.4′	S 21°20.8′
2	191°49.1′	207°03.3′	S 6°30.0′	252°24.0′	S 16°45.0′	205°36.8′	S 6°57.7′	229°57.5′	S 15°55.5′	251°08.9′	S 21°20.5′
3	206°51.6′	222°03.4′	S 6°29.0′	267°24.2′	S 16°44.8′	220°38.7′	S 6°57.5′	244°59.7′	S 15°55.4′	266°09.3′	S 21°20.1′
4	221°54.1′	237°03.6′	S 6°28.1′	282°24.5′	S 16°44.7′	235°40.6′	S 6°57.2′	260°01.9′	S 15°55.3′	281°09.8′	S 21°19.8′
5	236°56.5′	252°03.7′	S 6°27.1′	297°24.7′	S 16°44.6′	250°42.5′	S 6°57.0′	275°04.0′	S 15°55.2′	296°10.3′	S 21°19.5′
6	251°59.0′	267°03.8′	S 6°26.1′	312°25.0′	S 16°44.4′	265°44.4′	S 6°56.8′	290°06.2′	S 15°55.1′	311°10.8′	S 21°19.1′
7	267°01.5′	282°04.0′	S 6°25.2′	327°25.2′	S 16°44.3′	280°46.3′	S 6°56.5′	305°08.4′	S 15°55.1′	326°11.3′	S 21°18.8′
8	282°03.9′	297°04.1′	S 6°24.2′	342°25.5′	S 16°44.2′	295°48.2′	S 6°56.3′	320°10.6′	S 15°55.0′	341°11.8′	S 21°18.4′
9	297°06.4′	312°04.2′	S 6°23.2′	357°25.7′	S 16°44.0′	310°50.1′	S 6°56.1′	335°12.8′	S 15°54.9′	356°12.3′	S 21°18.1′
10	312°08.8′	327°04.4′	S 6°22.3′	12°25.9′	S 16°43.9′	325°52.0′	S 6°55.8′	350°15.0′	S 15°54.8′	11°12.8′	S 21°17.7′
11	327°11.3′	342°04.5′	S 6°21.3′	27°26.2′	S 16°43.7′	340°53.9′	S 6°55.6′	5°17.1′	S 15°54.7′	26°13.3′	S 21°17.3′
12	342°13.8′	357°04.6′	S 6°20.4′	42°26.4′	S 16°43.6′	355°55.8′	S 6°55.4′	20°19.3′	S 15°54.6′	41°13.8′	S 21°17.0′
13	357°16.2′	12°04.8′	S 6°19.4′	57°26.7′	S 16°43.5′	10°57.7′	S 6°55.1′	35°21.5′	S 15°54.5′	56°14.3′	S 21°16.6′
14	12°18.7′	27°04.9′	S 6°18.4′	72°26.9′	S 16°43.3′	25°59.6′	S 6°54.9′	50°23.7′	S 15°54.5′	71°14.8′	S 21°16.3′
15	27°21.2′	42°05.1′	S 6°17.5′	87°27.1′	S 16°43.2′	41°01.5′	S 6°54.7′	65°25.9′	S 15°54.4′	86°15.3′	S 21°15.9′
16	42°23.6′	57°05.2′	S 6°16.5′	102°27.4′	S 16°43.0′	56°03.4′	S 6°54.4′	80°28.1′	S 15°54.3′	101°15.8′	S 21°15.6′
17	57°26.1′	72°05.3′	S 6°15.5′	117°27.6′	S 16°42.9′	71°05.3′	S 6°54.2′	95°30.3′	S 15°54.2′	116°16.3′	S 21°15.2′
18	72°28.6′	87°05.5′	S 6°14.6′	132°27.8′	S 16°42.8′	86°07.2′	S 6°54.0′	110°32.4′	S 15°54.1′	131°16.8′	S 21°14.9′
19	87°31.0′	102°05.6′	S 6°13.6′	147°28.1′	S 16°42.6′	101°09.1′	S 6°53.7′	125°34.6′	S 15°54.0′	146°17.3′	S 21°14.5′
20	102°33.5′	117°05.7′	S 6°12.6′	162°28.3′	S 16°42.5′	116°11.0′	S 6°53.5′	140°36.8′	S 15°54.0′	161°17.8′	S 21°14.2′
21	117°36.0′	132°05.9′	S 6°11.7′	177°28.5′	S 16°42.3′	131°12.9′	S 6°53.3′	155°39.0′	S 15°53.9′	176°18.3′	S 21°13.8′
22	132°38.4′	147°06.0′	S 6°10.7′	192°28.7′	S 16°42.2′	146°14.8′	S 6°53.0′	170°41.2′	S 15°53.8′	191°18.8′	S 21°13.5′
23	147°40.9′	162°06.1′	S 6°09.7′	207°29.0′	S 16°42.0′	161°16.7′	S 6°52.8′	185°43.4′	S 15°53.7′	206°19.3′	S 21°13.1′
		SD 16.1′ *d* 1.0′		*v* 0.2′ *d* 0.1′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.4′	
Mer. pass.		12 h 11 m 41 s		9 h 10 m		12 h 16 m		10 h 39 m		9 h 15 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Pollux	−Procyon	−Adhara	−Betelgeuse	−Capella	−Rigel	−Aldebaran	+Fomalhaut
0	160°31.9′	S 4°00.6′	13.2′	15.0′	57.6′	114°18.2′	114°08.4′	99°55.2′	88°25.5′	84°52.7′	77°16.0′	70°18.7′	29°54.3′
1	175°04.1′	S 3°45.6′	13.2′	15.0′	57.5′	113°44.5′	113°37.2′	99°36.7′	87°53.6′	84°21.1′	76°48.0′	69°45.3′	
2	189°36.3′	S 3°30.7′	13.3′	15.0′	57.5′	113°10.9′	113°06.1′	99°18.1′	87°21.8′	83°49.6′	76°20.1′	69°11.9′	
3	204°08.6′	S 3°15.7′	13.3′	15.0′	57.5′	112°37.3′	112°35.0′	98°59.6′	86°49.9′	83°18.1′	75°52.2′	68°38.5′	
4	218°41.0′	S 3°00.7′	13.4′	15.0′	57.5′	112°03.7′	112°03.9′	98°41.0′	86°18.1′	82°46.7′	75°24.4′	68°05.2′	
5	233°13.4′	S 2°45.8′	13.4′	15.0′	57.4′	111°30.2′	111°32.8′	98°22.4′	85°46.4′	82°15.3′	74°56.7′	67°31.9′	
6	247°45.8′	S 2°30.8′	13.5′	15.0′	57.4′	110°56.7′	111°01.7′	98°03.8′	85°14.7′	81°44.0′	74°29.0′	66°58.7′	
7	262°18.3′	S 2°15.9′	13.5′	14.9′	57.4′	110°23.3′	110°30.6′	97°45.2′	84°43.0′	81°12.7′	74°01.3′	66°25.5′	
8	276°50.8′	S 2°00.9′	13.6′	14.9′	57.3′	109°49.9′	109°59.6′	97°26.6′	84°11.3′	80°41.4′	73°33.7′	65°52.3′	
9	291°23.4′	S 1°46.0′	13.6′	14.9′	57.3′	109°16.5′	109°28.5′	97°08.0′	83°39.7′	80°10.2′	73°06.2′	65°19.2′	
10	305°56.0′	S 1°31.1′	13.6′	14.9′	57.3′	108°43.2′	108°57.5′	96°49.4′	83°08.2′	79°39.0′	72°38.7′	64°46.1′	
11	320°28.6′	S 1°16.1′	13.7′	14.9′	57.2′	108°09.8′	108°26.5′	96°30.7′	82°36.6′	79°07.8′	72°11.3′	64°13.0′	
12	335°01.3′	S 1°01.2′	13.7′	14.9′	57.2′	107°36.6′	107°55.5′	96°12.1′	82°05.1′	78°36.7′	71°44.0′	63°40.0′	
13	349°34.0′	S 0°46.3′	13.8′	14.9′	57.2′	107°03.3′	107°24.6′	95°53.4′	81°33.7′	78°05.6′	71°16.7′	63°07.0′	
14	4°06.8′	S 0°31.4′	13.8′	14.9′	57.2′	106°30.2′	106°53.7′	95°34.8′	81°02.3′	77°34.6′	70°49.5′	62°34.1′	
15	18°39.6′	S 0°16.6′	13.8′	14.9′	57.1′	105°57.0′	106°22.7′	95°16.1′	80°30.9′	77°03.6′	70°22.4′	62°01.2′	
16	33°12.4′	S 0°01.7′	13.9′	14.8′	57.1′	105°23.9′	105°51.9′	94°57.5′	79°59.6′	76°32.7′	69°55.3′	61°28.3′	
17	47°45.2′	N 0°13.1′	13.9′	14.8′	57.1′	104°50.8′	105°21.0′	94°38.9′	79°28.3′	76°01.8′	69°28.3′	60°55.5′	
18	62°18.1′	N 0°28.0′	13.9′	14.8′	57.0′	104°17.7′	104°50.1′	94°20.2′	78°57.0′	75°31.0′	69°01.4′	60°22.7′	
19	76°51.1′	N 0°42.8′	14.0′	14.8′	57.0′	103°44.7′	104°19.3′	94°01.6′	78°25.8′	75°00.2′	68°34.6′	59°50.0′	
20	91°24.0′	N 0°57.6′	14.0′	14.8′	57.0′	103°11.8′	103°48.5′	93°42.9′	77°54.7′	74°29.4′	68°07.8′	59°17.3′	
21	105°57.0′	N 1°12.3′	14.0′	14.7′	56.9′	102°38.8′	103°17.8′	93°24.3′	77°23.5′	73°58.7′	67°41.1′	58°44.7′	
22	120°30.0′	N 1°27.1′	14.0′	14.7′	56.9′	102°05.9′	102°47.0′	93°05.7′	76°52.5′	73°28.1′	67°14.4′	58°12.0′	
23	135°03.1′	N 1°41.8′	14.1′	14.7′	56.9′	101°33.1′	102°16.3′	92°47.1′	76°21.4′	72°57.4′	66°47.9′	57°39.5′	
Mer. pass. 13 h 43 m SD 15.7′ phase 2%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.5′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.5′	N 7°24.6′
Deneb	+1.2	49°27.8′	N 45°21.3′	Acrux	+0.8	173°02.1′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.5′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°35.0′	N 38°47.9′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.3′	N 16°33.1′
Antares	+1.1	112°18.7′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°20.8′	N 89°21.7′
Rigil Kent	−0.0	139°43.1′	S 60°55.4′	Adhara	+1.5	255°07.5′	S 29°00.3′	Achernar	+0.5	335°22.4′	S 57°07.8′
Arcturus	−0.1	145°49.9′	N 19°03.9′	Sirius	−1.4	258°28.1′	S 16°45.0′				
Hadar	+0.6	148°38.9′	S 60°28.6′	Canopus	−0.6	263°53.2′	S 52°42.7′				

Saturday 05 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	162°43.3′	177°06.3′	S 6°08.8′	222°29.2′	S 16°41.9′	176°18.6′	S 6°52.6′	200°45.5′	S 15°53.6′	221°19.8′	S 21°12.8′
1	177°45.8′	192°06.4′	S 6°07.8′	237°29.4′	S 16°41.7′	191°20.5′	S 6°52.4′	215°47.7′	S 15°53.5′	236°20.3′	S 21°12.4′
2	192°48.3′	207°06.6′	S 6°06.8′	252°29.6′	S 16°41.6′	206°22.4′	S 6°52.1′	230°49.9′	S 15°53.5′	251°20.8′	S 21°12.0′
3	207°50.7′	222°06.7′	S 6°05.9′	267°29.9′	S 16°41.4′	221°24.3′	S 6°51.9′	245°52.1′	S 15°53.4′	266°21.3′	S 21°11.7′
4	222°53.2′	237°06.8′	S 6°04.9′	282°30.1′	S 16°41.3′	236°26.2′	S 6°51.7′	260°54.3′	S 15°53.3′	281°21.8′	S 21°11.3′
5	237°55.7′	252°07.0′	S 6°04.0′	297°30.3′	S 16°41.1′	251°28.1′	S 6°51.4′	275°56.5′	S 15°53.2′	296°22.3′	S 21°11.0′
6	252°58.1′	267°07.1′	S 6°03.0′	312°30.5′	S 16°41.0′	266°30.0′	S 6°51.2′	290°58.7′	S 15°53.1′	311°22.8′	S 21°10.6′
7	268°00.6′	282°07.3′	S 6°02.0′	327°30.7′	S 16°40.8′	281°31.9′	S 6°51.0′	306°00.8′	S 15°53.0′	326°23.3′	S 21°10.3′
8	283°03.1′	297°07.4′	S 6°01.1′	342°31.0′	S 16°40.7′	296°33.8′	S 6°50.7′	321°03.0′	S 15°53.0′	341°23.8′	S 21°09.9′
9	298°05.5′	312°07.5′	S 6°00.1′	357°31.2′	S 16°40.5′	311°35.7′	S 6°50.5′	336°05.2′	S 15°52.9′	356°24.3′	S 21°09.5′
10	313°08.0′	327°07.7′	S 5°59.1′	12°31.4′	S 16°40.4′	326°37.6′	S 6°50.3′	351°07.4′	S 15°52.8′	11°24.8′	S 21°09.2′
11	328°10.5′	342°07.8′	S 5°58.2′	27°31.6′	S 16°40.2′	341°39.5′	S 6°50.0′	6°09.6′	S 15°52.7′	26°25.3′	S 21°08.8′
12	343°12.9′	357°08.0′	S 5°57.2′	42°31.8′	S 16°40.0′	356°41.4′	S 6°49.8′	21°11.8′	S 15°52.6′	41°25.8′	S 21°08.5′
13	358°15.4′	12°08.1′	S 5°56.2′	57°32.0′	S 16°39.9′	11°43.3′	S 6°49.6′	36°14.0′	S 15°52.5′	56°26.3′	S 21°08.1′
14	13°17.8′	27°08.2′	S 5°55.2′	72°32.2′	S 16°39.7′	26°45.2′	S 6°49.3′	51°16.1′	S 15°52.4′	71°26.8′	S 21°07.7′
15	28°20.3′	42°08.4′	S 5°54.3′	87°32.4′	S 16°39.6′	41°47.1′	S 6°49.1′	66°18.3′	S 15°52.4′	86°27.3′	S 21°07.4′
16	43°22.8′	57°08.5′	S 5°53.3′	102°32.6′	S 16°39.4′	56°49.0′	S 6°48.9′	81°20.5′	S 15°52.3′	101°27.8′	S 21°07.0′
17	58°25.2′	72°08.7′	S 5°52.3′	117°32.9′	S 16°39.2′	71°50.9′	S 6°48.6′	96°22.7′	S 15°52.2′	116°28.3′	S 21°06.6′
18	73°27.7′	87°08.8′	S 5°51.4′	132°33.1′	S 16°39.1′	86°52.8′	S 6°48.4′	111°24.9′	S 15°52.1′	131°28.9′	S 21°06.3′
19	88°30.2′	102°08.9′	S 5°50.4′	147°33.3′	S 16°38.9′	101°54.7′	S 6°48.2′	126°27.1′	S 15°52.0′	146°29.4′	S 21°05.9′
20	103°32.6′	117°09.1′	S 5°49.4′	162°33.5′	S 16°38.8′	116°56.6′	S 6°47.9′	141°29.3′	S 15°51.9′	161°29.9′	S 21°05.6′
21	118°35.1′	132°09.2′	S 5°48.5′	177°33.7′	S 16°38.6′	131°58.5′	S 6°47.7′	156°31.4′	S 15°51.9′	176°30.4′	S 21°05.2′
22	133°37.6′	147°09.4′	S 5°47.5′	192°33.9′	S 16°38.4′	147°00.4′	S 6°47.5′	171°33.6′	S 15°51.8′	191°30.9′	S 21°04.8′
23	148°40.0′	162°09.5′	S 5°46.5′	207°34.1′	S 16°38.3′	162°02.3′	S 6°47.2′	186°35.8′	S 15°51.7′	206°31.4′	S 21°04.5′
		SD 16.1′ *d* 1.0′		*v* 0.2′ *d* 0.2′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.4′	
Mer. pass.		12 h 11 m 28 s		9 h 10 m		12 h 13 m		10 h 35 m		9 h 14 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Procyon	−Pollux	−Adhara	−Sirius	−Betelgeuse	−Capella	−Rigel	−Aldebaran
0	149°36.1′	N 1°56.5′	14.1′	14.7′	56.9′	101°45.6′	101°00.2′	92°28.5′	89°02.3′	75°50.4′	72°26.9′	66°21.4′	57°06.9′
1	164°09.2′	N 2°11.2′	14.1′	14.6′	56.8′	101°14.9′	100°27.4′	92°09.9′	88°38.4′	75°19.5′	71°56.4′	65°55.0′	56°34.4′
2	178°42.3′	N 2°25.8′	14.1′	14.6′	56.8′	100°44.3′	99°54.7′	91°51.4′	88°14.6′	74°48.6′	71°25.9′	65°28.7′	56°02.0′
3	193°15.5′	N 2°40.4′	14.2′	14.6′	56.8′	100°13.7′	99°22.0′	91°32.8′	87°50.8′	74°17.7′	70°55.5′	65°02.4′	55°29.6′
4	207°48.6′	N 2°55.0′	14.2′	14.6′	56.7′	99°43.1′	98°49.3′	91°14.3′	87°27.1′	73°46.9′	70°25.1′	64°36.3′	54°57.2′
5	222°21.8′	N 3°09.6′	14.2′	14.5′	56.7′	99°12.5′	98°16.7′	90°55.7′	87°03.3′	73°16.1′	69°54.8′	64°10.2′	54°24.9′
6	236°55.0′	N 3°24.1′	14.2′	14.5′	56.7′	98°42.0′	97°44.1′	90°37.2′	86°39.6′	72°45.4′	69°24.5′	63°44.2′	53°52.6′
7	251°28.2′	N 3°38.6′	14.2′	14.5′	56.6′	98°11.5′	97°11.5′	90°18.8′	86°16.0′	72°14.7′	68°54.3′	63°18.3′	53°20.3′
8	266°01.4′	N 3°53.1′	14.3′	14.4′	56.6′	97°41.0′	96°39.0′	90°00.3′	85°52.3′	71°44.1′	68°24.1′	62°52.5′	52°48.1′
9	280°34.7′	N 4°07.5′	14.3′	14.4′	56.6′	97°10.6′	96°06.5′	89°41.9′	85°28.8′	71°13.5′	67°54.0′	62°26.7′	52°16.0′
10	295°08.0′	N 4°21.9′	14.3′	14.4′	56.5′	96°40.2′	95°34.0′	89°23.4′	85°05.2′	70°43.0′	67°23.9′	62°01.1′	51°43.9′
11	309°41.3′	N 4°36.3′	14.3′	14.3′	56.5′	96°09.8′	95°01.6′	89°05.0′	84°41.7′	70°12.5′	66°53.9′	61°35.6′	51°11.8′
12	324°14.5′	N 4°50.6′	14.3′	14.3′	56.5′	95°39.5′	94°29.2′	88°46.7′	84°18.2′	69°42.0′	66°23.9′	61°10.1′	50°39.8′
13	338°47.9′	N 5°04.9′	14.3′	14.3′	56.5′	95°09.1′	93°56.9′	88°28.3′	83°54.8′	69°11.7′	65°54.0′	60°44.7′	50°07.8′
14	353°21.2′	N 5°19.2′	14.3′	14.2′	56.4′	94°38.9′	93°24.5′	88°10.0′	83°31.4′	68°41.3′	65°24.2′	60°19.5′	49°35.8′
15	7°54.5′	N 5°33.4′	14.3′	14.2′	56.4′	94°08.6′	92°52.3′	87°51.7′	83°08.1′	68°11.0′	64°54.4′	59°54.3′	49°03.9′
16	22°27.9′	N 5°47.6′	14.4′	14.1′	56.4′	93°38.4′	92°20.0′	87°33.4′	82°44.8′	67°40.8′	64°24.6′	59°29.2′	48°32.0′
17	37°01.2′	N 6°01.7′	14.4′	14.1′	56.3′	93°08.2′	91°47.8′	87°15.2′	82°21.6′	67°10.6′	63°54.9′	59°04.2′	48°00.2′
18	51°34.6′	N 6°15.8′	14.4′	14.1′	56.3′	92°38.0′	91°15.7′	86°57.0′	81°58.4′	66°40.4′	63°25.3′	58°39.4′	47°28.4′
19	66°07.9′	N 6°29.9′	14.4′	14.0′	56.3′	92°07.9′	90°43.6′	86°38.8′	81°35.2′	66°10.3′	62°55.7′	58°14.6′	46°56.7′
20	80°41.3′	N 6°43.9′	14.4′	14.0′	56.3′	91°37.8′	90°11.5′	86°20.7′	81°12.1′	65°40.3′	62°26.2′	57°49.9′	46°25.0′
21	95°14.7′	N 6°57.9′	14.4′	13.9′	56.2′	91°07.7′	89°39.4′	86°02.6′	80°49.0′	65°10.3′	61°56.7′	57°25.4′	45°53.3′
22	109°48.0′	N 7°11.8′	14.4′	13.9′	56.2′	90°37.7′	89°07.4′	85°44.5′	80°26.0′	64°40.3′	61°27.3′	57°00.9′	45°21.7′
23	124°21.4′	N 7°25.7′	14.4′	13.8′	56.2′	90°07.7′	88°35.4′	85°26.5′	80°03.1′	64°10.4′	60°58.0′	56°36.6′	44°50.2′
Mer. pass. 14 h 27 m SD 15.5′ phase 6%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.5′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.5′	N 7°24.6′
Deneb	+1.2	49°27.8′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.5′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°35.0′	N 38°47.9′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.3′	N 16°33.1′
Antares	+1.1	112°18.7′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°21.3′	N 89°21.7′
Rigil Kent	−0.0	139°43.1′	S 60°55.4′	Adhara	+1.5	255°07.5′	S 29°00.3′	Achernar	+0.5	335°22.4′	S 57°07.8′
Arcturus	−0.1	145°49.9′	N 19°03.9′	Sirius	−1.4	258°28.1′	S 16°45.0′				
Hadar	+0.6	148°38.9′	S 60°28.6′	Canopus	−0.6	263°53.2′	S 52°42.7′				

Sunday 06 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	163°42.5′	177°09.7′	S 5°45.6′	222°34.3′	S 16°38.1′	177°04.2′	S 6°47.0′	201°38.0′	S 15°51.6′	221°31.9′	S 21°04.1′
1	178°44.9′	192°09.8′	S 5°44.6′	237°34.5′	S 16°37.9′	192°06.1′	S 6°46.8′	216°40.2′	S 15°51.5′	236°32.4′	S 21°03.7′
2	193°47.4′	207°09.9′	S 5°43.6′	252°34.7′	S 16°37.8′	207°08.0′	S 6°46.5′	231°42.4′	S 15°51.4′	251°32.9′	S 21°03.4′
3	208°49.9′	222°10.1′	S 5°42.7′	267°34.8′	S 16°37.6′	222°09.9′	S 6°46.3′	246°44.6′	S 15°51.4′	266°33.4′	S 21°03.0′
4	223°52.3′	237°10.2′	S 5°41.7′	282°35.0′	S 16°37.4′	237°11.8′	S 6°46.1′	261°46.8′	S 15°51.3′	281°33.9′	S 21°02.6′
5	238°54.8′	252°10.4′	S 5°40.7′	297°35.2′	S 16°37.3′	252°13.7′	S 6°45.8′	276°48.9′	S 15°51.2′	296°34.4′	S 21°02.3′
6	253°57.3′	267°10.5′	S 5°39.7′	312°35.4′	S 16°37.1′	267°15.6′	S 6°45.6′	291°51.1′	S 15°51.1′	311°34.9′	S 21°01.9′
7	268°59.7′	282°10.7′	S 5°38.8′	327°35.6′	S 16°36.9′	282°17.5′	S 6°45.4′	306°53.3′	S 15°51.0′	326°35.4′	S 21°01.5′
8	284°02.2′	297°10.8′	S 5°37.8′	342°35.8′	S 16°36.7′	297°19.4′	S 6°45.1′	321°55.5′	S 15°50.9′	341°35.9′	S 21°01.2′
9	299°04.7′	312°10.9′	S 5°36.8′	357°36.0′	S 16°36.6′	312°21.3′	S 6°44.9′	336°57.7′	S 15°50.9′	356°36.4′	S 21°00.8′
10	314°07.1′	327°11.1′	S 5°35.9′	12°36.2′	S 16°36.4′	327°23.2′	S 6°44.7′	351°59.9′	S 15°50.8′	11°36.9′	S 21°00.4′
11	329°09.6′	342°11.2′	S 5°34.9′	27°36.4′	S 16°36.2′	342°25.1′	S 6°44.4′	7°02.1′	S 15°50.7′	26°37.4′	S 21°00.1′
12	344°12.1′	357°11.4′	S 5°33.9′	42°36.6′	S 16°36.1′	357°27.0′	S 6°44.2′	22°04.2′	S 15°50.6′	41°37.9′	S 20°59.7′
13	359°14.5′	12°11.5′	S 5°33.0′	57°36.7′	S 16°35.9′	12°28.9′	S 6°44.0′	37°06.4′	S 15°50.5′	56°38.4′	S 20°59.3′
14	14°17.0′	27°11.7′	S 5°32.0′	72°36.9′	S 16°35.7′	27°30.8′	S 6°43.8′	52°08.6′	S 15°50.4′	71°38.9′	S 20°59.0′
15	29°19.4′	42°11.8′	S 5°31.0′	87°37.1′	S 16°35.5′	42°32.8′	S 6°43.5′	67°10.8′	S 15°50.4′	86°39.4′	S 20°58.6′
16	44°21.9′	57°12.0′	S 5°30.0′	102°37.3′	S 16°35.3′	57°34.7′	S 6°43.3′	82°13.0′	S 15°50.3′	101°39.9′	S 20°58.2′
17	59°24.4′	72°12.1′	S 5°29.1′	117°37.5′	S 16°35.2′	72°36.6′	S 6°43.1′	97°15.2′	S 15°50.2′	116°40.4′	S 20°57.8′
18	74°26.8′	87°12.3′	S 5°28.1′	132°37.6′	S 16°35.0′	87°38.5′	S 6°42.8′	112°17.4′	S 15°50.1′	131°40.9′	S 20°57.5′
19	89°29.3′	102°12.4′	S 5°27.1′	147°37.8′	S 16°34.8′	102°40.4′	S 6°42.6′	127°19.6′	S 15°50.0′	146°41.4′	S 20°57.1′
20	104°31.8′	117°12.5′	S 5°26.2′	162°38.0′	S 16°34.6′	117°42.3′	S 6°42.4′	142°21.7′	S 15°49.9′	161°41.9′	S 20°56.7′
21	119°34.2′	132°12.7′	S 5°25.2′	177°38.2′	S 16°34.4′	132°44.2′	S 6°42.1′	157°23.9′	S 15°49.9′	176°42.5′	S 20°56.4′
22	134°36.7′	147°12.8′	S 5°24.2′	192°38.3′	S 16°34.3′	147°46.1′	S 6°41.9′	172°26.1′	S 15°49.8′	191°43.0′	S 20°56.0′
23	149°39.2′	162°13.0′	S 5°23.2′	207°38.5′	S 16°34.1′	162°48.0′	S 6°41.7′	187°28.3′	S 15°49.7′	206°43.5′	S 20°55.6′
		SD 16.1′	*d* 1.0′	*v* 0.2′	*d* 0.2′	*v* 1.9′	*d* 0.2′	*v* 2.2′	*d* 0.1′	*v* 0.5′	*d* 0.4′
Mer. pass.		12 h 11 m 14 s		9 h 10 m		12 h 10 m		10 h 32 m		9 h 14 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Regulus	−Procyon	−Betelgeuse	−Capella	−Rigel	−Aldebaran	+Sun	+Achernar
0	138°54.8′	N 7°39.5′	14.4′	13.8′	56.1′		89°37.7′	63°40.6′	60°28.7′	56°12.3′	44°18.7′	40°26.6′	
1	153°28.2′	N 7°53.3′	14.4′	13.7′	56.1′		89°07.8′	63°10.8′	59°59.5′	55°48.2′	43°47.2′	40°55.8′	
2	168°01.6′	N 8°07.0′	14.4′	13.7′	56.1′		88°37.9′	62°41.1′	59°30.3′	55°24.2′	43°15.7′	41°25.0′	
3	182°35.0′	N 8°20.7′	14.4′	13.6′	56.0′		88°08.1′	62°11.4′	59°01.2′	55°00.3′	42°44.4′	41°54.1′	
4	197°08.4′	N 8°34.3′	14.4′	13.6′	56.0′		87°38.2′	61°41.7′	58°32.1′	54°36.5′	42°13.0′	42°23.2′	
5	211°41.7′	N 8°47.9′	14.4′	13.5′	56.0′		87°08.4′	61°12.2′	58°03.2′	54°12.9′	41°41.7′	42°52.3′	
6	226°15.1′	N 9°01.5′	14.4′	13.5′	56.0′		86°38.7′	60°42.6′	57°34.2′	53°49.3′	41°10.5′	43°21.3′	
7	240°48.5′	N 9°14.9′	14.4′	13.4′	55.9′		86°09.0′	60°13.2′	57°05.4′	53°25.9′	40°39.2′	43°50.3′	
8	255°21.9′	N 9°28.4′	14.4′	13.4′	55.9′		85°39.3′	59°43.8′	56°36.6′	53°02.6′	40°08.1′	44°19.3′	
9	269°55.2′	N 9°41.8′	14.4′	13.3′	55.9′	119°36.5′	85°09.6′	59°14.4′	56°07.9′	52°39.5′	39°37.0′	44°48.2′	
10	284°28.6′	N 9°55.1′	14.3′	13.3′	55.9′	119°05.0′	84°40.0′	58°45.1′	55°39.2′	52°16.5′	39°05.9′	45°17.1′	
11	299°01.9′	N 10°08.3′	14.3′	13.2′	55.8′	118°33.6′	84°10.4′	58°15.9′	55°10.6′	51°53.6′	38°34.9′	45°46.0′	
12	313°35.3′	N 10°21.5′	14.3′	13.1′	55.8′	118°02.1′	83°40.9′	57°46.7′	54°42.1′	51°30.8′	38°03.9′	46°14.8′	
13	328°08.6′	N 10°34.7′	14.3′	13.1′	55.8′	117°30.7′	83°11.4′	57°17.6′	54°13.6′	51°08.2′	37°32.9′	46°43.6′	67°55.1′
14	342°41.9′	N 10°47.8′	14.3′	13.0′	55.7′	116°59.4′	82°41.9′	56°48.5′	53°45.2′	50°45.7′	37°02.1′	47°12.4′	68°10.1′
15	357°15.2′	N 11°00.8′	14.3′	13.0′	55.7′	116°28.0′	82°12.5′	56°19.5′	53°16.9′	50°23.3′	36°31.2′	47°41.2′	68°25.2′
16	11°48.5′	N 11°13.8′	14.3′	12.9′	55.7′	115°56.7′	81°43.1′	55°50.5′	52°48.6′	50°01.1′	36°00.4′	48°09.9′	68°40.4′
17	26°21.8′	N 11°26.7′	14.3′	12.8′	55.7′	115°25.5′	81°13.7′	55°21.6′	52°20.5′	49°39.0′	35°29.7′	48°38.6′	68°55.6′
18	40°55.1′	N 11°39.5′	14.3′	12.8′	55.6′	114°54.2′	80°44.4′	54°52.8′	51°52.3′	49°17.1′	34°59.0′	49°07.3′	69°10.9′
19	55°28.3′	N 11°52.3′	14.2′	12.7′	55.6′	114°23.0′	80°15.1′	54°24.0′	51°24.3′	48°55.3′	34°28.3′	49°35.9′	69°26.3′
20	70°01.6′	N 12°05.1′	14.2′	12.7′	55.6′	113°51.9′	79°45.8′	53°55.3′	50°56.4′	48°33.7′	33°57.7′	50°04.5′	69°41.7′
21	84°34.8′	N 12°17.7′	14.2′	12.6′	55.6′	113°20.7′	79°16.6′	53°26.7′	50°28.5′	48°12.3′	33°27.2′	50°33.1′	69°57.2′
22	99°08.0′	N 12°30.3′	14.2′	12.5′	55.5′	112°49.6′	78°47.4′	52°58.1′	50°00.7′	47°51.0′	32°56.7′	51°01.7′	70°12.8′
23	113°41.2′	N 12°42.8′	14.2′	12.5′	55.5′	112°18.5′	78°18.3′	52°29.6′	49°32.9′	47°29.8′	32°26.3′	51°30.2′	70°28.4′
Mer. pass. 15 h 11 m SD 15.3′ phase 12%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.5′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.5′	N 7°24.6′
Deneb	+1.2	49°27.8′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.5′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°35.0′	N 38°47.9′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.3′	N 16°33.1′
Antares	+1.1	112°18.7′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°21.7′	N 89°21.7′
Rigil Kent	−0.0	139°43.1′	S 60°55.4′	Adhara	+1.5	255°07.5′	S 29°00.3′	Achernar	+0.5	335°22.4′	S 57°07.8′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.9′	S 60°28.6′	Canopus	−0.6	263°53.2′	S 52°42.7′				

Monday 07 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	164°41.6′	177°13.1′	S 5°22.3′	222°38.7′	S 16°33.9′	177°49.9′	S 6°41.4′	202°30.5′	S 15°49.6′	221°44.0′	S 20°55.2′
1	179°44.1′	192°13.3′	S 5°21.3′	237°38.9′	S 16°33.7′	192°51.8′	S 6°41.2′	217°32.7′	S 15°49.5′	236°44.5′	S 20°54.9′
2	194°46.5′	207°13.4′	S 5°20.3′	252°39.0′	S 16°33.5′	207°53.7′	S 6°41.0′	232°34.9′	S 15°49.4′	251°45.0′	S 20°54.5′
3	209°49.0′	222°13.6′	S 5°19.4′	267°39.2′	S 16°33.3′	222°55.6′	S 6°40.7′	247°37.1′	S 15°49.4′	266°45.5′	S 20°54.1′
4	224°51.5′	237°13.7′	S 5°18.4′	282°39.4′	S 16°33.2′	237°57.5′	S 6°40.5′	262°39.2′	S 15°49.3′	281°46.0′	S 20°53.7′
5	239°53.9′	252°13.9′	S 5°17.4′	297°39.5′	S 16°33.0′	252°59.4′	S 6°40.3′	277°41.4′	S 15°49.2′	296°46.5′	S 20°53.4′
6	254°56.4′	267°14.0′	S 5°16.4′	312°39.7′	S 16°32.8′	268°01.3′	S 6°40.0′	292°43.6′	S 15°49.1′	311°47.0′	S 20°53.0′
7	269°58.9′	282°14.2′	S 5°15.5′	327°39.9′	S 16°32.6′	283°03.2′	S 6°39.8′	307°45.8′	S 15°49.0′	326°47.5′	S 20°52.6′
8	285°01.3′	297°14.3′	S 5°14.5′	342°40.0′	S 16°32.4′	298°05.1′	S 6°39.6′	322°48.0′	S 15°48.9′	341°48.0′	S 20°52.2′
9	300°03.8′	312°14.5′	S 5°13.5′	357°40.2′	S 16°32.2′	313°07.0′	S 6°39.3′	337°50.2′	S 15°48.9′	356°48.5′	S 20°51.9′
10	315°06.3′	327°14.6′	S 5°12.5′	12°40.3′	S 16°32.0′	328°08.9′	S 6°39.1′	352°52.4′	S 15°48.8′	11°49.0′	S 20°51.5′
11	330°08.7′	342°14.8′	S 5°11.6′	27°40.5′	S 16°31.8′	343°10.8′	S 6°38.9′	7°54.6′	S 15°48.7′	26°49.5′	S 20°51.1′
12	345°11.2′	357°14.9′	S 5°10.6′	42°40.7′	S 16°31.6′	358°12.7′	S 6°38.6′	22°56.8′	S 15°48.6′	41°50.0′	S 20°50.7′
13	0°13.7′	12°15.1′	S 5°09.6′	57°40.8′	S 16°31.4′	13°14.6′	S 6°38.4′	37°58.9′	S 15°48.5′	56°50.6′	S 20°50.3′
14	15°16.1′	27°15.2′	S 5°08.6′	72°41.0′	S 16°31.2′	28°16.5′	S 6°38.2′	53°01.1′	S 15°48.4′	71°51.1′	S 20°50.0′
15	30°18.6′	42°15.4′	S 5°07.7′	87°41.1′	S 16°31.0′	43°18.4′	S 6°37.9′	68°03.3′	S 15°48.4′	86°51.6′	S 20°49.6′
16	45°21.0′	57°15.5′	S 5°06.7′	102°41.3′	S 16°30.9′	58°20.3′	S 6°37.7′	83°05.5′	S 15°48.3′	101°52.1′	S 20°49.2′
17	60°23.5′	72°15.7′	S 5°05.7′	117°41.4′	S 16°30.7′	73°22.2′	S 6°37.5′	98°07.7′	S 15°48.2′	116°52.6′	S 20°48.8′
18	75°26.0′	87°15.8′	S 5°04.8′	132°41.6′	S 16°30.5′	88°24.1′	S 6°37.2′	113°09.9′	S 15°48.1′	131°53.1′	S 20°48.4′
19	90°28.4′	102°16.0′	S 5°03.8′	147°41.7′	S 16°30.3′	103°26.0′	S 6°37.0′	128°12.1′	S 15°48.0′	146°53.6′	S 20°48.1′
20	105°30.9′	117°16.1′	S 5°02.8′	162°41.9′	S 16°30.1′	118°27.9′	S 6°36.8′	143°14.3′	S 15°47.9′	161°54.1′	S 20°47.7′
21	120°33.4′	132°16.3′	S 5°01.8′	177°42.0′	S 16°29.9′	133°29.8′	S 6°36.5′	158°16.5′	S 15°47.9′	176°54.6′	S 20°47.3′
22	135°35.8′	147°16.4′	S 5°00.9′	192°42.2′	S 16°29.7′	148°31.7′	S 6°36.3′	173°18.6′	S 15°47.8′	191°55.1′	S 20°46.9′
23	150°38.3′	162°16.6′	S 4°59.9′	207°42.3′	S 16°29.5′	163°33.6′	S 6°36.1′	188°20.8′	S 15°47.7′	206°55.6′	S 20°46.5′
		SD 16.1′ *d* 1.0′		*v* 0.2′ *d* 0.2′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.4′	
Mer. pass.		12 h 11 m 0 s		9 h 9 m		12 h 7 m		10 h 28 m		9 h 13 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Regulus	−Adhara	−Betelgeuse	−Capella	−Rigel	−Aldebaran	+Sun	+Achernar
0	128°14.4′	N 12°55.3′	14.2′	12.4′	55.5′	111°47.5′	78°09.9′	52°01.1′	49°05.3′	47°08.8′	31°55.9′	51°58.7′	70°44.1′
1	142°47.5′	N 13°07.7′	14.1′	12.3′	55.5′	111°16.5′	77°53.1′	51°32.8′	48°37.7′	46°48.0′	31°25.5′	52°27.1′	70°59.8′
2	157°20.6′	N 13°20.0′	14.1′	12.3′	55.4′	110°45.5′	77°36.4′	51°04.4′	48°10.2′	46°27.3′	30°55.3′	52°55.6′	71°15.6′
3	171°53.7′	N 13°32.3′	14.1′	12.2′	55.4′	110°14.5′	77°19.8′	50°36.2′	47°42.8′	46°06.9′	30°25.0′	53°24.0′	71°31.4′
4	186°26.8′	N 13°44.5′	14.1′	12.1′	55.4′	109°43.6′	77°03.1′	50°08.0′	47°15.5′	45°46.6′	29°54.9′	53°52.4′	71°47.4′
5	200°59.9′	N 13°56.6′	14.0′	12.1′	55.4′	109°12.7′	76°46.6′	49°39.9′	46°48.2′	45°26.4′	29°24.7′	54°20.7′	72°03.3′
6	215°33.0′	N 14°08.7′	14.0′	12.0′	55.3′	108°41.8′	76°30.1′	49°11.8′	46°21.1′	45°06.5′	28°54.7′	54°49.0′	72°19.3′
7	230°06.0′	N 14°20.7′	14.0′	11.9′	55.3′	108°11.0′	76°13.7′	48°43.9′	45°54.0′	44°46.7′	28°24.7′	55°17.3′	72°35.4′
8	244°39.0′	N 14°32.6′	14.0′	11.8′	55.3′	107°40.2′	75°57.4′	48°16.0′	45°27.0′	44°27.1′	27°54.7′	55°45.6′	72°51.5′
9	259°11.9′	N 14°44.4′	13.9′	11.8′	55.3′	107°09.4′	75°41.1′	47°48.1′	45°00.2′	44°07.7′	27°24.9′	56°13.8′	73°07.6′
10	273°44.9′	N 14°56.2′	13.9′	11.7′	55.2′	106°38.6′	75°24.9′	47°20.4′	44°33.4′	43°48.5′	26°55.0′	56°42.0′	73°23.8′
11	288°17.8′	N 15°07.9′	13.9′	11.6′	55.2′	106°07.9′	75°08.7′	46°52.7′	44°06.7′	43°29.5′	26°25.3′	57°10.2′	73°40.1′
12	302°50.7′	N 15°19.5′	13.9′	11.5′	55.2′	105°37.2′	74°52.6′	46°25.1′	43°40.1′	43°10.7′	25°55.6′	57°38.4′	73°56.4′
13	317°23.6′	N 15°31.0′	13.8′	11.5′	55.2′	105°06.5′	74°36.6′	45°57.6′	43°13.6′	42°52.1′	25°26.0′	58°06.5′	74°12.7′
14	331°56.4′	N 15°42.5′	13.8′	11.4′	55.1′	104°35.9′	74°20.7′	45°30.1′	42°47.2′	42°33.7′	24°56.5′	58°34.6′	74°29.1′
15	346°29.2′	N 15°53.9′	13.8′	11.3′	55.1′	104°05.3′	74°04.8′	45°02.8′	42°20.9′	42°15.5′	24°27.0′	59°02.7′	74°45.5′
16	1°02.0′	N 16°05.2′	13.8′	11.2′	55.1′	103°34.7′	73°49.0′	44°35.5′	41°54.7′	41°57.6′	23°57.6′	59°30.7′	75°01.9′
17	15°34.8′	N 16°16.4′	13.7′	11.2′	55.1′	103°04.1′	73°33.3′	44°08.3′	41°28.6′	41°39.8′	23°28.3′	59°58.8′	75°18.4′
18	30°07.5′	N 16°27.6′	13.7′	11.1′	55.0′	102°33.6′	73°17.6′	43°41.1′	41°02.6′	41°22.3′	22°59.0′	60°26.8′	75°35.0′
19	44°40.2′	N 16°38.6′	13.7′	11.0′	55.0′	102°03.1′	73°02.1′	43°14.1′	40°36.7′	41°05.0′	22°29.9′	60°54.7′	75°51.5′
20	59°12.8′	N 16°49.6′	13.6′	10.9′	55.0′	101°32.6′	72°46.6′	42°47.2′	40°11.0′	40°47.9′	22°00.8′	61°22.7′	76°08.1′
21	73°45.5′	N 17°00.6′	13.6′	10.8′	55.0′	101°02.1′	72°31.1′	42°20.3′	39°45.4′	40°31.0′	21°31.9′	61°50.6′	76°24.7′
22	88°18.1′	N 17°11.4′	13.6′	10.8′	55.0′	100°31.7′	72°15.8′	41°53.5′	39°19.8′	40°14.4′	21°03.0′	62°18.5′	76°41.4′
23	102°50.6′	N 17°22.1′	13.5′	10.7′	54.9′	100°01.3′	72°00.5′	41°26.9′	38°54.4′	39°58.1′	20°34.2′	62°46.4′	76°58.1′
Mer. pass. 15 h 56 m SD 15.1′ phase 19%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.5′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.5′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°35.0′	N 38°47.9′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.3′	N 16°33.1′
Antares	+1.1	112°18.7′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°22.1′	N 89°21.7′
Rigil Kent	−0.0	139°43.1′	S 60°55.4′	Adhara	+1.5	255°07.5′	S 29°00.3′	Achernar	+0.5	335°22.4′	S 57°07.8′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.9′	S 60°28.6′	Canopus	−0.6	263°53.2′	S 52°42.7′				

Tuesday 08 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	165°40.8′	177°16.7′	S 4°58.9′	222°42.5′	S 16°29.3′	178°35.5′	S 6°35.8′	203°23.0′	S 15°47.6′	221°56.1′	S 20°46.2′
1	180°43.2′	192°16.9′	S 4°57.9′	237°42.6′	S 16°29.1′	193°37.4′	S 6°35.6′	218°25.2′	S 15°47.5′	236°56.7′	S 20°45.8′
2	195°45.7′	207°17.0′	S 4°57.0′	252°42.8′	S 16°28.8′	208°39.3′	S 6°35.4′	233°27.4′	S 15°47.4′	251°57.2′	S 20°45.4′
3	210°48.2′	222°17.2′	S 4°56.0′	267°42.9′	S 16°28.6′	223°41.2′	S 6°35.1′	248°29.6′	S 15°47.4′	266°57.7′	S 20°45.0′
4	225°50.6′	237°17.3′	S 4°55.0′	282°43.1′	S 16°28.4′	238°43.1′	S 6°34.9′	263°31.8′	S 15°47.3′	281°58.2′	S 20°44.6′
5	240°53.1′	252°17.5′	S 4°54.0′	297°43.2′	S 16°28.2′	253°45.0′	S 6°34.7′	278°34.0′	S 15°47.2′	296°58.7′	S 20°44.2′
6	255°55.5′	267°17.6′	S 4°53.1′	312°43.3′	S 16°28.0′	268°46.9′	S 6°34.4′	293°36.2′	S 15°47.1′	311°59.2′	S 20°43.9′
7	270°58.0′	282°17.8′	S 4°52.1′	327°43.5′	S 16°27.8′	283°48.8′	S 6°34.2′	308°38.4′	S 15°47.0′	326°59.7′	S 20°43.5′
8	286°00.5′	297°17.9′	S 4°51.1′	342°43.6′	S 16°27.6′	298°50.7′	S 6°34.0′	323°40.5′	S 15°46.9′	342°00.2′	S 20°43.1′
9	301°02.9′	312°18.1′	S 4°50.1′	357°43.8′	S 16°27.4′	313°52.6′	S 6°33.7′	338°42.7′	S 15°46.9′	357°00.7′	S 20°42.7′
10	316°05.4′	327°18.2′	S 4°49.2′	12°43.9′	S 16°27.2′	328°54.5′	S 6°33.5′	353°44.9′	S 15°46.8′	12°01.2′	S 20°42.3′
11	331°07.9′	342°18.4′	S 4°48.2′	27°44.0′	S 16°27.0′	343°56.4′	S 6°33.3′	8°47.1′	S 15°46.7′	27°01.7′	S 20°41.9′
12	346°10.3′	357°18.5′	S 4°47.2′	42°44.2′	S 16°26.8′	358°58.3′	S 6°33.0′	23°49.3′	S 15°46.6′	42°02.3′	S 20°41.5′
13	1°12.8′	12°18.7′	S 4°46.2′	57°44.3′	S 16°26.6′	14°00.2′	S 6°32.8′	38°51.5′	S 15°46.5′	57°02.8′	S 20°41.2′
14	16°15.3′	27°18.8′	S 4°45.2′	72°44.4′	S 16°26.3′	29°02.2′	S 6°32.6′	53°53.7′	S 15°46.4′	72°03.3′	S 20°40.8′
15	31°17.7′	42°19.0′	S 4°44.3′	87°44.6′	S 16°26.1′	44°04.1′	S 6°32.3′	68°55.9′	S 15°46.4′	87°03.8′	S 20°40.4′
16	46°20.2′	57°19.2′	S 4°43.3′	102°44.7′	S 16°25.9′	59°06.0′	S 6°32.1′	83°58.1′	S 15°46.3′	102°04.3′	S 20°40.0′
17	61°22.6′	72°19.3′	S 4°42.3′	117°44.8′	S 16°25.7′	74°07.9′	S 6°31.9′	99°00.3′	S 15°46.2′	117°04.8′	S 20°39.6′
18	76°25.1′	87°19.5′	S 4°41.3′	132°45.0′	S 16°25.5′	89°09.8′	S 6°31.6′	114°02.4′	S 15°46.1′	132°05.3′	S 20°39.2′
19	91°27.6′	102°19.6′	S 4°40.4′	147°45.1′	S 16°25.3′	104°11.7′	S 6°31.4′	129°04.6′	S 15°46.0′	147°05.8′	S 20°38.8′
20	106°30.0′	117°19.8′	S 4°39.4′	162°45.2′	S 16°25.1′	119°13.6′	S 6°31.2′	144°06.8′	S 15°46.0′	162°06.3′	S 20°38.4′
21	121°32.5′	132°19.9′	S 4°38.4′	177°45.3′	S 16°24.8′	134°15.5′	S 6°30.9′	159°09.0′	S 15°45.9′	177°06.9′	S 20°38.0′
22	136°35.0′	147°20.1′	S 4°37.4′	192°45.5′	S 16°24.6′	149°17.4′	S 6°30.7′	174°11.2′	S 15°45.8′	192°07.4′	S 20°37.7′
23	151°37.4′	162°20.2′	S 4°36.5′	207°45.6′	S 16°24.4′	164°19.3′	S 6°30.5′	189°13.4′	S 15°45.7′	207°07.9′	S 20°37.3′
		SD 16.1′ *d* 1.0′		*v* 0.1′ *d* 0.2′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.4′	
Mer. pass.		12 h 10 m 46 s		9 h 9 m		12 h 4 m		10 h 25 m		9 h 12 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Regulus	−Adhara	−Betelgeuse	−Rigel	−Capella	−Aldebaran	+Sun	+Achernar
0	117°23.1′	N 17°32.8′	13.5′	10.6′	54.9′	99°30.9′	71°45.3′	41°00.3′	39°41.9′	38°29.2′	20°05.5′	63°14.2′	77°14.8′
1	131°55.6′	N 17°43.4′	13.5′	10.5′	54.9′	99°00.6′	71°30.2′	40°33.8′	39°26.1′	38°04.0′	19°37.0′	63°42.1′	77°31.6′
2	146°28.1′	N 17°53.9′	13.4′	10.4′	54.9′	98°30.2′		40°07.4′	39°10.4′	37°39.0′	19°08.5′	64°09.9′	77°48.3′
3	161°00.5′	N 18°04.3′	13.4′	10.3′	54.9′	97°59.9′		39°41.2′	38°55.1′	37°14.1′	18°40.2′	64°37.7′	78°05.2′
4	175°32.9′	N 18°14.6′	13.4′	10.2′	54.8′	97°29.6′		39°15.0′		36°49.4′	18°12.0′	65°05.4′	78°22.0′
5	190°05.3′	N 18°24.9′	13.3′	10.2′	54.8′	96°59.4′		38°48.9′		36°24.8′	17°44.0′	65°33.2′	78°38.8′
6	204°37.6′	N 18°35.0′	13.3′	10.1′	54.8′	96°29.1′		38°22.9′		36°00.3′	17°16.1′	66°00.9′	78°55.7′
7	219°09.9′	N 18°45.1′	13.2′	10.0′	54.8′	95°58.9′		37°57.1′		35°36.0′	16°48.3′	66°28.6′	79°12.6′
8	233°42.1′	N 18°55.1′	13.2′	9.9′	54.8′	95°28.7′		37°31.4′		35°11.9′	16°20.8′	66°56.3′	79°29.6′
9	248°14.3′	N 19°05.0′	13.2′	9.8′	54.7′	94°58.5′		37°05.7′		34°47.9′	15°53.4′	67°23.9′	79°46.5′
10	262°46.5′	N 19°14.8′	13.1′	9.7′	54.7′	94°28.4′		36°40.2′		34°24.0′	15°26.2′	67°51.5′	80°03.5′
11	277°18.6′	N 19°24.5′	13.1′	9.6′	54.7′	93°58.2′		36°14.9′		34°00.4′	14°59.2′	68°19.2′	80°20.5′
12	291°50.7′	N 19°34.1′	13.1′	9.5′	54.7′	93°28.1′		35°49.6′		33°36.9′	14°32.4′	68°46.7′	80°37.5′
13	306°22.7′	N 19°43.7′	13.0′	9.4′	54.7′	92°58.0′		35°24.5′		33°13.5′	14°05.9′	69°14.3′	80°54.5′
14	320°54.8′	N 19°53.1′	13.0′	9.3′	54.7′	92°28.0′		34°59.5′		32°50.4′	13°39.6′	69°41.9′	81°11.6′
15	335°26.7′	N 20°02.4′	12.9′	9.3′	54.6′	91°57.9′		34°34.6′		32°27.4′	13°13.7′	70°09.4′	81°28.6′
16	349°58.7′	N 20°11.7′	12.9′	9.2′	54.6′	91°27.9′		34°09.9′		32°04.7′	12°48.0′	70°36.9′	81°45.7′
17	4°30.6′	N 20°20.9′	12.9′	9.1′	54.6′	90°57.9′		33°45.4′		31°42.1′	12°22.7′	71°04.4′	82°02.8′
18	19°02.4′	N 20°29.9′	12.8′	9.0′	54.6′	90°27.9′		33°20.9′		31°19.7′	11°57.8′	71°31.9′	82°19.9′
19	33°34.2′	N 20°38.9′	12.8′	8.9′	54.6′	89°57.9′		32°56.7′		30°57.6′	11°33.3′	71°59.3′	82°37.0′
20	48°06.0′	N 20°47.8′	12.7′	8.8′	54.6′	89°28.0′		32°32.6′		30°35.6′	11°09.2′	72°26.8′	82°54.2′
21	62°37.7′	N 20°56.5′	12.7′	8.7′	54.6′	88°58.0′		32°08.6′		30°13.9′	10°45.7′	72°54.2′	83°11.3′
22	77°09.4′	N 21°05.2′	12.6′	8.6′	54.5′	88°28.1′		31°44.9′		29°52.4′	10°22.7′	73°21.6′	83°28.5′
23	91°41.0′	N 21°13.8′	12.6′	8.5′	54.5′	87°58.2′		31°21.2′		29°31.2′	10°00.4′	73°49.0′	83°45.6′
Mer. pass. 16 h 41 m SD 15.0′ phase 27%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.5′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.5′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°35.0′	N 38°47.9′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.3′	N 16°33.1′
Antares	+1.1	112°18.7′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°22.5′	N 89°21.7′
Rigil Kent	−0.0	139°43.1′	S 60°55.4′	Adhara	+1.5	255°07.5′	S 29°00.3′	Achernar	+0.5	335°22.4′	S 57°07.8′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.9′	S 60°28.6′	Canopus	−0.6	263°53.2′	S 52°42.7′				

Wednesday 09 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	166°39.9′	177°20.4′	S 4°35.5′	222°45.7′	S 16°24.2′	179°21.2′	S 6°30.3′	204°15.6′	S 15°45.6′	222°08.4′	S 20°36.9′
1	181°42.4′	192°20.5′	S 4°34.5′	237°45.8′	S 16°24.0′	194°23.1′	S 6°30.0′	219°17.8′	S 15°45.5′	237°08.9′	S 20°36.5′
2	196°44.8′	207°20.7′	S 4°33.5′	252°46.0′	S 16°23.7′	209°25.0′	S 6°29.8′	234°20.0′	S 15°45.5′	252°09.4′	S 20°36.1′
3	211°47.3′	222°20.9′	S 4°32.5′	267°46.1′	S 16°23.5′	224°26.9′	S 6°29.6′	249°22.2′	S 15°45.4′	267°09.9′	S 20°35.7′
4	226°49.8′	237°21.0′	S 4°31.6′	282°46.2′	S 16°23.3′	239°28.8′	S 6°29.3′	264°24.4′	S 15°45.3′	282°10.4′	S 20°35.3′
5	241°52.2′	252°21.2′	S 4°30.6′	297°46.3′	S 16°23.1′	254°30.7′	S 6°29.1′	279°26.5′	S 15°45.2′	297°10.9′	S 20°34.9′
6	256°54.7′	267°21.3′	S 4°29.6′	312°46.4′	S 16°22.8′	269°32.6′	S 6°28.9′	294°28.7′	S 15°45.1′	312°11.5′	S 20°34.5′
7	271°57.1′	282°21.5′	S 4°28.6′	327°46.5′	S 16°22.6′	284°34.5′	S 6°28.6′	309°30.9′	S 15°45.0′	327°12.0′	S 20°34.1′
8	286°59.6′	297°21.6′	S 4°27.7′	342°46.7′	S 16°22.4′	299°36.4′	S 6°28.4′	324°33.1′	S 15°45.0′	342°12.5′	S 20°33.7′
9	302°02.1′	312°21.8′	S 4°26.7′	357°46.8′	S 16°22.2′	314°38.3′	S 6°28.2′	339°35.3′	S 15°44.9′	357°13.0′	S 20°33.3′
10	317°04.5′	327°21.9′	S 4°25.7′	12°46.9′	S 16°21.9′	329°40.2′	S 6°27.9′	354°37.5′	S 15°44.8′	12°13.5′	S 20°32.9′
11	332°07.0′	342°22.1′	S 4°24.7′	27°47.0′	S 16°21.7′	344°42.1′	S 6°27.7′	9°39.7′	S 15°44.7′	27°14.0′	S 20°32.6′
12	347°09.5′	357°22.3′	S 4°23.7′	42°47.1′	S 16°21.5′	359°44.0′	S 6°27.5′	24°41.9′	S 15°44.6′	42°14.5′	S 20°32.2′
13	2°11.9′	12°22.4′	S 4°22.8′	57°47.2′	S 16°21.2′	14°45.9′	S 6°27.2′	39°44.1′	S 15°44.5′	57°15.1′	S 20°31.8′
14	17°14.4′	27°22.6′	S 4°21.8′	72°47.3′	S 16°21.0′	29°47.8′	S 6°27.0′	54°46.3′	S 15°44.5′	72°15.6′	S 20°31.4′
15	32°16.9′	42°22.7′	S 4°20.8′	87°47.4′	S 16°20.8′	44°49.7′	S 6°26.8′	69°48.5′	S 15°44.4′	87°16.1′	S 20°31.0′
16	47°19.3′	57°22.9′	S 4°19.8′	102°47.6′	S 16°20.5′	59°51.6′	S 6°26.5′	84°50.7′	S 15°44.3′	102°16.6′	S 20°30.6′
17	62°21.8′	72°23.0′	S 4°18.8′	117°47.7′	S 16°20.3′	74°53.5′	S 6°26.3′	99°52.8′	S 15°44.2′	117°17.1′	S 20°30.2′
18	77°24.3′	87°23.2′	S 4°17.9′	132°47.8′	S 16°20.1′	89°55.4′	S 6°26.1′	114°55.0′	S 15°44.1′	132°17.6′	S 20°29.8′
19	92°26.7′	102°23.4′	S 4°16.9′	147°47.9′	S 16°19.8′	104°57.3′	S 6°25.8′	129°57.2′	S 15°44.1′	147°18.1′	S 20°29.4′
20	107°29.2′	117°23.5′	S 4°15.9′	162°48.0′	S 16°19.6′	119°59.2′	S 6°25.6′	144°59.4′	S 15°44.0′	162°18.6′	S 20°29.0′
21	122°31.6′	132°23.7′	S 4°14.9′	177°48.1′	S 16°19.4′	135°01.1′	S 6°25.4′	160°01.6′	S 15°43.9′	177°19.2′	S 20°28.6′
22	137°34.1′	147°23.8′	S 4°13.9′	192°48.2′	S 16°19.1′	150°03.0′	S 6°25.1′	175°03.8′	S 15°43.8′	192°19.7′	S 20°28.2′
23	152°36.6′	162°24.0′	S 4°13.0′	207°48.3′	S 16°18.9′	165°04.9′	S 6°24.9′	190°06.0′	S 15°43.7′	207°20.2′	S 20°27.8′
		SD 16.1′ *d* 1.0′		*v* 0.1′ *d* 0.2′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.4′	
Mer. pass.		12 h 10 m 31 s		9 h 9 m		12 h 1 m		10 h 21 m		9 h 11 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Regulus	−Sirius	−Pollux	−Betelgeuse	−Capella	−Aldebaran	+Sun	+Achernar
0	106°12.7′	N 21°22.3′	12.6′	8.4′	54.5′	87°28.3′	55°26.7′	51°04.6′	30°57.8′	29°10.1′	9°38.8′	74°16.3′	84°02.8′
1	120°44.2′	N 21°30.7′	12.5′	8.3′	54.5′	86°58.5′	55°10.3′	50°34.6′	30°34.6′	28°49.4′		74°43.7′	84°20.0′
2	135°15.7′	N 21°39.0′	12.5′	8.2′	54.5′	86°28.6′	54°53.9′	50°04.7′	30°11.5′	28°28.9′		75°11.0′	84°37.2′
3	149°47.2′	N 21°47.2′	12.4′	8.1′	54.5′	85°58.8′	54°37.8′	49°34.9′	29°48.7′	28°08.7′		75°38.4′	84°54.4′
4	164°18.6′	N 21°55.2′	12.4′	8.0′	54.5′	85°29.0′	54°21.7′	49°05.0′	29°26.0′	27°48.7′		76°05.7′	85°11.6′
5	178°50.0′	N 22°03.2′	12.4′	7.9′	54.4′	84°59.2′	54°05.8′	48°35.1′	29°03.6′	27°29.1′		76°33.0′	85°28.8′
6	193°21.4′	N 22°11.1′	12.3′	7.8′	54.4′	84°29.4′	53°50.1′	48°05.3′	28°41.4′	27°09.7′		77°00.2′	85°46.0′
7	207°52.7′	N 22°18.9′	12.3′	7.7′	54.4′	83°59.6′	53°34.4′	47°35.5′	28°19.4′	26°50.6′		77°27.5′	86°03.2′
8	222°24.0′	N 22°26.6′	12.2′	7.6′	54.4′	83°29.9′	53°19.0′	47°05.7′	27°57.6′	26°31.9′		77°54.8′	86°20.5′
9	236°55.2′	N 22°34.1′	12.2′	7.5′	54.4′	83°00.1′	53°03.7′	46°35.9′	27°36.1′	26°13.5′		78°22.0′	86°37.7′
10	251°26.4′	N 22°41.6′	12.1′	7.4′	54.4′	82°30.4′	52°48.5′	46°06.1′	27°14.8′	25°55.4′		78°49.2′	86°54.9′
11	265°57.5′	N 22°49.0′	12.1′	7.3′	54.4′	82°00.7′		45°36.3′	26°53.8′	25°37.7′		79°16.4′	87°12.2′
12	280°28.6′	N 22°56.2′	12.1′	7.2′	54.4′	81°31.0′		45°06.6′	26°33.1′	25°20.3′		79°43.6′	87°29.4′
13	294°59.7′	N 23°03.4′	12.0′	7.0′	54.3′	81°01.3′		44°36.8′	26°12.6′	25°03.3′		80°10.8′	87°46.6′
14	309°30.7′	N 23°10.4′	12.0′	6.9′	54.3′	80°31.6′		44°07.1′	25°52.5′	24°46.7′		80°38.0′	88°03.9′
15	324°01.6′	N 23°17.4′	11.9′	6.8′	54.3′	80°02.0′		43°37.4′	25°32.6′	24°30.5′		81°05.2′	88°21.1′
16	338°32.6′	N 23°24.2′	11.9′	6.7′	54.3′	79°32.3′		43°07.7′	25°13.0′	24°14.6′		81°32.3′	88°38.3′
17	353°03.5′	N 23°31.0′	11.8′	6.6′	54.3′	79°02.7′		42°38.0′	24°53.8′			81°59.4′	88°55.5′
18	7°34.3′	N 23°37.6′	11.8′	6.5′	54.3′	78°33.0′		42°08.4′	24°34.9′			82°26.6′	89°12.8′
19	22°05.1′	N 23°44.1′	11.8′	6.4′	54.3′	78°03.4′		41°38.7′	24°16.3′			82°53.7′	89°30.0′
20	36°35.9′	N 23°50.5′	11.7′	6.3′	54.3′	77°33.8′		41°09.0′	23°58.1′			83°20.8′	89°47.2′
21	51°06.6′	N 23°56.8′	11.7′	6.2′	54.3′	77°04.2′		40°39.4′	23°40.3′			83°47.9′	90°04.4′
22	65°37.3′	N 24°02.9′	11.6′	6.1′	54.3′	76°34.6′		40°09.8′	23°22.8′			84°15.0′	90°21.6′
23	80°07.9′	N 24°09.0′	11.6′	6.0′	54.3′	76°05.1′		39°40.1′	23°05.8′			84°42.1′	90°38.8′
Mer. pass. 17 h 29 m SD 14.9′ phase 36%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.5′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.5′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.3′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°22.9′	N 89°21.7′
Rigil Kent	−0.0	139°43.1′	S 60°55.4′	Adhara	+1.5	255°07.5′	S 29°00.4′	Achernar	+0.5	335°22.4′	S 57°07.8′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.8′	S 60°28.6′	Canopus	−0.6	263°53.3′	S 52°42.7′				

Thursday 10 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	167°39.0′	177°24.2′	S 4°12.0′	222°48.4′	S 16°18.6′	180°06.8′	S 6°24.7′	205°08.2′	S 15°43.6′	222°20.7′	S 20°27.4′
1	182°41.5′	192°24.3′	S 4°11.0′	237°48.5′	S 16°18.4′	195°08.7′	S 6°24.4′	220°10.4′	S 15°43.6′	237°21.2′	S 20°27.0′
2	197°44.0′	207°24.5′	S 4°10.0′	252°48.6′	S 16°18.2′	210°10.6′	S 6°24.2′	235°12.6′	S 15°43.5′	252°21.7′	S 20°26.6′
3	212°46.4′	222°24.6′	S 4°09.1′	267°48.7′	S 16°17.9′	225°12.6′	S 6°24.0′	250°14.8′	S 15°43.4′	267°22.3′	S 20°26.2′
4	227°48.9′	237°24.8′	S 4°08.1′	282°48.8′	S 16°17.7′	240°14.5′	S 6°23.7′	265°17.0′	S 15°43.3′	282°22.8′	S 20°25.8′
5	242°51.4′	252°25.0′	S 4°07.1′	297°48.9′	S 16°17.4′	255°16.4′	S 6°23.5′	280°19.2′	S 15°43.2′	297°23.3′	S 20°25.4′
6	257°53.8′	267°25.1′	S 4°06.1′	312°49.0′	S 16°17.2′	270°18.3′	S 6°23.3′	295°21.3′	S 15°43.2′	312°23.8′	S 20°25.0′
7	272°56.3′	282°25.3′	S 4°05.1′	327°49.1′	S 16°16.9′	285°20.2′	S 6°23.0′	310°23.5′	S 15°43.1′	327°24.3′	S 20°24.6′
8	287°58.7′	297°25.4′	S 4°04.2′	342°49.2′	S 16°16.7′	300°22.1′	S 6°22.8′	325°25.7′	S 15°43.0′	342°24.8′	S 20°24.2′
9	303°01.2′	312°25.6′	S 4°03.2′	357°49.3′	S 16°16.5′	315°24.0′	S 6°22.6′	340°27.9′	S 15°42.9′	357°25.3′	S 20°23.8′
10	318°03.7′	327°25.8′	S 4°02.2′	12°49.3′	S 16°16.2′	330°25.9′	S 6°22.3′	355°30.1′	S 15°42.8′	12°25.9′	S 20°23.4′
11	333°06.1′	342°25.9′	S 4°01.2′	27°49.4′	S 16°16.0′	345°27.8′	S 6°22.1′	10°32.3′	S 15°42.7′	27°26.4′	S 20°23.0′
12	348°08.6′	357°26.1′	S 4°00.2′	42°49.5′	S 16°15.7′	0°29.7′	S 6°21.9′	25°34.5′	S 15°42.7′	42°26.9′	S 20°22.6′
13	3°11.1′	12°26.2′	S 3°59.2′	57°49.6′	S 16°15.5′	15°31.6′	S 6°21.6′	40°36.7′	S 15°42.6′	57°27.4′	S 20°22.2′
14	18°13.5′	27°26.4′	S 3°58.3′	72°49.7′	S 16°15.2′	30°33.5′	S 6°21.4′	55°38.9′	S 15°42.5′	72°27.9′	S 20°21.8′
15	33°16.0′	42°26.6′	S 3°57.3′	87°49.8′	S 16°15.0′	45°35.4′	S 6°21.2′	70°41.1′	S 15°42.4′	87°28.4′	S 20°21.3′
16	48°18.5′	57°26.7′	S 3°56.3′	102°49.9′	S 16°14.7′	60°37.3′	S 6°20.9′	85°43.3′	S 15°42.3′	102°29.0′	S 20°20.9′
17	63°20.9′	72°26.9′	S 3°55.3′	117°50.0′	S 16°14.5′	75°39.2′	S 6°20.7′	100°45.5′	S 15°42.2′	117°29.5′	S 20°20.5′
18	78°23.4′	87°27.0′	S 3°54.3′	132°50.1′	S 16°14.2′	90°41.1′	S 6°20.5′	115°47.7′	S 15°42.2′	132°30.0′	S 20°20.1′
19	93°25.9′	102°27.2′	S 3°53.4′	147°50.1′	S 16°13.9′	105°43.0′	S 6°20.2′	130°49.9′	S 15°42.1′	147°30.5′	S 20°19.7′
20	108°28.3′	117°27.4′	S 3°52.4′	162°50.2′	S 16°13.7′	120°44.9′	S 6°20.0′	145°52.1′	S 15°42.0′	162°31.0′	S 20°19.3′
21	123°30.8′	132°27.5′	S 3°51.4′	177°50.3′	S 16°13.4′	135°46.8′	S 6°19.8′	160°54.2′	S 15°41.9′	177°31.5′	S 20°18.9′
22	138°33.2′	147°27.7′	S 3°50.4′	192°50.4′	S 16°13.2′	150°48.7′	S 6°19.5′	175°56.4′	S 15°41.8′	192°32.1′	S 20°18.5′
23	153°35.7′	162°27.9′	S 3°49.4′	207°50.5′	S 16°12.9′	165°50.6′	S 6°19.3′	190°58.6′	S 15°41.8′	207°32.6′	S 20°18.1′
		SD 16.1′ *d* 1.0′		*v* 0.1′ *d* 0.2′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.4′	
Mer. pass.		12 h 10 m 16 s		9 h 9 m		11 h 58 m		10 h 18 m		9 h 10 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Spica	−Regulus	−Procyon	−Pollux	−Betelgeuse	+Aldebaran	+Sun	+Achernar
0	94°38.5′	N 24°15.0′	11.6′	5.8′	54.3′		75°35.5′	44°42.6′	39°10.5′	22°49.1′		85°09.2′	90°56.0′
1	109°09.0′	N 24°20.8′	11.5′	5.7′	54.2′		75°05.9′	44°16.9′	38°40.9′	22°32.9′		85°36.2′	91°13.2′
2	123°39.6′	N 24°26.5′	11.5′	5.6′	54.2′		74°36.4′	43°51.2′	38°11.3′	22°17.1′		86°03.3′	91°30.4′
3	138°10.0′	N 24°32.2′	11.4′	5.5′	54.2′		74°06.8′	43°25.7′	37°41.8′			86°30.3′	91°47.6′
4	152°40.5′	N 24°37.7′	11.4′	5.4′	54.2′		73°37.3′	43°00.2′	37°12.2′		9°45.1′	86°57.4′	92°04.7′
5	167°10.9′	N 24°43.0′	11.4′	5.3′	54.2′		73°07.7′	42°34.8′	36°42.6′		10°06.7′	87°24.4′	92°21.9′
6	181°41.2′	N 24°48.3′	11.3′	5.2′	54.2′		72°38.2′	42°09.4′	36°13.1′		10°28.9′	87°51.5′	92°39.0′
7	196°11.5′	N 24°53.5′	11.3′	5.0′	54.2′		72°08.7′	41°44.2′	35°43.5′		10°51.7′	88°18.5′	92°56.1′
8	210°41.8′	N 24°58.5′	11.2′	4.9′	54.2′		71°39.2′	41°19.0′	35°14.0′		11°15.0′	88°45.5′	93°13.2′
9	225°12.0′	N 25°03.4′	11.2′	4.8′	54.2′		71°09.7′	40°54.0′	34°44.4′		11°38.8′	89°12.5′	93°30.4′
10	239°42.3′	N 25°08.2′	11.2′	4.7′	54.2′		70°40.2′	40°29.0′	34°14.9′		12°03.1′	89°39.6′	93°47.4′
11	254°12.4′	N 25°12.9′	11.1′	4.6′	54.2′		70°10.7′	40°04.1′	33°45.4′		12°27.7′	90°06.6′	94°04.5′
12	268°42.6′	N 25°17.5′	11.1′	4.5′	54.2′		69°41.2′	39°39.3′	33°15.8′		12°52.6′	90°33.6′	94°21.6′
13	283°12.6′	N 25°22.0′	11.1′	4.3′	54.2′		69°11.7′	39°14.6′	32°46.3′		13°17.8′	91°00.6′	94°38.6′
14	297°42.7′	N 25°26.3′	11.0′	4.2′	54.2′		68°42.2′	38°50.0′	32°16.8′		13°43.4′	91°27.6′	94°55.7′
15	312°12.7′	N 25°30.5′	11.0′	4.1′	54.2′		68°12.8′	38°25.4′	31°47.3′		14°09.2′	91°54.6′	95°12.7′
16	326°42.7′	N 25°34.6′	11.0′	4.0′	54.2′		67°43.3′	38°01.0′	31°17.8′		14°35.2′	92°21.6′	95°29.7′
17	341°12.7′	N 25°38.6′	10.9′	3.9′	54.2′		67°13.8′	37°36.7′	30°48.3′		15°01.4′	92°48.6′	95°46.7′
18	355°42.6′	N 25°42.5′	10.9′	3.7′	54.2′		66°44.3′	37°12.5′	30°18.8′		15°27.8′	93°15.6′	96°03.6′
19	10°12.5′	N 25°46.2′	10.9′	3.6′	54.2′		66°14.9′	36°48.5′	29°49.4′		15°54.5′	93°42.6′	96°20.6′
20	24°42.3′	N 25°49.8′	10.8′	3.5′	54.2′	119°49.0′	65°45.4′	36°24.5′	29°19.9′		16°21.2′	94°09.5′	96°37.5′
21	39°12.2′	N 25°53.3′	10.8′	3.4′	54.2′	119°19.6′	65°15.9′	36°00.7′	28°50.4′		16°48.2′	94°36.5′	96°54.4′
22	53°41.9′	N 25°56.7′	10.8′	3.3′	54.2′	118°50.1′	64°46.5′	35°37.0′	28°20.9′		17°15.2′	95°03.5′	97°11.3′
23	68°11.7′	N 25°59.9′	10.7′	3.1′	54.2′	118°20.7′	64°17.0′	35°13.4′	27°51.5′		17°42.4′	95°30.5′	97°28.1′
Mer. pass. 18 h 18 m SD 14.8′ phase 46%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.5′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.5′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.3′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°23.2′	N 89°21.7′
Rigil Kent	−0.0	139°43.1′	S 60°55.4′	Adhara	+1.5	255°07.5′	S 29°00.4′	Achernar	+0.5	335°22.4′	S 57°07.8′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.8′	S 60°28.6′	Canopus	−0.6	263°53.3′	S 52°42.7′				

Friday 11 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	168°38.2′	177°28.0′	S 3°48.5′	222°50.5′	S 16°12.7′	180°52.5′	S 6°19.1′	206°00.8′	S 15°41.7′	222°33.1′	S 20°17.7′
1	183°40.6′	192°28.2′	S 3°47.5′	237°50.6′	S 16°12.4′	195°54.4′	S 6°18.8′	221°03.0′	S 15°41.6′	237°33.6′	S 20°17.3′
2	198°43.1′	207°28.3′	S 3°46.5′	252°50.7′	S 16°12.1′	210°56.3′	S 6°18.6′	236°05.2′	S 15°41.5′	252°34.1′	S 20°16.9′
3	213°45.6′	222°28.5′	S 3°45.5′	267°50.8′	S 16°11.9′	225°58.2′	S 6°18.4′	251°07.4′	S 15°41.4′	267°34.6′	S 20°16.5′
4	228°48.0′	237°28.7′	S 3°44.5′	282°50.9′	S 16°11.6′	241°00.1′	S 6°18.1′	266°09.6′	S 15°41.3′	282°35.2′	S 20°16.1′
5	243°50.5′	252°28.8′	S 3°43.5′	297°50.9′	S 16°11.4′	256°02.0′	S 6°17.9′	281°11.8′	S 15°41.3′	297°35.7′	S 20°15.6′
6	258°53.0′	267°29.0′	S 3°42.6′	312°51.0′	S 16°11.1′	271°03.9′	S 6°17.7′	296°14.0′	S 15°41.2′	312°36.2′	S 20°15.2′
7	273°55.4′	282°29.2′	S 3°41.6′	327°51.1′	S 16°10.8′	286°05.8′	S 6°17.4′	311°16.2′	S 15°41.1′	327°36.7′	S 20°14.8′
8	288°57.9′	297°29.3′	S 3°40.6′	342°51.1′	S 16°10.6′	301°07.7′	S 6°17.2′	326°18.4′	S 15°41.0′	342°37.2′	S 20°14.4′
9	304°00.4′	312°29.5′	S 3°39.6′	357°51.2′	S 16°10.3′	316°09.6′	S 6°17.0′	341°20.6′	S 15°40.9′	357°37.8′	S 20°14.0′
10	319°02.8′	327°29.7′	S 3°38.6′	12°51.3′	S 16°10.0′	331°11.6′	S 6°16.7′	356°22.8′	S 15°40.9′	12°38.3′	S 20°13.6′
11	334°05.3′	342°29.8′	S 3°37.7′	27°51.4′	S 16°09.8′	346°13.5′	S 6°16.5′	11°25.0′	S 15°40.8′	27°38.8′	S 20°13.2′
12	349°07.7′	357°30.0′	S 3°36.7′	42°51.4′	S 16°09.5′	1°15.4′	S 6°16.3′	26°27.2′	S 15°40.7′	42°39.3′	S 20°12.8′
13	4°10.2′	12°30.1′	S 3°35.7′	57°51.5′	S 16°09.2′	16°17.3′	S 6°16.0′	41°29.4′	S 15°40.6′	57°39.8′	S 20°12.4′
14	19°12.7′	27°30.3′	S 3°34.7′	72°51.6′	S 16°09.0′	31°19.2′	S 6°15.8′	56°31.6′	S 15°40.5′	72°40.4′	S 20°11.9′
15	34°15.1′	42°30.5′	S 3°33.7′	87°51.6′	S 16°08.7′	46°21.1′	S 6°15.6′	71°33.8′	S 15°40.5′	87°40.9′	S 20°11.5′
16	49°17.6′	57°30.6′	S 3°32.7′	102°51.7′	S 16°08.4′	61°23.0′	S 6°15.3′	86°35.9′	S 15°40.4′	102°41.4′	S 20°11.1′
17	64°20.1′	72°30.8′	S 3°31.8′	117°51.8′	S 16°08.2′	76°24.9′	S 6°15.1′	101°38.1′	S 15°40.3′	117°41.9′	S 20°10.7′
18	79°22.5′	87°31.0′	S 3°30.8′	132°51.8′	S 16°07.9′	91°26.8′	S 6°14.9′	116°40.3′	S 15°40.2′	132°42.4′	S 20°10.3′
19	94°25.0′	102°31.1′	S 3°29.8′	147°51.9′	S 16°07.6′	106°28.7′	S 6°14.7′	131°42.5′	S 15°40.1′	147°43.0′	S 20°09.9′
20	109°27.5′	117°31.3′	S 3°28.8′	162°52.0′	S 16°07.3′	121°30.6′	S 6°14.4′	146°44.7′	S 15°40.0′	162°43.5′	S 20°09.5′
21	124°29.9′	132°31.5′	S 3°27.8′	177°52.0′	S 16°07.1′	136°32.5′	S 6°14.2′	161°46.9′	S 15°40.0′	177°44.0′	S 20°09.0′
22	139°32.4′	147°31.6′	S 3°26.8′	192°52.1′	S 16°06.8′	151°34.4′	S 6°14.0′	176°49.1′	S 15°39.9′	192°44.5′	S 20°08.6′
23	154°34.9′	162°31.8′	S 3°25.9′	207°52.1′	S 16°06.5′	166°36.3′	S 6°13.7′	191°51.3′	S 15°39.8′	207°45.0′	S 20°08.2′
		SD 16.1′ *d* 1.0′		*v* 0.1′ *d* 0.3′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.4′	
Mer. pass.		12 h 10 m 0 s		9 h 9 m		11 h 55 m		10 h 14 m		9 h 9 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Arcturus	−Regulus	−Procyon	−Pollux	+Aldebaran	+Capella	+Rigel	+Sun
0	82°41.4′	N 26°03.1′	10.7′	3.0′	54.2′	112°27.2′	63°47.5′	34°49.9′	27°22.0′	18°09.7′			95°57.5′
1	97°11.1′	N 26°06.1′	10.7′	2.9′	54.2′	112°01.8′	63°18.1′	34°26.6′	26°52.5′	18°37.2′			96°24.5′
2	111°40.8′	N 26°08.9′	10.6′	2.8′	54.2′	111°36.2′	62°48.6′	34°03.4′	26°23.1′	19°04.7′			96°51.5′
3	126°10.5′	N 26°11.7′	10.6′	2.6′	54.2′	111°10.7′	62°19.2′	33°40.4′	25°53.6′	19°32.3′			97°18.5′
4	140°40.1′	N 26°14.3′	10.6′	2.5′	54.2′	110°45.2′	61°49.7′	33°17.5′	25°24.2′	20°00.1′			97°45.5′
5	155°09.7′	N 26°16.8′	10.6′	2.4′	54.2′	110°19.6′	61°20.2′	32°54.8′	24°54.7′	20°27.9′			98°12.5′
6	169°39.2′	N 26°19.2′	10.5′	2.3′	54.2′	109°54.0′	60°50.8′	32°32.2′	24°25.3′	20°55.8′			98°39.5′
7	184°08.8′	N 26°21.5′	10.5′	2.1′	54.2′	109°28.3′	60°21.3′	32°09.8′	23°55.8′	21°23.7′			99°06.5′
8	198°38.3′	N 26°23.6′	10.5′	2.0′	54.2′	109°02.7′	59°51.8′	31°47.6′	23°26.4′	21°51.8′			99°33.5′
9	213°07.8′	N 26°25.6′	10.5′	1.9′	54.2′	108°37.0′	59°22.3′	31°25.5′	22°56.9′	22°19.9′			100°00.5′
10	227°37.2′	N 26°27.5′	10.4′	1.8′	54.2′	108°11.3′	58°52.9′	31°03.7′	22°27.5′	22°48.0′			100°27.5′
11	242°06.7′	N 26°29.3′	10.4′	1.6′	54.2′	107°45.5′	58°23.4′	30°42.0′	21°58.0′	23°16.3′			100°54.5′
12	256°36.1′	N 26°30.9′	10.4′	1.5′	54.2′	107°19.8′	57°53.9′	30°20.5′	21°28.6′	23°44.6′			101°21.6′
13	271°05.5′	N 26°32.4′	10.4′	1.4′	54.2′	106°54.0′	57°24.4′	29°59.2′	20°59.2′	24°12.9′			101°48.6′
14	285°34.9′	N 26°33.8′	10.4′	1.2′	54.2′	106°28.2′	56°54.9′	29°38.2′	20°29.7′	24°41.3′			102°15.6′
15	300°04.2′	N 26°35.0′	10.3′	1.1′	54.2′	106°02.3′	56°25.4′	29°17.3′	20°00.3′	25°09.7′			102°42.7′
16	314°33.6′	N 26°36.1′	10.3′	1.0′	54.2′	105°36.5′	55°55.9′	28°56.7′	19°30.9′	25°38.2′			103°09.7′
17	329°02.9′	N 26°37.1′	10.3′	0.9′	54.2′	105°10.6′	55°26.4′	28°36.4′	19°01.5′	26°06.8′			103°36.8′
18	343°32.2′	N 26°38.0′	10.3′	0.7′	54.2′	104°44.7′	54°56.9′	28°16.2′	18°32.1′	26°35.4′			104°03.8′
19	358°01.5′	N 26°38.7′	10.3′	0.6′	54.2′	104°18.8′	54°27.4′	27°56.4′	18°02.7′	27°04.0′			104°30.9′
20	12°30.8′	N 26°39.3′	10.3′	0.5′	54.2′	103°52.8′	53°57.9′	27°36.8′	17°33.2′	27°32.6′	23°46.6′	38°59.3′	104°58.0′
21	27°00.0′	N 26°39.8′	10.2′	0.4′	54.2′	103°26.9′	53°28.3′	27°17.4′	17°03.9′	28°01.4′	24°01.6′	39°14.3′	105°25.1′
22	41°29.3′	N 26°40.2′	10.2′	0.2′	54.3′	103°00.9′	52°58.8′	26°58.4′	16°34.5′	28°30.1′	24°17.0′	39°29.6′	105°52.1′
23	55°58.5′	N 26°40.4′	10.2′	0.1′	54.3′	102°34.9′	52°29.3′	26°39.6′	16°05.1′	28°58.9′	24°32.8′	39°45.1′	106°19.2′
Mer. pass. 19 h 8 m SD 14.8′ phase 55%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.5′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.3′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°23.6′	N 89°21.7′
Rigil Kent	−0.0	139°43.1′	S 60°55.4′	Adhara	+1.5	255°07.5′	S 29°00.4′	Achernar	+0.5	335°22.4′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.8′	S 60°28.6′	Canopus	−0.6	263°53.3′	S 52°42.7′				

Saturday 12 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	169°37.3′	177°32.0′	S 3°24.9′	222°52.2′	S 16°06.2′	181°38.2′	S 6°13.5′	206°53.5′	S 15°39.7′	222°45.6′	S 20°07.8′
1	184°39.8′	192°32.1′	S 3°23.9′	237°52.3′	S 16°05.9′	196°40.1′	S 6°13.3′	221°55.7′	S 15°39.6′	237°46.1′	S 20°07.4′
2	199°42.2′	207°32.3′	S 3°22.9′	252°52.3′	S 16°05.7′	211°42.0′	S 6°13.0′	236°57.9′	S 15°39.6′	252°46.6′	S 20°07.0′
3	214°44.7′	222°32.5′	S 3°21.9′	267°52.4′	S 16°05.4′	226°43.9′	S 6°12.8′	252°00.1′	S 15°39.5′	267°47.1′	S 20°06.5′
4	229°47.2′	237°32.6′	S 3°20.9′	282°52.4′	S 16°05.1′	241°45.8′	S 6°12.6′	267°02.3′	S 15°39.4′	282°47.6′	S 20°06.1′
5	244°49.6′	252°32.8′	S 3°20.0′	297°52.5′	S 16°04.8′	256°47.7′	S 6°12.3′	282°04.5′	S 15°39.3′	297°48.2′	S 20°05.7′
6	259°52.1′	267°33.0′	S 3°19.0′	312°52.5′	S 16°04.5′	271°49.6′	S 6°12.1′	297°06.7′	S 15°39.2′	312°48.7′	S 20°05.3′
7	274°54.6′	282°33.1′	S 3°18.0′	327°52.6′	S 16°04.3′	286°51.5′	S 6°11.9′	312°08.9′	S 15°39.2′	327°49.2′	S 20°04.9′
8	289°57.0′	297°33.3′	S 3°17.0′	342°52.7′	S 16°04.0′	301°53.4′	S 6°11.6′	327°11.1′	S 15°39.1′	342°49.7′	S 20°04.4′
9	304°59.5′	312°33.5′	S 3°16.0′	357°52.7′	S 16°03.7′	316°55.3′	S 6°11.4′	342°13.3′	S 15°39.0′	357°50.3′	S 20°04.0′
10	320°02.0′	327°33.6′	S 3°15.0′	12°52.8′	S 16°03.4′	331°57.2′	S 6°11.2′	357°15.5′	S 15°38.9′	12°50.8′	S 20°03.6′
11	335°04.4′	342°33.8′	S 3°14.1′	27°52.8′	S 16°03.1′	346°59.1′	S 6°10.9′	12°17.7′	S 15°38.8′	27°51.3′	S 20°03.2′
12	350°06.9′	357°34.0′	S 3°13.1′	42°52.9′	S 16°02.8′	2°01.1′	S 6°10.7′	27°19.9′	S 15°38.7′	42°51.8′	S 20°02.8′
13	5°09.3′	12°34.1′	S 3°12.1′	57°52.9′	S 16°02.5′	17°03.0′	S 6°10.5′	42°22.1′	S 15°38.7′	57°52.3′	S 20°02.3′
14	20°11.8′	27°34.3′	S 3°11.1′	72°53.0′	S 16°02.3′	32°04.9′	S 6°10.2′	57°24.3′	S 15°38.6′	72°52.9′	S 20°01.9′
15	35°14.3′	42°34.5′	S 3°10.1′	87°53.0′	S 16°02.0′	47°06.8′	S 6°10.0′	72°26.5′	S 15°38.5′	87°53.4′	S 20°01.5′
16	50°16.7′	57°34.6′	S 3°09.1′	102°53.0′	S 16°01.7′	62°08.7′	S 6°09.8′	87°28.7′	S 15°38.4′	102°53.9′	S 20°01.1′
17	65°19.2′	72°34.8′	S 3°08.1′	117°53.1′	S 16°01.4′	77°10.6′	S 6°09.5′	102°30.9′	S 15°38.3′	117°54.4′	S 20°00.7′
18	80°21.7′	87°35.0′	S 3°07.2′	132°53.1′	S 16°01.1′	92°12.5′	S 6°09.3′	117°33.0′	S 15°38.3′	132°55.0′	S 20°00.2′
19	95°24.1′	102°35.1′	S 3°06.2′	147°53.2′	S 16°00.8′	107°14.4′	S 6°09.1′	132°35.2′	S 15°38.2′	147°55.5′	S 19°59.8′
20	110°26.6′	117°35.3′	S 3°05.2′	162°53.2′	S 16°00.5′	122°16.3′	S 6°08.8′	147°37.4′	S 15°38.1′	162°56.0′	S 19°59.4′
21	125°29.1′	132°35.5′	S 3°04.2′	177°53.3′	S 16°00.2′	137°18.2′	S 6°08.6′	162°39.6′	S 15°38.0′	177°56.5′	S 19°59.0′
22	140°31.5′	147°35.6′	S 3°03.2′	192°53.3′	S 15°59.9′	152°20.1′	S 6°08.4′	177°41.8′	S 15°37.9′	192°57.0′	S 19°58.5′
23	155°34.0′	162°35.8′	S 3°02.2′	207°53.4′	S 15°59.6′	167°22.0′	S 6°08.1′	192°44.0′	S 15°37.9′	207°57.6′	S 19°58.1′
		SD 16.1′ *d* 1.0′		*v* 0.0′ *d* 0.3′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.4′	
Mer. pass.		12 h 9 m 44 s		9 h 8 m		11 h 52 m		10 h 11 m		9 h 9 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Arcturus	−Regulus	−Procyon	−Pollux	+Betelgeuse	+Capella	+Aldebaran	+Sun
0	70°27.7′	N 26°40.5′	10.2′	-0.0′	54.3′	102°08.8′	51°59.7′	26°21.1′	15°35.7′		24°49.1′	29°27.7′	106°46.4′
1	84°57.0′	N 26°40.5′	10.2′	-0.2′	54.3′	101°42.8′	51°30.2′	26°03.0′	15°06.4′		25°05.7′	29°56.6′	107°13.5′
2	99°26.2′	N 26°40.3′	10.2′	-0.3′	54.3′	101°16.7′	51°00.6′	25°45.2′	14°37.0′	21°59.8′	25°22.7′	30°25.5′	107°40.6′
3	113°55.3′	N 26°40.0′	10.2′	-0.4′	54.3′	100°50.6′	50°31.0′	25°27.7′	14°07.7′	22°15.1′	25°40.1′	30°54.4′	108°07.7′
4	128°24.5′	N 26°39.6′	10.2′	-0.6′	54.3′	100°24.5′	50°01.4′	25°10.6′	13°38.4′	22°30.8′	25°57.9′	31°23.3′	108°34.9′
5	142°53.7′	N 26°39.0′	10.2′	-0.7′	54.3′	99°58.4′	49°31.8′	24°53.8′	13°09.1′	22°47.0′	26°16.0′	31°52.3′	109°02.1′
6	157°22.9′	N 26°38.3′	10.2′	-0.8′	54.3′	99°32.2′	49°02.2′	24°37.5′	12°39.8′	23°03.7′	26°34.4′	32°21.3′	109°29.2′
7	171°52.0′	N 26°37.5′	10.2′	-0.9′	54.3′	99°06.0′	48°32.6′	24°21.5′	12°10.6′	23°20.7′	26°53.1′	32°50.4′	109°56.4′
8	186°21.2′	N 26°36.6′	10.2′	-1.1′	54.3′	98°39.8′	48°03.0′	24°05.9′	11°41.4′	23°38.2′	27°12.2′	33°19.5′	110°23.6′
9	200°50.4′	N 26°35.5′	10.2′	-1.2′	54.3′	98°13.6′	47°33.4′		11°12.2′	23°56.0′	27°31.5′	33°48.6′	110°50.8′
10	215°19.5′	N 26°34.3′	10.1′	-1.3′	54.4′	97°47.4′	47°03.8′		10°43.1′	24°14.3′	27°51.2′	34°17.7′	111°18.0′
11	229°48.7′	N 26°33.0′	10.1′	-1.5′	54.4′	97°21.1′	46°34.1′		10°14.0′	24°32.9′	28°11.1′	34°46.9′	111°45.3′
12	244°17.8′	N 26°31.5′	10.1′	-1.6′	54.4′	96°54.9′	46°04.5′		9°45.0′	24°51.8′	28°31.3′	35°16.1′	112°12.5′
13	258°47.0′	N 26°29.9′	10.1′	-1.7′	54.4′	96°28.6′	45°34.8′		9°16.1′	25°11.1′	28°51.8′	35°45.4′	112°39.8′
14	273°16.1′	N 26°28.2′	10.1′	-1.9′	54.4′	96°02.3′	45°05.1′		8°47.2′	25°30.7′	29°12.5′	36°14.6′	113°07.0′
15	287°45.3′	N 26°26.4′	10.2′	-2.0′	54.4′	95°35.9′	44°35.4′		8°18.5′	25°50.6′	29°33.4′	36°43.9′	113°34.3′
16	302°14.4′	N 26°24.4′	10.2′	-2.1′	54.4′	95°09.6′	44°05.7′		7°49.9′	26°10.8′	29°54.7′	37°13.2′	114°01.6′
17	316°43.6′	N 26°22.3′	10.2′	-2.2′	54.4′	94°43.2′	43°36.0′		7°21.4′	26°31.4′	30°16.1′	37°42.6′	114°28.9′
18	331°12.7′	N 26°20.0′	10.2′	-2.4′	54.4′	94°16.8′	43°06.3′		6°53.2′	26°52.2′	30°37.8′	38°11.9′	114°56.3′
19	345°41.9′	N 26°17.7′	10.2′	-2.5′	54.5′	93°50.4′	42°36.5′		6°25.1′	27°13.2′	30°59.7′	38°41.3′	115°23.6′
20	0°11.0′	N 26°15.2′	10.2′	-2.6′	54.5′	93°24.0′	42°06.8′		5°57.4′	27°34.6′	31°21.8′	39°10.8′	115°51.0′
21	14°40.2′	N 26°12.5′	10.2′	-2.8′	54.5′	92°57.6′	41°37.0′		5°30.1′	27°56.2′	31°44.1′	39°40.2′	116°18.3′
22	29°09.4′	N 26°09.8′	10.2′	-2.9′	54.5′	92°31.1′	41°07.3′		5°03.2′	28°18.0′	32°06.6′	40°09.7′	116°45.7′
23	43°38.6′	N 26°06.9′	10.2′	-3.0′	54.5′	92°04.6′	40°37.5′			28°40.1′	32°29.3′	40°39.2′	117°13.1′
Mer. pass. 19 h 59 m SD 14.8′ phase 64%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°19.9′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°23.9′	N 89°21.7′
Rigil Kent	−0.0	139°43.0′	S 60°55.4′	Adhara	+1.5	255°07.5′	S 29°00.4′	Achernar	+0.5	335°22.4′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.8′	S 60°28.6′	Canopus	−0.6	263°53.3′	S 52°42.7′				

Sunday 13 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	170°36.5′	177°36.0′	S 3°01.3′	222°53.4′	S 15°59.3′	182°23.9′	S 6°07.9′	207°46.2′	S 15°37.8′	222°58.1′	S 19°57.7′
1	185°38.9′	192°36.2′	S 3°00.3′	237°53.4′	S 15°59.0′	197°25.8′	S 6°07.7′	222°48.4′	S 15°37.7′	237°58.6′	S 19°57.3′
2	200°41.4′	207°36.3′	S 2°59.3′	252°53.5′	S 15°58.7′	212°27.7′	S 6°07.4′	237°50.6′	S 15°37.6′	252°59.1′	S 19°56.8′
3	215°43.8′	222°36.5′	S 2°58.3′	267°53.5′	S 15°58.4′	227°29.6′	S 6°07.2′	252°52.8′	S 15°37.5′	267°59.7′	S 19°56.4′
4	230°46.3′	237°36.7′	S 2°57.3′	282°53.6′	S 15°58.1′	242°31.5′	S 6°07.0′	267°55.0′	S 15°37.4′	283°00.2′	S 19°56.0′
5	245°48.8′	252°36.8′	S 2°56.3′	297°53.6′	S 15°57.8′	257°33.4′	S 6°06.7′	282°57.2′	S 15°37.4′	298°00.7′	S 19°55.6′
6	260°51.2′	267°37.0′	S 2°55.3′	312°53.6′	S 15°57.5′	272°35.3′	S 6°06.5′	297°59.4′	S 15°37.3′	313°01.2′	S 19°55.1′
7	275°53.7′	282°37.2′	S 2°54.4′	327°53.7′	S 15°57.2′	287°37.2′	S 6°06.3′	313°01.6′	S 15°37.2′	328°01.8′	S 19°54.7′
8	290°56.2′	297°37.3′	S 2°53.4′	342°53.7′	S 15°56.9′	302°39.1′	S 6°06.0′	328°03.8′	S 15°37.1′	343°02.3′	S 19°54.3′
9	305°58.6′	312°37.5′	S 2°52.4′	357°53.7′	S 15°56.6′	317°41.0′	S 6°05.8′	343°06.0′	S 15°37.0′	358°02.8′	S 19°53.9′
10	321°01.1′	327°37.7′	S 2°51.4′	12°53.8′	S 15°56.3′	332°42.9′	S 6°05.6′	358°08.2′	S 15°37.0′	13°03.3′	S 19°53.4′
11	336°03.6′	342°37.9′	S 2°50.4′	27°53.8′	S 15°56.0′	347°44.9′	S 6°05.3′	13°10.4′	S 15°36.9′	28°03.9′	S 19°53.0′
12	351°06.0′	357°38.0′	S 2°49.4′	42°53.8′	S 15°55.7′	2°46.8′	S 6°05.1′	28°12.6′	S 15°36.8′	43°04.4′	S 19°52.6′
13	6°08.5′	12°38.2′	S 2°48.4′	57°53.9′	S 15°55.4′	17°48.7′	S 6°04.9′	43°14.8′	S 15°36.7′	58°04.9′	S 19°52.1′
14	21°11.0′	27°38.4′	S 2°47.5′	72°53.9′	S 15°55.1′	32°50.6′	S 6°04.6′	58°17.0′	S 15°36.6′	73°05.4′	S 19°51.7′
15	36°13.4′	42°38.5′	S 2°46.5′	87°53.9′	S 15°54.8′	47°52.5′	S 6°04.4′	73°19.2′	S 15°36.6′	88°06.0′	S 19°51.3′
16	51°15.9′	57°38.7′	S 2°45.5′	102°53.9′	S 15°54.5′	62°54.4′	S 6°04.2′	88°21.4′	S 15°36.5′	103°06.5′	S 19°50.8′
17	66°18.3′	72°38.9′	S 2°44.5′	117°54.0′	S 15°54.2′	77°56.3′	S 6°03.9′	103°23.6′	S 15°36.4′	118°07.0′	S 19°50.4′
18	81°20.8′	87°39.0′	S 2°43.5′	132°54.0′	S 15°53.9′	92°58.2′	S 6°03.7′	118°25.8′	S 15°36.3′	133°07.6′	S 19°50.0′
19	96°23.3′	102°39.2′	S 2°42.5′	147°54.0′	S 15°53.5′	108°00.1′	S 6°03.5′	133°28.0′	S 15°36.2′	148°08.1′	S 19°49.6′
20	111°25.7′	117°39.4′	S 2°41.5′	162°54.1′	S 15°53.2′	123°02.0′	S 6°03.2′	148°30.2′	S 15°36.2′	163°08.6′	S 19°49.1′
21	126°28.2′	132°39.6′	S 2°40.6′	177°54.1′	S 15°52.9′	138°03.9′	S 6°03.0′	163°32.4′	S 15°36.1′	178°09.1′	S 19°48.7′
22	141°30.7′	147°39.7′	S 2°39.6′	192°54.1′	S 15°52.6′	153°05.8′	S 6°02.8′	178°34.6′	S 15°36.0′	193°09.7′	S 19°48.3′
23	156°33.1′	162°39.9′	S 2°38.6′	207°54.1′	S 15°52.3′	168°07.7′	S 6°02.5′	193°36.8′	S 15°35.9′	208°10.2′	S 19°47.8′
		SD 16.1′ *d* 1.0′		*v* 0.0′ *d* 0.3′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.4′	
Mer. pass.		12 h 9 m 28 s		9 h 8 m		11 h 49 m		10 h 7 m		9 h 8 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Spica	−Arcturus	−Regulus	−Pollux	+Betelgeuse	+Capella	+Aldebaran	+Sun
0	58°07.8′	N 26°03.9′	10.2′	-3.1′	54.5′	94°08.8′	91°38.1′	40°07.7′		29°02.4′	32°52.2′	41°08.7′	117°40.6′
1	72°37.0′	N 26°00.7′	10.2′	-3.3′	54.5′	93°38.9′	91°11.6′	39°37.9′		29°25.0′	33°15.2′	41°38.3′	118°08.0′
2	87°06.2′	N 25°57.5′	10.2′	-3.4′	54.6′	93°08.9′	90°45.1′	39°08.0′		29°47.7′	33°38.5′	42°07.9′	118°35.5′
3	101°35.4′	N 25°54.1′	10.2′	-3.5′	54.6′	92°38.9′	90°18.5′	38°38.2′		30°10.7′	34°01.9′	42°37.5′	119°02.9′
4	116°04.7′	N 25°50.5′	10.3′	-3.7′	54.6′	92°08.9′	89°52.0′	38°08.4′		30°33.8′	34°25.5′	43°07.1′	119°30.4′
5	130°33.9′	N 25°46.9′	10.3′	-3.8′	54.6′	91°38.9′	89°25.4′	37°38.5′		30°57.2′	34°49.2′	43°36.8′	119°58.0′
6	145°03.2′	N 25°43.1′	10.3′	-3.9′	54.6′	91°08.8′	88°58.8′	37°08.6′		31°20.7′	35°13.1′	44°06.5′	
7	159°32.5′	N 25°39.2′	10.3′	-4.0′	54.6′	90°38.8′	88°32.2′	36°38.7′		31°44.4′	35°37.2′	44°36.2′	
8	174°01.8′	N 25°35.1′	10.3′	-4.2′	54.6′	90°08.7′	88°05.6′	36°08.8′		32°08.4′	36°01.4′	45°06.0′	
9	188°31.1′	N 25°30.9′	10.3′	-4.3′	54.7′	89°38.6′	87°38.9′	35°38.9′		32°32.4′	36°25.8′	45°35.8′	
10	203°00.4′	N 25°26.6′	10.3′	-4.4′	54.7′	89°08.5′	87°12.3′	35°09.0′		32°56.7′	36°50.3′	46°05.6′	
11	217°29.8′	N 25°22.2′	10.4′	-4.6′	54.7′	88°38.3′	86°45.6′	34°39.0′		33°21.1′	37°14.9′	46°35.4′	
12	231°59.2′	N 25°17.7′	10.4′	-4.7′	54.7′	88°08.2′	86°18.9′	34°09.1′		33°45.6′	37°39.6′	47°05.3′	
13	246°28.5′	N 25°13.0′	10.4′	-4.8′	54.7′	87°38.0′	85°52.2′	33°39.1′		34°10.3′	38°04.5′	47°35.1′	
14	260°57.9′	N 25°08.2′	10.4′	-4.9′	54.7′	87°07.8′	85°25.5′	33°09.1′		34°35.2′	38°29.6′	48°05.1′	
15	275°27.4′	N 25°03.2′	10.4′	-5.1′	54.8′	86°37.6′	84°58.8′	32°39.1′		35°00.2′	38°54.7′	48°35.0′	
16	289°56.8′	N 24°58.2′	10.5′	-5.2′	54.8′	86°07.3′	84°32.1′	32°09.1′	5°07.9′	35°25.3′	39°20.0′	49°05.0′	
17	304°26.3′	N 24°53.0′	10.5′	-5.3′	54.8′	85°37.1′	84°05.3′	31°39.1′	5°35.2′	35°50.6′	39°45.4′	49°35.0′	
18	318°55.8′	N 24°47.7′	10.5′	-5.4′	54.8′	85°06.8′	83°38.5′	31°09.1′	6°03.1′	36°16.0′	40°10.9′	50°05.0′	
19	333°25.3′	N 24°42.3′	10.5′	-5.6′	54.8′	84°36.5′	83°11.7′	30°39.1′	6°31.3′	36°41.5′	40°36.5′	50°35.0′	
20	347°54.8′	N 24°36.7′	10.6′	-5.7′	54.9′	84°06.1′	82°44.9′	30°09.0′	6°59.8′	37°07.2′	41°02.2′	51°05.1′	
21	2°24.4′	N 24°31.0′	10.6′	-5.8′	54.9′	83°35.8′	82°18.1′	29°38.9′	7°28.6′	37°33.0′	41°28.0′	51°35.2′	
22	16°54.0′	N 24°25.2′	10.6′	-5.9′	54.9′	83°05.4′	81°51.3′	29°08.9′	7°57.7′	37°58.9′	41°54.0′	52°05.4′	
23	31°23.6′	N 24°19.3′	10.6′	-6.0′	54.9′	82°35.0′	81°24.5′	28°38.8′	8°26.9′	38°24.9′	42°20.0′	52°35.5′	
Mer. pass. 20 h 50 m SD 14.9′ phase 73%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°24.3′	N 89°21.7′
Rigil Kent	−0.0	139°43.0′	S 60°55.4′	Adhara	+1.5	255°07.5′	S 29°00.4′	Achernar	+0.5	335°22.4′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.8′	S 60°28.6′	Canopus	−0.6	263°53.3′	S 52°42.7′				

Monday 14 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	171°35.6′	177°40.1′	S 2°37.6′	222°54.1′	S 15°52.0′	183°09.6′	S 6°02.3′	208°39.0′	S 15°35.8′	223°10.7′	S 19°47.4′
1	186°38.1′	192°40.3′	S 2°36.6′	237°54.2′	S 15°51.7′	198°11.5′	S 6°02.1′	223°41.2′	S 15°35.8′	238°11.2′	S 19°47.0′
2	201°40.5′	207°40.4′	S 2°35.6′	252°54.2′	S 15°51.3′	213°13.4′	S 6°01.8′	238°43.4′	S 15°35.7′	253°11.8′	S 19°46.5′
3	216°43.0′	222°40.6′	S 2°34.6′	267°54.2′	S 15°51.0′	228°15.3′	S 6°01.6′	253°45.6′	S 15°35.6′	268°12.3′	S 19°46.1′
4	231°45.5′	237°40.8′	S 2°33.7′	282°54.2′	S 15°50.7′	243°17.2′	S 6°01.4′	268°47.8′	S 15°35.5′	283°12.8′	S 19°45.7′
5	246°47.9′	252°40.9′	S 2°32.7′	297°54.3′	S 15°50.4′	258°19.1′	S 6°01.2′	283°50.0′	S 15°35.4′	298°13.4′	S 19°45.2′
6	261°50.4′	267°41.1′	S 2°31.7′	312°54.3′	S 15°50.1′	273°21.0′	S 6°00.9′	298°52.2′	S 15°35.4′	313°13.9′	S 19°44.8′
7	276°52.8′	282°41.3′	S 2°30.7′	327°54.3′	S 15°49.7′	288°23.0′	S 6°00.7′	313°54.4′	S 15°35.3′	328°14.4′	S 19°44.4′
8	291°55.3′	297°41.5′	S 2°29.7′	342°54.3′	S 15°49.4′	303°24.9′	S 6°00.5′	328°56.6′	S 15°35.2′	343°14.9′	S 19°43.9′
9	306°57.8′	312°41.6′	S 2°28.7′	357°54.3′	S 15°49.1′	318°26.8′	S 6°00.2′	343°58.8′	S 15°35.1′	358°15.5′	S 19°43.5′
10	322°00.2′	327°41.8′	S 2°27.7′	12°54.3′	S 15°48.8′	333°28.7′	S 5°60.0′	359°01.0′	S 15°35.0′	13°16.0′	S 19°43.0′
11	337°02.7′	342°42.0′	S 2°26.8′	27°54.4′	S 15°48.5′	348°30.6′	S 5°59.8′	14°03.2′	S 15°35.0′	28°16.5′	S 19°42.6′
12	352°05.2′	357°42.2′	S 2°25.8′	42°54.4′	S 15°48.1′	3°32.5′	S 5°59.5′	29°05.4′	S 15°34.9′	43°17.0′	S 19°42.2′
13	7°07.6′	12°42.3′	S 2°24.8′	57°54.4′	S 15°47.8′	18°34.4′	S 5°59.3′	44°07.6′	S 15°34.8′	58°17.6′	S 19°41.7′
14	22°10.1′	27°42.5′	S 2°23.8′	72°54.4′	S 15°47.5′	33°36.3′	S 5°59.1′	59°09.8′	S 15°34.7′	73°18.1′	S 19°41.3′
15	37°12.6′	42°42.7′	S 2°22.8′	87°54.4′	S 15°47.1′	48°38.2′	S 5°58.8′	74°12.0′	S 15°34.6′	88°18.6′	S 19°40.9′
16	52°15.0′	57°42.8′	S 2°21.8′	102°54.4′	S 15°46.8′	63°40.1′	S 5°58.6′	89°14.2′	S 15°34.6′	103°19.2′	S 19°40.4′
17	67°17.5′	72°43.0′	S 2°20.8′	117°54.4′	S 15°46.5′	78°42.0′	S 5°58.4′	104°16.4′	S 15°34.5′	118°19.7′	S 19°40.0′
18	82°19.9′	87°43.2′	S 2°19.8′	132°54.4′	S 15°46.2′	93°43.9′	S 5°58.1′	119°18.6′	S 15°34.4′	133°20.2′	S 19°39.5′
19	97°22.4′	102°43.4′	S 2°18.9′	147°54.4′	S 15°45.8′	108°45.8′	S 5°57.9′	134°20.8′	S 15°34.3′	148°20.8′	S 19°39.1′
20	112°24.9′	117°43.5′	S 2°17.9′	162°54.5′	S 15°45.5′	123°47.7′	S 5°57.7′	149°23.0′	S 15°34.2′	163°21.3′	S 19°38.7′
21	127°27.3′	132°43.7′	S 2°16.9′	177°54.5′	S 15°45.2′	138°49.6′	S 5°57.4′	164°25.2′	S 15°34.2′	178°21.8′	S 19°38.2′
22	142°29.8′	147°43.9′	S 2°15.9′	192°54.5′	S 15°44.8′	153°51.5′	S 5°57.2′	179°27.4′	S 15°34.1′	193°22.3′	S 19°37.8′
23	157°32.3′	162°44.1′	S 2°14.9′	207°54.5′	S 15°44.5′	168°53.4′	S 5°57.0′	194°29.6′	S 15°34.0′	208°22.9′	S 19°37.3′
		SD 16.1′ *d* 1.0′		*v* 0.0′ *d* 0.3′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.4′	
Mer. pass.		12 h 9 m 11 s		9 h 8 m		11 h 46 m		10 h 4 m		9 h 7 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Acrux	−Spica	−Arcturus	−Regulus	+Pollux	+Procyon	+Betelgeuse	+Capella
0	45°53.2′	N 24°13.3′	10.7′	-6.2′	54.9′	99°42.7′	82°04.5′	80°57.6′	28°08.7′	8°56.3′		38°51.0′	42°46.1′
1	60°22.9′	N 24°07.1′	10.7′	-6.3′	54.9′	99°25.1′	81°34.1′	80°30.8′	27°38.6′	9°25.9′		39°17.2′	43°12.4′
2	74°52.6′	N 24°00.8′	10.7′	-6.4′	55.0′	99°07.4′	81°03.6′	80°03.9′	27°08.5′	9°55.5′		39°43.6′	43°38.7′
3	89°22.3′	N 23°54.4′	10.7′	-6.5′	55.0′	98°49.7′	80°33.1′	79°37.0′	26°38.3′	10°25.3′		40°10.0′	44°05.1′
4	103°52.0′	N 23°47.8′	10.8′	-6.7′	55.0′	98°32.0′	80°02.6′	79°10.1′	26°08.2′	10°55.2′		40°36.6′	44°31.7′
5	118°21.8′	N 23°41.2′	10.8′	-6.8′	55.0′	98°14.2′	79°32.0′	78°43.2′	25°38.1′	11°25.2′		41°03.2′	44°58.3′
6	132°51.6′	N 23°34.4′	10.8′	-6.9′	55.1′	97°56.3′	79°01.5′	78°16.3′	25°07.9′	11°55.2′		41°30.0′	45°25.0′
7	147°21.4′	N 23°27.5′	10.9′	-7.0′	55.1′	97°38.5′	78°30.9′	77°49.4′	24°37.8′	12°25.3′		41°56.8′	45°51.8′
8	161°51.3′	N 23°20.5′	10.9′	-7.1′	55.1′	97°20.6′	78°00.2′	77°22.5′	24°07.6′	12°55.5′		42°23.8′	46°18.7′
9	176°21.2′	N 23°13.4′	10.9′	-7.3′	55.1′	97°02.6′	77°29.6′	76°55.6′	23°37.5′	13°25.8′		42°50.8′	46°45.6′
10	190°51.1′	N 23°06.1′	11.0′	-7.4′	55.1′	96°44.6′	76°58.9′	76°28.6′	23°07.3′	13°56.1′	23°41.2′	43°17.9′	47°12.7′
11	205°21.1′	N 22°58.7′	11.0′	-7.5′	55.2′	96°26.6′	76°28.2′	76°01.7′	22°37.2′	14°26.5′	23°56.6′	43°45.1′	47°39.8′
12	219°51.1′	N 22°51.3′	11.0′	-7.6′	55.2′	96°08.5′	75°57.5′	75°34.7′	22°07.0′	14°56.9′	24°12.5′	44°12.4′	48°07.0′
13	234°21.1′	N 22°43.7′	11.0′	-7.7′	55.2′	95°50.5′	75°26.7′	75°07.7′	21°36.9′	15°27.4′	24°28.8′	44°39.8′	48°34.3′
14	248°51.1′	N 22°35.9′	11.1′	-7.8′	55.2′	95°32.3′	74°55.9′	74°40.8′	21°06.7′	15°58.0′	24°45.6′	45°07.3′	49°01.6′
15	263°21.2′	N 22°28.1′	11.1′	-7.9′	55.2′	95°14.2′	74°25.1′	74°13.8′	20°36.6′	16°28.6′	25°02.9′	45°34.8′	49°29.1′
16	277°51.3′	N 22°20.2′	11.1′	-8.1′	55.3′	94°56.0′	73°54.3′	73°46.8′	20°06.5′	16°59.2′	25°20.5′	46°02.5′	49°56.6′
17	292°21.5′	N 22°12.1′	11.2′	-8.2′	55.3′	94°37.7′	73°23.4′	73°19.8′	19°36.4′	17°29.9′	25°38.6′	46°30.2′	50°24.2′
18	306°51.6′	N 22°03.9′	11.2′	-8.3′	55.3′	94°19.5′	72°52.5′	72°52.8′	19°06.3′	18°00.6′	25°57.0′	46°57.9′	50°51.8′
19	321°21.8′	N 21°55.6′	11.2′	-8.4′	55.3′	94°01.2′	72°21.6′	72°25.8′	18°36.2′	18°31.4′	26°15.8′	47°25.8′	51°19.6′
20	335°52.1′	N 21°47.2′	11.3′	-8.5′	55.4′	93°42.9′	71°50.6′	71°58.8′	18°06.2′	19°02.2′	26°35.1′	47°53.7′	51°47.4′
21	350°22.4′	N 21°38.7′	11.3′	-8.6′	55.4′	93°24.5′	71°19.6′	71°31.8′	17°36.2′	19°33.0′	26°54.6′	48°21.8′	52°15.2′
22	4°52.7′	N 21°30.1′	11.3′	-8.7′	55.4′	93°06.1′	70°48.6′	71°04.8′	17°06.2′	20°03.9′	27°14.5′	48°49.8′	52°43.2′
23	19°23.0′	N 21°21.3′	11.4′	-8.8′	55.4′	92°47.7′	70°17.6′	70°37.8′	16°36.2′	20°34.9′	27°34.8′	49°18.0′	53°11.2′
Mer. pass. 21 h 40 m SD 15.0′ phase 81%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°24.7′	N 89°21.7′
Rigil Kent	−0.0	139°43.0′	S 60°55.4′	Adhara	+1.5	255°07.5′	S 29°00.4′	Achernar	+0.5	335°22.4′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.8′	S 60°28.6′	Canopus	−0.6	263°53.3′	S 52°42.7′				

Tuesday 15 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	172°34.7′	177°44.2′	S 2°13.9′	222°54.5′	S 15°44.2′	183°55.3′	S 5°56.7′	209°31.8′	S 15°33.9′	223°23.4′	S 19°36.9′
1	187°37.2′	192°44.4′	S 2°12.9′	237°54.5′	S 15°43.8′	198°57.2′	S 5°56.5′	224°34.0′	S 15°33.8′	238°23.9′	S 19°36.5′
2	202°39.7′	207°44.6′	S 2°12.0′	252°54.5′	S 15°43.5′	213°59.2′	S 5°56.3′	239°36.2′	S 15°33.8′	253°24.5′	S 19°36.0′
3	217°42.1′	222°44.8′	S 2°11.0′	267°54.5′	S 15°43.1′	229°01.1′	S 5°56.0′	254°38.4′	S 15°33.7′	268°25.0′	S 19°35.6′
4	232°44.6′	237°44.9′	S 2°10.0′	282°54.5′	S 15°42.8′	244°03.0′	S 5°55.8′	269°40.6′	S 15°33.6′	283°25.5′	S 19°35.1′
5	247°47.1′	252°45.1′	S 2°09.0′	297°54.5′	S 15°42.5′	259°04.9′	S 5°55.6′	284°42.8′	S 15°33.5′	298°26.1′	S 19°34.7′
6	262°49.5′	267°45.3′	S 2°08.0′	312°54.5′	S 15°42.1′	274°06.8′	S 5°55.3′	299°45.0′	S 15°33.4′	313°26.6′	S 19°34.2′
7	277°52.0′	282°45.5′	S 2°07.0′	327°54.5′	S 15°41.8′	289°08.7′	S 5°55.1′	314°47.2′	S 15°33.4′	328°27.1′	S 19°33.8′
8	292°54.4′	297°45.6′	S 2°06.0′	342°54.5′	S 15°41.4′	304°10.6′	S 5°54.9′	329°49.4′	S 15°33.3′	343°27.7′	S 19°33.4′
9	307°56.9′	312°45.8′	S 2°05.0′	357°54.5′	S 15°41.1′	319°12.5′	S 5°54.6′	344°51.6′	S 15°33.2′	358°28.2′	S 19°32.9′
10	322°59.4′	327°46.0′	S 2°04.1′	12°54.5′	S 15°40.8′	334°14.4′	S 5°54.4′	359°53.8′	S 15°33.1′	13°28.7′	S 19°32.5′
11	338°01.8′	342°46.2′	S 2°03.1′	27°54.5′	S 15°40.4′	349°16.3′	S 5°54.2′	14°56.0′	S 15°33.0′	28°29.2′	S 19°32.0′
12	353°04.3′	357°46.3′	S 2°02.1′	42°54.5′	S 15°40.1′	4°18.2′	S 5°53.9′	29°58.2′	S 15°33.0′	43°29.8′	S 19°31.6′
13	8°06.8′	12°46.5′	S 2°01.1′	57°54.5′	S 15°39.7′	19°20.1′	S 5°53.7′	45°00.4′	S 15°32.9′	58°30.3′	S 19°31.1′
14	23°09.2′	27°46.7′	S 2°00.1′	72°54.5′	S 15°39.4′	34°22.0′	S 5°53.5′	60°02.6′	S 15°32.8′	73°30.8′	S 19°30.7′
15	38°11.7′	42°46.9′	S 1°59.1′	87°54.5′	S 15°39.0′	49°23.9′	S 5°53.2′	75°04.8′	S 15°32.7′	88°31.4′	S 19°30.2′
16	53°14.2′	57°47.1′	S 1°58.1′	102°54.5′	S 15°38.7′	64°25.8′	S 5°53.0′	90°07.0′	S 15°32.6′	103°31.9′	S 19°29.8′
17	68°16.6′	72°47.2′	S 1°57.1′	117°54.5′	S 15°38.3′	79°27.7′	S 5°52.8′	105°09.2′	S 15°32.6′	118°32.4′	S 19°29.3′
18	83°19.1′	87°47.4′	S 1°56.2′	132°54.5′	S 15°38.0′	94°29.6′	S 5°52.5′	120°11.4′	S 15°32.5′	133°33.0′	S 19°28.9′
19	98°21.6′	102°47.6′	S 1°55.2′	147°54.5′	S 15°37.6′	109°31.6′	S 5°52.3′	135°13.6′	S 15°32.4′	148°33.5′	S 19°28.5′
20	113°24.0′	117°47.8′	S 1°54.2′	162°54.5′	S 15°37.3′	124°33.5′	S 5°52.1′	150°15.8′	S 15°32.3′	163°34.0′	S 19°28.0′
21	128°26.5′	132°47.9′	S 1°53.2′	177°54.5′	S 15°36.9′	139°35.4′	S 5°51.8′	165°18.0′	S 15°32.2′	178°34.6′	S 19°27.6′
22	143°28.9′	147°48.1′	S 1°52.2′	192°54.4′	S 15°36.6′	154°37.3′	S 5°51.6′	180°20.2′	S 15°32.2′	193°35.1′	S 19°27.1′
23	158°31.4′	162°48.3′	S 1°51.2′	207°54.4′	S 15°36.2′	169°39.2′	S 5°51.4′	195°22.4′	S 15°32.1′	208°35.6′	S 19°26.7′
		SD 16.1′ *d* 1.0′		*v* -0.0′ *d* 0.3′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.4′	
Mer. pass.		12 h 8 m 55 s		9 h 8 m		11 h 43 m		10 h 0 m		9 h 6 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Acrux	−Arcturus	−Spica	−Regulus	+Pollux	+Procyon	+Betelgeuse	+Sirius
0	33°53.4′	N 21°12.5′	11.4′	-9.0′	55.5′	92°29.3′	70°10.8′	69°46.5′	16°06.3′	21°05.8′	27°55.4′	49°46.2′	52°36.7′
1	48°23.8′	N 21°03.5′	11.5′	-9.1′	55.5′	92°10.8′	69°43.8′	69°15.5′	15°36.5′	21°36.9′	28°16.3′	50°14.5′	52°52.4′
2	62°54.3′	N 20°54.5′	11.5′	-9.2′	55.5′	91°52.3′	69°16.8′	68°44.3′	15°06.7′	22°07.9′	28°37.5′	50°42.9′	53°08.4′
3	77°24.8′	N 20°45.3′	11.5′	-9.3′	55.5′	91°33.8′	68°49.8′	68°13.2′	14°37.0′	22°39.0′	28°59.0′	51°11.3′	53°24.5′
4	91°55.3′	N 20°36.0′	11.6′	-9.4′	55.5′	91°15.3′	68°22.8′	67°42.0′	14°07.4′	23°10.1′	29°20.8′	51°39.8′	53°40.7′
5	106°25.8′	N 20°26.6′	11.6′	-9.5′	55.6′	90°56.8′	67°55.8′	67°10.8′	13°37.8′	23°41.3′	29°42.9′	52°08.3′	53°57.1′
6	120°56.4′	N 20°17.1′	11.6′	-9.6′	55.6′	90°38.2′	67°28.9′	66°39.6′	13°08.4′	24°12.5′	30°05.2′	52°37.0′	54°13.7′
7	135°27.1′	N 20°07.5′	11.7′	-9.7′	55.6′	90°19.6′	67°01.9′	66°08.3′	12°39.1′	24°43.7′	30°27.8′	53°05.7′	54°30.5′
8	149°57.7′	N 19°57.8′	11.7′	-9.8′	55.6′	90°01.0′	66°34.9′	65°37.0′	12°09.9′	25°15.0′	30°50.7′	53°34.4′	54°47.4′
9	164°28.4′	N 19°48.0′	11.7′	-9.9′	55.7′	89°42.3′	66°07.9′	65°05.7′	11°40.9′	25°46.3′	31°13.8′	54°03.2′	55°04.5′
10	178°59.1′	N 19°38.1′	11.8′	-10.0′	55.7′	89°23.7′	65°41.0′	64°34.3′	11°12.1′	26°17.6′	31°37.1′	54°32.1′	55°21.7′
11	193°29.9′	N 19°28.1′	11.8′	-10.1′	55.7′	89°05.0′	65°14.0′	64°03.0′	10°43.5′	26°49.0′	32°00.7′	55°01.0′	55°39.1′
12	208°00.7′	N 19°18.0′	11.8′	-10.2′	55.7′	88°46.4′	64°47.1′	63°31.6′	10°15.2′	27°20.4′	32°24.5′	55°30.0′	55°56.7′
13	222°31.5′	N 19°07.7′	11.9′	-10.3′	55.8′	88°27.7′	64°20.1′	63°00.1′	9°47.2′	27°51.8′	32°48.5′	55°59.1′	56°14.4′
14	237°02.4′	N 18°57.4′	11.9′	-10.4′	55.8′	88°08.9′	63°53.2′	62°28.6′	9°19.5′	28°23.3′	33°12.7′	56°28.2′	56°32.2′
15	251°33.3′	N 18°47.0′	11.9′	-10.5′	55.8′	87°50.2′	63°26.3′	61°57.1′	8°52.2′	28°54.8′	33°37.2′	56°57.4′	56°50.2′
16	266°04.2′	N 18°36.5′	12.0′	-10.6′	55.8′	87°31.5′	62°59.4′	61°25.6′	8°25.3′	29°26.4′	34°01.8′	57°26.6′	57°08.4′
17	280°35.2′	N 18°25.9′	12.0′	-10.7′	55.9′	87°12.8′	62°32.5′	60°54.1′	7°59.1′	29°58.0′	34°26.6′	57°55.9′	57°26.6′
18	295°06.2′	N 18°15.1′	12.0′	-10.8′	55.9′	86°54.0′	62°05.6′	60°22.5′	7°33.5′	30°29.6′	34°51.6′	58°25.2′	57°45.1′
19	309°37.3′	N 18°04.3′	12.1′	-10.9′	55.9′	86°35.2′	61°38.8′	59°50.8′		31°01.3′	35°16.8′	58°54.6′	58°03.6′
20	324°08.3′	N 17°53.4′	12.1′	-11.0′	56.0′	86°16.5′	61°12.0′	59°19.2′		31°33.0′	35°42.2′	59°24.1′	58°22.3′
21	338°39.4′	N 17°42.4′	12.1′	-11.1′	56.0′	85°57.7′	60°45.2′	58°47.5′		32°04.7′	36°07.7′	59°53.6′	58°41.2′
22	353°10.6′	N 17°31.3′	12.2′	-11.2′	56.0′	85°38.9′	60°18.4′	58°15.8′		32°36.4′	36°33.4′	60°23.1′	59°00.2′
23	7°41.7′	N 17°20.1′	12.2′	-11.3′	56.0′	85°20.1′	59°51.6′	57°44.1′		33°08.2′	36°59.3′	60°52.7′	59°19.3′
Mer. pass. 22 h 28 m SD 15.1′ phase 88%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.6′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.3′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°25.1′	N 89°21.7′
Rigil Kent	−0.0	139°43.0′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.4′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.8′	S 60°28.6′	Canopus	−0.6	263°53.3′	S 52°42.7′				

Wednesday 16 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	173°33.9′	177°48.5′	S 1°50.2′	222°54.4′	S 15°35.9′	184°41.1′	S 5°51.1′	210°24.6′	S 15°32.0′	223°36.2′	S 19°26.2′
1	188°36.3′	192°48.6′	S 1°49.2′	237°54.4′	S 15°35.5′	199°43.0′	S 5°50.9′	225°26.9′	S 15°31.9′	238°36.7′	S 19°25.8′
2	203°38.8′	207°48.8′	S 1°48.3′	252°54.4′	S 15°35.2′	214°44.9′	S 5°50.7′	240°29.1′	S 15°31.8′	253°37.2′	S 19°25.3′
3	218°41.3′	222°49.0′	S 1°47.3′	267°54.4′	S 15°34.8′	229°46.8′	S 5°50.5′	255°31.3′	S 15°31.8′	268°37.8′	S 19°24.9′
4	233°43.7′	237°49.2′	S 1°46.3′	282°54.4′	S 15°34.4′	244°48.7′	S 5°50.2′	270°33.5′	S 15°31.7′	283°38.3′	S 19°24.4′
5	248°46.2′	252°49.4′	S 1°45.3′	297°54.4′	S 15°34.1′	259°50.6′	S 5°50.0′	285°35.7′	S 15°31.6′	298°38.8′	S 19°24.0′
6	263°48.7′	267°49.5′	S 1°44.3′	312°54.4′	S 15°33.7′	274°52.5′	S 5°49.8′	300°37.9′	S 15°31.5′	313°39.4′	S 19°23.5′
7	278°51.1′	282°49.7′	S 1°43.3′	327°54.3′	S 15°33.4′	289°54.4′	S 5°49.5′	315°40.1′	S 15°31.4′	328°39.9′	S 19°23.1′
8	293°53.6′	297°49.9′	S 1°42.3′	342°54.3′	S 15°33.0′	304°56.3′	S 5°49.3′	330°42.3′	S 15°31.4′	343°40.4′	S 19°22.6′
9	308°56.0′	312°50.1′	S 1°41.3′	357°54.3′	S 15°32.6′	319°58.2′	S 5°49.1′	345°44.5′	S 15°31.3′	358°41.0′	S 19°22.2′
10	323°58.5′	327°50.2′	S 1°40.4′	12°54.3′	S 15°32.3′	335°00.1′	S 5°48.8′	0°46.7′	S 15°31.2′	13°41.5′	S 19°21.7′
11	339°01.0′	342°50.4′	S 1°39.4′	27°54.3′	S 15°31.9′	350°02.1′	S 5°48.6′	15°48.9′	S 15°31.1′	28°42.1′	S 19°21.2′
12	354°03.4′	357°50.6′	S 1°38.4′	42°54.3′	S 15°31.6′	5°04.0′	S 5°48.4′	30°51.1′	S 15°31.1′	43°42.6′	S 19°20.8′
13	9°05.9′	12°50.8′	S 1°37.4′	57°54.2′	S 15°31.2′	20°05.9′	S 5°48.1′	45°53.3′	S 15°31.0′	58°43.1′	S 19°20.3′
14	24°08.4′	27°51.0′	S 1°36.4′	72°54.2′	S 15°30.8′	35°07.8′	S 5°47.9′	60°55.5′	S 15°30.9′	73°43.7′	S 19°19.9′
15	39°10.8′	42°51.1′	S 1°35.4′	87°54.2′	S 15°30.5′	50°09.7′	S 5°47.7′	75°57.7′	S 15°30.8′	88°44.2′	S 19°19.4′
16	54°13.3′	57°51.3′	S 1°34.4′	102°54.2′	S 15°30.1′	65°11.6′	S 5°47.4′	90°59.9′	S 15°30.7′	103°44.7′	S 19°19.0′
17	69°15.8′	72°51.5′	S 1°33.4′	117°54.2′	S 15°29.7′	80°13.5′	S 5°47.2′	106°02.1′	S 15°30.7′	118°45.3′	S 19°18.5′
18	84°18.2′	87°51.7′	S 1°32.4′	132°54.1′	S 15°29.4′	95°15.4′	S 5°47.0′	121°04.3′	S 15°30.6′	133°45.8′	S 19°18.1′
19	99°20.7′	102°51.9′	S 1°31.5′	147°54.1′	S 15°29.0′	110°17.3′	S 5°46.7′	136°06.5′	S 15°30.5′	148°46.3′	S 19°17.6′
20	114°23.2′	117°52.0′	S 1°30.5′	162°54.1′	S 15°28.6′	125°19.2′	S 5°46.5′	151°08.7′	S 15°30.4′	163°46.9′	S 19°17.2′
21	129°25.6′	132°52.2′	S 1°29.5′	177°54.1′	S 15°28.2′	140°21.1′	S 5°46.3′	166°10.9′	S 15°30.3′	178°47.4′	S 19°16.7′
22	144°28.1′	147°52.4′	S 1°28.5′	192°54.1′	S 15°27.9′	155°23.0′	S 5°46.0′	181°13.1′	S 15°30.3′	193°48.0′	S 19°16.2′
23	159°30.5′	162°52.6′	S 1°27.5′	207°54.0′	S 15°27.5′	170°24.9′	S 5°45.8′	196°15.3′	S 15°30.2′	208°48.5′	S 19°15.8′
		SD 16.1′ *d* 1.0′		*v* -0.0′ *d* 0.4′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.5′	
Mer. pass.		12 h 8 m 38 s		9 h 8 m		11 h 40 m		9 h 57 m		9 h 5 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Acrux	−Arcturus	−Spica	−Regulus	+Pollux	+Procyon	+Sirius	+Betelgeuse
0	22°13.0′	N 17°08.9′	12.2′	-11.4′	56.1′	85°01.3′	59°24.9′	57°12.3′		33°40.1′	37°25.3′	59°38.5′	61°22.4′
1	36°44.2′	N 16°57.5′	12.3′	-11.5′	56.1′	84°42.5′	58°58.2′	56°40.5′		34°11.9′	37°51.5′	59°57.9′	61°52.1′
2	51°15.5′	N 16°46.0′	12.3′	-11.6′	56.1′	84°23.7′	58°31.5′	56°08.7′		34°43.8′	38°17.9′	60°17.4′	62°21.9′
3	65°46.8′	N 16°34.5′	12.3′	-11.6′	56.1′	84°05.0′	58°04.8′	55°36.8′		35°15.8′	38°44.4′	60°37.0′	62°51.7′
4	80°18.1′	N 16°22.8′	12.4′	-11.7′	56.2′	83°46.2′	57°38.2′	55°04.9′		35°47.7′	39°11.0′	60°56.8′	63°21.5′
5	94°49.5′	N 16°11.1′	12.4′	-11.8′	56.2′	83°27.4′	57°11.6′	54°33.0′		36°19.7′	39°37.8′	61°16.6′	63°51.4′
6	109°20.8′	N 15°59.3′	12.4′	-11.9′	56.2′	83°08.6′	56°45.0′	54°01.0′		36°51.8′	40°04.7′	61°36.6′	64°21.4′
7	123°52.3′	N 15°47.4′	12.5′	-12.0′	56.2′	82°49.8′	56°18.5′	53°29.0′		37°23.8′	40°31.7′	61°56.7′	64°51.4′
8	138°23.7′	N 15°35.4′	12.5′	-12.1′	56.3′	82°31.0′	55°52.0′	52°57.0′		37°55.9′	40°58.8′	62°17.0′	65°21.5′
9	152°55.2′	N 15°23.3′	12.5′	-12.2′	56.3′	82°12.3′	55°25.6′	52°25.0′		38°28.1′	41°26.1′	62°37.3′	65°51.6′
10	167°26.7′	N 15°11.1′	12.5′	-12.2′	56.3′	81°53.5′	54°59.2′	51°52.9′		39°00.2′	41°53.6′	62°57.8′	66°21.7′
11	181°58.3′	N 14°58.9′	12.6′	-12.3′	56.3′	81°34.8′	54°32.8′	51°20.8′		39°32.4′	42°21.1′	63°18.3′	66°51.9′
12	196°29.8′	N 14°46.6′	12.6′	-12.4′	56.4′	81°16.0′	54°06.5′	50°48.7′		40°04.7′	42°48.7′	63°39.0′	67°22.2′
13	211°01.4′	N 14°34.2′	12.6′	-12.5′	56.4′	80°57.3′	53°40.2′	50°16.5′		40°37.0′	43°16.5′	63°59.8′	67°52.5′
14	225°33.0′	N 14°21.7′	12.6′	-12.6′	56.4′	80°38.6′	53°14.0′	49°44.3′		41°09.3′	43°44.4′	64°20.7′	68°22.8′
15	240°04.7′	N 14°09.1′	12.7′	-12.6′	56.5′	80°19.9′	52°47.9′	49°12.1′		41°41.6′	44°12.4′	64°41.7′	68°53.2′
16	254°36.4′	N 13°56.5′	12.7′	-12.7′	56.5′	80°01.2′	52°21.7′	48°39.9′		42°14.0′	44°40.5′	65°02.8′	69°23.6′
17	269°08.1′	N 13°43.8′	12.7′	-12.8′	56.5′	79°42.5′	51°55.7′	48°07.6′		42°46.4′	45°08.6′	65°24.0′	69°54.1′
18	283°39.8′	N 13°31.0′	12.8′	-12.9′	56.5′	79°23.9′	51°29.7′	47°35.3′	8°13.1′	43°18.8′	45°36.9′	65°45.3′	70°24.6′
19	298°11.5′	N 13°18.1′	12.8′	-12.9′	56.6′	79°05.2′	51°03.8′	47°02.9′	8°40.4′	43°51.3′	46°05.3′	66°06.7′	70°55.2′
20	312°43.3′	N 13°05.1′	12.8′	-13.0′	56.6′	78°46.6′	50°37.9′	46°30.6′	9°08.2′	44°23.8′	46°33.8′	66°28.2′	71°25.8′
21	327°15.1′	N 12°52.1′	12.8′	-13.1′	56.6′	78°28.0′	50°12.1′	45°58.2′	9°36.7′	44°56.4′	47°02.4′	66°49.8′	71°56.4′
22	341°46.9′	N 12°39.0′	12.8′	-13.2′	56.6′	78°09.5′	49°46.4′	45°25.8′	10°05.5′	45°28.9′	47°31.1′	67°11.6′	72°27.1′
23	356°18.8′	N 12°25.9′	12.9′	-13.2′	56.7′	77°50.9′	49°20.8′	44°53.3′	10°34.8′	46°01.5′	47°59.9′	67°33.3′	72°57.8′
Mer. pass. 23 h 15 m SD 15.3′ phase 94%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.5′	Spica	+1.0	158°24.5′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.3′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°25.5′	N 89°21.7′
Rigil Kent	−0.0	139°43.0′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.4′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.8′	S 60°28.6′	Canopus	−0.6	263°53.3′	S 52°42.7′				

Thursday 17 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	174°33.0′	177°52.7′	S 1°26.5′	222°54.0′	S 15°27.1′	185°26.8′	S 5°45.6′	211°17.5′	S 15°30.1′	223°49.0′	S 19°15.3′
1	189°35.5′	192°52.9′	S 1°25.5′	237°54.0′	S 15°26.7′	200°28.7′	S 5°45.3′	226°19.7′	S 15°30.0′	238°49.6′	S 19°14.9′
2	204°37.9′	207°53.1′	S 1°24.5′	252°53.9′	S 15°26.4′	215°30.7′	S 5°45.1′	241°21.9′	S 15°29.9′	253°50.1′	S 19°14.4′
3	219°40.4′	222°53.3′	S 1°23.6′	267°53.9′	S 15°26.0′	230°32.6′	S 5°44.9′	256°24.2′	S 15°29.9′	268°50.6′	S 19°14.0′
4	234°42.9′	237°53.5′	S 1°22.6′	282°53.9′	S 15°25.6′	245°34.5′	S 5°44.6′	271°26.4′	S 15°29.8′	283°51.2′	S 19°13.5′
5	249°45.3′	252°53.6′	S 1°21.6′	297°53.9′	S 15°25.2′	260°36.4′	S 5°44.4′	286°28.6′	S 15°29.7′	298°51.7′	S 19°13.0′
6	264°47.8′	267°53.8′	S 1°20.6′	312°53.8′	S 15°24.9′	275°38.3′	S 5°44.2′	301°30.8′	S 15°29.6′	313°52.2′	S 19°12.6′
7	279°50.3′	282°54.0′	S 1°19.6′	327°53.8′	S 15°24.5′	290°40.2′	S 5°43.9′	316°33.0′	S 15°29.6′	328°52.8′	S 19°12.1′
8	294°52.7′	297°54.2′	S 1°18.6′	342°53.8′	S 15°24.1′	305°42.1′	S 5°43.7′	331°35.2′	S 15°29.5′	343°53.3′	S 19°11.7′
9	309°55.2′	312°54.4′	S 1°17.6′	357°53.8′	S 15°23.7′	320°44.0′	S 5°43.5′	346°37.4′	S 15°29.4′	358°53.9′	S 19°11.2′
10	324°57.6′	327°54.5′	S 1°16.6′	12°53.7′	S 15°23.3′	335°45.9′	S 5°43.2′	1°39.6′	S 15°29.3′	13°54.4′	S 19°10.7′
11	340°00.1′	342°54.7′	S 1°15.7′	27°53.7′	S 15°23.0′	350°47.8′	S 5°43.0′	16°41.8′	S 15°29.2′	28°54.9′	S 19°10.3′
12	355°02.6′	357°54.9′	S 1°14.7′	42°53.7′	S 15°22.6′	5°49.7′	S 5°42.8′	31°44.0′	S 15°29.2′	43°55.5′	S 19°09.8′
13	10°05.0′	12°55.1′	S 1°13.7′	57°53.6′	S 15°22.2′	20°51.6′	S 5°42.6′	46°46.2′	S 15°29.1′	58°56.0′	S 19°09.4′
14	25°07.5′	27°55.3′	S 1°12.7′	72°53.6′	S 15°21.8′	35°53.5′	S 5°42.3′	61°48.4′	S 15°29.0′	73°56.6′	S 19°08.9′
15	40°10.0′	42°55.5′	S 1°11.7′	87°53.6′	S 15°21.4′	50°55.4′	S 5°42.1′	76°50.6′	S 15°28.9′	88°57.1′	S 19°08.4′
16	55°12.4′	57°55.6′	S 1°10.7′	102°53.5′	S 15°21.0′	65°57.4′	S 5°41.9′	91°52.8′	S 15°28.8′	103°57.6′	S 19°08.0′
17	70°14.9′	72°55.8′	S 1°09.7′	117°53.5′	S 15°20.6′	80°59.3′	S 5°41.6′	106°55.0′	S 15°28.8′	118°58.2′	S 19°07.5′
18	85°17.4′	87°56.0′	S 1°08.7′	132°53.5′	S 15°20.3′	96°01.2′	S 5°41.4′	121°57.2′	S 15°28.7′	133°58.7′	S 19°07.0′
19	100°19.8′	102°56.2′	S 1°07.7′	147°53.4′	S 15°19.9′	111°03.1′	S 5°41.2′	136°59.4′	S 15°28.6′	148°59.3′	S 19°06.6′
20	115°22.3′	117°56.4′	S 1°06.8′	162°53.4′	S 15°19.5′	126°05.0′	S 5°40.9′	152°01.7′	S 15°28.5′	163°59.8′	S 19°06.1′
21	130°24.8′	132°56.5′	S 1°05.8′	177°53.3′	S 15°19.1′	141°06.9′	S 5°40.7′	167°03.9′	S 15°28.5′	179°00.3′	S 19°05.7′
22	145°27.2′	147°56.7′	S 1°04.8′	192°53.3′	S 15°18.7′	156°08.8′	S 5°40.5′	182°06.1′	S 15°28.4′	194°00.9′	S 19°05.2′
23	160°29.7′	162°56.9′	S 1°03.8′	207°53.3′	S 15°18.3′	171°10.7′	S 5°40.2′	197°08.3′	S 15°28.3′	209°01.4′	S 19°04.7′
		SD 16.1′ *d* 1.0′		*v* -0.0′ *d* 0.4′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.5′	
Mer. pass.		12 h 8 m 20 s		9 h 8 m		11 h 37 m		9 h 53 m		9 h 4 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Hadar	−Acrux	−Arcturus	−Spica	+Regulus	+Pollux	+Procyon	+Sirius
0	10°50.7′	N 12°12.6′	12.9′	-13.3′	56.7′	81°55.7′	77°32.4′	48°55.2′	44°20.8′	11°04.3′	46°34.2′	48°28.8′	67°55.2′
1	25°22.5′	N 11°59.3′	12.9′	-13.4′	56.7′	81°32.3′	77°13.9′	48°29.7′	43°48.3′	11°34.2′	47°06.9′	48°57.7′	68°17.2′
2	39°54.4′	N 11°45.9′	12.9′	-13.4′	56.7′	81°09.0′	76°55.5′	48°04.3′	43°15.8′	12°04.4′	47°39.6′	49°26.8′	68°39.3′
3	54°26.4′	N 11°32.5′	12.9′	-13.5′	56.8′	80°45.6′	76°37.1′	47°39.0′	42°43.2′	12°34.8′	48°12.3′	49°55.9′	69°01.4′
4	68°58.3′	N 11°19.0′	13.0′	-13.6′	56.8′	80°22.3′	76°18.7′	47°13.8′	42°10.6′	13°05.4′	48°45.1′	50°25.1′	69°23.7′
5	83°30.3′	N 11°05.4′	13.0′	-13.6′	56.8′	79°59.0′	76°00.3′	46°48.6′	41°38.0′	13°36.3′	49°17.9′	50°54.4′	69°46.0′
6	98°02.3′	N 10°51.8′	13.0′	-13.7′	56.9′	79°35.6′	75°42.0′	46°23.6′	41°05.4′	14°07.3′	49°50.7′	51°23.8′	70°08.4′
7	112°34.3′	N 10°38.1′	13.0′	-13.8′	56.9′	79°12.3′	75°23.7′	45°58.7′	40°32.7′	14°38.4′	50°23.6′	51°53.3′	70°30.9′
8	127°06.3′	N 10°24.3′	13.0′	-13.8′	56.9′	78°49.0′	75°05.5′	45°33.8′	39°60.0′	15°09.8′	50°56.5′	52°22.8′	70°53.5′
9	141°38.3′	N 10°10.5′	13.0′	-13.9′	56.9′	78°25.7′	74°47.3′	45°09.1′	39°27.3′	15°41.2′	51°29.4′	52°52.4′	71°16.1′
10	156°10.4′	N 9°56.6′	13.1′	-13.9′	57.0′	78°02.4′	74°29.1′	44°44.5′	38°54.5′	16°12.8′	52°02.4′	53°22.1′	71°38.9′
11	170°42.4′	N 9°42.6′	13.1′	-14.0′	57.0′	77°39.1′	74°11.0′	44°20.1′	38°21.7′	16°44.5′	52°35.4′	53°51.9′	72°01.7′
12	185°14.5′	N 9°28.6′	13.1′	-14.1′	57.0′	77°15.8′	73°52.9′	43°55.7′	37°48.9′	17°16.3′	53°08.5′	54°21.7′	72°24.6′
13	199°46.6′	N 9°14.6′	13.1′	-14.1′	57.0′	76°52.6′	73°34.9′	43°31.5′	37°16.1′	17°48.2′	53°41.5′	54°51.6′	72°47.5′
14	214°18.7′	N 9°00.4′	13.1′	-14.2′	57.1′	76°29.3′	73°16.9′	43°07.4′	36°43.3′	18°20.3′	54°14.6′	55°21.6′	73°10.6′
15	228°50.8′	N 8°46.3′	13.1′	-14.2′	57.1′	76°06.1′	72°59.0′	42°43.5′	36°10.4′	18°52.4′	54°47.8′	55°51.6′	73°33.7′
16	243°22.9′	N 8°32.0′	13.1′	-14.3′	57.1′	75°42.9′	72°41.1′	42°19.7′	35°37.5′	19°24.6′	55°20.9′	56°21.7′	73°56.8′
17	257°55.0′	N 8°17.7′	13.1′	-14.3′	57.1′	75°19.7′	72°23.3′	41°56.0′	35°04.6′	19°56.9′	55°54.1′	56°51.9′	74°20.1′
18	272°27.2′	N 8°03.4′	13.1′	-14.4′	57.2′	74°56.5′	72°05.5′	41°32.6′	34°31.7′	20°29.2′	56°27.3′	57°22.1′	74°43.4′
19	286°59.3′	N 7°49.0′	13.2′	-14.4′	57.2′	74°33.4′	71°47.8′	41°09.2′	33°58.7′	21°01.7′	57°00.6′	57°52.4′	75°06.8′
20	301°31.5′	N 7°34.6′	13.2′	-14.5′	57.2′	74°10.3′	71°30.2′	40°46.1′	33°25.7′	21°34.2′	57°33.9′	58°22.8′	75°30.2′
21	316°03.6′	N 7°20.1′	13.2′	-14.5′	57.3′	73°47.2′	71°12.6′	40°23.1′	32°52.7′	22°06.8′	58°07.2′	58°53.2′	75°53.7′
22	330°35.8′	N 7°05.6′	13.2′	-14.6′	57.3′	73°24.1′	70°55.1′	40°00.3′	32°19.7′	22°39.4′	58°40.5′	59°23.7′	76°17.3′
23	345°08.0′	N 6°51.0′	13.2′	-14.6′	57.3′	73°01.1′	70°37.6′	39°37.7′	31°46.7′	23°12.1′	59°13.9′	59°54.2′	76°40.9′
Mer. pass. 0 h 1 m SD 15.5′ phase 98%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.5′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.2′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°25.9′	N 89°21.6′
Rigil Kent	−0.0	139°43.0′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.4′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.8′	S 60°28.6′	Canopus	−0.6	263°53.3′	S 52°42.7′				

Friday 18 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	175°32.1′	177°57.1′	S 1°02.8′	222°53.2′	S 15°17.9′	186°12.6′	S 5°40.0′	212°10.5′	S 15°28.2′	224°02.0′	S 19°04.3′
1	190°34.6′	192°57.3′	S 1°01.8′	237°53.2′	S 15°17.5′	201°14.5′	S 5°39.8′	227°12.7′	S 15°28.1′	239°02.5′	S 19°03.8′
2	205°37.1′	207°57.4′	S 1°00.8′	252°53.1′	S 15°17.1′	216°16.4′	S 5°39.5′	242°14.9′	S 15°28.1′	254°03.0′	S 19°03.3′
3	220°39.5′	222°57.6′	S 0°59.8′	267°53.1′	S 15°16.7′	231°18.3′	S 5°39.3′	257°17.1′	S 15°28.0′	269°03.6′	S 19°02.9′
4	235°42.0′	237°57.8′	S 0°58.8′	282°53.1′	S 15°16.3′	246°20.2′	S 5°39.1′	272°19.3′	S 15°27.9′	284°04.1′	S 19°02.4′
5	250°44.5′	252°58.0′	S 0°57.9′	297°53.0′	S 15°15.9′	261°22.2′	S 5°38.8′	287°21.5′	S 15°27.8′	299°04.7′	S 19°01.9′
6	265°46.9′	267°58.2′	S 0°56.9′	312°53.0′	S 15°15.5′	276°24.1′	S 5°38.6′	302°23.7′	S 15°27.8′	314°05.2′	S 19°01.5′
7	280°49.4′	282°58.4′	S 0°55.9′	327°52.9′	S 15°15.1′	291°26.0′	S 5°38.4′	317°25.9′	S 15°27.7′	329°05.7′	S 19°01.0′
8	295°51.9′	297°58.5′	S 0°54.9′	342°52.9′	S 15°14.7′	306°27.9′	S 5°38.1′	332°28.1′	S 15°27.6′	344°06.3′	S 19°00.5′
9	310°54.3′	312°58.7′	S 0°53.9′	357°52.9′	S 15°14.3′	321°29.8′	S 5°37.9′	347°30.3′	S 15°27.5′	359°06.8′	S 19°00.1′
10	325°56.8′	327°58.9′	S 0°52.9′	12°52.8′	S 15°13.9′	336°31.7′	S 5°37.7′	2°32.5′	S 15°27.4′	14°07.4′	S 18°59.6′
11	340°59.2′	342°59.1′	S 0°51.9′	27°52.8′	S 15°13.5′	351°33.6′	S 5°37.4′	17°34.8′	S 15°27.4′	29°07.9′	S 18°59.1′
12	356°01.7′	357°59.3′	S 0°50.9′	42°52.7′	S 15°13.1′	6°35.5′	S 5°37.2′	32°37.0′	S 15°27.3′	44°08.4′	S 18°58.7′
13	11°04.2′	12°59.4′	S 0°50.0′	57°52.7′	S 15°12.7′	21°37.4′	S 5°37.0′	47°39.2′	S 15°27.2′	59°09.0′	S 18°58.2′
14	26°06.6′	27°59.6′	S 0°49.0′	72°52.6′	S 15°12.3′	36°39.3′	S 5°36.7′	62°41.4′	S 15°27.1′	74°09.5′	S 18°57.7′
15	41°09.1′	42°59.8′	S 0°48.0′	87°52.6′	S 15°11.9′	51°41.2′	S 5°36.5′	77°43.6′	S 15°27.0′	89°10.1′	S 18°57.2′
16	56°11.6′	57°60.0′	S 0°47.0′	102°52.5′	S 15°11.5′	66°43.1′	S 5°36.3′	92°45.8′	S 15°27.0′	104°10.6′	S 18°56.8′
17	71°14.0′	73°00.2′	S 0°46.0′	117°52.5′	S 15°11.1′	81°45.1′	S 5°36.1′	107°48.0′	S 15°26.9′	119°11.2′	S 18°56.3′
18	86°16.5′	88°00.4′	S 0°45.0′	132°52.4′	S 15°10.7′	96°47.0′	S 5°35.8′	122°50.2′	S 15°26.8′	134°11.7′	S 18°55.8′
19	101°19.0′	103°00.5′	S 0°44.0′	147°52.4′	S 15°10.3′	111°48.9′	S 5°35.6′	137°52.4′	S 15°26.7′	149°12.2′	S 18°55.4′
20	116°21.4′	118°00.7′	S 0°43.0′	162°52.3′	S 15°09.9′	126°50.8′	S 5°35.4′	152°54.6′	S 15°26.7′	164°12.8′	S 18°54.9′
21	131°23.9′	133°00.9′	S 0°42.0′	177°52.3′	S 15°09.5′	141°52.7′	S 5°35.1′	167°56.8′	S 15°26.6′	179°13.3′	S 18°54.4′
22	146°26.4′	148°01.1′	S 0°41.1′	192°52.2′	S 15°09.0′	156°54.6′	S 5°34.9′	182°59.0′	S 15°26.5′	194°13.9′	S 18°53.9′
23	161°28.8′	163°01.3′	S 0°40.1′	207°52.2′	S 15°08.6′	171°56.5′	S 5°34.7′	198°01.3′	S 15°26.4′	209°14.4′	S 18°53.5′
		SD 16.1′ *d* 1.0′		*v* -0.0′ *d* 0.4′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.5′	
Mer. pass.		12 h 8 m 3 s		9 h 8 m		11 h 34 m		9 h 50 m		9 h 4 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Hadar	−Acrux	−Arcturus	−Spica	+Regulus	+Pollux	+Procyon	+Adhara
0	359°40.1′	N 6°36.4′	13.2′	-14.7′	57.3′	72°38.1′	70°20.2′	39°15.2′	31°13.6′	23°44.9′	59°47.3′	60°24.8′	76°52.2′
1	14°12.3′	N 6°21.7′	13.2′	-14.7′	57.4′	72°15.1′	70°02.9′	38°53.0′	30°40.5′	24°17.7′	60°20.8′	60°55.5′	77°10.1′
2	28°44.5′	N 6°07.0′	13.2′	-14.8′	57.4′	71°52.2′	69°45.7′	38°31.0′	30°07.4′	24°50.6′	60°54.3′	61°26.2′	77°28.0′
3	43°16.7′	N 5°52.3′	13.2′	-14.8′	57.4′	71°29.3′	69°28.5′	38°09.2′	29°34.3′	25°23.5′	61°27.8′	61°57.0′	77°46.0′
4	57°48.8′	N 5°37.5′	13.2′	-14.8′	57.4′	71°06.4′	69°11.4′	37°47.6′	29°01.2′	25°56.5′	62°01.3′	62°27.8′	78°04.0′
5	72°21.0′	N 5°22.6′	13.2′	-14.9′	57.5′	70°43.6′	68°54.4′	37°26.3′	28°28.1′	26°29.6′	62°34.9′	62°58.7′	78°22.1′
6	86°53.2′	N 5°07.8′	13.2′	-14.9′	57.5′	70°20.8′	68°37.4′	37°05.2′	27°54.9′	27°02.7′	63°08.4′	63°29.6′	78°40.3′
7	101°25.4′	N 4°52.9′	13.2′	-14.9′	57.5′	69°58.1′	68°20.6′	36°44.3′	27°21.8′	27°35.8′	63°42.1′	64°00.6′	78°58.6′
8	115°57.5′	N 4°37.9′	13.2′	-15.0′	57.5′	69°35.4′	68°03.8′	36°23.8′	26°48.6′	28°09.0′	64°15.7′	64°31.6′	79°16.9′
9	130°29.7′	N 4°22.9′	13.2′	-15.0′	57.6′	69°12.7′	67°47.1′	36°03.4′	26°15.4′	28°42.2′	64°49.4′	65°02.7′	79°35.2′
10	145°01.9′	N 4°07.9′	13.2′	-15.0′	57.6′	68°50.1′	67°30.5′	35°43.4′	25°42.3′	29°15.5′	65°23.1′	65°33.8′	79°53.6′
11	159°34.0′	N 3°52.9′	13.1′	-15.1′	57.6′	68°27.6′	67°14.0′	35°23.6′	25°09.1′	29°48.8′	65°56.9′	66°05.0′	80°12.1′
12	174°06.2′	N 3°37.8′	13.1′	-15.1′	57.6′	68°05.1′	66°57.6′	35°04.1′	24°35.9′	30°22.2′	66°30.6′	66°36.3′	80°30.6′
13	188°38.3′	N 3°22.7′	13.1′	-15.1′	57.7′	67°42.7′	66°41.2′	34°44.9′	24°02.7′	30°55.6′	67°04.4′	67°07.5′	80°49.2′
14	203°10.4′	N 3°07.6′	13.1′	-15.2′	57.7′	67°20.3′	66°25.0′	34°26.1′	23°29.5′	31°29.0′	67°38.2′	67°38.9′	81°07.9′
15	217°42.6′	N 2°52.4′	13.1′	-15.2′	57.7′	66°58.0′	66°08.9′	34°07.5′	22°56.3′	32°02.5′	68°12.1′	68°10.2′	81°26.5′
16	232°14.7′	N 2°37.2′	13.1′	-15.2′	57.7′	66°35.7′	65°52.8′	33°49.3′	22°23.2′	32°36.1′	68°46.0′	68°41.6′	81°45.3′
17	246°46.8′	N 2°22.0′	13.1′	-15.2′	57.7′	66°13.5′	65°36.9′	33°31.5′	21°50.0′	33°09.6′	69°19.9′	69°13.1′	82°04.1′
18	261°18.8′	N 2°06.8′	13.1′	-15.3′	57.8′	65°51.4′	65°21.1′	33°14.0′	21°16.8′	33°43.2′	69°53.8′	69°44.6′	82°22.9′
19	275°50.9′	N 1°51.5′	13.1′	-15.3′	57.8′	65°29.3′	65°05.4′	32°56.8′	20°43.7′	34°16.9′	70°27.8′	70°16.1′	82°41.8′
20	290°23.0′	N 1°36.3′	13.0′	-15.3′	57.8′	65°07.4′	64°49.8′	32°40.1′	20°10.6′	34°50.6′	71°01.8′	70°47.7′	83°00.7′
21	304°55.0′	N 1°21.0′	13.0′	-15.3′	57.8′	64°45.5′	64°34.3′	32°23.7′	19°37.5′	35°24.3′	71°35.8′	71°19.3′	83°19.7′
22	319°27.0′	N 1°05.6′	13.0′	-15.3′	57.9′	64°23.6′	64°18.9′	32°07.7′	19°04.4′	35°58.0′	72°09.8′	71°51.0′	83°38.7′
23	333°59.0′	N 0°50.3′	13.0′	-15.3′	57.9′	64°01.9′	64°03.6′	31°52.2′	18°31.4′	36°31.8′	72°43.9′	72°22.7′	83°57.7′
Mer. pass. 0 h 1 m SD 15.6′ phase 100%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.5′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.2′	Acrux	+0.8	173°02.0′	S 63°13.2′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°26.4′	N 89°21.6′
Rigil Kent	−0.0	139°43.0′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.8′	S 60°28.6′	Canopus	−0.6	263°53.3′	S 52°42.7′				

Saturday 19 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	176°31.3′	178°01.5′	S 0°39.1′	222°52.1′	S 15°08.2′	186°58.4′	S 5°34.4′	213°03.5′	S 15°26.3′	224°15.0′	S 18°53.0′
1	191°33.7′	193°01.6′	S 0°38.1′	237°52.1′	S 15°07.8′	202°00.3′	S 5°34.2′	228°05.7′	S 15°26.3′	239°15.5′	S 18°52.5′
2	206°36.2′	208°01.8′	S 0°37.1′	252°52.0′	S 15°07.4′	217°02.2′	S 5°34.0′	243°07.9′	S 15°26.2′	254°16.0′	S 18°52.1′
3	221°38.7′	223°02.0′	S 0°36.1′	267°52.0′	S 15°07.0′	232°04.1′	S 5°33.7′	258°10.1′	S 15°26.1′	269°16.6′	S 18°51.6′
4	236°41.1′	238°02.2′	S 0°35.1′	282°51.9′	S 15°06.6′	247°06.0′	S 5°33.5′	273°12.3′	S 15°26.0′	284°17.1′	S 18°51.1′
5	251°43.6′	253°02.4′	S 0°34.1′	297°51.9′	S 15°06.1′	262°08.0′	S 5°33.3′	288°14.5′	S 15°26.0′	299°17.7′	S 18°50.6′
6	266°46.1′	268°02.6′	S 0°33.2′	312°51.8′	S 15°05.7′	277°09.9′	S 5°33.0′	303°16.7′	S 15°25.9′	314°18.2′	S 18°50.2′
7	281°48.5′	283°02.7′	S 0°32.2′	327°51.7′	S 15°05.3′	292°11.8′	S 5°32.8′	318°18.9′	S 15°25.8′	329°18.8′	S 18°49.7′
8	296°51.0′	298°02.9′	S 0°31.2′	342°51.7′	S 15°04.9′	307°13.7′	S 5°32.6′	333°21.1′	S 15°25.7′	344°19.3′	S 18°49.2′
9	311°53.5′	313°03.1′	S 0°30.2′	357°51.6′	S 15°04.5′	322°15.6′	S 5°32.3′	348°23.3′	S 15°25.6′	359°19.9′	S 18°48.7′
10	326°55.9′	328°03.3′	S 0°29.2′	12°51.6′	S 15°04.0′	337°17.5′	S 5°32.1′	3°25.6′	S 15°25.6′	14°20.4′	S 18°48.3′
11	341°58.4′	343°03.5′	S 0°28.2′	27°51.5′	S 15°03.6′	352°19.4′	S 5°31.9′	18°27.8′	S 15°25.5′	29°20.9′	S 18°47.8′
12	357°00.8′	358°03.7′	S 0°27.2′	42°51.5′	S 15°03.2′	7°21.3′	S 5°31.6′	33°30.0′	S 15°25.4′	44°21.5′	S 18°47.3′
13	12°03.3′	13°03.8′	S 0°26.2′	57°51.4′	S 15°02.8′	22°23.2′	S 5°31.4′	48°32.2′	S 15°25.3′	59°22.0′	S 18°46.8′
14	27°05.8′	28°04.0′	S 0°25.2′	72°51.3′	S 15°02.4′	37°25.1′	S 5°31.2′	63°34.4′	S 15°25.3′	74°22.6′	S 18°46.3′
15	42°08.2′	43°04.2′	S 0°24.3′	87°51.3′	S 15°01.9′	52°27.0′	S 5°30.9′	78°36.6′	S 15°25.2′	89°23.1′	S 18°45.9′
16	57°10.7′	58°04.4′	S 0°23.3′	102°51.2′	S 15°01.5′	67°28.9′	S 5°30.7′	93°38.8′	S 15°25.1′	104°23.7′	S 18°45.4′
17	72°13.2′	73°04.6′	S 0°22.3′	117°51.2′	S 15°01.1′	82°30.9′	S 5°30.5′	108°41.0′	S 15°25.0′	119°24.2′	S 18°44.9′
18	87°15.6′	88°04.8′	S 0°21.3′	132°51.1′	S 15°00.6′	97°32.8′	S 5°30.3′	123°43.2′	S 15°25.0′	134°24.8′	S 18°44.4′
19	102°18.1′	103°04.9′	S 0°20.3′	147°51.0′	S 15°00.2′	112°34.7′	S 5°30.0′	138°45.4′	S 15°24.9′	149°25.3′	S 18°44.0′
20	117°20.6′	118°05.1′	S 0°19.3′	162°51.0′	S 14°59.8′	127°36.6′	S 5°29.8′	153°47.6′	S 15°24.8′	164°25.9′	S 18°43.5′
21	132°23.0′	133°05.3′	S 0°18.3′	177°50.9′	S 14°59.4′	142°38.5′	S 5°29.6′	168°49.9′	S 15°24.7′	179°26.4′	S 18°43.0′
22	147°25.5′	148°05.5′	S 0°17.3′	192°50.8′	S 14°58.9′	157°40.4′	S 5°29.3′	183°52.1′	S 15°24.6′	194°27.0′	S 18°42.5′
23	162°28.0′	163°05.7′	S 0°16.4′	207°50.8′	S 14°58.5′	172°42.3′	S 5°29.1′	198°54.3′	S 15°24.6′	209°27.5′	S 18°42.0′
		SD 16.1′ *d* 1.0′		*v* -0.1′ *d* 0.4′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.5′	
Mer. pass.		12 h 7 m 45 s		9 h 9 m		11 h 31 m		9 h 46 m		9 h 3 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Acrux	−Hadar	−Antares	−Spica	+Regulus	+Procyon	+Pollux	+Adhara
0	348°31.0′	N 0°35.0′	13.0′	-15.4′	57.9′	63°48.5′	63°40.2′	63°26.1′	17°58.4′	37°05.6′	72°54.4′	73°18.0′	84°16.8′
1	3°03.0′	N 0°19.6′	12.9′	-15.4′	57.9′		63°18.6′	62°52.0′	17°25.4′	37°39.5′	73°26.2′	73°52.1′	84°35.9′
2	17°34.9′	N 0°04.2′	12.9′	-15.4′	58.0′		62°57.1′	62°17.9′	16°52.5′	38°13.4′	73°58.0′	74°26.2′	84°55.1′
3	32°06.8′	S 0°11.2′	12.9′	-15.4′	58.0′		62°35.7′	61°43.7′	16°19.7′	38°47.3′	74°29.9′	75°00.4′	85°14.3′
4	46°38.7′	S 0°26.6′	12.9′	-15.4′	58.0′		62°14.4′	61°09.6′	15°46.9′	39°21.2′	75°01.8′	75°34.6′	85°33.5′
5	61°10.6′	S 0°42.0′	12.8′	-15.4′	58.0′		61°53.1′	60°35.4′	15°14.2′	39°55.2′	75°33.7′	76°08.8′	85°52.8′
6	75°42.5′	S 0°57.4′	12.8′	-15.4′	58.0′		61°32.0′	60°01.2′	14°41.6′	40°29.2′	76°05.7′	76°43.1′	86°12.1′
7	90°14.3′	S 1°12.8′	12.8′	-15.4′	58.1′		61°11.0′	59°27.0′	14°09.1′	41°03.3′	76°37.7′	77°17.4′	86°31.4′
8	104°46.1′	S 1°28.2′	12.8′	-15.4′	58.1′		60°50.1′	58°52.7′	13°36.7′	41°37.3′	77°09.7′	77°51.7′	86°50.7′
9	119°17.9′	S 1°43.7′	12.7′	-15.4′	58.1′		60°29.2′	58°18.4′	13°04.5′	42°11.4′	77°41.7′	78°26.0′	87°10.1′
10	133°49.6′	S 1°59.1′	12.7′	-15.4′	58.1′		60°08.5′	57°44.1′	12°32.4′	42°45.5′	78°13.8′	79°00.3′	87°29.5′
11	148°21.3′	S 2°14.5′	12.7′	-15.4′	58.1′		59°47.9′	57°09.8′	12°00.5′	43°19.7′	78°45.9′	79°34.7′	87°48.9′
12	162°53.0′	S 2°30.0′	12.6′	-15.4′	58.2′		59°27.4′	56°35.5′	11°28.8′	43°53.9′	79°18.1′	80°09.1′	88°08.4′
13	177°24.6′	S 2°45.4′	12.6′	-15.4′	58.2′		59°07.1′	56°01.1′	10°57.4′	44°28.1′	79°50.3′	80°43.5′	88°27.8′
14	191°56.2′	S 3°00.9′	12.6′	-15.4′	58.2′		58°46.8′	55°26.7′	10°26.3′	45°02.3′	80°22.5′	81°17.9′	88°47.3′
15	206°27.8′	S 3°16.3′	12.5′	-15.4′	58.2′		58°26.7′	54°52.3′	9°55.5′	45°36.6′	80°54.7′	81°52.4′	89°06.8′
16	220°59.3′	S 3°31.7′	12.5′	-15.4′	58.2′		58°06.7′	54°17.9′	9°25.1′	46°10.9′	81°27.0′	82°26.9′	89°26.3′
17	235°30.8′	S 3°47.1′	12.5′	-15.4′	58.3′		57°46.9′	53°43.4′	8°55.2′	46°45.2′	81°59.3′	83°01.4′	89°45.8′
18	250°02.3′	S 4°02.5′	12.4′	-15.4′	58.3′		57°27.1′	53°08.9′	8°25.9′	47°19.6′	82°31.6′	83°35.9′	90°05.4′
19	264°33.7′	S 4°17.9′	12.4′	-15.4′	58.3′		57°07.5′	52°34.4′		47°53.9′	83°03.9′	84°10.4′	90°24.9′
20	279°05.1′	S 4°33.3′	12.3′	-15.4′	58.3′		56°48.1′	51°59.9′		48°28.3′	83°36.3′	84°45.0′	90°44.5′
21	293°36.5′	S 4°48.7′	12.3′	-15.4′	58.3′		56°28.8′	51°25.4′		49°02.7′	84°08.7′	85°19.6′	91°04.1′
22	308°07.8′	S 5°04.0′	12.3′	-15.3′	58.4′		56°09.6′	50°50.9′		49°37.2′	84°41.1′	85°54.2′	91°23.7′
23	322°39.0′	S 5°19.4′	12.2′	-15.3′	58.4′		55°50.6′	50°16.3′		50°11.6′	85°13.5′	86°28.8′	91°43.2′
Mer. pass. 0 h 47 m SD 15.8′ phase 99%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.5′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.2′	Acrux	+0.8	173°02.0′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.1′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°26.8′	N 89°21.6′
Rigil Kent	−0.0	139°43.0′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.8′	S 60°28.6′	Canopus	−0.6	263°53.3′	S 52°42.7′				

Sunday 20 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	177°30.4′	178°05.9′	S 0°15.4′	222°50.7′	S 14°58.1′	187°44.2′	S 5°28.9′	213°56.5′	S 15°24.5′	224°28.0′	S 18°41.6′
1	192°32.9′	193°06.1′	S 0°14.4′	237°50.7′	S 14°57.6′	202°46.1′	S 5°28.6′	228°58.7′	S 15°24.4′	239°28.6′	S 18°41.1′
2	207°35.3′	208°06.2′	S 0°13.4′	252°50.6′	S 14°57.2′	217°48.0′	S 5°28.4′	244°00.9′	S 15°24.3′	254°29.1′	S 18°40.6′
3	222°37.8′	223°06.4′	S 0°12.4′	267°50.5′	S 14°56.8′	232°49.9′	S 5°28.2′	259°03.1′	S 15°24.3′	269°29.7′	S 18°40.1′
4	237°40.3′	238°06.6′	S 0°11.4′	282°50.5′	S 14°56.3′	247°51.9′	S 5°27.9′	274°05.3′	S 15°24.2′	284°30.2′	S 18°39.6′
5	252°42.7′	253°06.8′	S 0°10.4′	297°50.4′	S 14°55.9′	262°53.8′	S 5°27.7′	289°07.5′	S 15°24.1′	299°30.8′	S 18°39.1′
6	267°45.2′	268°07.0′	S 0°09.4′	312°50.3′	S 14°55.5′	277°55.7′	S 5°27.5′	304°09.8′	S 15°24.0′	314°31.3′	S 18°38.7′
7	282°47.7′	283°07.2′	S 0°08.5′	327°50.3′	S 14°55.0′	292°57.6′	S 5°27.2′	319°12.0′	S 15°23.9′	329°31.9′	S 18°38.2′
8	297°50.1′	298°07.4′	S 0°07.5′	342°50.2′	S 14°54.6′	307°59.5′	S 5°27.0′	334°14.2′	S 15°23.9′	344°32.4′	S 18°37.7′
9	312°52.6′	313°07.5′	S 0°06.5′	357°50.1′	S 14°54.1′	323°01.4′	S 5°26.8′	349°16.4′	S 15°23.8′	359°33.0′	S 18°37.2′
10	327°55.1′	328°07.7′	S 0°05.5′	12°50.0′	S 14°53.7′	338°03.3′	S 5°26.5′	4°18.6′	S 15°23.7′	14°33.5′	S 18°36.7′
11	342°57.5′	343°07.9′	S 0°04.5′	27°50.0′	S 14°53.3′	353°05.2′	S 5°26.3′	19°20.8′	S 15°23.6′	29°34.1′	S 18°36.2′
12	357°60.0′	358°08.1′	S 0°03.5′	42°49.9′	S 14°52.8′	8°07.1′	S 5°26.1′	34°23.0′	S 15°23.6′	44°34.6′	S 18°35.8′
13	13°02.5′	13°08.3′	S 0°02.5′	57°49.8′	S 14°52.4′	23°09.0′	S 5°25.8′	49°25.2′	S 15°23.5′	59°35.2′	S 18°35.3′
14	28°04.9′	28°08.5′	S 0°01.5′	72°49.8′	S 14°51.9′	38°11.0′	S 5°25.6′	64°27.4′	S 15°23.4′	74°35.7′	S 18°34.8′
15	43°07.4′	43°08.6′	S 0°00.5′	87°49.7′	S 14°51.5′	53°12.9′	S 5°25.4′	79°29.7′	S 15°23.3′	89°36.3′	S 18°34.3′
16	58°09.8′	58°08.8′	N 0°00.4′	102°49.6′	S 14°51.0′	68°14.8′	S 5°25.2′	94°31.9′	S 15°23.3′	104°36.8′	S 18°33.8′
17	73°12.3′	73°09.0′	N 0°01.4′	117°49.5′	S 14°50.6′	83°16.7′	S 5°24.9′	109°34.1′	S 15°23.2′	119°37.4′	S 18°33.3′
18	88°14.8′	88°09.2′	N 0°02.4′	132°49.5′	S 14°50.1′	98°18.6′	S 5°24.7′	124°36.3′	S 15°23.1′	134°37.9′	S 18°32.9′
19	103°17.2′	103°09.4′	N 0°03.4′	147°49.4′	S 14°49.7′	113°20.5′	S 5°24.5′	139°38.5′	S 15°23.0′	149°38.5′	S 18°32.4′
20	118°19.7′	118°09.6′	N 0°04.4′	162°49.3′	S 14°49.2′	128°22.4′	S 5°24.2′	154°40.7′	S 15°22.9′	164°39.0′	S 18°31.9′
21	133°22.2′	133°09.8′	N 0°05.4′	177°49.2′	S 14°48.8′	143°24.3′	S 5°24.0′	169°42.9′	S 15°22.9′	179°39.6′	S 18°31.4′
22	148°24.6′	148°09.9′	N 0°06.4′	192°49.2′	S 14°48.3′	158°26.2′	S 5°23.8′	184°45.1′	S 15°22.8′	194°40.1′	S 18°30.9′
23	163°27.1′	163°10.1′	N 0°07.4′	207°49.1′	S 14°47.9′	173°28.1′	S 5°23.5′	199°47.4′	S 15°22.7′	209°40.7′	S 18°30.4′
		SD 16.1′ *d* 1.0′		*v* -0.1′ *d* 0.4′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.5′ *d* 0.5′	
Mer. pass.		12 h 7 m 28 s		9 h 9 m		11 h 28 m		9 h 43 m		9 h 2 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Rigil Kent	−Hadar	−Antares	−Spica	+Regulus	+Procyon	+Pollux	+Adhara
0	337°10.3′	S 5°34.7′	12.2′	-15.3′	58.4′	57°20.6′	55°31.8′	49°41.7′		50°46.1′	85°46.0′	87°03.5′	92°02.8′
1	351°41.4′	S 5°50.0′	12.1′	-15.3′	58.4′	56°59.5′	55°13.1′	49°07.1′		51°20.6′	86°18.5′	87°38.1′	92°22.4′
2	6°12.6′	S 6°05.3′	12.1′	-15.3′	58.4′	56°38.5′	54°54.5′	48°32.5′		51°55.2′	86°51.0′	88°12.8′	92°42.0′
3	20°43.6′	S 6°20.6′	12.0′	-15.2′	58.5′	56°17.7′	54°36.2′	47°57.8′		52°29.7′	87°23.5′	88°47.5′	93°01.6′
4	35°14.7′	S 6°35.8′	12.0′	-15.2′	58.5′	55°57.0′	54°18.0′	47°23.2′		53°04.3′	87°56.1′	89°22.3′	93°21.2′
5	49°45.6′	S 6°51.1′	11.9′	-15.2′	58.5′	55°36.5′	53°59.9′	46°48.5′		53°38.9′	88°28.6′	89°57.0′	93°40.8′
6	64°16.6′	S 7°06.2′	11.9′	-15.2′	58.5′	55°16.1′	53°42.1′	46°13.8′		54°13.5′	89°01.2′	90°31.8′	94°00.3′
7	78°47.5′	S 7°21.4′	11.8′	-15.1′	58.5′	54°55.9′	53°24.4′	45°39.1′		54°48.2′	89°33.8′	91°06.6′	94°19.9′
8	93°18.3′	S 7°36.6′	11.8′	-15.1′	58.5′	54°35.8′	53°07.0′	45°04.4′		55°22.8′	90°06.4′	91°41.4′	94°39.5′
9	107°49.1′	S 7°51.7′	11.7′	-15.1′	58.6′	54°15.9′	52°49.7′	44°29.6′		55°57.5′	90°39.0′	92°16.2′	94°59.0′
10	122°19.8′	S 8°06.7′	11.7′	-15.0′	58.6′	53°56.1′	52°32.6′	43°54.9′		56°32.2′	91°11.7′	92°51.0′	95°18.6′
11	136°50.5′	S 8°21.8′	11.6′	-15.0′	58.6′	53°36.5′	52°15.7′	43°20.1′		57°06.9′	91°44.4′	93°25.9′	95°38.1′
12	151°21.1′	S 8°36.8′	11.6′	-15.0′	58.6′	53°17.1′	51°59.0′	42°45.3′		57°41.7′	92°17.0′	94°00.7′	95°57.6′
13	165°51.6′	S 8°51.8′	11.5′	-14.9′	58.6′	52°57.8′	51°42.5′	42°10.5′		58°16.4′	92°49.7′	94°35.6′	96°17.1′
14	180°22.1′	S 9°06.7′	11.4′	-14.9′	58.6′	52°38.7′	51°26.2′	41°35.7′		58°51.2′	93°22.4′	95°10.5′	96°36.6′
15	194°52.5′	S 9°21.6′	11.4′	-14.9′	58.7′	52°19.8′	51°10.2′	41°00.9′		59°26.0′	93°55.2′	95°45.5′	96°56.1′
16	209°22.9′	S 9°36.5′	11.3′	-14.8′	58.7′	52°01.1′	50°54.3′	40°26.0′		60°00.8′	94°27.9′	96°20.4′	97°15.5′
17	223°53.2′	S 9°51.3′	11.3′	-14.8′	58.7′	51°42.6′	50°38.7′	39°51.2′		60°35.6′	95°00.6′	96°55.3′	97°34.9′
18	238°23.5′	S 10°06.0′	11.2′	-14.7′	58.7′	51°24.3′	50°23.3′	39°16.3′	8°12.2′	61°10.5′	95°33.4′	97°30.3′	97°54.3′
19	252°53.7′	S 10°20.8′	11.1′	-14.7′	58.7′	51°06.2′		38°41.4′	8°41.6′	61°45.4′	96°06.1′	98°05.3′	98°13.7′
20	267°23.8′	S 10°35.4′	11.1′	-14.6′	58.7′	50°48.2′		38°06.5′	9°11.7′	62°20.2′	96°38.9′	98°40.3′	98°33.0′
21	281°53.9′	S 10°50.1′	11.0′	-14.6′	58.7′	50°30.5′		37°31.6′	9°42.3′	62°55.1′	97°11.7′	99°15.3′	98°52.3′
22	296°23.8′	S 11°04.6′	10.9′	-14.5′	58.8′	50°13.0′		36°56.7′	10°13.5′	63°30.0′	97°44.5′	99°50.3′	99°11.6′
23	310°53.8′	S 11°19.2′	10.9′	-14.5′	58.8′	49°55.8′		36°21.8′	10°45.0′	64°05.0′	98°17.3′	100°25.4′	99°30.8′
Mer. pass. 1 h 34 m SD 15.9′ phase 96%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.5′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.2′	Acrux	+0.8	173°02.0′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.6′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°27.1′	N 89°21.6′
Rigil Kent	−0.0	139°43.0′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.6′	Canopus	−0.6	263°53.4′	S 52°42.7′				

Monday 21 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	178°29.6′	178°10.3′	N 0°08.3′	222°49.0′	S 14°47.4′	188°30.0′	S 5°23.3′	214°49.6′	S 15°22.6′	224°41.2′	S 18°29.9′
1	193°32.0′	193°10.5′	N 0°09.3′	237°48.9′	S 14°47.0′	203°32.0′	S 5°23.1′	229°51.8′	S 15°22.6′	239°41.8′	S 18°29.4′
2	208°34.5′	208°10.7′	N 0°10.3′	252°48.9′	S 14°46.5′	218°33.9′	S 5°22.8′	244°54.0′	S 15°22.5′	254°42.3′	S 18°29.0′
3	223°36.9′	223°10.9′	N 0°11.3′	267°48.8′	S 14°46.1′	233°35.8′	S 5°22.6′	259°56.2′	S 15°22.4′	269°42.9′	S 18°28.5′
4	238°39.4′	238°11.1′	N 0°12.3′	282°48.7′	S 14°45.6′	248°37.7′	S 5°22.4′	274°58.4′	S 15°22.3′	284°43.4′	S 18°28.0′
5	253°41.9′	253°11.2′	N 0°13.3′	297°48.6′	S 14°45.2′	263°39.6′	S 5°22.1′	290°00.6′	S 15°22.3′	299°44.0′	S 18°27.5′
6	268°44.3′	268°11.4′	N 0°14.3′	312°48.6′	S 14°44.7′	278°41.5′	S 5°21.9′	305°02.8′	S 15°22.2′	314°44.5′	S 18°27.0′
7	283°46.8′	283°11.6′	N 0°15.3′	327°48.5′	S 14°44.3′	293°43.4′	S 5°21.7′	320°05.1′	S 15°22.1′	329°45.1′	S 18°26.5′
8	298°49.3′	298°11.8′	N 0°16.2′	342°48.4′	S 14°43.8′	308°45.3′	S 5°21.4′	335°07.3′	S 15°22.0′	344°45.6′	S 18°26.0′
9	313°51.7′	313°12.0′	N 0°17.2′	357°48.3′	S 14°43.3′	323°47.2′	S 5°21.2′	350°09.5′	S 15°22.0′	359°46.2′	S 18°25.5′
10	328°54.2′	328°12.2′	N 0°18.2′	12°48.2′	S 14°42.9′	338°49.2′	S 5°21.0′	5°11.7′	S 15°21.9′	14°46.7′	S 18°25.0′
11	343°56.7′	343°12.4′	N 0°19.2′	27°48.2′	S 14°42.4′	353°51.1′	S 5°20.8′	20°13.9′	S 15°21.8′	29°47.3′	S 18°24.5′
12	358°59.1′	358°12.6′	N 0°20.2′	42°48.1′	S 14°42.0′	8°53.0′	S 5°20.5′	35°16.1′	S 15°21.7′	44°47.8′	S 18°24.0′
13	14°01.6′	13°12.7′	N 0°21.2′	57°48.0′	S 14°41.5′	23°54.9′	S 5°20.3′	50°18.3′	S 15°21.6′	59°48.4′	S 18°23.6′
14	29°04.1′	28°12.9′	N 0°22.2′	72°47.9′	S 14°41.0′	38°56.8′	S 5°20.1′	65°20.6′	S 15°21.6′	74°48.9′	S 18°23.1′
15	44°06.5′	43°13.1′	N 0°23.1′	87°47.8′	S 14°40.6′	53°58.7′	S 5°19.8′	80°22.8′	S 15°21.5′	89°49.5′	S 18°22.6′
16	59°09.0′	58°13.3′	N 0°24.1′	102°47.7′	S 14°40.1′	69°00.6′	S 5°19.6′	95°25.0′	S 15°21.4′	104°50.0′	S 18°22.1′
17	74°11.4′	73°13.5′	N 0°25.1′	117°47.7′	S 14°39.6′	84°02.5′	S 5°19.4′	110°27.2′	S 15°21.3′	119°50.6′	S 18°21.6′
18	89°13.9′	88°13.7′	N 0°26.1′	132°47.6′	S 14°39.2′	99°04.4′	S 5°19.1′	125°29.4′	S 15°21.3′	134°51.1′	S 18°21.1′
19	104°16.4′	103°13.9′	N 0°27.1′	147°47.5′	S 14°38.7′	114°06.3′	S 5°18.9′	140°31.6′	S 15°21.2′	149°51.7′	S 18°20.6′
20	119°18.8′	118°14.0′	N 0°28.1′	162°47.4′	S 14°38.2′	129°08.3′	S 5°18.7′	155°33.8′	S 15°21.1′	164°52.3′	S 18°20.1′
21	134°21.3′	133°14.2′	N 0°29.1′	177°47.3′	S 14°37.8′	144°10.2′	S 5°18.4′	170°36.1′	S 15°21.0′	179°52.8′	S 18°19.6′
22	149°23.8′	148°14.4′	N 0°30.1′	192°47.2′	S 14°37.3′	159°12.1′	S 5°18.2′	185°38.3′	S 15°21.0′	194°53.4′	S 18°19.1′
23	164°26.2′	163°14.6′	N 0°31.0′	207°47.1′	S 14°36.8′	174°14.0′	S 5°18.0′	200°40.5′	S 15°20.9′	209°53.9′	S 18°18.6′
		SD 16.1′ *d* 1.0′		*v* -0.1′ *d* 0.5′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.6′ *d* 0.5′	
Mer. pass.		12 h 7 m 10 s		9 h 9 m		11 h 25 m		9 h 39 m		9 h 1 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Mars	−Altair	−Rigil Kent	−Antares	+Spica	+Arcturus	+Regulus	+Procyon
0	325°23.6′	S 11°33.6′	10.8′	-14.4′	58.8′	96°15.6′	86°48.8′	49°38.7′	35°46.9′	11°16.9′		64°39.9′	98°50.1′
1	339°53.4′	S 11°48.1′	10.7′	-14.4′	58.8′	95°42.4′	86°19.7′	49°21.9′	35°11.9′	11°49.1′		65°14.9′	99°22.9′
2	354°23.1′	S 12°02.4′	10.7′	-14.3′	58.8′	95°09.3′	85°50.7′	49°05.3′	34°37.0′	12°21.5′		65°49.8′	99°55.7′
3	8°52.8′	S 12°16.7′	10.6′	-14.2′	58.8′	94°36.1′	85°21.6′	48°48.9′	34°02.0′	12°54.2′	31°20.9′	66°24.8′	100°28.5′
4	23°22.4′	S 12°31.0′	10.5′	-14.2′	58.8′	94°02.9′	84°52.5′	48°32.8′	33°27.0′	13°27.2′	31°36.0′	66°59.8′	101°01.3′
5	37°51.9′	S 12°45.1′	10.4′	-14.1′	58.8′	93°29.8′	84°23.5′	48°16.9′	32°52.1′	14°00.3′	31°51.6′	67°34.8′	101°34.1′
6	52°21.3′	S 12°59.3′	10.4′	-14.1′	58.9′	92°56.6′	83°54.4′	48°01.2′	32°17.1′	14°33.5′	32°07.6′	68°09.9′	102°06.9′
7	66°50.7′	S 13°13.3′	10.3′	-14.0′	58.9′	92°23.4′	83°25.4′	47°45.9′	31°42.1′	15°07.0′	32°24.1′	68°44.9′	102°39.8′
8	81°20.0′	S 13°27.3′	10.2′	-13.9′	58.9′	91°50.1′	82°56.3′		31°07.1′	15°40.5′	32°41.0′	69°19.9′	103°12.6′
9	95°49.2′	S 13°41.2′	10.1′	-13.8′	58.9′	91°16.9′	82°27.2′		30°32.1′	16°14.2′	32°58.4′	69°55.0′	103°45.4′
10	110°18.3′	S 13°55.1′	10.1′	-13.8′	58.9′	90°43.7′	81°58.2′		29°57.1′	16°48.0′	33°16.2′	70°30.1′	104°18.2′
11	124°47.4′	S 14°08.8′	10.0′	-13.7′	58.9′	90°10.4′	81°29.2′		29°22.1′	17°21.9′	33°34.4′	71°05.2′	104°51.0′
12	139°16.4′	S 14°22.5′	9.9′	-13.6′	58.9′	89°37.1′	81°00.1′		28°47.1′	17°55.9′	33°53.0′	71°40.3′	105°23.9′
13	153°45.3′	S 14°36.2′	9.8′	-13.6′	58.9′	89°03.9′	80°31.1′		28°12.1′	18°30.0′	34°12.0′	72°15.4′	105°56.7′
14	168°14.1′	S 14°49.7′	9.7′	-13.5′	58.9′	88°30.6′	80°02.1′		27°37.1′	19°04.1′	34°31.4′	72°50.5′	106°29.5′
15	182°42.8′	S 15°03.2′	9.7′	-13.4′	59.0′	87°57.3′	79°33.1′		27°02.1′	19°38.3′	34°51.1′	73°25.6′	107°02.3′
16	197°11.5′	S 15°16.6′	9.6′	-13.3′	59.0′	87°24.0′	79°04.1′		26°27.1′	20°12.6′	35°11.2′	74°00.8′	107°35.1′
17	211°40.1′	S 15°29.9′	9.5′	-13.2′	59.0′	86°50.7′	78°35.1′		25°52.1′	20°47.0′	35°31.7′	74°35.9′	108°07.9′
18	226°08.6′	S 15°43.2′	9.4′	-13.2′	59.0′	86°17.3′	78°06.2′		25°17.1′	21°21.4′	35°52.4′	75°11.1′	108°40.7′
19	240°37.0′	S 15°56.3′	9.3′	-13.1′	59.0′	85°44.0′	77°37.3′		24°42.1′	21°55.8′	36°13.6′	75°46.3′	109°13.4′
20	255°05.3′	S 16°09.4′	9.3′	-13.0′	59.0′	85°10.7′	77°08.3′		24°07.1′	22°30.4′	36°35.0′	76°21.4′	109°46.2′
21	269°33.6′	S 16°22.4′	9.2′	-12.9′	59.0′	84°37.3′	76°39.4′		23°32.1′	23°04.9′	36°56.8′	76°56.6′	110°18.9′
22	284°01.8′	S 16°35.3′	9.1′	-12.8′	59.0′	84°04.0′	76°10.6′		22°57.1′	23°39.5′	37°18.8′	77°31.8′	110°51.7′
23	298°29.9′	S 16°48.1′	9.0′	-12.7′	59.0′	83°30.6′	75°41.7′		22°22.1′	24°14.2′	37°41.2′	78°07.0′	111°24.4′
Mer. pass. 2 h 23 m SD 16.0′ phase 91%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.4′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.7′	N 45°21.2′	Acrux	+0.8	173°02.0′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.8′
Vega	+0.0	80°34.9′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.5′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°27.5′	N 89°21.6′
Rigil Kent	−0.0	139°43.0′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.6′	Canopus	−0.6	263°53.4′	S 52°42.7′				

Tuesday 22 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	179°28.7′	178°14.8′	N 0°32.0′	222°47.1′	S 14°36.4′	189°15.9′	S 5°17.7′	215°42.7′	S 15°20.8′	224°54.5′	S 18°18.1′
1	194°31.2′	193°15.0′	N 0°33.0′	237°47.0′	S 14°35.9′	204°17.8′	S 5°17.5′	230°44.9′	S 15°20.7′	239°55.0′	S 18°17.6′
2	209°33.6′	208°15.2′	N 0°34.0′	252°46.9′	S 14°35.4′	219°19.7′	S 5°17.3′	245°47.1′	S 15°20.7′	254°55.6′	S 18°17.1′
3	224°36.1′	223°15.4′	N 0°35.0′	267°46.8′	S 14°34.9′	234°21.6′	S 5°17.0′	260°49.3′	S 15°20.6′	269°56.1′	S 18°16.6′
4	239°38.5′	238°15.5′	N 0°36.0′	282°46.7′	S 14°34.5′	249°23.5′	S 5°16.8′	275°51.6′	S 15°20.5′	284°56.7′	S 18°16.1′
5	254°41.0′	253°15.7′	N 0°37.0′	297°46.6′	S 14°34.0′	264°25.5′	S 5°16.6′	290°53.8′	S 15°20.4′	299°57.2′	S 18°15.6′
6	269°43.5′	268°15.9′	N 0°38.0′	312°46.5′	S 14°33.5′	279°27.4′	S 5°16.4′	305°56.0′	S 15°20.4′	314°57.8′	S 18°15.1′
7	284°45.9′	283°16.1′	N 0°38.9′	327°46.4′	S 14°33.0′	294°29.3′	S 5°16.1′	320°58.2′	S 15°20.3′	329°58.3′	S 18°14.6′
8	299°48.4′	298°16.3′	N 0°39.9′	342°46.3′	S 14°32.6′	309°31.2′	S 5°15.9′	336°00.4′	S 15°20.2′	344°58.9′	S 18°14.1′
9	314°50.9′	313°16.5′	N 0°40.9′	357°46.3′	S 14°32.1′	324°33.1′	S 5°15.7′	351°02.6′	S 15°20.1′	359°59.5′	S 18°13.6′
10	329°53.3′	328°16.7′	N 0°41.9′	12°46.2′	S 14°31.6′	339°35.0′	S 5°15.4′	6°04.8′	S 15°20.0′	15°00.0′	S 18°13.1′
11	344°55.8′	343°16.8′	N 0°42.9′	27°46.1′	S 14°31.1′	354°36.9′	S 5°15.2′	21°07.1′	S 15°20.0′	30°00.6′	S 18°12.6′
12	359°58.3′	358°17.0′	N 0°43.9′	42°46.0′	S 14°30.6′	9°38.8′	S 5°15.0′	36°09.3′	S 15°19.9′	45°01.1′	S 18°12.1′
13	15°00.7′	13°17.2′	N 0°44.9′	57°45.9′	S 14°30.2′	24°40.7′	S 5°14.7′	51°11.5′	S 15°19.8′	60°01.7′	S 18°11.6′
14	30°03.2′	28°17.4′	N 0°45.8′	72°45.8′	S 14°29.7′	39°42.7′	S 5°14.5′	66°13.7′	S 15°19.7′	75°02.2′	S 18°11.1′
15	45°05.7′	43°17.6′	N 0°46.8′	87°45.7′	S 14°29.2′	54°44.6′	S 5°14.3′	81°15.9′	S 15°19.7′	90°02.8′	S 18°10.6′
16	60°08.1′	58°17.8′	N 0°47.8′	102°45.6′	S 14°28.7′	69°46.5′	S 5°14.0′	96°18.1′	S 15°19.6′	105°03.3′	S 18°10.1′
17	75°10.6′	73°18.0′	N 0°48.8′	117°45.5′	S 14°28.2′	84°48.4′	S 5°13.8′	111°20.4′	S 15°19.5′	120°03.9′	S 18°09.6′
18	90°13.0′	88°18.2′	N 0°49.8′	132°45.4′	S 14°27.7′	99°50.3′	S 5°13.6′	126°22.6′	S 15°19.4′	135°04.5′	S 18°09.1′
19	105°15.5′	103°18.3′	N 0°50.8′	147°45.3′	S 14°27.3′	114°52.2′	S 5°13.3′	141°24.8′	S 15°19.4′	150°05.0′	S 18°08.6′
20	120°18.0′	118°18.5′	N 0°51.8′	162°45.2′	S 14°26.8′	129°54.1′	S 5°13.1′	156°27.0′	S 15°19.3′	165°05.6′	S 18°08.1′
21	135°20.4′	133°18.7′	N 0°52.7′	177°45.1′	S 14°26.3′	144°56.0′	S 5°12.9′	171°29.2′	S 15°19.2′	180°06.1′	S 18°07.6′
22	150°22.9′	148°18.9′	N 0°53.7′	192°45.0′	S 14°25.8′	159°57.9′	S 5°12.7′	186°31.4′	S 15°19.1′	195°06.7′	S 18°07.1′
23	165°25.4′	163°19.1′	N 0°54.7′	207°44.9′	S 14°25.3′	174°59.9′	S 5°12.4′	201°33.7′	S 15°19.1′	210°07.2′	S 18°06.6′
		SD 16.0′ *d* 1.0′		*v* -0.1′ *d* 0.5′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.6′ *d* 0.5′	
Mer. pass.		12 h 6 m 52 s		9 h 9 m		11 h 22 m		9 h 36 m		9 h 0 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Sun	−Mars	−Altair	−Antares	+Spica	+Arcturus	+Regulus	+Adhara
0	312°57.9′	S 17°00.8′	8.9′	-12.6′	59.0′		82°57.2′	75°12.9′	21°47.2′	24°48.8′	38°03.8′	78°42.3′	107°16.1′
1	327°25.8′	S 17°13.4′	8.8′	-12.5′	59.1′		82°23.9′	74°44.1′	21°12.2′	25°23.5′	38°26.7′	79°17.5′	107°33.8′
2	341°53.6′	S 17°25.9′	8.7′	-12.4′	59.1′		81°50.5′	74°15.3′	20°37.3′	25°58.3′	38°49.9′	79°52.7′	107°51.5′
3	356°21.4′	S 17°38.3′	8.7′	-12.3′	59.1′		81°17.1′	73°46.6′	20°02.3′	26°33.1′	39°13.3′	80°27.9′	108°09.1′
4	10°49.0′	S 17°50.6′	8.6′	-12.2′	59.1′		80°43.7′	73°17.9′	19°27.4′	27°07.9′	39°37.0′	81°03.2′	108°26.6′
5	25°16.6′	S 18°02.8′	8.5′	-12.1′	59.1′		80°10.3′	72°49.2′	18°52.6′	27°42.7′	40°01.0′	81°38.4′	108°44.0′
6	39°44.1′	S 18°15.0′	8.4′	-12.0′	59.1′		79°36.9′	72°20.5′	18°17.7′	28°17.6′	40°25.1′	82°13.7′	109°01.3′
7	54°11.5′	S 18°27.0′	8.3′	-11.9′	59.1′		79°03.5′	71°51.9′	17°42.9′	28°52.5′	40°49.5′	82°49.0′	109°18.6′
8	68°38.8′	S 18°38.9′	8.2′	-11.8′	59.1′		78°30.0′	71°23.4′	17°08.1′	29°27.4′	41°14.2′	83°24.2′	109°35.7′
9	83°06.0′	S 18°50.7′	8.1′	-11.7′	59.1′		77°56.6′	70°54.8′	16°33.3′	30°02.3′	41°39.0′	83°59.5′	109°52.7′
10	97°33.2′	S 19°02.4′	8.1′	-11.6′	59.1′		77°23.2′	70°26.3′	15°58.6′	30°37.3′	42°04.1′	84°34.8′	110°09.7′
11	112°00.2′	S 19°14.0′	8.0′	-11.5′	59.1′		76°49.7′	69°57.9′	15°23.9′	31°12.2′	42°29.3′	85°10.1′	110°26.5′
12	126°27.2′	S 19°25.4′	7.9′	-11.4′	59.1′		76°16.3′	69°29.5′	14°49.2′	31°47.2′	42°54.8′	85°45.4′	110°43.3′
13	140°54.0′	S 19°36.8′	7.8′	-11.2′	59.1′		75°42.8′	69°01.1′	14°14.7′	32°22.3′	43°20.4′	86°20.7′	110°59.9′
14	155°20.8′	S 19°48.0′	7.7′	-11.1′	59.1′		75°09.4′	68°32.8′	13°40.2′	32°57.3′	43°46.2′	86°56.0′	111°16.4′
15	169°47.5′	S 19°59.2′	7.6′	-11.0′	59.1′		74°35.9′	68°04.5′	13°05.7′	33°32.3′	44°12.3′	87°31.3′	111°32.8′
16	184°14.1′	S 20°10.2′	7.5′	-10.9′	59.2′		74°02.5′	67°36.3′	12°31.4′	34°07.4′	44°38.4′	88°06.6′	111°49.1′
17	198°40.7′	S 20°21.1′	7.4′	-10.8′	59.2′		73°29.0′	67°08.1′	11°57.1′	34°42.5′	45°04.8′	88°41.9′	112°05.3′
18	213°07.1′	S 20°31.8′	7.3′	-10.6′	59.2′		72°55.6′	66°40.0′	11°23.0′	35°17.6′	45°31.3′	89°17.2′	112°21.4′
19	227°33.4′	S 20°42.5′	7.3′	-10.5′	59.2′		72°22.1′	66°12.0′	10°49.0′	35°52.7′	45°58.0′	89°52.6′	112°37.3′
20	241°59.7′	S 20°53.0′	7.2′	-10.4′	59.2′		71°48.6′	65°44.0′	10°15.1′	36°27.8′	46°24.8′	90°27.9′	112°53.2′
21	256°25.9′	S 21°03.4′	7.1′	-10.3′	59.2′		71°15.1′	65°16.0′	9°41.5′	37°02.9′	46°51.8′	91°03.2′	113°08.9′
22	270°52.0′	S 21°13.6′	7.0′	-10.1′	59.2′		70°41.7′	64°48.1′	9°08.0′	37°38.1′	47°19.0′	91°38.6′	113°24.5′
23	285°18.0′	S 21°23.8′	6.9′	-10.0′	59.2′	119°55.6′	70°08.2′	64°20.3′	8°34.8′	38°13.2′	47°46.2′	92°13.9′	113°39.9′
Mer. pass. 3 h 15 m SD 16.1′ phase 84%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.4′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.6′	N 45°21.2′	Acrux	+0.8	173°02.0′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.4′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.8′
Vega	+0.0	80°34.8′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.5′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°27.7′	N 89°21.6′
Rigil Kent	−0.0	139°43.0′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.6′	Canopus	−0.6	263°53.4′	S 52°42.7′				

Wednesday 23 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	180°27.8′	178°19.3′	N 0°55.7′	222°44.8′	S 14°24.8′	190°01.8′	S 5°12.2′	216°35.9′	S 15°19.0′	225°07.8′	S 18°06.1′
1	195°30.3′	193°19.5′	N 0°56.7′	237°44.8′	S 14°24.3′	205°03.7′	S 5°12.0′	231°38.1′	S 15°18.9′	240°08.4′	S 18°05.6′
2	210°32.8′	208°19.7′	N 0°57.7′	252°44.7′	S 14°23.8′	220°05.6′	S 5°11.7′	246°40.3′	S 15°18.8′	255°08.9′	S 18°05.1′
3	225°35.2′	223°19.8′	N 0°58.7′	267°44.6′	S 14°23.3′	235°07.5′	S 5°11.5′	261°42.5′	S 15°18.8′	270°09.5′	S 18°04.6′
4	240°37.7′	238°20.0′	N 0°59.6′	282°44.5′	S 14°22.8′	250°09.4′	S 5°11.3′	276°44.7′	S 15°18.7′	285°10.0′	S 18°04.1′
5	255°40.2′	253°20.2′	N 1°00.6′	297°44.4′	S 14°22.3′	265°11.3′	S 5°11.0′	291°47.0′	S 15°18.6′	300°10.6′	S 18°03.6′
6	270°42.6′	268°20.4′	N 1°01.6′	312°44.3′	S 14°21.9′	280°13.2′	S 5°10.8′	306°49.2′	S 15°18.5′	315°11.1′	S 18°03.1′
7	285°45.1′	283°20.6′	N 1°02.6′	327°44.2′	S 14°21.4′	295°15.2′	S 5°10.6′	321°51.4′	S 15°18.5′	330°11.7′	S 18°02.6′
8	300°47.5′	298°20.8′	N 1°03.6′	342°44.1′	S 14°20.9′	310°17.1′	S 5°10.3′	336°53.6′	S 15°18.4′	345°12.3′	S 18°02.1′
9	315°50.0′	313°21.0′	N 1°04.6′	357°44.0′	S 14°20.4′	325°19.0′	S 5°10.1′	351°55.8′	S 15°18.3′	0°12.8′	S 18°01.6′
10	330°52.5′	328°21.2′	N 1°05.6′	12°43.9′	S 14°19.9′	340°20.9′	S 5°09.9′	6°58.0′	S 15°18.2′	15°13.4′	S 18°01.1′
11	345°54.9′	343°21.3′	N 1°06.5′	27°43.8′	S 14°19.4′	355°22.8′	S 5°09.6′	22°00.3′	S 15°18.2′	30°13.9′	S 18°00.6′
12	0°57.4′	358°21.5′	N 1°07.5′	42°43.7′	S 14°18.9′	10°24.7′	S 5°09.4′	37°02.5′	S 15°18.1′	45°14.5′	S 18°00.1′
13	15°59.9′	13°21.7′	N 1°08.5′	57°43.6′	S 14°18.4′	25°26.6′	S 5°09.2′	52°04.7′	S 15°18.0′	60°15.1′	S 17°59.6′
14	31°02.3′	28°21.9′	N 1°09.5′	72°43.5′	S 14°17.9′	40°28.5′	S 5°09.0′	67°06.9′	S 15°17.9′	75°15.6′	S 17°59.1′
15	46°04.8′	43°22.1′	N 1°10.5′	87°43.3′	S 14°17.4′	55°30.5′	S 5°08.7′	82°09.1′	S 15°17.9′	90°16.2′	S 17°58.5′
16	61°07.3′	58°22.3′	N 1°11.5′	102°43.2′	S 14°16.9′	70°32.4′	S 5°08.5′	97°11.4′	S 15°17.8′	105°16.7′	S 17°58.0′
17	76°09.7′	73°22.5′	N 1°12.5′	117°43.1′	S 14°16.4′	85°34.3′	S 5°08.3′	112°13.6′	S 15°17.7′	120°17.3′	S 17°57.5′
18	91°12.2′	88°22.7′	N 1°13.4′	132°43.0′	S 14°15.8′	100°36.2′	S 5°08.0′	127°15.8′	S 15°17.6′	135°17.9′	S 17°57.0′
19	106°14.7′	103°22.9′	N 1°14.4′	147°42.9′	S 14°15.3′	115°38.1′	S 5°07.8′	142°18.0′	S 15°17.6′	150°18.4′	S 17°56.5′
20	121°17.1′	118°23.0′	N 1°15.4′	162°42.8′	S 14°14.8′	130°40.0′	S 5°07.6′	157°20.2′	S 15°17.5′	165°19.0′	S 17°56.0′
21	136°19.6′	133°23.2′	N 1°16.4′	177°42.7′	S 14°14.3′	145°41.9′	S 5°07.3′	172°22.4′	S 15°17.4′	180°19.5′	S 17°55.5′
22	151°22.0′	148°23.4′	N 1°17.4′	192°42.6′	S 14°13.8′	160°43.8′	S 5°07.1′	187°24.7′	S 15°17.3′	195°20.1′	S 17°55.0′
23	166°24.5′	163°23.6′	N 1°18.4′	207°42.5′	S 14°13.3′	175°45.8′	S 5°06.9′	202°26.9′	S 15°17.3′	210°20.7′	S 17°54.5′
		SD 16.0′ *d* 1.0′		*v* -0.1′ *d* 0.5′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.6′ *d* 0.5′	
Mer. pass.		12 h 6 m 34 s		9 h 9 m		11 h 18 m		9 h 32 m		8 h 59 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Sun	−Mars	−Altair	−Antares	+Spica	+Arcturus	+Regulus	+Adhara
0	299°43.9′	S 21°33.8′	6.8′	-9.9′	59.2′	119°22.7′	69°34.7′	63°52.6′	8°02.0′	38°48.4′	48°13.6′	92°49.2′	113°55.3′
1	314°09.7′	S 21°43.7′	6.7′	-9.7′	59.2′	118°49.8′	69°01.2′	63°24.9′	7°29.5′	39°23.5′	48°41.2′	93°24.6′	114°10.5′
2	328°35.4′	S 21°53.4′	6.7′	-9.6′	59.2′	118°17.0′	68°27.8′	62°57.3′	6°57.5′	39°58.7′	49°08.8′	93°59.9′	
3	343°01.1′	S 22°03.0′	6.6′	-9.5′	59.2′	117°44.1′	67°54.3′	62°29.8′	6°26.1′	40°33.9′	49°36.6′	94°35.3′	
4	357°26.7′	S 22°12.5′	6.5′	-9.3′	59.2′	117°11.2′	67°20.8′	62°02.3′		41°09.1′	50°04.6′	95°10.6′	
5	11°52.2′	S 22°21.8′	6.4′	-9.2′	59.2′	116°38.4′	66°47.3′	61°34.9′		41°44.3′	50°32.6′	95°45.9′	
6	26°17.6′	S 22°31.0′	6.3′	-9.0′	59.2′	116°05.5′	66°13.8′	61°07.6′		42°19.5′	51°00.7′	96°21.3′	
7	40°42.9′	S 22°40.0′	6.2′	-8.9′	59.2′	115°32.6′	65°40.3′	60°40.4′		42°54.7′	51°29.0′	96°56.6′	
8	55°08.1′	S 22°48.9′	6.2′	-8.8′	59.2′	114°59.7′	65°06.8′	60°13.2′		43°30.0′	51°57.4′	97°32.0′	
9	69°33.3′	S 22°57.7′	6.1′	-8.6′	59.2′	114°26.8′	64°33.4′	59°46.2′		44°05.2′	52°25.8′	98°07.3′	
10	83°58.3′	S 23°06.3′	6.0′	-8.5′	59.2′	113°53.9′	63°59.9′	59°19.2′		44°40.4′	52°54.4′	98°42.7′	
11	98°23.3′	S 23°14.8′	5.9′	-8.3′	59.2′	113°21.0′	63°26.4′	58°52.3′		45°15.7′	53°23.0′	99°18.1′	
12	112°48.3′	S 23°23.1′	5.8′	-8.2′	59.2′	112°48.2′	62°52.9′	58°25.6′		45°50.9′	53°51.8′	99°53.4′	
13	127°13.1′	S 23°31.3′	5.8′	-8.0′	59.2′	112°15.3′	62°19.4′	57°58.9′		46°26.2′	54°20.7′	100°28.8′	
14	141°37.9′	S 23°39.3′	5.7′	-7.9′	59.2′	111°42.4′	61°45.9′	57°32.3′		47°01.4′	54°49.6′	101°04.1′	
15	156°02.5′	S 23°47.1′	5.6′	-7.7′	59.2′	111°09.5′	61°12.4′	57°05.8′		47°36.7′	55°18.6′	101°39.5′	
16	170°27.1′	S 23°54.9′	5.5′	-7.6′	59.2′	110°36.6′	60°39.0′	56°39.4′		48°12.0′	55°47.7′	102°14.8′	
17	184°51.7′	S 24°02.4′	5.5′	-7.4′	59.2′	110°03.7′	60°05.5′	56°13.2′		48°47.2′	56°16.9′	102°50.2′	
18	199°16.1′	S 24°09.8′	5.4′	-7.2′	59.2′	109°30.8′	59°32.0′	55°47.0′		49°22.5′	56°46.2′	103°25.5′	
19	213°40.5′	S 24°17.1′	5.3′	-7.1′	59.2′	108°57.9′	58°58.5′	55°21.0′		49°57.8′	57°15.5′	104°00.9′	
20	228°04.9′	S 24°24.2′	5.2′	-6.9′	59.2′	108°25.0′	58°25.0′	54°55.1′		50°33.1′	57°44.9′	104°36.2′	
21	242°29.1′	S 24°31.1′	5.2′	-6.8′	59.2′	107°52.1′	57°51.6′	54°29.3′		51°08.3′	58°14.4′	105°11.5′	
22	256°53.3′	S 24°37.9′	5.1′	-6.6′	59.2′	107°19.2′	57°18.1′	54°03.6′	6°23.8′	51°43.6′	58°44.0′	105°46.9′	
23	271°17.4′	S 24°44.5′	5.0′	-6.4′	59.2′	106°46.3′	56°44.6′	53°38.0′	6°55.1′	52°18.9′	59°13.6′	106°22.2′	
Mer. pass. 4 h 11 m SD 16.1′ phase 75%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.4′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.6′	N 45°21.2′	Acrux	+0.8	173°02.0′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.3′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.8′
Vega	+0.0	80°34.8′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.5′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°28.0′	N 89°21.6′
Rigil Kent	−0.0	139°42.9′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.6′	Canopus	−0.6	263°53.4′	S 52°42.7′				

Thursday 24 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	181°27.0′	178°23.8′	N 1°19.4′	222°42.4′	S 14°12.8′	190°47.7′	S 5°06.6′	217°29.1′	S 15°17.2′	225°21.2′	S 17°54.0′
1	196°29.4′	193°24.0′	N 1°20.3′	237°42.3′	S 14°12.3′	205°49.6′	S 5°06.4′	232°31.3′	S 15°17.1′	240°21.8′	S 17°53.5′
2	211°31.9′	208°24.2′	N 1°21.3′	252°42.2′	S 14°11.8′	220°51.5′	S 5°06.2′	247°33.5′	S 15°17.0′	255°22.3′	S 17°52.9′
3	226°34.4′	223°24.4′	N 1°22.3′	267°42.1′	S 14°11.3′	235°53.4′	S 5°06.0′	262°35.8′	S 15°17.0′	270°22.9′	S 17°52.4′
4	241°36.8′	238°24.5′	N 1°23.3′	282°42.0′	S 14°10.8′	250°55.3′	S 5°05.7′	277°38.0′	S 15°16.9′	285°23.5′	S 17°51.9′
5	256°39.3′	253°24.7′	N 1°24.3′	297°41.9′	S 14°10.2′	265°57.2′	S 5°05.5′	292°40.2′	S 15°16.8′	300°24.0′	S 17°51.4′
6	271°41.8′	268°24.9′	N 1°25.3′	312°41.8′	S 14°09.7′	280°59.1′	S 5°05.3′	307°42.4′	S 15°16.7′	315°24.6′	S 17°50.9′
7	286°44.2′	283°25.1′	N 1°26.2′	327°41.7′	S 14°09.2′	296°01.1′	S 5°05.0′	322°44.6′	S 15°16.7′	330°25.1′	S 17°50.4′
8	301°46.7′	298°25.3′	N 1°27.2′	342°41.5′	S 14°08.7′	311°03.0′	S 5°04.8′	337°46.9′	S 15°16.6′	345°25.7′	S 17°49.9′
9	316°49.1′	313°25.5′	N 1°28.2′	357°41.4′	S 14°08.2′	326°04.9′	S 5°04.6′	352°49.1′	S 15°16.5′	0°26.3′	S 17°49.4′
10	331°51.6′	328°25.7′	N 1°29.2′	12°41.3′	S 14°07.7′	341°06.8′	S 5°04.3′	7°51.3′	S 15°16.4′	15°26.8′	S 17°48.8′
11	346°54.1′	343°25.9′	N 1°30.2′	27°41.2′	S 14°07.1′	356°08.7′	S 5°04.1′	22°53.5′	S 15°16.4′	30°27.4′	S 17°48.3′
12	1°56.5′	358°26.0′	N 1°31.2′	42°41.1′	S 14°06.6′	11°10.6′	S 5°03.9′	37°55.7′	S 15°16.3′	45°28.0′	S 17°47.8′
13	16°59.0′	13°26.2′	N 1°32.2′	57°41.0′	S 14°06.1′	26°12.5′	S 5°03.6′	52°58.0′	S 15°16.2′	60°28.5′	S 17°47.3′
14	32°01.5′	28°26.4′	N 1°33.1′	72°40.9′	S 14°05.6′	41°14.4′	S 5°03.4′	68°00.2′	S 15°16.1′	75°29.1′	S 17°46.8′
15	47°03.9′	43°26.6′	N 1°34.1′	87°40.8′	S 14°05.1′	56°16.4′	S 5°03.2′	83°02.4′	S 15°16.1′	90°29.6′	S 17°46.3′
16	62°06.4′	58°26.8′	N 1°35.1′	102°40.7′	S 14°04.5′	71°18.3′	S 5°03.0′	98°04.6′	S 15°16.0′	105°30.2′	S 17°45.8′
17	77°08.9′	73°27.0′	N 1°36.1′	117°40.5′	S 14°04.0′	86°20.2′	S 5°02.7′	113°06.8′	S 15°15.9′	120°30.8′	S 17°45.2′
18	92°11.3′	88°27.2′	N 1°37.1′	132°40.4′	S 14°03.5′	101°22.1′	S 5°02.5′	128°09.1′	S 15°15.8′	135°31.3′	S 17°44.7′
19	107°13.8′	103°27.4′	N 1°38.1′	147°40.3′	S 14°03.0′	116°24.0′	S 5°02.3′	143°11.3′	S 15°15.8′	150°31.9′	S 17°44.2′
20	122°16.3′	118°27.6′	N 1°39.0′	162°40.2′	S 14°02.4′	131°25.9′	S 5°02.0′	158°13.5′	S 15°15.7′	165°32.5′	S 17°43.7′
21	137°18.7′	133°27.7′	N 1°40.0′	177°40.1′	S 14°01.9′	146°27.8′	S 5°01.8′	173°15.7′	S 15°15.6′	180°33.0′	S 17°43.2′
22	152°21.2′	148°27.9′	N 1°41.0′	192°40.0′	S 14°01.4′	161°29.8′	S 5°01.6′	188°17.9′	S 15°15.5′	195°33.6′	S 17°42.7′
23	167°23.6′	163°28.1′	N 1°42.0′	207°39.9′	S 14°00.9′	176°31.7′	S 5°01.3′	203°20.2′	S 15°15.5′	210°34.2′	S 17°42.1′
		SD 16.0′ *d* 1.0′		*v* -0.1′ *d* 0.5′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.6′ *d* 0.5′	
Mer. pass.		12 h 6 m 16 s		9 h 9 m		11 h 15 m		9 h 29 m		8 h 58 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Sun	−Venus	−Mars	−Altair	+Antares	+Rigil Kent	+Hadar	+Spica
0	285°41.4′	S 24°50.9′	5.0′	-6.3′	59.2′	106°13.4′	59°49.1′	56°11.2′	53°12.6′	7°27.1′			52°54.2′
1	300°05.4′	S 24°57.2′	4.9′	-6.1′	59.2′	105°40.5′	59°16.5′	55°37.7′	52°47.3′	7°59.5′			53°29.5′
2	314°29.3′	S 25°03.3′	4.9′	-5.9′	59.2′	105°07.6′	58°43.8′	55°04.3′	52°22.2′	8°32.3′			54°04.8′
3	328°53.2′	S 25°09.2′	4.8′	-5.8′	59.2′	104°34.7′	58°11.2′	54°30.8′	51°57.2′	9°05.5′			54°40.1′
4	343°17.0′	S 25°15.0′	4.7′	-5.6′	59.2′	104°01.8′	57°38.6′	53°57.3′	51°32.3′	9°38.9′			55°15.3′
5	357°40.8′	S 25°20.6′	4.7′	-5.4′	59.2′	103°28.9′	57°06.0′	53°23.9′	51°07.6′	10°12.6′			55°50.6′
6	12°04.4′	S 25°26.1′	4.6′	-5.3′	59.2′	102°56.1′	56°33.4′	52°50.5′	50°43.1′	10°46.4′			56°25.9′
7	26°28.1′	S 25°31.3′	4.6′	-5.1′	59.2′	102°23.2′	56°00.9′	52°17.0′	50°18.7′	11°20.4′			57°01.2′
8	40°51.6′	S 25°36.4′	4.5′	-4.9′	59.2′	101°50.3′	55°28.3′	51°43.6′	49°54.4′	11°54.6′			57°36.5′
9	55°15.2′	S 25°41.4′	4.5′	-4.8′	59.2′	101°17.4′	54°55.7′	51°10.2′	49°30.4′	12°28.8′			58°11.8′
10	69°38.6′	S 25°46.1′	4.4′	-4.6′	59.2′	100°44.5′	54°23.1′	50°36.7′	49°06.5′	13°03.2′			58°47.1′
11	84°02.1′	S 25°50.7′	4.4′	-4.4′	59.2′	100°11.6′	53°50.6′	50°03.3′	48°42.8′	13°37.6′			59°22.4′
12	98°25.5′	S 25°55.1′	4.3′	-4.2′	59.2′	99°38.8′	53°18.0′	49°29.9′	48°19.2′	14°12.2′			59°57.7′
13	112°48.8′	S 25°59.4′	4.3′	-4.1′	59.2′	99°05.9′	52°45.5′	48°56.5′	47°55.9′	14°46.8′			60°32.9′
14	127°12.1′	S 26°03.4′	4.3′	-3.9′	59.2′	98°33.0′	52°12.9′	48°23.1′	47°32.7′	15°21.4′			61°08.2′
15	141°35.3′	S 26°07.3′	4.2′	-3.7′	59.2′	98°00.2′	51°40.4′	47°49.7′	47°09.8′	15°56.1′		50°01.7′	61°43.5′
16	155°58.6′	S 26°11.0′	4.2′	-3.5′	59.2′	97°27.3′	51°07.9′	47°16.3′	46°47.0′	16°30.9′		50°16.9′	62°18.8′
17	170°21.7′	S 26°14.5′	4.1′	-3.3′	59.2′	96°54.4′	50°35.4′	46°42.9′	46°24.4′	17°05.7′		50°32.4′	62°54.1′
18	184°44.9′	S 26°17.9′	4.1′	-3.2′	59.2′	96°21.6′	50°02.9′	46°09.5′	46°02.1′	17°40.5′		50°48.1′	63°29.3′
19	199°08.0′	S 26°21.0′	4.1′	-3.0′	59.2′	95°48.7′	49°30.4′	45°36.1′	45°39.9′	18°15.4′		51°04.1′	64°04.6′
20	213°31.1′	S 26°24.0′	4.1′	-2.8′	59.2′	95°15.9′	48°57.9′	45°02.8′	45°18.0′	18°50.2′	47°22.4′	51°20.3′	64°39.9′
21	227°54.1′	S 26°26.8′	4.0′	-2.6′	59.2′	94°43.0′	48°25.4′	44°29.4′	44°56.3′	19°25.2′	47°37.5′	51°36.7′	65°15.1′
22	242°17.1′	S 26°29.5′	4.0′	-2.4′	59.2′	94°10.2′	47°53.0′	43°56.1′	44°34.9′	20°00.1′	47°52.8′	51°53.4′	65°50.4′
23	256°40.1′	S 26°31.9′	4.0′	-2.3′	59.2′	93°37.3′	47°20.5′	43°22.7′	44°13.7′	20°35.1′	48°08.4′	52°10.2′	66°25.7′
Mer. pass. 5 h 10 m SD 16.2′ phase 64%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.4′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.6′	N 45°21.2′	Acrux	+0.8	173°02.0′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.3′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.8′
Vega	+0.0	80°34.8′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.5′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°28.2′	N 89°21.6′
Rigil Kent	−0.0	139°42.9′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.8′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.6′	Canopus	−0.6	263°53.4′	S 52°42.7′				

Friday 25 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	182°26.1′	178°28.3′	N 1°43.0′	222°39.8′	S 14°00.3′	191°33.6′	S 5°01.1′	218°22.4′	S 15°15.4′	225°34.7′	S 17°41.6′
1	197°28.6′	193°28.5′	N 1°44.0′	237°39.6′	S 13°59.8′	206°35.5′	S 5°00.9′	233°24.6′	S 15°15.3′	240°35.3′	S 17°41.1′
2	212°31.0′	208°28.7′	N 1°44.9′	252°39.5′	S 13°59.3′	221°37.4′	S 5°00.6′	248°26.8′	S 15°15.2′	255°35.8′	S 17°40.6′
3	227°33.5′	223°28.9′	N 1°45.9′	267°39.4′	S 13°58.7′	236°39.3′	S 5°00.4′	263°29.0′	S 15°15.2′	270°36.4′	S 17°40.1′
4	242°36.0′	238°29.1′	N 1°46.9′	282°39.3′	S 13°58.2′	251°41.2′	S 5°00.2′	278°31.3′	S 15°15.1′	285°37.0′	S 17°39.5′
5	257°38.4′	253°29.2′	N 1°47.9′	297°39.2′	S 13°57.7′	266°43.2′	S 4°60.0′	293°33.5′	S 15°15.0′	300°37.5′	S 17°39.0′
6	272°40.9′	268°29.4′	N 1°48.9′	312°39.1′	S 13°57.1′	281°45.1′	S 4°59.7′	308°35.7′	S 15°15.0′	315°38.1′	S 17°38.5′
7	287°43.4′	283°29.6′	N 1°49.9′	327°38.9′	S 13°56.6′	296°47.0′	S 4°59.5′	323°37.9′	S 15°14.9′	330°38.7′	S 17°38.0′
8	302°45.8′	298°29.8′	N 1°50.8′	342°38.8′	S 13°56.1′	311°48.9′	S 4°59.3′	338°40.1′	S 15°14.8′	345°39.2′	S 17°37.5′
9	317°48.3′	313°30.0′	N 1°51.8′	357°38.7′	S 13°55.5′	326°50.8′	S 4°59.0′	353°42.4′	S 15°14.7′	0°39.8′	S 17°37.0′
10	332°50.8′	328°30.2′	N 1°52.8′	12°38.6′	S 13°55.0′	341°52.7′	S 4°58.8′	8°44.6′	S 15°14.7′	15°40.4′	S 17°36.4′
11	347°53.2′	343°30.4′	N 1°53.8′	27°38.5′	S 13°54.5′	356°54.6′	S 4°58.6′	23°46.8′	S 15°14.6′	30°40.9′	S 17°35.9′
12	2°55.7′	358°30.6′	N 1°54.8′	42°38.4′	S 13°53.9′	11°56.6′	S 4°58.3′	38°49.0′	S 15°14.5′	45°41.5′	S 17°35.4′
13	17°58.1′	13°30.8′	N 1°55.7′	57°38.2′	S 13°53.4′	26°58.5′	S 4°58.1′	53°51.3′	S 15°14.4′	60°42.1′	S 17°34.9′
14	33°00.6′	28°30.9′	N 1°56.7′	72°38.1′	S 13°52.9′	42°00.4′	S 4°57.9′	68°53.5′	S 15°14.4′	75°42.6′	S 17°34.3′
15	48°03.1′	43°31.1′	N 1°57.7′	87°38.0′	S 13°52.3′	57°02.3′	S 4°57.6′	83°55.7′	S 15°14.3′	90°43.2′	S 17°33.8′
16	63°05.5′	58°31.3′	N 1°58.7′	102°37.9′	S 13°51.8′	72°04.2′	S 4°57.4′	98°57.9′	S 15°14.2′	105°43.8′	S 17°33.3′
17	78°08.0′	73°31.5′	N 1°59.7′	117°37.8′	S 13°51.2′	87°06.1′	S 4°57.2′	114°00.1′	S 15°14.1′	120°44.3′	S 17°32.8′
18	93°10.5′	88°31.7′	N 2°00.7′	132°37.6′	S 13°50.7′	102°08.0′	S 4°57.0′	129°02.4′	S 15°14.1′	135°44.9′	S 17°32.3′
19	108°12.9′	103°31.9′	N 2°01.6′	147°37.5′	S 13°50.1′	117°10.0′	S 4°56.7′	144°04.6′	S 15°14.0′	150°45.5′	S 17°31.7′
20	123°15.4′	118°32.1′	N 2°02.6′	162°37.4′	S 13°49.6′	132°11.9′	S 4°56.5′	159°06.8′	S 15°13.9′	165°46.0′	S 17°31.2′
21	138°17.9′	133°32.3′	N 2°03.6′	177°37.3′	S 13°49.1′	147°13.8′	S 4°56.3′	174°09.0′	S 15°13.8′	180°46.6′	S 17°30.7′
22	153°20.3′	148°32.5′	N 2°04.6′	192°37.2′	S 13°48.5′	162°15.7′	S 4°56.0′	189°11.3′	S 15°13.8′	195°47.2′	S 17°30.2′
23	168°22.8′	163°32.6′	N 2°05.6′	207°37.0′	S 13°48.0′	177°17.6′	S 4°55.8′	204°13.5′	S 15°13.7′	210°47.7′	S 17°29.6′
		SD 16.0′ *d* 1.0′		*v* -0.1′ *d* 0.5′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.6′ *d* 0.5′	
Mer. pass.		12 h 5 m 58 s		9 h 9 m		11 h 12 m		9 h 25 m		8 h 57 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Sun	−Venus	−Altair	−Mars	+Antares	+Rigil Kent	+Hadar	+Acrux
0	271°03.1′	S 26°34.2′	4.0′	-2.1′	59.2′	93°04.5′	46°48.1′	43°52.7′	42°49.4′	21°10.0′	48°24.3′	52°27.3′	63°59.4′
1	285°26.1′	S 26°36.3′	3.9′	-1.9′	59.2′	92°31.7′	46°15.7′	43°32.0′	42°16.1′	21°45.0′	48°40.4′	52°44.6′	64°15.2′
2	299°49.0′	S 26°38.2′	3.9′	-1.7′	59.2′	91°58.8′	45°43.3′	43°11.5′	41°42.7′	22°20.1′	48°56.8′	53°02.1′	64°31.2′
3	314°12.0′	S 26°39.9′	3.9′	-1.5′	59.2′	91°26.0′	45°10.9′	42°51.3′	41°09.4′	22°55.1′	49°13.4′	53°19.8′	64°47.2′
4	328°34.9′	S 26°41.4′	3.9′	-1.4′	59.2′	90°53.2′	44°38.5′	42°31.3′	40°36.1′	23°30.1′	49°30.2′	53°37.7′	65°03.5′
5	342°57.8′	S 26°42.8′	3.9′	-1.2′	59.2′	90°20.4′	44°06.1′	42°11.7′	40°02.8′	24°05.2′	49°47.3′	53°55.8′	65°19.8′
6	357°20.7′	S 26°43.9′	3.9′	-1.0′	59.2′	89°47.6′	43°33.7′	41°52.3′	39°29.5′	24°40.2′	50°04.6′	54°14.1′	65°36.3′
7	11°43.5′	S 26°44.9′	3.9′	-0.8′	59.2′	89°14.8′	43°01.4′	41°33.2′	38°56.3′	25°15.3′	50°22.2′	54°32.6′	65°52.9′
8	26°06.4′	S 26°45.7′	3.9′	-0.6′	59.2′	88°42.0′	42°29.0′	41°14.4′	38°23.0′	25°50.4′	50°40.0′	54°51.2′	66°09.6′
9	40°29.3′	S 26°46.3′	3.9′	-0.4′	59.2′	88°09.2′	41°56.7′	40°55.9′	37°49.7′	26°25.5′	50°58.0′	55°10.1′	66°26.5′
10	54°52.2′	S 26°46.8′	3.9′	-0.3′	59.2′	87°36.4′	41°24.4′	40°37.7′	37°16.5′	27°00.5′	51°16.2′	55°29.1′	66°43.4′
11	69°15.1′	S 26°47.0′	3.9′	-0.1′	59.1′	87°03.6′	40°52.1′	40°19.9′	36°43.3′	27°35.6′	51°34.6′	55°48.3′	67°00.5′
12	83°37.9′	S 26°47.1′	3.9′	0.1′	59.1′	86°30.8′	40°19.8′	40°02.3′	36°10.1′	28°10.7′	51°53.2′	56°07.7′	67°17.7′
13	98°00.8′	S 26°47.0′	3.9′	0.3′	59.1′	85°58.0′	39°47.6′	39°45.1′	35°36.8′	28°45.8′	52°12.0′	56°27.2′	67°35.1′
14	112°23.7′	S 26°46.7′	3.9′	0.5′	59.1′	85°25.3′	39°15.3′	39°28.2′	35°03.6′	29°20.9′	52°31.1′	56°46.9′	67°52.5′
15	126°46.6′	S 26°46.2′	3.9′	0.7′	59.1′	84°52.5′	38°43.1′	39°11.7′	34°30.5′	29°56.0′	52°50.3′	57°06.7′	68°10.0′
16	141°09.6′	S 26°45.6′	3.9′	0.8′	59.1′	84°19.8′	38°10.9′	38°55.5′	33°57.3′	30°31.1′	53°09.7′	57°26.8′	68°27.7′
17	155°32.5′	S 26°44.7′	4.0′	1.0′	59.1′	83°47.0′	37°38.7′	38°39.7′	33°24.1′	31°06.2′	53°29.3′	57°46.9′	68°45.4′
18	169°55.5′	S 26°43.7′	4.0′	1.2′	59.1′	83°14.3′	37°06.6′	38°24.2′	32°51.0′	31°41.3′	53°49.0′	58°07.2′	69°03.2′
19	184°18.4′	S 26°42.5′	4.0′	1.4′	59.1′	82°41.5′	36°34.4′		32°17.8′	32°16.4′	54°09.0′	58°27.7′	69°21.2′
20	198°41.4′	S 26°41.1′	4.0′	1.6′	59.1′	82°08.8′	36°02.3′		31°44.7′	32°51.5′	54°29.1′	58°48.3′	69°39.2′
21	213°04.5′	S 26°39.5′	4.1′	1.8′	59.1′	81°36.1′	35°30.2′		31°11.6′	33°26.7′	54°49.4′	59°09.1′	69°57.4′
22	227°27.5′	S 26°37.8′	4.1′	1.9′	59.1′	81°03.3′	34°58.1′		30°38.5′	34°01.8′	55°09.9′	59°29.9′	70°15.6′
23	241°50.6′	S 26°35.8′	4.1′	2.1′	59.1′	80°30.6′	34°26.0′		30°05.5′	34°36.9′	55°30.5′	59°51.0′	70°33.9′
Mer. pass. 6 h 11 m SD 16.1′ phase 53%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.4′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.6′	N 45°21.2′	Acrux	+0.8	173°02.0′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.3′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.8′
Vega	+0.0	80°34.8′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.5′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°28.4′	N 89°21.6′
Rigil Kent	−0.0	139°42.9′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.7′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.7′	Canopus	−0.6	263°53.4′	S 52°42.7′				

Saturday 26 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	183°25.3′	178°32.8′	N 2°06.6′	222°36.9′	S 13°47.4′	192°19.5′	S 4°55.6′	219°15.7′	S 15°13.6′	225°48.3′	S 17°29.1′
1	198°27.7′	193°33.0′	N 2°07.5′	237°36.8′	S 13°46.9′	207°21.4′	S 4°55.3′	234°17.9′	S 15°13.6′	240°48.9′	S 17°28.6′
2	213°30.2′	208°33.2′	N 2°08.5′	252°36.7′	S 13°46.3′	222°23.4′	S 4°55.1′	249°20.2′	S 15°13.5′	255°49.4′	S 17°28.1′
3	228°32.6′	223°33.4′	N 2°09.5′	267°36.5′	S 13°45.8′	237°25.3′	S 4°54.9′	264°22.4′	S 15°13.4′	270°50.0′	S 17°27.5′
4	243°35.1′	238°33.6′	N 2°10.5′	282°36.4′	S 13°45.2′	252°27.2′	S 4°54.7′	279°24.6′	S 15°13.3′	285°50.6′	S 17°27.0′
5	258°37.6′	253°33.8′	N 2°11.5′	297°36.3′	S 13°44.7′	267°29.1′	S 4°54.4′	294°26.8′	S 15°13.3′	300°51.1′	S 17°26.5′
6	273°40.0′	268°34.0′	N 2°12.4′	312°36.2′	S 13°44.1′	282°31.0′	S 4°54.2′	309°29.0′	S 15°13.2′	315°51.7′	S 17°26.0′
7	288°42.5′	283°34.1′	N 2°13.4′	327°36.0′	S 13°43.6′	297°32.9′	S 4°54.0′	324°31.3′	S 15°13.1′	330°52.3′	S 17°25.4′
8	303°45.0′	298°34.3′	N 2°14.4′	342°35.9′	S 13°43.0′	312°34.8′	S 4°53.7′	339°33.5′	S 15°13.0′	345°52.8′	S 17°24.9′
9	318°47.4′	313°34.5′	N 2°15.4′	357°35.8′	S 13°42.5′	327°36.8′	S 4°53.5′	354°35.7′	S 15°13.0′	0°53.4′	S 17°24.4′
10	333°49.9′	328°34.7′	N 2°16.4′	12°35.7′	S 13°41.9′	342°38.7′	S 4°53.3′	9°37.9′	S 15°12.9′	15°54.0′	S 17°23.8′
11	348°52.4′	343°34.9′	N 2°17.3′	27°35.5′	S 13°41.3′	357°40.6′	S 4°53.0′	24°40.2′	S 15°12.8′	30°54.6′	S 17°23.3′
12	3°54.8′	358°35.1′	N 2°18.3′	42°35.4′	S 13°40.8′	12°42.5′	S 4°52.8′	39°42.4′	S 15°12.7′	45°55.1′	S 17°22.8′
13	18°57.3′	13°35.3′	N 2°19.3′	57°35.3′	S 13°40.2′	27°44.4′	S 4°52.6′	54°44.6′	S 15°12.7′	60°55.7′	S 17°22.3′
14	33°59.8′	28°35.5′	N 2°20.3′	72°35.2′	S 13°39.7′	42°46.3′	S 4°52.4′	69°46.8′	S 15°12.6′	75°56.3′	S 17°21.7′
15	49°02.2′	43°35.7′	N 2°21.3′	87°35.0′	S 13°39.1′	57°48.3′	S 4°52.1′	84°49.1′	S 15°12.5′	90°56.8′	S 17°21.2′
16	64°04.7′	58°35.8′	N 2°22.2′	102°34.9′	S 13°38.5′	72°50.2′	S 4°51.9′	99°51.3′	S 15°12.5′	105°57.4′	S 17°20.7′
17	79°07.1′	73°36.0′	N 2°23.2′	117°34.8′	S 13°38.0′	87°52.1′	S 4°51.7′	114°53.5′	S 15°12.4′	120°58.0′	S 17°20.1′
18	94°09.6′	88°36.2′	N 2°24.2′	132°34.7′	S 13°37.4′	102°54.0′	S 4°51.4′	129°55.7′	S 15°12.3′	135°58.5′	S 17°19.6′
19	109°12.1′	103°36.4′	N 2°25.2′	147°34.5′	S 13°36.9′	117°55.9′	S 4°51.2′	144°58.0′	S 15°12.2′	150°59.1′	S 17°19.1′
20	124°14.5′	118°36.6′	N 2°26.2′	162°34.4′	S 13°36.3′	132°57.8′	S 4°51.0′	160°00.2′	S 15°12.2′	165°59.7′	S 17°18.6′
21	139°17.0′	133°36.8′	N 2°27.1′	177°34.3′	S 13°35.7′	147°59.7′	S 4°50.7′	175°02.4′	S 15°12.1′	181°00.3′	S 17°18.0′
22	154°19.5′	148°37.0′	N 2°28.1′	192°34.1′	S 13°35.2′	163°01.7′	S 4°50.5′	190°04.6′	S 15°12.0′	196°00.8′	S 17°17.5′
23	169°21.9′	163°37.2′	N 2°29.1′	207°34.0′	S 13°34.6′	178°03.6′	S 4°50.3′	205°06.9′	S 15°11.9′	211°01.4′	S 17°17.0′
		SD 16.0′ *d* 1.0′		*v* -0.1′ *d* 0.6′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.6′ *d* 0.5′	
Mer. pass.		12 h 5 m 40 s		9 h 10 m		11 h 9 m		9 h 22 m		8 h 56 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Sun	−Saturn	−Venus	−Mars	+Antares	+Rigil Kent	+Hadar	+Acrux
0	256°13.7′	S 26°33.7′	4.1′	2.3′	59.1′	79°57.9′	36°11.7′	33°54.0′	29°32.4′	35°12.0′	55°51.3′	60°12.1′	70°52.4′
1	270°36.9′	S 26°31.4′	4.2′	2.5′	59.1′	79°25.2′	35°37.0′	33°22.0′	28°59.4′	35°47.1′	56°12.2′	60°33.4′	71°10.9′
2	285°00.0′	S 26°28.9′	4.2′	2.7′	59.1′	78°52.5′	35°02.3′	32°50.0′	28°26.4′	36°22.1′	56°33.3′	60°54.8′	71°29.4′
3	299°23.2′	S 26°26.3′	4.3′	2.8′	59.1′	78°19.8′	34°27.6′	32°18.1′	27°53.4′	36°57.2′	56°54.5′	61°16.3′	71°48.1′
4	313°46.5′	S 26°23.5′	4.3′	3.0′	59.0′	77°47.2′	33°52.9′	31°46.1′	27°20.4′	37°32.3′	57°15.9′	61°38.0′	72°06.9′
5	328°09.8′	S 26°20.4′	4.3′	3.2′	59.0′	77°14.5′	33°18.2′	31°14.2′	26°47.5′	38°07.4′	57°37.4′	61°59.7′	72°25.7′
6	342°33.1′	S 26°17.3′	4.4′	3.4′	59.0′	76°41.8′	32°43.5′	30°42.4′	26°14.5′	38°42.5′	57°59.1′	62°21.6′	72°44.6′
7	356°56.5′	S 26°13.9′	4.4′	3.5′	59.0′	76°09.2′	32°08.9′	30°10.5′	25°41.6′	39°17.6′	58°20.9′	62°43.6′	73°03.6′
8	11°20.0′	S 26°10.4′	4.5′	3.7′	59.0′	75°36.5′	31°34.3′	29°38.7′	25°08.7′	39°52.6′	58°42.8′	63°05.7′	73°22.7′
9	25°43.4′	S 26°06.7′	4.5′	3.9′	59.0′	75°03.9′	30°59.7′	29°07.0′	24°35.9′	40°27.7′	59°04.9′	63°27.9′	73°41.8′
10	40°07.0′	S 26°02.8′	4.6′	4.1′	59.0′	74°31.3′	30°25.1′	28°35.2′	24°03.0′	41°02.8′	59°27.1′	63°50.2′	74°01.0′
11	54°30.5′	S 25°58.7′	4.6′	4.2′	59.0′	73°58.6′	29°50.6′	28°03.5′	23°30.2′	41°37.8′	59°49.4′	64°12.6′	74°20.3′
12	68°54.2′	S 25°54.5′	4.7′	4.4′	59.0′	73°26.0′	29°16.0′	27°31.9′	22°57.5′	42°12.9′	60°11.8′	64°35.1′	74°39.6′
13	83°17.9′	S 25°50.1′	4.8′	4.6′	59.0′	72°53.4′	28°41.5′	27°00.3′	22°24.7′	42°47.9′	60°34.4′	64°57.7′	74°59.0′
14	97°41.6′	S 25°45.5′	4.8′	4.7′	59.0′	72°20.8′	28°07.0′	26°28.7′	21°52.0′	43°23.0′	60°57.0′	65°20.3′	75°18.5′
15	112°05.4′	S 25°40.8′	4.9′	4.9′	59.0′	71°48.2′	27°32.5′	25°57.2′	21°19.3′	43°58.0′	61°19.8′	65°43.1′	75°38.0′
16	126°29.3′	S 25°35.9′	4.9′	5.1′	59.0′	71°15.6′	26°58.1′	25°25.7′	20°46.7′	44°33.0′	61°42.7′	66°06.0′	75°57.6′
17	140°53.3′	S 25°30.8′	5.0′	5.2′	58.9′	70°43.1′	26°23.7′	24°54.3′	20°14.1′	45°08.1′	62°05.6′	66°28.9′	76°17.2′
18	155°17.3′	S 25°25.5′	5.1′	5.4′	58.9′	70°10.5′	25°49.3′	24°22.9′	19°41.5′	45°43.1′	62°28.7′	66°52.0′	76°36.9′
19	169°41.3′	S 25°20.1′	5.1′	5.6′	58.9′	69°37.9′	25°14.9′	23°51.6′	19°09.0′	46°18.1′	62°51.9′	67°15.1′	76°56.6′
20	184°05.5′	S 25°14.6′	5.2′	5.7′	58.9′	69°05.4′	24°40.6′	23°20.4′	18°36.6′	46°53.1′	63°15.2′	67°38.3′	77°16.4′
21	198°29.7′	S 25°08.8′	5.3′	5.9′	58.9′	68°32.9′	24°06.3′	22°49.2′	18°04.2′	47°28.1′	63°38.6′	68°01.6′	77°36.3′
22	212°53.9′	S 25°02.9′	5.3′	6.1′	58.9′	68°00.3′	23°32.0′	22°18.1′	17°31.8′	48°03.1′	64°02.0′	68°24.9′	77°56.2′
23	227°18.3′	S 24°56.9′	5.4′	6.2′	58.9′	67°27.8′	22°57.8′	21°47.0′	16°59.5′	48°38.1′	64°25.6′	68°48.3′	78°16.1′
Mer. pass. 7 h 13 m SD 16.1′ phase 41%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.4′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.6′	N 45°21.2′	Acrux	+0.8	173°02.0′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.3′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.8′
Vega	+0.0	80°34.8′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.5′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°28.7′	N 89°21.6′
Rigil Kent	−0.0	139°42.9′	S 60°55.4′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.7′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.7′	Canopus	−0.6	263°53.4′	S 52°42.7′				

Sunday 27 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	184°24.4′	178°37.3′	N 2°30.1′	222°33.9′	S 13°34.0′	193°05.5′	S 4°50.1′	220°09.1′	S 15°11.9′	226°02.0′	S 17°16.4′
1	199°26.9′	193°37.5′	N 2°31.1′	237°33.8′	S 13°33.5′	208°07.4′	S 4°49.8′	235°11.3′	S 15°11.8′	241°02.5′	S 17°15.9′
2	214°29.3′	208°37.7′	N 2°32.0′	252°33.6′	S 13°32.9′	223°09.3′	S 4°49.6′	250°13.5′	S 15°11.7′	256°03.1′	S 17°15.4′
3	229°31.8′	223°37.9′	N 2°33.0′	267°33.5′	S 13°32.3′	238°11.2′	S 4°49.4′	265°15.8′	S 15°11.7′	271°03.7′	S 17°14.8′
4	244°34.2′	238°38.1′	N 2°34.0′	282°33.4′	S 13°31.8′	253°13.2′	S 4°49.1′	280°18.0′	S 15°11.6′	286°04.3′	S 17°14.3′
5	259°36.7′	253°38.3′	N 2°35.0′	297°33.2′	S 13°31.2′	268°15.1′	S 4°48.9′	295°20.2′	S 15°11.5′	301°04.8′	S 17°13.8′
6	274°39.2′	268°38.5′	N 2°36.0′	312°33.1′	S 13°30.6′	283°17.0′	S 4°48.7′	310°22.4′	S 15°11.4′	316°05.4′	S 17°13.2′
7	289°41.6′	283°38.7′	N 2°36.9′	327°33.0′	S 13°30.1′	298°18.9′	S 4°48.4′	325°24.7′	S 15°11.4′	331°06.0′	S 17°12.7′
8	304°44.1′	298°38.9′	N 2°37.9′	342°32.8′	S 13°29.5′	313°20.8′	S 4°48.2′	340°26.9′	S 15°11.3′	346°06.5′	S 17°12.2′
9	319°46.6′	313°39.0′	N 2°38.9′	357°32.7′	S 13°28.9′	328°22.7′	S 4°48.0′	355°29.1′	S 15°11.2′	1°07.1′	S 17°11.6′
10	334°49.0′	328°39.2′	N 2°39.9′	12°32.6′	S 13°28.3′	343°24.7′	S 4°47.8′	10°31.4′	S 15°11.1′	16°07.7′	S 17°11.1′
11	349°51.5′	343°39.4′	N 2°40.9′	27°32.4′	S 13°27.8′	358°26.6′	S 4°47.5′	25°33.6′	S 15°11.1′	31°08.3′	S 17°10.6′
12	4°54.0′	358°39.6′	N 2°41.8′	42°32.3′	S 13°27.2′	13°28.5′	S 4°47.3′	40°35.8′	S 15°11.0′	46°08.8′	S 17°10.0′
13	19°56.4′	13°39.8′	N 2°42.8′	57°32.2′	S 13°26.6′	28°30.4′	S 4°47.1′	55°38.0′	S 15°10.9′	61°09.4′	S 17°09.5′
14	34°58.9′	28°40.0′	N 2°43.8′	72°32.0′	S 13°26.0′	43°32.3′	S 4°46.8′	70°40.3′	S 15°10.9′	76°10.0′	S 17°09.0′
15	50°01.4′	43°40.2′	N 2°44.8′	87°31.9′	S 13°25.5′	58°34.2′	S 4°46.6′	85°42.5′	S 15°10.8′	91°10.6′	S 17°08.4′
16	65°03.8′	58°40.4′	N 2°45.8′	102°31.8′	S 13°24.9′	73°36.2′	S 4°46.4′	100°44.7′	S 15°10.7′	106°11.1′	S 17°07.9′
17	80°06.3′	73°40.5′	N 2°46.7′	117°31.6′	S 13°24.3′	88°38.1′	S 4°46.1′	115°46.9′	S 15°10.6′	121°11.7′	S 17°07.3′
18	95°08.7′	88°40.7′	N 2°47.7′	132°31.5′	S 13°23.7′	103°40.0′	S 4°45.9′	130°49.2′	S 15°10.6′	136°12.3′	S 17°06.8′
19	110°11.2′	103°40.9′	N 2°48.7′	147°31.4′	S 13°23.1′	118°41.9′	S 4°45.7′	145°51.4′	S 15°10.5′	151°12.8′	S 17°06.3′
20	125°13.7′	118°41.1′	N 2°49.7′	162°31.2′	S 13°22.6′	133°43.8′	S 4°45.5′	160°53.6′	S 15°10.4′	166°13.4′	S 17°05.7′
21	140°16.1′	133°41.3′	N 2°50.6′	177°31.1′	S 13°22.0′	148°45.7′	S 4°45.2′	175°55.8′	S 15°10.3′	181°14.0′	S 17°05.2′
22	155°18.6′	148°41.5′	N 2°51.6′	192°31.0′	S 13°21.4′	163°47.7′	S 4°45.0′	190°58.1′	S 15°10.3′	196°14.6′	S 17°04.7′
23	170°21.1′	163°41.7′	N 2°52.6′	207°30.8′	S 13°20.8′	178°49.6′	S 4°44.8′	206°00.3′	S 15°10.2′	211°15.1′	S 17°04.1′
		SD 16.0′ *d* 1.0′		*v* -0.1′ *d* 0.6′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.6′ *d* 0.5′	
Mer. pass.		12 h 5 m 22 s		9 h 10 m		11 h 6 m		9 h 18 m		8 h 56 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Sun	−Saturn	−Venus	−Mars	+Antares	+Rigil Kent	+Hadar	+Acrux
0	241°42.7′	S 24°50.7′	5.5′	6.4′	58.9′	66°55.3′	22°23.6′	21°16.1′	16°27.3′	49°13.0′	64°49.2′	69°11.8′	78°36.1′
1	256°07.2′	S 24°44.3′	5.6′	6.5′	58.9′	66°22.8′	21°49.5′	20°45.2′	15°55.2′	49°48.0′	65°13.0′	69°35.4′	78°56.2′
2	270°31.8′	S 24°37.8′	5.6′	6.7′	58.9′	65°50.3′	21°15.4′	20°14.4′	15°23.1′	50°23.0′	65°36.8′	69°59.0′	79°16.2′
3	284°56.4′	S 24°31.1′	5.7′	6.8′	58.9′	65°17.8′	20°41.3′	19°43.7′	14°51.1′	50°57.9′	66°00.7′	70°22.7′	79°36.3′
4	299°21.1′	S 24°24.2′	5.8′	7.0′	58.8′	64°45.4′	20°07.3′	19°13.1′	14°19.2′	51°32.8′	66°24.6′	70°46.5′	79°56.5′
5	313°45.9′	S 24°17.2′	5.9′	7.2′	58.8′	64°12.9′	19°33.3′	18°42.6′	13°47.4′	52°07.8′	66°48.7′	71°10.3′	80°16.7′
6	328°10.8′	S 24°10.1′	6.0′	7.3′	58.8′	63°40.5′	18°59.4′	18°12.2′	13°15.8′	52°42.7′	67°12.8′	71°34.2′	80°36.9′
7	342°35.8′	S 24°02.8′	6.0′	7.5′	58.8′	63°08.0′	18°25.6′	17°42.0′	12°44.2′	53°17.6′	67°37.0′	71°58.1′	80°57.2′
8	357°00.8′	S 23°55.3′	6.1′	7.6′	58.8′	62°35.6′	17°51.8′	17°11.8′	12°12.9′	53°52.5′	68°01.3′	72°22.1′	81°17.5′
9	11°26.0′	S 23°47.7′	6.2′	7.7′	58.8′	62°03.2′	17°18.1′	16°41.9′	11°41.6′	54°27.4′	68°25.6′	72°46.1′	81°37.8′
10	25°51.2′	S 23°40.0′	6.3′	7.9′	58.8′	61°30.8′	16°44.5′	16°12.1′	11°10.6′	55°02.3′	68°50.0′	73°10.2′	81°58.1′
11	40°16.5′	S 23°32.1′	6.4′	8.0′	58.8′	60°58.4′	16°11.0′	15°42.4′	10°39.8′	55°37.2′	69°14.5′	73°34.3′	82°18.5′
12	54°41.9′	S 23°24.0′	6.5′	8.2′	58.8′	60°26.0′	15°37.5′	15°13.0′	10°09.2′	56°12.1′	69°39.0′	73°58.5′	82°38.9′
13	69°07.4′	S 23°15.9′	6.6′	8.3′	58.7′	59°53.6′	15°04.2′	14°43.7′	9°38.9′	56°46.9′	70°03.6′	74°22.8′	82°59.3′
14	83°32.9′	S 23°07.5′	6.7′	8.5′	58.7′	59°21.3′	14°31.0′	14°14.7′	9°08.9′	57°21.8′	70°28.2′	74°47.0′	83°19.8′
15	97°58.6′	S 22°59.1′	6.7′	8.6′	58.7′	58°48.9′	13°57.9′	13°46.0′	8°39.3′	57°56.6′	70°52.9′	75°11.4′	83°40.3′
16	112°24.3′	S 22°50.5′	6.8′	8.7′	58.7′	58°16.6′	13°24.9′	13°17.5′	8°10.1′	58°31.4′	71°17.6′	75°35.7′	84°00.8′
17	126°50.2′	S 22°41.7′	6.9′	8.9′	58.7′	57°44.3′	12°52.1′	12°49.3′	7°41.5′	59°06.3′	71°42.4′	76°00.1′	84°21.3′
18	141°16.1′	S 22°32.8′	7.0′	9.0′	58.7′	57°11.9′	12°19.5′	12°21.5′	7°13.5′	59°41.1′	72°07.3′	76°24.5′	84°41.8′
19	155°42.1′	S 22°23.8′	7.1′	9.1′	58.7′	56°39.6′	11°47.0′	11°54.0′		60°15.9′	72°32.2′	76°49.0′	85°02.3′
20	170°08.2′	S 22°14.7′	7.2′	9.3′	58.7′	56°07.3′	11°14.8′	11°27.0′		60°50.7′	72°57.1′	77°13.5′	85°22.9′
21	184°34.4′	S 22°05.4′	7.3′	9.4′	58.7′	55°35.1′	10°42.9′	11°00.4′		61°25.4′	73°22.1′	77°38.0′	85°43.4′
22	199°00.7′	S 21°56.0′	7.4′	9.5′	58.6′	55°02.8′	10°11.2′	10°34.4′		62°00.2′	73°47.1′	78°02.6′	86°04.0′
23	213°27.1′	S 21°46.5′	7.5′	9.7′	58.6′	54°30.6′	9°39.9′	10°08.9′		62°35.0′	74°12.2′	78°27.2′	86°24.6′
Mer. pass. 8 h 12 m SD 16.1′ phase 30%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.4′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.6′	N 45°21.2′	Acrux	+0.8	173°01.9′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.3′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.8′
Vega	+0.0	80°34.8′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.5′	S 26°28.8′	Procyon	+0.4	244°53.1′	N 5°10.0′	Polaris	+2.0	315°29.0′	N 89°21.6′
Rigil Kent	−0.0	139°42.9′	S 60°55.5′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.7′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.7′	Canopus	−0.6	263°53.4′	S 52°42.7′				

Monday 28 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	185°23.5′	178°41.9′	N 2°53.6′	222°30.7′	S 13°20.2′	193°51.5′	S 4°44.5′	221°02.5′	S 15°10.1′	226°15.7′	S 17°03.6′
1	200°26.0′	193°42.0′	N 2°54.6′	237°30.6′	S 13°19.6′	208°53.4′	S 4°44.3′	236°04.8′	S 15°10.1′	241°16.3′	S 17°03.0′
2	215°28.5′	208°42.2′	N 2°55.5′	252°30.4′	S 13°19.1′	223°55.3′	S 4°44.1′	251°07.0′	S 15°10.0′	256°16.9′	S 17°02.5′
3	230°30.9′	223°42.4′	N 2°56.5′	267°30.3′	S 13°18.5′	238°57.2′	S 4°43.9′	266°09.2′	S 15°09.9′	271°17.4′	S 17°02.0′
4	245°33.4′	238°42.6′	N 2°57.5′	282°30.2′	S 13°17.9′	253°59.2′	S 4°43.6′	281°11.4′	S 15°09.8′	286°18.0′	S 17°01.4′
5	260°35.9′	253°42.8′	N 2°58.5′	297°30.0′	S 13°17.3′	269°01.1′	S 4°43.4′	296°13.7′	S 15°09.8′	301°18.6′	S 17°00.9′
6	275°38.3′	268°43.0′	N 2°59.4′	312°29.9′	S 13°16.7′	284°03.0′	S 4°43.2′	311°15.9′	S 15°09.7′	316°19.2′	S 17°00.3′
7	290°40.8′	283°43.2′	N 3°00.4′	327°29.7′	S 13°16.1′	299°04.9′	S 4°42.9′	326°18.1′	S 15°09.6′	331°19.8′	S 16°59.8′
8	305°43.2′	298°43.4′	N 3°01.4′	342°29.6′	S 13°15.5′	314°06.8′	S 4°42.7′	341°20.4′	S 15°09.6′	346°20.3′	S 16°59.3′
9	320°45.7′	313°43.6′	N 3°02.4′	357°29.5′	S 13°14.9′	329°08.7′	S 4°42.5′	356°22.6′	S 15°09.5′	1°20.9′	S 16°58.7′
10	335°48.2′	328°43.7′	N 3°03.3′	12°29.3′	S 13°14.3′	344°10.7′	S 4°42.2′	11°24.8′	S 15°09.4′	16°21.5′	S 16°58.2′
11	350°50.6′	343°43.9′	N 3°04.3′	27°29.2′	S 13°13.7′	359°12.6′	S 4°42.0′	26°27.0′	S 15°09.3′	31°22.1′	S 16°57.6′
12	5°53.1′	358°44.1′	N 3°05.3′	42°29.1′	S 13°13.2′	14°14.5′	S 4°41.8′	41°29.3′	S 15°09.3′	46°22.6′	S 16°57.1′
13	20°55.6′	13°44.3′	N 3°06.3′	57°28.9′	S 13°12.6′	29°16.4′	S 4°41.6′	56°31.5′	S 15°09.2′	61°23.2′	S 16°56.6′
14	35°58.0′	28°44.5′	N 3°07.3′	72°28.8′	S 13°12.0′	44°18.3′	S 4°41.3′	71°33.7′	S 15°09.1′	76°23.8′	S 16°56.0′
15	51°00.5′	43°44.7′	N 3°08.2′	87°28.6′	S 13°11.4′	59°20.2′	S 4°41.1′	86°36.0′	S 15°09.1′	91°24.4′	S 16°55.5′
16	66°03.0′	58°44.9′	N 3°09.2′	102°28.5′	S 13°10.8′	74°22.2′	S 4°40.9′	101°38.2′	S 15°09.0′	106°24.9′	S 16°54.9′
17	81°05.4′	73°45.1′	N 3°10.2′	117°28.4′	S 13°10.2′	89°24.1′	S 4°40.6′	116°40.4′	S 15°08.9′	121°25.5′	S 16°54.4′
18	96°07.9′	88°45.2′	N 3°11.2′	132°28.2′	S 13°09.6′	104°26.0′	S 4°40.4′	131°42.6′	S 15°08.8′	136°26.1′	S 16°53.8′
19	111°10.3′	103°45.4′	N 3°12.1′	147°28.1′	S 13°09.0′	119°27.9′	S 4°40.2′	146°44.9′	S 15°08.8′	151°26.7′	S 16°53.3′
20	126°12.8′	118°45.6′	N 3°13.1′	162°27.9′	S 13°08.4′	134°29.8′	S 4°40.0′	161°47.1′	S 15°08.7′	166°27.3′	S 16°52.8′
21	141°15.3′	133°45.8′	N 3°14.1′	177°27.8′	S 13°07.8′	149°31.8′	S 4°39.7′	176°49.3′	S 15°08.6′	181°27.8′	S 16°52.2′
22	156°17.7′	148°46.0′	N 3°15.1′	192°27.7′	S 13°07.2′	164°33.7′	S 4°39.5′	191°51.6′	S 15°08.6′	196°28.4′	S 16°51.7′
23	171°20.2′	163°46.2′	N 3°16.0′	207°27.5′	S 13°06.6′	179°35.6′	S 4°39.3′	206°53.8′	S 15°08.5′	211°29.0′	S 16°51.1′
		SD 16.0′ *d* 1.0′		*v* -0.1′ *d* 0.6′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.6′ *d* 0.5′	
Mer. pass.		12 h 5 m 4 s		9 h 10 m		11 h 3 m		9 h 14 m		8 h 55 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Sun	−Venus	−Saturn	−Mars	+Altair	+Antares	+Rigil Kent	+Hadar
0	227°53.5′	S 21°36.8′	7.6′	9.8′	58.6′	53°58.3′	9°44.1′	9°09.0′			63°09.7′	74°37.3′	78°51.8′
1	242°20.1′	S 21°27.0′	7.7′	9.9′	58.6′	53°26.1′		8°38.6′			63°44.4′	75°02.5′	79°16.5′
2	256°46.8′	S 21°17.1′	7.8′	10.0′	58.6′	52°53.9′		8°08.7′			64°19.2′	75°27.6′	79°41.2′
3	271°13.5′	S 21°07.1′	7.8′	10.2′	58.6′	52°21.7′		7°39.5′			64°53.9′	75°52.9′	80°05.9′
4	285°40.4′	S 20°56.9′	7.9′	10.3′	58.6′	51°49.5′					65°28.6′	76°18.1′	80°30.6′
5	300°07.3′	S 20°46.7′	8.0′	10.4′	58.6′	51°17.3′					66°03.2′	76°43.4′	80°55.3′
6	314°34.3′	S 20°36.3′	8.1′	10.5′	58.5′	50°45.2′					66°37.9′	77°08.7′	81°20.1′
7	329°01.5′	S 20°25.8′	8.2′	10.6′	58.5′	50°13.0′					67°12.6′	77°34.0′	81°44.8′
8	343°28.7′	S 20°15.2′	8.3′	10.7′	58.5′	49°40.9′					67°47.2′	77°59.4′	82°09.6′
9	357°56.0′	S 20°04.4′	8.4′	10.8′	58.5′	49°08.8′					68°21.8′	78°24.8′	82°34.4′
10	12°23.4′	S 19°53.6′	8.5′	11.0′	58.5′	48°36.7′					68°56.5′	78°50.2′	82°59.3′
11	26°50.9′	S 19°42.6′	8.6′	11.1′	58.5′	48°04.6′				38°25.9′	69°31.1′	79°15.7′	83°24.1′
12	41°18.6′	S 19°31.6′	8.7′	11.2′	58.5′	47°32.6′				38°41.2′	70°05.7′	79°41.1′	83°48.9′
13	55°46.2′	S 19°20.4′	8.8′	11.3′	58.4′	47°00.5′				38°56.7′	70°40.2′	80°06.6′	84°13.8′
14	70°14.0′	S 19°09.1′	8.9′	11.4′	58.4′	46°28.5′				39°12.6′	71°14.8′	80°32.1′	84°38.6′
15	84°41.9′	S 18°57.7′	9.0′	11.5′	58.4′	45°56.5′				39°28.8′	71°49.4′	80°57.6′	85°03.5′
16	99°09.9′	S 18°46.3′	9.1′	11.6′	58.4′	45°24.5′			7°08.8′	39°45.3′	72°23.9′	81°23.1′	85°28.3′
17	113°38.0′	S 18°34.7′	9.2′	11.7′	58.4′	44°52.5′			7°36.4′	40°02.2′	72°58.4′	81°48.7′	85°53.2′
18	128°06.1′	S 18°23.0′	9.3′	11.8′	58.4′	44°20.5′			8°04.7′	40°19.4′	73°32.9′	82°14.2′	86°18.1′
19	142°34.4′	S 18°11.2′	9.3′	11.9′	58.4′	43°48.6′			8°33.4′	40°36.8′	74°07.4′	82°39.8′	86°42.9′
20	157°02.7′	S 17°59.3′	9.4′	12.0′	58.3′	43°16.6′			9°02.6′	40°54.6′	74°41.9′	83°05.3′	87°07.8′
21	171°31.2′	S 17°47.4′	9.5′	12.1′	58.3′	42°44.7′			9°32.2′	41°12.6′	75°16.4′	83°30.9′	87°32.7′
22	185°59.7′	S 17°35.3′	9.6′	12.2′	58.3′	42°12.8′			10°02.0′	41°30.9′	75°50.8′	83°56.5′	87°57.5′
23	200°28.3′	S 17°23.2′	9.7′	12.2′	58.3′	41°40.9′			10°32.1′	41°49.5′	76°25.3′	84°22.1′	88°22.4′
Mer. pass. 9 h 9 m SD 16.0′ phase 21%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.4′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.6′	N 45°21.2′	Acrux	+0.8	173°01.9′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.3′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.8′
Vega	+0.0	80°34.8′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.5′	S 26°28.8′	Procyon	+0.4	244°53.2′	N 5°10.0′	Polaris	+2.0	315°29.3′	N 89°21.6′
Rigil Kent	−0.0	139°42.9′	S 60°55.5′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.7′	N 19°03.9′	Sirius	−1.4	258°28.2′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.7′	Canopus	−0.6	263°53.4′	S 52°42.7′				

Tuesday 29 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	186°22.7′	178°46.4′	N 3°17.0′	222°27.4′	S 13°06.0′	194°37.5′	S 4°39.0′	221°56.0′	S 15°08.4′	226°29.6′	S 16°50.6′
1	201°25.1′	193°46.6′	N 3°18.0′	237°27.2′	S 13°05.4′	209°39.4′	S 4°38.8′	236°58.3′	S 15°08.3′	241°30.1′	S 16°50.0′
2	216°27.6′	208°46.7′	N 3°19.0′	252°27.1′	S 13°04.8′	224°41.3′	S 4°38.6′	252°00.5′	S 15°08.3′	256°30.7′	S 16°49.5′
3	231°30.1′	223°46.9′	N 3°19.9′	267°26.9′	S 13°04.2′	239°43.3′	S 4°38.4′	267°02.7′	S 15°08.2′	271°31.3′	S 16°48.9′
4	246°32.5′	238°47.1′	N 3°20.9′	282°26.8′	S 13°03.6′	254°45.2′	S 4°38.1′	282°04.9′	S 15°08.1′	286°31.9′	S 16°48.4′
5	261°35.0′	253°47.3′	N 3°21.9′	297°26.7′	S 13°03.0′	269°47.1′	S 4°37.9′	297°07.2′	S 15°08.1′	301°32.5′	S 16°47.8′
6	276°37.5′	268°47.5′	N 3°22.9′	312°26.5′	S 13°02.3′	284°49.0′	S 4°37.7′	312°09.4′	S 15°08.0′	316°33.0′	S 16°47.3′
7	291°39.9′	283°47.7′	N 3°23.8′	327°26.4′	S 13°01.7′	299°50.9′	S 4°37.4′	327°11.6′	S 15°07.9′	331°33.6′	S 16°46.8′
8	306°42.4′	298°47.9′	N 3°24.8′	342°26.2′	S 13°01.1′	314°52.9′	S 4°37.2′	342°13.9′	S 15°07.8′	346°34.2′	S 16°46.2′
9	321°44.8′	313°48.1′	N 3°25.8′	357°26.1′	S 13°00.5′	329°54.8′	S 4°37.0′	357°16.1′	S 15°07.8′	1°34.8′	S 16°45.7′
10	336°47.3′	328°48.2′	N 3°26.8′	12°25.9′	S 12°59.9′	344°56.7′	S 4°36.7′	12°18.3′	S 15°07.7′	16°35.4′	S 16°45.1′
11	351°49.8′	343°48.4′	N 3°27.7′	27°25.8′	S 12°59.3′	359°58.6′	S 4°36.5′	27°20.6′	S 15°07.6′	31°35.9′	S 16°44.6′
12	6°52.2′	358°48.6′	N 3°28.7′	42°25.7′	S 12°58.7′	15°00.5′	S 4°36.3′	42°22.8′	S 15°07.6′	46°36.5′	S 16°44.0′
13	21°54.7′	13°48.8′	N 3°29.7′	57°25.5′	S 12°58.1′	30°02.5′	S 4°36.1′	57°25.0′	S 15°07.5′	61°37.1′	S 16°43.5′
14	36°57.2′	28°49.0′	N 3°30.7′	72°25.4′	S 12°57.5′	45°04.4′	S 4°35.8′	72°27.3′	S 15°07.4′	76°37.7′	S 16°42.9′
15	51°59.6′	43°49.2′	N 3°31.6′	87°25.2′	S 12°56.8′	60°06.3′	S 4°35.6′	87°29.5′	S 15°07.3′	91°38.3′	S 16°42.4′
16	67°02.1′	58°49.4′	N 3°32.6′	102°25.1′	S 12°56.2′	75°08.2′	S 4°35.4′	102°31.7′	S 15°07.3′	106°38.8′	S 16°41.8′
17	82°04.6′	73°49.5′	N 3°33.6′	117°24.9′	S 12°55.6′	90°10.1′	S 4°35.1′	117°34.0′	S 15°07.2′	121°39.4′	S 16°41.3′
18	97°07.0′	88°49.7′	N 3°34.5′	132°24.8′	S 12°55.0′	105°12.0′	S 4°34.9′	132°36.2′	S 15°07.1′	136°40.0′	S 16°40.7′
19	112°09.5′	103°49.9′	N 3°35.5′	147°24.6′	S 12°54.4′	120°14.0′	S 4°34.7′	147°38.4′	S 15°07.1′	151°40.6′	S 16°40.2′
20	127°12.0′	118°50.1′	N 3°36.5′	162°24.5′	S 12°53.8′	135°15.9′	S 4°34.5′	162°40.7′	S 15°07.0′	166°41.2′	S 16°39.6′
21	142°14.4′	133°50.3′	N 3°37.5′	177°24.3′	S 12°53.1′	150°17.8′	S 4°34.2′	177°42.9′	S 15°06.9′	181°41.8′	S 16°39.1′
22	157°16.9′	148°50.5′	N 3°38.4′	192°24.2′	S 12°52.5′	165°19.7′	S 4°34.0′	192°45.1′	S 15°06.8′	196°42.3′	S 16°38.5′
23	172°19.3′	163°50.7′	N 3°39.4′	207°24.1′	S 12°51.9′	180°21.6′	S 4°33.8′	207°47.3′	S 15°06.8′	211°42.9′	S 16°38.0′
		SD 16.0′ *d* 1.0′		*v* -0.1′ *d* 0.6′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.6′ *d* 0.5′	
Mer. pass.		12 h 4 m 46 s		9 h 10 m		11 h 0 m		9 h 11 m		8 h 54 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Sun	−Jupiter	+Saturn	+Venus	+Mars	+Altair	+Antares	+Rigil Kent
0	214°57.0′	S 17°10.9′	9.8′	12.3′	58.3′	41°09.1′	23°31.5′			11°02.4′	42°08.3′	76°59.7′	84°47.7′
1	229°25.8′	S 16°58.6′	9.9′	12.4′	58.3′	40°37.2′	22°58.1′			11°32.9′	42°27.4′	77°34.1′	85°13.3′
2	243°54.7′	S 16°46.2′	10.0′	12.5′	58.2′	40°05.4′	22°24.6′	7°57.1′		12°03.6′	42°46.8′	78°08.5′	85°38.9′
3	258°23.7′	S 16°33.7′	10.1′	12.6′	58.2′		21°51.3′	8°26.5′	9°25.3′	12°34.4′	43°06.4′	78°42.9′	86°04.5′
4	272°52.8′	S 16°21.1′	10.2′	12.7′	58.2′		21°17.9′	8°56.4′	9°49.2′	13°05.4′	43°26.2′	79°17.2′	86°30.1′
5	287°21.9′	S 16°08.4′	10.2′	12.7′	58.2′		20°44.6′	9°26.7′	10°13.8′	13°36.4′	43°46.3′	79°51.6′	86°55.7′
6	301°51.2′	S 15°55.7′	10.3′	12.8′	58.2′		20°11.4′	9°57.5′	10°39.0′	14°07.5′	44°06.6′	80°25.9′	87°21.2′
7	316°20.5′	S 15°42.9′	10.4′	12.9′	58.2′		19°38.2′	10°28.6′	11°04.7′	14°38.7′	44°27.1′	81°00.2′	87°46.8′
8	330°49.9′	S 15°30.0′	10.5′	13.0′	58.2′		19°05.0′	10°59.9′	11°30.9′	15°10.0′	44°47.8′	81°34.5′	88°12.4′
9	345°19.4′	S 15°17.0′	10.6′	13.0′	58.1′		18°31.9′	11°31.5′	11°57.6′	15°41.4′	45°08.7′	82°08.8′	88°38.0′
10	359°49.0′	S 15°03.9′	10.7′	13.1′	58.1′		17°58.8′	12°03.4′	12°24.6′	16°12.8′	45°29.9′	82°43.0′	89°03.5′
11	14°18.7′	S 14°50.8′	10.8′	13.2′	58.1′		17°25.8′	12°35.3′	12°52.0′	16°44.2′	45°51.2′	83°17.3′	89°29.1′
12	28°48.5′	S 14°37.6′	10.8′	13.3′	58.1′		16°52.9′	13°07.5′	13°19.6′	17°15.7′	46°12.7′	83°51.5′	89°54.6′
13	43°18.3′	S 14°24.4′	10.9′	13.3′	58.1′		16°20.0′	13°39.8′	13°47.5′	17°47.2′	46°34.4′	84°25.7′	90°20.1′
14	57°48.2′	S 14°11.0′	11.0′	13.4′	58.0′		15°47.2′	14°12.2′	14°15.7′	18°18.7′	46°56.3′	84°59.9′	90°45.7′
15	72°18.2′	S 13°57.6′	11.1′	13.5′	58.0′		15°14.5′	14°44.7′	14°44.1′	18°50.3′	47°18.4′	85°34.0′	91°11.2′
16	86°48.3′	S 13°44.2′	11.2′	13.5′	58.0′		14°41.9′	15°17.2′	15°12.6′	19°21.9′	47°40.6′	86°08.2′	91°36.6′
17	101°18.5′	S 13°30.7′	11.2′	13.6′	58.0′		14°09.4′	15°49.9′	15°41.4′	19°53.5′	48°03.0′	86°42.3′	92°02.1′
18	115°48.7′	S 13°17.1′	11.3′	13.6′	58.0′		13°36.9′	16°22.6′	16°10.2′	20°25.2′	48°25.6′	87°16.4′	92°27.5′
19	130°19.0′	S 13°03.4′	11.4′	13.7′	58.0′		13°04.6′	16°55.4′	16°39.3′	20°56.8′	48°48.3′	87°50.5′	92°53.0′
20	144°49.4′	S 12°49.7′	11.5′	13.8′	57.9′		12°32.4′	17°28.2′	17°08.4′	21°28.5′	49°11.2′	88°24.6′	93°18.4′
21	159°19.9′	S 12°36.0′	11.5′	13.8′	57.9′		12°00.3′	18°01.1′	17°37.7′	22°00.1′	49°34.2′	88°58.7′	93°43.7′
22	173°50.4′	S 12°22.1′	11.6′	13.9′	57.9′		11°28.4′	18°34.0′	18°07.1′	22°31.8′	49°57.3′	89°32.7′	94°09.1′
23	188°21.0′	S 12°08.3′	11.7′	13.9′	57.9′		10°56.6′	19°07.0′	18°36.5′	23°03.5′	50°20.6′	90°06.7′	94°34.4′
Mer. pass. 10 h 1 m SD 15.9′ phase 12%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.4′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.6′	N 45°21.2′	Acrux	+0.8	173°01.9′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.3′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.7′
Vega	+0.0	80°34.8′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.5′	S 26°28.8′	Procyon	+0.4	244°53.2′	N 5°10.0′	Polaris	+2.0	315°29.6′	N 89°21.6′
Rigil Kent	−0.0	139°42.9′	S 60°55.5′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.7′
Arcturus	−0.1	145°49.7′	N 19°03.9′	Sirius	−1.4	258°28.3′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.7′	Canopus	−0.6	263°53.4′	S 52°42.7′				

Wednesday 30 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	187°21.8′	178°50.9′	N 3°40.4′	222°23.9′	S 12°51.3′	195°23.6′	S 4°33.5′	222°49.6′	S 15°06.7′	226°43.5′	S 16°37.4′
1	202°24.3′	193°51.0′	N 3°41.4′	237°23.8′	S 12°50.7′	210°25.5′	S 4°33.3′	237°51.8′	S 15°06.6′	241°44.1′	S 16°36.9′
2	217°26.7′	208°51.2′	N 3°42.3′	252°23.6′	S 12°50.0′	225°27.4′	S 4°33.1′	252°54.0′	S 15°06.6′	256°44.7′	S 16°36.3′
3	232°29.2′	223°51.4′	N 3°43.3′	267°23.5′	S 12°49.4′	240°29.3′	S 4°32.9′	267°56.3′	S 15°06.5′	271°45.2′	S 16°35.8′
4	247°31.7′	238°51.6′	N 3°44.3′	282°23.3′	S 12°48.8′	255°31.2′	S 4°32.6′	282°58.5′	S 15°06.4′	286°45.8′	S 16°35.2′
5	262°34.1′	253°51.8′	N 3°45.2′	297°23.2′	S 12°48.2′	270°33.2′	S 4°32.4′	298°00.7′	S 15°06.4′	301°46.4′	S 16°34.6′
6	277°36.6′	268°52.0′	N 3°46.2′	312°23.0′	S 12°47.6′	285°35.1′	S 4°32.2′	313°03.0′	S 15°06.3′	316°47.0′	S 16°34.1′
7	292°39.1′	283°52.2′	N 3°47.2′	327°22.9′	S 12°46.9′	300°37.0′	S 4°31.9′	328°05.2′	S 15°06.2′	331°47.6′	S 16°33.5′
8	307°41.5′	298°52.3′	N 3°48.2′	342°22.7′	S 12°46.3′	315°38.9′	S 4°31.7′	343°07.4′	S 15°06.1′	346°48.2′	S 16°33.0′
9	322°44.0′	313°52.5′	N 3°49.1′	357°22.6′	S 12°45.7′	330°40.8′	S 4°31.5′	358°09.7′	S 15°06.1′	1°48.7′	S 16°32.4′
10	337°46.4′	328°52.7′	N 3°50.1′	12°22.4′	S 12°45.0′	345°42.8′	S 4°31.3′	13°11.9′	S 15°06.0′	16°49.3′	S 16°31.9′
11	352°48.9′	343°52.9′	N 3°51.1′	27°22.3′	S 12°44.4′	0°44.7′	S 4°31.0′	28°14.1′	S 15°05.9′	31°49.9′	S 16°31.3′
12	7°51.4′	358°53.1′	N 3°52.0′	42°22.1′	S 12°43.8′	15°46.6′	S 4°30.8′	43°16.4′	S 15°05.9′	46°50.5′	S 16°30.8′
13	22°53.8′	13°53.3′	N 3°53.0′	57°22.0′	S 12°43.2′	30°48.5′	S 4°30.6′	58°18.6′	S 15°05.8′	61°51.1′	S 16°30.2′
14	37°56.3′	28°53.5′	N 3°54.0′	72°21.8′	S 12°42.5′	45°50.4′	S 4°30.3′	73°20.8′	S 15°05.7′	76°51.7′	S 16°29.7′
15	52°58.8′	43°53.7′	N 3°55.0′	87°21.7′	S 12°41.9′	60°52.4′	S 4°30.1′	88°23.1′	S 15°05.7′	91°52.3′	S 16°29.1′
16	68°01.2′	58°53.8′	N 3°55.9′	102°21.5′	S 12°41.3′	75°54.3′	S 4°29.9′	103°25.3′	S 15°05.6′	106°52.8′	S 16°28.5′
17	83°03.7′	73°54.0′	N 3°56.9′	117°21.4′	S 12°40.6′	90°56.2′	S 4°29.7′	118°27.5′	S 15°05.5′	121°53.4′	S 16°28.0′
18	98°06.2′	88°54.2′	N 3°57.9′	132°21.2′	S 12°40.0′	105°58.1′	S 4°29.4′	133°29.8′	S 15°05.4′	136°54.0′	S 16°27.4′
19	113°08.6′	103°54.4′	N 3°58.8′	147°21.1′	S 12°39.4′	121°00.0′	S 4°29.2′	148°32.0′	S 15°05.4′	151°54.6′	S 16°26.9′
20	128°11.1′	118°54.6′	N 3°59.8′	162°20.9′	S 12°38.7′	136°02.0′	S 4°29.0′	163°34.3′	S 15°05.3′	166°55.2′	S 16°26.3′
21	143°13.6′	133°54.8′	N 4°00.8′	177°20.8′	S 12°38.1′	151°03.9′	S 4°28.7′	178°36.5′	S 15°05.2′	181°55.8′	S 16°25.8′
22	158°16.0′	148°55.0′	N 4°01.7′	192°20.6′	S 12°37.5′	166°05.8′	S 4°28.5′	193°38.7′	S 15°05.2′	196°56.3′	S 16°25.2′
23	173°18.5′	163°55.1′	N 4°02.7′	207°20.5′	S 12°36.8′	181°07.7′	S 4°28.3′	208°41.0′	S 15°05.1′	211°56.9′	S 16°24.6′
		SD 16.0′ *d* 1.0′		*v* -0.1′ *d* 0.6′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.6′ *d* 0.6′	
Mer. pass.		12 h 4 m 28 s		9 h 11 m		10 h 57 m		9 h 7 m		8 h 53 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	−Jupiter	+Fomalhaut	+Venus	+Saturn	+Mars	+Altair	+Antares	+Rigil Kent
0	202°51.7′	S 11°54.3′	11.8′	14.0′	57.9′	10°25.1′		19°06.1′	19°40.0′	23°35.1′	50°44.1′	90°40.7′	94°59.7′
1	217°22.5′	S 11°40.4′	11.8′	14.0′	57.9′	9°53.8′		19°35.7′	20°13.0′	24°06.8′	51°07.6′	91°14.7′	95°25.0′
2	231°53.3′	S 11°26.3′	11.9′	14.1′	57.8′	9°22.7′		20°05.4′	20°46.0′	24°38.5′	51°31.3′	91°48.7′	95°50.3′
3	246°24.3′	S 11°12.3′	12.0′	14.1′	57.8′	8°52.0′	18°20.8′	20°35.1′	21°19.1′	25°10.1′	51°55.1′	92°22.6′	96°15.5′
4	260°55.2′	S 10°58.1′	12.0′	14.2′	57.8′	8°21.6′	18°37.3′	21°04.9′	21°52.1′	25°41.8′	52°19.1′	92°56.5′	96°40.7′
5	275°26.3′	S 10°44.0′	12.1′	14.2′	57.8′	7°51.6′	18°54.5′	21°34.8′	22°25.2′	26°13.5′	52°43.1′	93°30.4′	97°05.8′
6	289°57.4′	S 10°29.8′	12.2′	14.3′	57.8′	7°22.1′	19°12.5′	22°04.7′	22°58.3′	26°45.1′	53°07.3′	94°04.3′	97°30.9′
7	304°28.6′	S 10°15.5′	12.3′	14.3′	57.7′	6°53.2′	19°31.1′	22°34.6′	23°31.4′	27°16.8′	53°31.5′	94°38.2′	97°56.0′
8	318°59.8′	S 10°01.2′	12.3′	14.3′	57.7′		19°50.3′	23°04.6′	24°04.5′	27°48.4′	53°55.9′	95°12.0′	98°21.1′
9	333°31.1′	S 9°46.9′	12.4′	14.4′	57.7′		20°10.2′	23°34.6′	24°37.6′	28°20.1′	54°20.4′	95°45.8′	98°46.1′
10	348°02.5′	S 9°32.5′	12.4′	14.4′	57.7′		20°30.6′	24°04.6′	25°10.7′	28°51.7′	54°44.9′	96°19.6′	99°11.1′
11	2°34.0′	S 9°18.1′	12.5′	14.4′	57.7′		20°51.6′	24°34.7′	25°43.8′	29°23.3′	55°09.6′	96°53.4′	99°36.0′
12	17°05.5′	S 9°03.7′	12.6′	14.5′	57.6′		21°13.1′	25°04.8′	26°16.9′	29°54.9′	55°34.4′	97°27.2′	100°00.9′
13	31°37.0′	S 8°49.2′	12.6′	14.5′	57.6′		21°35.1′	25°34.9′	26°50.0′	30°26.5′	55°59.2′	98°00.9′	100°25.7′
14	46°08.7′	S 8°34.7′	12.7′	14.5′	57.6′		21°57.5′	26°05.0′	27°23.1′	30°58.1′	56°24.2′	98°34.6′	100°50.5′
15	60°40.4′	S 8°20.1′	12.7′	14.6′	57.6′		22°20.4′	26°35.2′	27°56.1′	31°29.7′	56°49.2′	99°08.3′	101°15.3′
16	75°12.1′	S 8°05.5′	12.8′	14.6′	57.6′		22°43.7′	27°05.3′	28°29.2′	32°01.2′	57°14.3′	99°42.0′	101°40.0′
17	89°43.9′	S 7°50.9′	12.9′	14.6′	57.5′		23°07.3′	27°35.5′	29°02.3′	32°32.8′	57°39.4′	100°15.6′	102°04.7′
18	104°15.8′	S 7°36.3′	12.9′	14.7′	57.5′		23°31.4′	28°05.6′	29°35.4′	33°04.3′	58°04.7′	100°49.2′	102°29.3′
19	118°47.7′	S 7°21.7′	13.0′	14.7′	57.5′		23°55.8′	28°35.8′	30°08.4′	33°35.8′	58°30.0′	101°22.8′	102°53.8′
20	133°19.6′	S 7°07.0′	13.0′	14.7′	57.5′		24°20.5′	29°06.0′	30°41.5′	34°07.3′	58°55.4′	101°56.4′	103°18.4′
21	147°51.7′	S 6°52.3′	13.1′	14.7′	57.5′		24°45.6′	29°36.2′	31°14.5′	34°38.8′	59°20.9′	102°30.0′	103°42.8′
22	162°23.7′	S 6°37.5′	13.1′	14.7′	57.4′		25°10.9′	30°06.4′	31°47.5′	35°10.2′	59°46.4′	103°03.5′	104°07.2′
23	176°55.9′	S 6°22.8′	13.2′	14.8′	57.4′		25°36.5′	30°36.5′	32°20.5′	35°41.7′	60°12.0′	103°37.0′	104°31.6′
Mer. pass. 10 h 49 m SD 15.8′ phase 6%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.4′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.6′	N 45°21.2′	Acrux	+0.8	173°01.9′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.3′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.7′
Vega	+0.0	80°34.8′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.5′	S 26°28.8′	Procyon	+0.4	244°53.2′	N 5°10.0′	Polaris	+2.0	315°30.0′	N 89°21.6′
Rigil Kent	−0.0	139°42.9′	S 60°55.5′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.6′
Arcturus	−0.1	145°49.7′	N 19°03.9′	Sirius	−1.4	258°28.3′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.7′	Canopus	−0.6	263°53.4′	S 52°42.7′				

Thursday 31 March 2022 UT1

h	Aries	Sun		Venus		Jupiter		Saturn		Mars	
	GHA	GHA	dec	GHA	dec	GHA	dec	GHA	dec	GHA	dec
0	188°20.9′	178°55.3′	N 4°03.7′	222°20.3′	S 12°36.2′	196°09.6′	S 4°28.1′	223°43.2′	S 15°05.0′	226°57.5′	S 16°24.1′
1	203°23.4′	193°55.5′	N 4°04.7′	237°20.2′	S 12°35.5′	211°11.6′	S 4°27.8′	238°45.4′	S 15°05.0′	241°58.1′	S 16°23.5′
2	218°25.9′	208°55.7′	N 4°05.6′	252°20.0′	S 12°34.9′	226°13.5′	S 4°27.6′	253°47.7′	S 15°04.9′	256°58.7′	S 16°23.0′
3	233°28.3′	223°55.9′	N 4°06.6′	267°19.9′	S 12°34.3′	241°15.4′	S 4°27.4′	268°49.9′	S 15°04.8′	271°59.3′	S 16°22.4′
4	248°30.8′	238°56.1′	N 4°07.6′	282°19.7′	S 12°33.6′	256°17.3′	S 4°27.2′	283°52.1′	S 15°04.7′	286°59.9′	S 16°21.8′
5	263°33.3′	253°56.3′	N 4°08.5′	297°19.6′	S 12°33.0′	271°19.3′	S 4°26.9′	298°54.4′	S 15°04.7′	302°00.5′	S 16°21.3′
6	278°35.7′	268°56.4′	N 4°09.5′	312°19.4′	S 12°32.3′	286°21.2′	S 4°26.7′	313°56.6′	S 15°04.6′	317°01.0′	S 16°20.7′
7	293°38.2′	283°56.6′	N 4°10.5′	327°19.3′	S 12°31.7′	301°23.1′	S 4°26.5′	328°58.8′	S 15°04.5′	332°01.6′	S 16°20.2′
8	308°40.7′	298°56.8′	N 4°11.4′	342°19.1′	S 12°31.0′	316°25.0′	S 4°26.2′	344°01.1′	S 15°04.5′	347°02.2′	S 16°19.6′
9	323°43.1′	313°57.0′	N 4°12.4′	357°19.0′	S 12°30.4′	331°26.9′	S 4°26.0′	359°03.3′	S 15°04.4′	2°02.8′	S 16°19.0′
10	338°45.6′	328°57.2′	N 4°13.4′	12°18.8′	S 12°29.8′	346°28.9′	S 4°25.8′	14°05.5′	S 15°04.3′	17°03.4′	S 16°18.5′
11	353°48.0′	343°57.4′	N 4°14.3′	27°18.7′	S 12°29.1′	1°30.8′	S 4°25.6′	29°07.8′	S 15°04.3′	32°04.0′	S 16°17.9′
12	8°50.5′	358°57.6′	N 4°15.3′	42°18.5′	S 12°28.5′	16°32.7′	S 4°25.3′	44°10.0′	S 15°04.2′	47°04.6′	S 16°17.4′
13	23°53.0′	13°57.7′	N 4°16.3′	57°18.4′	S 12°27.8′	31°34.6′	S 4°25.1′	59°12.3′	S 15°04.1′	62°05.2′	S 16°16.8′
14	38°55.4′	28°57.9′	N 4°17.2′	72°18.2′	S 12°27.2′	46°36.5′	S 4°24.9′	74°14.5′	S 15°04.0′	77°05.7′	S 16°16.2′
15	53°57.9′	43°58.1′	N 4°18.2′	87°18.0′	S 12°26.5′	61°38.5′	S 4°24.6′	89°16.7′	S 15°04.0′	92°06.3′	S 16°15.7′
16	69°00.4′	58°58.3′	N 4°19.2′	102°17.9′	S 12°25.9′	76°40.4′	S 4°24.4′	104°19.0′	S 15°03.9′	107°06.9′	S 16°15.1′
17	84°02.8′	73°58.5′	N 4°20.1′	117°17.7′	S 12°25.2′	91°42.3′	S 4°24.2′	119°21.2′	S 15°03.8′	122°07.5′	S 16°14.6′
18	99°05.3′	88°58.7′	N 4°21.1′	132°17.6′	S 12°24.6′	106°44.2′	S 4°24.0′	134°23.4′	S 15°03.8′	137°08.1′	S 16°14.0′
19	114°07.8′	103°58.9′	N 4°22.1′	147°17.4′	S 12°23.9′	121°46.2′	S 4°23.7′	149°25.7′	S 15°03.7′	152°08.7′	S 16°13.4′
20	129°10.2′	118°59.0′	N 4°23.0′	162°17.3′	S 12°23.3′	136°48.1′	S 4°23.5′	164°27.9′	S 15°03.6′	167°09.3′	S 16°12.9′
21	144°12.7′	133°59.2′	N 4°24.0′	177°17.1′	S 12°22.6′	151°50.0′	S 4°23.3′	179°30.2′	S 15°03.6′	182°09.9′	S 16°12.3′
22	159°15.2′	148°59.4′	N 4°25.0′	192°17.0′	S 12°22.0′	166°51.9′	S 4°23.0′	194°32.4′	S 15°03.5′	197°10.5′	S 16°11.7′
23	174°17.6′	163°59.6′	N 4°25.9′	207°16.8′	S 12°21.3′	181°53.8′	S 4°22.8′	209°34.6′	S 15°03.4′	212°11.0′	S 16°11.2′
		SD 16.0′ *d* 1.0′		*v* -0.2′ *d* 0.6′		*v* 1.9′ *d* 0.2′		*v* 2.2′ *d* 0.1′		*v* 0.6′ *d* 0.6′	
Mer. pass.		12 h 4 m 10 s		9 h 11 m		10 h 54 m		9 h 4 m		8 h 52 m	

h	Moon					Lunar distance							
	GHA	dec	*v*	*d*	HP	+Jupiter	+Fomalhaut	+Venus	+Saturn	+Mars	+Altair	+Antares	+Rigil Kent
0	191°28.0′	S 6°08.0′	13.2′	14.8′	57.4′		26°02.4′	31°06.7′	32°53.5′	36°13.1′	60°37.6′	104°10.5′	104°55.9′
1	206°00.3′	S 5°53.2′	13.3′	14.8′	57.4′		26°28.5′	31°36.9′	33°26.5′	36°44.5′	61°03.3′	104°43.9′	105°20.1′
2	220°32.5′	S 5°38.4′	13.3′	14.8′	57.3′		26°54.9′	32°07.1′	33°59.5′	37°15.9′	61°29.1′	105°17.4′	105°44.3′
3	235°04.9′	S 5°23.6′	13.4′	14.8′	57.3′		27°21.4′	32°37.3′	34°32.4′	37°47.3′	61°54.9′	105°50.8′	106°08.4′
4	249°37.2′	S 5°08.8′	13.4′	14.8′	57.3′	6°40.9′	27°48.2′	33°07.4′	35°05.3′	38°18.6′	62°20.7′	106°24.2′	106°32.5′
5	264°09.6′	S 4°53.9′	13.5′	14.9′	57.3′	7°09.0′	28°15.2′	33°37.6′	35°38.3′	38°50.0′	62°46.7′	106°57.6′	106°56.5′
6	278°42.1′	S 4°39.1′	13.5′	14.9′	57.3′	7°37.8′	28°42.4′	34°07.8′	36°11.2′	39°21.3′	63°12.6′	107°30.9′	107°20.4′
7	293°14.6′	S 4°24.2′	13.5′	14.9′	57.2′	8°07.1′	29°09.8′	34°37.9′	36°44.0′	39°52.6′	63°38.6′	108°04.2′	107°44.2′
8	307°47.1′	S 4°09.3′	13.6′	14.9′	57.2′	8°36.7′	29°37.3′	35°08.0′	37°16.9′	40°23.9′	64°04.7′	108°37.5′	108°08.0′
9	322°19.7′	S 3°54.4′	13.6′	14.9′	57.2′	9°06.7′	30°05.0′	35°38.2′	37°49.8′	40°55.1′	64°30.8′	109°10.8′	108°31.7′
10	336°52.3′	S 3°39.5′	13.7′	14.9′	57.2′	9°36.9′	30°32.8′	36°08.3′	38°22.6′	41°26.3′	64°56.9′	109°44.0′	108°55.4′
11	351°25.0′	S 3°24.6′	13.7′	14.9′	57.1′	10°07.4′	31°00.8′	36°38.4′	38°55.4′	41°57.6′	65°23.1′	110°17.2′	109°19.0′
12	5°57.7′	S 3°09.7′	13.7′	14.9′	57.1′	10°38.1′	31°28.9′	37°08.5′	39°28.2′	42°28.7′	65°49.3′	110°50.4′	109°42.5′
13	20°30.4′	S 2°54.8′	13.8′	14.9′	57.1′								
14	35°03.2′	S 2°39.9′	13.8′	14.9′	57.1′								
15	49°36.0′	S 2°25.0′	13.8′	14.9′	57.1′								
16	64°08.8′	S 2°10.1′	13.9′	14.9′	57.0′								
17	78°41.7′	S 1°55.2′	13.9′	14.9′	57.0′								
18	93°14.6′	S 1°40.3′	13.9′	14.9′	57.0′								
19	107°47.5′	S 1°25.4′	14.0′	14.9′	57.0′								
20	122°20.5′	S 1°10.5′	14.0′	14.9′	56.9′								
21	136°53.5′	S 0°55.6′	14.0′	14.9′	56.9′								
22	151°26.5′	S 0°40.7′	14.0′	14.9′	56.9′								
23	165°59.6′	S 0°25.8′	14.1′	14.9′	56.9′								
Mer. pass. 11 h 35 m SD 15.7′ phase 2%													

Star	mag	SHA	dec	Star	mag	SHA	dec	Star	mag	SHA	dec
Fomalhaut	+1.2	15°17.4′	S 29°30.4′	Spica	+1.0	158°24.4′	S 11°16.7′	Betelgeuse	+0.5	270°54.6′	N 7°24.6′
Deneb	+1.2	49°27.6′	N 45°21.2′	Acrux	+0.8	173°02.0′	S 63°13.3′	Capella	+0.1	280°25.4′	N 46°01.3′
Altair	+0.8	62°02.3′	N 8°55.4′	Regulus	+1.4	207°36.6′	N 11°51.5′	Rigel	+0.2	281°06.2′	S 8°10.7′
Vega	+0.0	80°34.8′	N 38°47.9′	Pollux	+1.2	243°20.0′	N 27°58.4′	Aldebaran	+0.9	290°42.4′	N 16°33.1′
Antares	+1.1	112°18.5′	S 26°28.8′	Procyon	+0.4	244°53.2′	N 5°10.0′	Polaris	+2.0	315°30.3′	N 89°21.6′
Rigil Kent	−0.0	139°42.9′	S 60°55.5′	Adhara	+1.5	255°07.6′	S 29°00.4′	Achernar	+0.5	335°22.5′	S 57°07.6′
Arcturus	−0.1	145°49.7′	N 19°03.9′	Sirius	−1.4	258°28.3′	S 16°45.0′				
Hadar	+0.6	148°38.7′	S 60°28.7′	Canopus	−0.6	263°53.5′	S 52°42.7′				