

Aries			Venus			Mars			Jupiter			Saturn		
Mon	GHA		GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
0	132°12.2	169°54.3	S16° 17.9	182°00.2	S19° 24.2	23°27.8	N22° 37.8	132°29.7	S02° 29.6					
1	147°14.7	184°53.6	16.9	197°00.6	23.7	38°30.6	37.8	147°32.0	29.5					
2	162°17.1	199°53.0	16.0	212°01.1	23.2	53°33.3	37.9	162°34.2	29.4					
3	177°19.6	214°52.3	.. 15.0	227°01.5	.. 22.7	68°36.1	.. 37.9	177°36.5	.. 29.3					
4	192°22.1	229°51.7	14.1	242°02.0	22.2	83°38.8	38.0	192°38.7	29.2					
5	207°24.5	244°51.0	13.1	257°02.4	21.7	98°41.6	38.0	207°40.9	29.1					
6	222°27.0	259°50.4	S16° 12.1	272°02.9	S19° 21.2	113°44.3	N22° 38.0	222°43.2	S02° 29.0					
7	237°29.5	274°49.7	11.2	287°03.4	20.7	128°47.1	38.1	237°45.4	28.9					
8	252°31.9	289°49.1	10.2	302°03.8	20.2	143°49.9	38.1	252°47.6	28.8					
9	267°34.4	304°48.5	.. 09.3	317°04.3	.. 19.7	158°52.6	.. 38.2	267°49.9	.. 28.7					
10	282°36.8	319°47.8	08.3	332°04.7	19.2	173°55.4	38.2	282°52.1	28.5					
11	297°39.3	334°47.2	07.3	347°05.2	18.7	188°58.1	38.2	297°54.4	28.4					
12	312°41.8	349°46.5	S16° 06.4	2°05.6	S19° 18.2	204°00.9	N22° 38.3	312°56.6	S02° 28.3					
13	327°44.2	4°45.9	05.4	17°06.1	17.7	219°03.6	38.3	327°58.8	28.1					
14	342°46.7	19°45.2	04.5	32°06.6	17.2	234°06.4	38.3	343°01.1	28.2					
15	357°49.2	34°44.6	.. 03.5	47°07.0	.. 16.7	249°09.1	.. 38.4	358°03.3	.. 28.0					
16	12°51.6	49°44.0	02.5	62°07.5	16.2	264°11.9	38.4	13°05.5	27.9					
17	27°54.1	64°43.3	01.6	77°07.9	15.7	279°14.6	38.5	28°07.8	27.8					
18	42°56.6	79°42.7	S16° 00.6	92°08.4	S19° 15.2	294°17.4	N22° 38.5	43°10.0	S02° 27.7					
19	57°59.0	94°42.1	15°59.6	107°08.9	14.7	309°20.2	38.5	58°12.3	27.6					
20	73°01.5	109°41.4	58.6	122°09.3	14.2	324°22.9	38.6	73°14.5	27.5					
21	88°04.0	124°40.8	.. 57.7	137°09.8	.. 13.7	339°25.7	.. 38.6	88°16.7	.. 27.4					
22	103°06.4	139°40.1	56.7	152°10.2	13.2	354°28.4	38.7	103°19.0	27.3					
23	118°08.9	154°39.5	55.7	167°10.7	12.7	370°31.2	38.7	118°21.2	27.2					
Mer.pass. 15:09			ν -0.6° d -1.0' m -3.91			ν 0.5° d -0.5' m 1.11			ν 2.8° d 0.0' m -2.62			ν 2.2° d -0.1' m 1.03		

Tue	GHA		Dec	GHA		Dec	GHA		Dec					
0	133°11.3	169°38.9	S15°54.8	182°11.2	S19°12.2	24°33.9	N22°38.7	133°23.4	S02°27.1					
1	148°13.8	184°38.2	53.8	197°11.6	11.7	39°36.7	38.8	148°25.7	27.0					
2	163°16.3	199°37.6	52.8	212°12.1	11.2	54°39.4	38.8	163°27.9	26.9					
3	178°18.7	214°37.0	.. 51.8	227°12.5	.. 10.7	69°42.2	.. 38.8	178°30.1	.. 26.8					
4	193°21.2	229°36.3	50.9	242°13.0	10.2	84°44.9	38.9	193°32.4	26.7					
5	208°23.7	244°35.7	49.9	257°13.5	09.7	99°47.7	38.9	208°34.6	26.6					
6	223°26.1	259°35.1	S15°48.9	272°13.9	S19°09.2	114°50.4	N22°39.0	223°36.8	S02°26.5					
7	238°28.6	274°34.4	47.9	287°14.4	08.7	129°53.2	39.0	238°39.1	26.4					
8	253°31.1	289°33.8	47.0	302°14.8	08.2	144°55.9	39.0	253°41.3	26.2					
9	268°33.5	304°33.2	.. 46.0	317°15.3	.. 07.7	159°58.7	.. 39.1	268°43.6	.. 26.1					
10	283°36.0	319°32.5	45.0	332°15.8	07.2	175°01.4	39.1	283°45.8	26.0					
11	298°38.4	334°31.9	44.0	347°16.2	06.7	190°04.2	39.2	298°48.0	25.9					
12	313°40.9	349°31.3	S15°43.0	2°16.7	S19°06.2	205°06.9	N22°39.2	313°50.3	S02°25.8					
13	328°43.4	4°30.7	42.0	17°17.2	05.7	220°09.7	39.2	328°52.5	25.7					
14	343°45.8	19°30.0	41.1	32°17.6	05.1	235°12.4	39.3	343°54.7	25.6					
15	358°48.3	34°29.4	.. 40.1	47°18.1	.. 04.6	250°15.2	.. 39.3	358°57.0	.. 25.5					
16	13°50.8	49°28.8	39.1	62°18.5	04.1	265°17.9	39.3	13°59.2	25.4					
17	28°53.2	64°28.2	38.1	77°19.0	03.6	280°20.7	39.4	29°01.4	25.3					
18	43°55.7	79°27.5	S15°37.1	92°19.5	S19°03.1	295°23.4	N22°39.4	44°03.7	S02°25.2					
19	58°58.2	94°26.9	36.1	107°19.9	02.6	310°26.2	39.5	59°05.9	25.1					
20	74°00.6	109°26.3	35.2	122°20.4	02.1	325°28.9	39.5	74°08.1	25.0					
21	89°03.1	124°25.7	.. 34.2	137°20.9	.. 01.6	340°31.7	.. 39.5	89°10.4	.. 24.9					
22	104°05.6	139°25.0	33.2	152°21.3	01.1	355°34.4	39.6	104°12.6	24.8					
23	119°08.0	154°24.4	32.2	167°21.8	00.6	370°37.1	39.6	119°14.8	24.7					
Mer.pass. 15:05			ν -0.6° d -1.0' m -3.91			ν 0.5° d -0.5' m 1.11			ν 2.8° d 0.0' m -2.61			ν 2.2° d -0.1' m 1.03		

Wed	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec					
0	134°10.5	169°23.8	S15°31.2	182°22.3	S19°00.0	25°39.9	N22°39.6	134°17.1	S02°24.6					
1	149°12.9	184°23.2	30.2	197°22.7	18°59.5	40°42.6	39.7	149°19.3	24.5					
2	164°15.4	199°22.5	29.2	212°23.2	19.0	55°45.4	39.7	164°21.5	24.4					
3	179°17.9	214°19.9	.. 28.2	227°23.7	.. 58.5	70°48.1	.. 39.8	179°23.8	.. 24.3					
4	194°20.3	229°21.3	27.2	242°24.1	58.0	85°50.9	39.8	194°26.0	24.1					
5	209°22.8	244°20.7	26.2	257°24.6	57.5	100°53.6	39.8	209°28.2	24.0					
6	224°25.3	259°20.1	S15°25.2	272°25.0	S18°57.0	115°56.4	N22°39.9	224°30.5	S02°23.9					
7	239°27.7	274°19.4	24.2	287°25.5	56.4	130°59.1	39.9	239°32.7	23.8					
8	254°30.2	289°18.8	23.2	302°26.0	55.9	146°01.8	39.9	254°34.9	23.7					
9	269°32.7	304°18.2	.. 22.2	317°26.4	.. 55.4	161°04.6	.. 40.0	269°37.2	.. 23.6					
10	284°35.1	319°17.6	21.2	332°26.9	54.9	176°07.3	40.0	284°39.4	23.5					
11	299°37.6	334°17.0	20.2	347°27.4	54.4	191°10.1	40.0	299°41.6	23.4					
12	314°40.1	349°16.4	S15°19.2	2°27.8	S18°53.9	206°12.8	N22°40.1	314°43.9	S02°23.3					
13	329°42.5	4°15.7	18.2	17°28.3	53.4	221°15.6	40.1	329°46.1	23.2					
14	344°45.9	19°15.1	17.2	32°28.8	52.8	236°18.3	40.2	344°48.3	23.1					
15	359°47.4	34°14.5	.. 16.2	47°29.2	.. 52.3	251°21.1	.. 40.2	359°50.6	.. 23.0					
16	14°49.9	49°13.9	15.2	62°29.7	51.8	266°23.8	40.2	14°52.8	22.9					
17	29°52.4	64°13.3	14.2	77°30.2	51.3	281°26.5	40.3	29°55.0	22.8					
18	44°54.8	79°12.7	S15°13.2	92°30.6	S18°50.8	296°29.3	N22°40.3	44°57.3	S02°22.7					
19	59°57.3	94°12.1	12.2	107°31.1	50.2	311°32.0	40.3	59°59.5	22.6					
20	74°59.8	109°11.5	11.2	122°31.6	49.7	326°34.8	40.4	75°01.7	22.5					
21	90°02.2	124°10.8	.. 10.2	137°32.0	.. 49.2	341°37.5	.. 40.4	90°03.9	.. 22.3					
22	105°04.7	139°10.2	09.2	152°32.5	48.7	356°40.2	40.5	105°06.2	22.2					
23	120°07.2	154°09.6	08.2	167°33.0	48.2	371°43.0	40.5	120°08.4	22.1					
Mer.pass. 15:01			ν -0.6° d -1.0' m -3.91			ν 0.5° d -0.5' m 1.11			ν 2.7° d 0.0' m -2.61			ν 2.2° d -0.1' m 1.03		

Stars		
	SHA	Dec
Alpheratz	357°34.1	29°14.2
Ankaa	353°06.5	-42°10.0
Schedar	349°30.3	56°41.1
Diphda	348°46.6	-17°50.7
Achernar	335°19.7	-57°06.5
Hamal	327°50.2	23°35.2
Polaris	313°31.5	89°22.8
Acamar	315°11.0	-40°12.2
Menkar	314°05.2	4°11.5
Mirfak	308°26.9	49°57.4
Aldebaran	290°38.4	16°33.7
Rigel	281°02.8	-8°10.4
Capella	280°20.3	46°01.6
Bellatrix	278°21.7	6°22.4
Elmath	278°00.5	28°37.8
Alnilam	275°36.6	-1°11.2
Betelgeuse	270°50.9	7°24.7
Canopus	263°51.5	-52°42.7
Sirius	258°25.1	-16°45.2
Adhara	255°04.8	-29°00.6
Procyon	244°49.6	5°09.4
Pollux	243°15.8	27°57.7
Avior	234°13.7	-59°35.6
Suhail	222°45.2	-43°32.3
Miaplacidus	221°37.2	-69°49.4
Alphard	217°46.5	-8°46.4
Regulus	207°33.2	11°50.2
Dubhe	193°39.3	61°36.4
Denebola	182°23.8	14°25.4
Gienah	175°42.4	-17°41.3
Acrux	172°58.7	-63°14.5
Gacrux	171°50.3	-57°15.4
Alioth	166°11.9	55°48.7
Spica	158°21.2	-13°12.9
Alkaid	152°51.1	49°10.6
Hadar	148°34.6	-60°29.7
Menkent	147°56.5	-36°29.8
Arcturus	145°47.0	19°02.5
Rigel Kent.	139°39.0	-60°56.4
Kochab	137°19.8	74°02.4
Zuben ubi	136°55.0	-16°09.1
Alphecca	126°03.0	26°37.3
Antares	112°14.9	-26°29.4
Atria	107°08.6	-69°04.2
Sabik	102°01.9	-15°45.5
Shaula	96°09.4	-37°07.3
Rasalhague	95°57.9	12°32.3
Eltanin	90°42.1	51°28.8
Kaus Aust.	83°31.6	-34°22.3
Vega	80°33.0	38°48.2
Nunki	75°47.0	-26°15.9
Altair	61°59.4	8°56.1
Peacock	53°04.9	-56°39.1
Deneb	49°25.7	45°22.3
Enif	33°38.2	9°59.6
Al Na'ir	27°32.2	-46°50.2
Fomalhaut	15°13.8	-29°09.2
Scheat	13°44.6	28°13.5
Markab	13°29.3	15°20.7
Feb 02 Mon		
Venus	37°42.2	12°41
Mars	49°08.0	12°41
Jupiter	251°15.6	22°22
Saturn	0°17.5	15°08
Feb 03 Tue		
Venus	36°27.5	12°42
Mars	48°59.8	11°51
Jupiter	251°22.6	22°18
Saturn	0°12.1	15°04
Feb 04 Wed		
Venus	35°13.3	12°43
Mars	48°11.8	11°50
Jupiter	251°29.8	22°13
Saturn	0°06.6	15°01
Horizontal parallax		
Venus:		0.1
Mars:		0.1

Aries			Venus			Mars			Jupiter			Saturn		
Thu	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	135°09.6	169°09.0	S15°07.2	182°33.4	S18°47.7	265°45.7	N22°40.5	135°10.6	S02°22.0	22.0				
1	150°12.1	184°08.4	06.2	197°33.9	47.1	41°48.5	40.6	150°12.9	21.9					
2	165°14.5	199°07.8	05.2	212°34.4	46.6	56°51.2	40.6	165°15.1	21.8					
3	180°17.0	214°07.2	04.2	227°34.9	45.1	71°53.9	40.6	180°17.3	21.7					
4	195°19.5	229°06.6	03.2	242°35.3	46.6	86°56.7	40.7	195°19.6	21.6					
5	210°21.9	244°06.0	02.1	257°35.8	45.0	101°59.4	40.7	210°21.8	21.5					
6	225°24.4	259°05.4	S15°01.1	272°36.3	S18°44.5	117°02.2	N22°40.7	225°24.0	S02°21.4	21.4				
7	240°26.9	274°04.8	15°00.1	287°36.7	44.0	132°04.9	40.8	240°26.3	21.3					
8	255°29.3	289°04.2	14°59.1	302°37.2	43.5	147°07.6	40.8	255°28.5	21.2					
9	270°31.8	304°03.5	14°58.1	317°37.7	43.0	162°10.4	40.8	270°30.7	21.1					
10	285°34.3	319°02.9	57.1	332°38.1	42.4	177°13.1	40.9	285°33.0	21.0					
11	300°36.7	334°02.3	56.1	347°38.6	41.9	192°15.8	40.9	300°35.2	20.9					
12	315°39.2	349°01.7	S14°55.0	2°39.1	S18°41.4	207°18.6	N22°41.0	315°37.4	S02°20.7	20.7				
13	330°41.7	4°01.1	54.0	17°39.6	40.9	222°21.3	41.0	330°39.6	20.6					
14	345°44.1	19°00.5	53.0	32°40.0	40.3	237°24.1	41.0	345°41.9	20.5					
15	0°46.6	33°59.9	52.0	47°40.5	39.8	252°26.8	41.1	0°44.1	20.4					
16	15°49.0	48°59.3	51.0	62°41.0	39.3	267°29.5	41.1	15°46.3	20.3					
17	30°51.5	63°58.7	49.9	77°41.4	38.8	282°32.3	41.1	30°48.6	20.2					
18	45°54.0	78°58.1	S14°48.9	92°41.9	S18°38.2	297°35.0	N22°41.2	45°50.8	S02°20.1	20.1				
19	60°56.4	93°57.5	47.9	107°42.4	37.7	312°37.7	41.2	60°53.0	20.0					
20	75°58.9	108°56.9	46.9	122°42.8	37.2	327°40.5	41.2	75°55.3	19.9					
21	91°01.4	123°56.3	45.9	137°43.3	36.6	342°43.2	41.3	90°57.5	19.8					
22	106°03.8	138°55.7	44.8	152°43.8	36.1	357°45.9	41.3	105°59.7	19.7					
23	121°06.3	153°55.1	43.8	167°44.3	35.6	12°48.7	41.3	121°01.9	19.6					
Mer.pass. 14:57			ν -0.6' d -1.0' m -3.91			ν 0.5' d -0.5' m 1.11			ν 2.7' d 0.0' m -2.60			ν 2.2' d -0.1' m 1.03		

Fri	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	136°08.8	168°54.5	S14°42.8	182°44.7	S18°35.1	275°51.4	N22°41.4	136°04.2
1	151°11.2	183°53.9	41.8	197°45.2	34.5	42°54.1	41.4	151°06.4
2	166°13.7	198°53.3	40.7	212°45.7	34.0	57°56.9	41.5	166°08.6
3	181°16.1	213°52.7	39.7	227°46.2	33.5	72°59.6	41.5	181°10.9
4	196°18.6	228°52.1	38.7	242°46.6	32.9	88°02.3	41.5	196°13.1
5	211°21.1	243°51.6	37.6	257°47.1	32.4	103°05.1	41.6	211°15.3
6	226°23.5	258°51.0	S14°36.6	272°47.6	S18°31.9	118°07.8	N22°41.6	226°17.5
7	241°26.0	273°50.4	35.6	287°48.0	31.3	133°10.5	41.6	241°19.8
8	256°28.5	288°49.8	34.6	302°48.5	30.8	148°13.3	41.7	256°22.0
9	271°30.9	303°49.2	33.5	317°49.0	30.3	163°16.0	41.7	271°24.2
10	286°33.4	318°48.6	32.5	332°49.5	29.7	178°18.7	41.7	286°26.5
11	301°35.9	333°48.0	31.5	347°49.9	29.2	193°21.5	41.8	301°28.7
12	316°38.3	348°47.4	S14°30.4	2°50.4	S18°28.7	208°24.2	N22°41.8	316°30.9
13	331°40.8	3°46.8	29.4	17°50.9	28.2	233°26.9	41.8	331°33.1
14	346°43.3	18°46.2	28.4	32°51.4	27.6	238°29.6	41.9	346°35.4
15	1°45.7	33°45.6	27.3	47°51.8	27.1	253°32.4	41.9	1°37.6
16	16°48.2	48°45.0	26.3	62°52.3	26.5	268°35.1	41.9	16°39.8
17	31°50.6	63°44.5	25.2	77°52.8	26.0	283°37.8	42.0	31°42.1
18	46°53.1	78°43.9	S14°24.2	92°53.3	S18°25.5	298°40.6	N22°42.0	46°44.3
19	61°55.6	93°43.3	23.2	107°53.7	24.9	313°43.3	42.0	61°46.5
20	76°58.0	108°42.7	22.1	122°54.2	24.4	328°46.0	42.1	76°48.7
21	92°00.5	123°42.1	21.1	137°54.7	23.9	343°48.7	42.1	91°51.0
22	107°03.0	138°41.5	20.1	152°55.2	23.3	358°51.5	42.2	106°53.2
23	122°05.4	153°40.9	19.0	167°55.6	22.8	13°54.2	42.2	121°55.4
Mer.pass. 14:53			ν -0.6' d -1.0' m -3.91			ν 0.5' d -0.5' m 1.11		

Sat	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	137°07.9	168°40.4	S14°18.0	182°56.1	S18°22.3	285°56.9	N22°42.2	136°57.6
1	152°10.4	183°39.8	16.9	197°56.6	21.7	43°59.7	42.3	151°59.9
2	167°12.8	198°39.2	15.9	212°57.1	21.2	59°02.4	42.3	167°02.1
3	182°15.3	213°38.6	14.8	227°57.6	20.6	74°05.1	42.3	182°04.3
4	197°17.8	228°38.0	13.8	242°58.0	20.1	89°07.8	42.4	197°06.6
5	212°20.2	243°37.4	12.7	257°58.5	19.6	104°10.6	42.4	212°08.8
6	227°22.7	258°36.9	S14°11.7	272°59.0	S18°19.0	119°13.3	N22°42.4	227°11.0
7	242°25.1	273°36.3	10.7	287°59.5	18.5	134°16.0	42.5	242°13.2
8	257°27.6	288°35.7	9.6	302°59.9	18.0	149°18.7	42.5	257°15.5
9	272°30.1	303°35.1	08.6	318°00.4	17.4	164°21.5	42.5	272°17.7
10	287°32.5	318°34.5	07.5	333°00.9	16.9	179°24.2	42.6	287°19.9
11	302°35.0	333°33.9	06.5	348°01.4	16.3	194°26.9	42.6	302°22.1
12	317°37.5	348°33.4	S14°05.4	3°01.9	S18°15.8	209°29.6	N22°42.6	317°24.4
13	332°39.9	3°32.8	04.4	18°02.3	15.2	224°32.4	42.7	332°26.6
14	347°42.3	18°32.2	03.3	33°02.8	14.7	239°35.1	42.7	347°28.8
15	2°44.9	33°31.6	02.3	48°03.3	14.2	254°37.8	42.7	2°31.0
16	17°47.3	48°31.1	01.2	63°03.8	13.6	269°40.5	42.8	17°33.3
17	32°49.8	63°30.5	14°00.2	78°04.2	13.1	284°43.3	42.8	32°35.5
18	47°52.2	78°29.9	S13°59.1	93°04.7	S18°12.5	299°46.0	N22°42.8	47°37.7
19	62°54.7	93°29.3	58.0	108°05.2	12.0	314°48.7	42.9	62°39.9
20	77°57.2	108°28.8	57.0	123°05.7	11.4	329°51.4	42.9	77°42.2
21	92°59.6	123°28.2	55.9	138°06.2	10.9	344°54.1	42.9	92°44.4
22	108°02.1	138°27.6	54.9	153°06.6	10.4	359°56.9	43.0	107°46.6
23	123°04.6	153°27.0	53.8	168°07.1	09.8	14°59.6	43.0	122°48.8
Mer.pass. 14:49			ν -0.6' d -1.0' m -3.91			ν 0.5' d -0.5' m 1.12		

Stars		
SHA	Dec	
Alpheratz	357°31.4	29°14.2
Ankaa	353°06.5	-42°10.0
Schedar	349°30.7	56°41.1
Diphda	348°46.6	-17°50.7
Achernar	335°19.7	-57°06.5
Hamal	327°50.2	23°35.2
Polaris	313°33.2	89°22.8
Acamar	315°11.1	-40°12.2
Menkar	314°05.2	4°11.5
Mirfak	308°26.9	49°57.4
Aldebaran	290°38.4	16°33.7
Rigel	281°02.8	-8°10.4
Capella	280°20.3	46°01.6
Bellatrix	278°21.7	6°22.4
Elnath	278°00.5	28°37.8
Anilim	275°36.6	-1°11.2
Betelgeuse	270°50.9	7°24.7
Canopus	263°51.6	-52°42.7
Sirius	258°25.2	-16°45.2
Adhara	255°04.8	-29°00.6
Procyon	244°49.6	5°09.4
Pollux	243°15.8	27°57.7
Avior	234°13.7	-59°35.6
Suhail	222°45.2	-43°32.3
Miaplacidus	221°37.2	-69°49.4
Alphard	217°46.5	-8°46.4
Regulus	207°33.2	11°50.2
Dubhe	193°39.3	61°36.4
Denebola	182°23.8	14°25.4
Gienah	175°42.4	-17°41.3
Acrux	172°58.7	-63°14.4
Carux	171°50.3	-57°15.4
Alioth	166°11.8	55°48.7
Spica	158°21.2	-11°17.9
Alkaid	152°51.1	49°10.6
Hadar	148°34.6	-60°29.7
Menkent	147°56.5	-36°29.8
Arcturus	145°47.0	19°02.5
Rigel Kent	139°39.0	-60°56.4
Kochab	137°59.7	74°02.4
Zuben'ubi	136°55.0	-16°09.1
Alphecca	126°03.6	-26°37.3
Antares	112°14.9	-26°29.4
Atria	107°08.6	-69°04.2
Sabik	102°01.9	-15°45.5
Shaula	96°09.4	-37°07.3
Rasalhague	95°57.9	12°32.3
Eltanin	90°42.1	51°28.8
Kaus Aust.	83°31.6	-34°22.3
Vega	80°33.0	38°48.2
Nunki	75°46.9	-26°15.9
Altair	61°59.4	8°56.1
Peacock	53°04.9	-56°39.0
Deneb	49°25.7	45°22.3
Enif	33°38.2	8°59.6
Al Na'ir	27°32.2	-46°50.2
Fomalhaut	15°13.8	-29°29.2
Scheat	13°44.6	28°13.5
Markab	13°29.3	15°20.7
Feb 05 Thu SHA Mer.pass		
Venus	33°59.4	12.44
Mars	47°23.8	11.49
Jupiter	251°36.1	22.09
Saturn	0°01.0	14.57
Feb 06 Fri SHA Mer.pass		
Venus	32°45.8	12.45
Mars	46°36.0	11.49
Jupiter	251°42.6	22.05
Saturn	359°55.4	14.54
Feb 07 Sat SHA Mer.pass		
Venus	31°32.5	12.46
Mars	45°48.2	11.48
Jupiter	251°49.0	22.00
Saturn	359°49.8	14.50
Horizontal parallax		
Venus:	0.1	
Mars:	0.1	

Sun			Moon				
Thu	GHA	Dec	GHA	ν	Dec	d	HP
0	176°31.3	S15°59.2	320°27.0	14.8°	N00°43.7	-15.5'	56.7'
1	191°31.2	58.4	335°30.7	14.8°	N0°28.2	-15.5'	56.7'
2	206°31.2	57.6	349°34.5	14.8°	N00°12.7	-15.5'	56.7'
3	221°31.1	56.9	363°38.4	14.8°	S00°18.2	-15.5'	56.6'
4	236°31.1	56.1	18°37.3	14.9°	N0°18.2	15.4'	56.6'
5	251°31.0	55.4	33°16.2	14.9°	N0°33.7	15.4'	56.6'
6	266°31.0	S15°54.6	47°50.1	15.0°	N0°49.1	15.4'	56.5'
7	281°30.9	55.9	62°24.1	15.0°	01°04.5	15.4'	56.5'
8	296°30.9	53.1	76°58.1	15.0°	01°19.8	15.3'	56.5'
9	311°30.8	52.3	91°32.1	15.1°	01°35.2	15.3'	56.4'
10	326°30.8	51.6	106°06.1	15.1°	01°50.5	15.3'	56.4'
11	341°30.8	50.8	120°40.2	15.1°	02°05.8	15.3'	56.4'
12	356°30.7	S15°50.1	135°14.3	15.1°	S02°21.1	15.2'	56.4'
13	11°30.7	49.3	149°48.5	15.2°	02°36.3	15.2'	56.3'
14	26°30.6	48.5	164°22.6	15.2°	02°51.5	15.2'	56.3'
15	41°30.6	47.8	178°56.8	15.2°	03°06.7	15.2'	56.3'
16	56°30.5	47.0	193°31.0	15.2°	03°21.9	15.1'	56.2'
17	71°30.5	46.2	208°05.2	15.2°	03°37.0	15.1'	56.2'
18	86°30.4	S15°45.5	222°39.4	15.2°	S03°52.1	15.1'	56.2'
19	101°30.4	44.7	237°13.7	15.3°	04°07.1	15.0'	56.1'
20	116°30.3	43.9	251°47.9	15.3°	04°22.1	15.0'	56.1'
21	131°30.3	43.2	266°22.2	15.3°	04°37.1	14.9'	56.1'
22	146°30.2	42.4	280°56.5	15.3°	04°52.1	14.9'	56.0'
23	161°30.2	41.6	295°30.8	15.3°	05°07.0	14.9'	56.0'
SD = 16.2'			$d = -0.8'$		SD = 15.5'		
Fri	GHA	Dec	GHA	ν	Dec	d	HP
0	176°30.2	S15°40.9	310°05.1	15.3°	S05°21.9	14.8'	56.0'
1	191°30.1	40.1	324°39.4	15.3°	05°36.7	14.8'	56.0'
2	206°30.1	39.3	339°13.8	15.3°	05°51.5	14.8'	55.9'
3	221°30.0	38.6	353°48.1	15.3°	06°06.3	14.7'	55.9'
4	236°30.0	37.8	8°22.5	15.4°	06°21.0	14.7'	55.9'
5	251°29.9	37.0	22°56.8	15.4°	06°35.7	14.6'	55.8'
6	266°29.9	S15°36.3	37°31.2	15.4°	S06°50.3	14.6'	55.8'
7	281°29.9	35.5	52°05.5	15.4°	07°04.9	14.5'	55.8'
8	296°29.8	34.7	66°39.9	15.4°	07°19.4	14.5'	55.7'
9	311°29.8	33.9	81°14.2	15.4°	07°33.9	14.5'	55.7'
10	326°29.7	33.2	95°48.6	15.4°	07°48.4	14.4'	55.7'
11	341°29.7	32.4	110°23.0	15.4°	08°02.8	14.4'	55.7'
12	356°29.6	S15°31.6	124°57.3	15.4°	S08°17.1	14.3'	55.6'
13	11°29.6	30.9	139°31.7	15.3°	08°31.4	14.3'	55.6'
14	26°29.6	30.1	154°06.0	15.3°	08°45.7	14.2'	55.6'
15	41°29.6	29.3	168°40.4	15.3°	08°59.9	14.2'	55.6'
16	56°29.5	28.5	183°14.7	15.3°	09°14.1	14.1'	55.5'
17	71°29.5	27.8	197°49.0	15.3°	09°28.2	14.1'	55.5'
18	86°29.4	S15°27.0	212°23.4	15.3°	S09°42.2	14.0'	55.5'
19	101°29.4	26.2	226°57.7	15.3°	09°56.3	14.0'	55.4'
20	116°29.4	25.4	241°32.0	15.3°	10°10.2	13.9'	55.4'
21	131°29.3	24.6	256°06.2	15.3°	10°24.1	13.8'	55.4'
22	146°29.3	23.9	270°40.5	15.3°	10°37.9	13.8'	55.4'
23	161°29.3	23.1	285°14.8	15.2°	10°51.7	13.7'	55.3'
SD = 16.2'			$d = -0.8'$		SD = 15.3'		
Sat	GHA	Dec	GHA	ν	Dec	d	HP
0	176°29.2	S15°22.3	299°49.0	15.2°	S11°05.5	13.7'	55.3'
1	191°29.2	21.5	314°23.2	15.2°	11°19.1	13.6'	55.3'
2	206°29.2	20.8	328°57.5	15.2°	11°32.7	13.6'	55.3'
3	221°29.1	20.0	343°31.6	15.2°	11°46.3	13.5'	55.2'
4	236°29.1	19.2	358°05.8	15.2°	11°59.8	13.4'	55.2'
5	251°29.0	18.4	12°40.0	15.1°	12°13.2	13.4'	55.2'
6	266°29.0	S15°17.6	27°14.1	15.1°	S12°26.6	13.3'	55.2'
7	281°29.0	16.8	41°48.2	15.1°	12°39.9	13.3'	55.1'
8	296°29.0	16.1	56°22.3	15.1°	12°53.2	13.2'	55.1'
9	311°28.9	15.3	70°56.4	15.0°	13°06.4	13.1'	55.1'
10	326°28.9	14.5	85°30.4	15.0°	13°19.5	13.1'	55.1'
11	341°28.9	13.7	100°04.4	15.0°	13°32.5	13.0'	55.1'
12	356°28.8	S15°12.9	114°38.4	15.0°	S13°45.5	12.9'	55.0'
13	11°28.8	12.1	129°12.4	14.9°	13°58.5	12.9'	55.0'
14	26°28.8	11.4	143°46.3	14.9°	14°11.3	12.8'	55.0'
15	41°28.7	10.6	158°20.2	14.9°	14°24.1	12.7'	55.0'
16	56°28.7	9.8	172°54.1	14.8°	14°36.8	12.7'	54.9'
17	71°28.7	09.0	187°27.9	14.8°	14°49.5	12.6'	54.9'
18	86°28.6	S15°08.2	202°01.7	14.8°	S15°02.1	12.5'	54.9'
19	101°28.6	07.4	216°35.5	14.7°	15°14.6	12.4'	54.9'
20	116°28.6	06.6	231°09.3	14.7°	15°27.1	12.4'	54.9'
21	131°28.6	05.9	245°43.0	14.7°	15°39.4	12.3'	54.8'
22	146°28.5	05.1	260°16.6	14.6°	15°51.7	12.2'	54.8'
23	161°28.5	04.3	274°50.3	14.6°	16°04.0	12.2'	54.8'
SD = 16.2'			$d = -0.8'$		SD = 15.1'		

Aries			Venus			Mars			Jupiter			Saturn		
Sun	GHA		GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
0	138°07.0	168°26.5	S13° 52.8	183°07.6	S18° 09.3	30°02.3	N22° 43.0	137°51.1	S02° 14.3					
1	153°09.5	183°25.9	51.7	198°08.1	08.7	45°05.0	43.1	152°53.3	14.2					
2	168°12.0	198°25.3	50.6	213°08.6	08.2	60°07.7	43.1	167°55.5	14.1					
3	183°14.4	213°24.7	.. 49.6	228°09.0	.. 07.6	75°10.5	.. 43.1	182°57.7	.. 14.0					
4	198°16.9	228°24.2	48.5	243°09.5	07.1	90°13.2	43.2	198°00.0	13.9					
5	213°19.4	243°23.6	47.5	258°10.0	06.5	105°15.9	43.2	213°02.2	13.7					
6	228°21.8	258°23.0	S13° 46.4	273°10.5	S18° 06.0	120°18.6	N22° 43.2	228°04.4	S02° 13.6					
7	243°24.3	273°22.5	45.3	288°11.0	05.4	135°21.3	43.3	243°06.6	13.5					
8	258°26.7	288°21.9	44.3	303°11.5	04.9	150°24.1	43.3	258°08.9	13.4					
9	273°29.2	303°21.3	.. 43.2	318°11.9	.. 04.3	165°26.8	.. 43.3	273°11.1	.. 13.3					
10	288°31.7	318°20.8	42.2	333°12.4	03.8	180°29.5	43.4	288°13.3	13.2					
11	303°34.1	333°20.2	41.1	348°12.9	03.2	195°32.2	43.4	303°15.5	13.1					
12	318°36.6	348°19.6	S13° 40.0	3°13.4	S18° 02.7	210°34.9	N22° 43.4	318°17.8	S02° 13.0					
13	333°39.1	3°19.1	39.0	18°13.9	02.1	225°37.7	43.5	333°20.0	12.9					
14	348°41.5	18°18.5	37.9	33°14.3	01.6	240°40.4	43.5	348°22.2	12.8					
15	3°44.0	33°17.9	.. 36.8	48°14.8	.. 01.0	255°43.1	.. 43.5	3°24.4	.. 12.7					
16	18°46.5	48°17.4	35.8	63°15.3	18°00.5	270°45.8	43.6	18°26.7	12.5					
17	33°48.9	63°16.8	34.7	78°15.8	17°59.9	285°48.5	43.6	33°28.9	12.4					
18	48°51.4	78°16.2	S13° 33.6	93°16.3	S17° 59.4	300°51.2	N22° 43.6	48°31.1	S02° 12.3					
19	63°53.9	93°15.7	32.5	108°16.8	58.8	315°53.9	43.7	63°33.3	12.2					
20	78°56.3	108°15.1	31.5	123°17.3	58.3	330°56.7	43.7	78°35.6	12.1					
21	93°58.8	123°14.5	.. 30.4	138°17.7	.. 57.7	345°59.4	.. 43.7	93°37.8	.. 12.0					
22	109°01.2	138°14.0	29.3	153°18.2	57.2	1°02.1	43.8	108°40.0	11.9					
23	124°03.7	153°13.4	28.3	168°18.7	56.6	16°04.8	43.8	123°42.2	11.8					
Mer.pass. 14:45			ν -0.6° d -1.1° m -3.91			ν 0.5° d -0.5° m 1.12			ν 2.7° d 0.0° m -2.59			ν 2.2° d -0.1° m 1.02		

Mon	GHA		Dec	GHA		Dec	GHA		Dec					
0	139°06.2	168°12.9	S13°27.2	183°19.2	S17°56.1	31°07.5	N22°43.8	138°44.4	S02°11.7					
1	154°08.6	183°12.3	26.1	198°19.7	55.5	46°10.2	43.9	153°46.7	11.6					
2	169°11.1	198°11.7	25.0	213°20.2	55.0	61°12.9	43.9	168°48.9	11.5					
3	184°13.6	213°11.2	.. 24.0	228°20.6	.. 54.4	76°15.7	.. 43.9	183°51.1	.. 11.3					
4	199°16.0	228°10.6	22.9	243°21.1	53.9	91°18.4	44.0	198°53.3	11.2					
5	214°18.5	243°10.1	21.8	258°21.6	53.3	106°21.1	44.0	213°55.6	11.1					
6	229°21.0	258°09.5	S13°20.7	273°22.1	S17°52.7	121°23.8	N22°44.0	228°57.8	S02°11.0					
7	244°23.4	273°08.9	19.7	288°22.6	52.2	136°26.5	44.0	244°00.0	10.9					
8	259°25.9	288°08.4	18.6	303°23.1	51.6	151°29.2	44.1	259°02.2	10.8					
9	274°28.3	303°07.8	.. 17.5	318°23.6	.. 51.1	166°31.9	.. 44.1	274°04.4	.. 10.7					
10	289°30.8	318°07.3	16.4	333°24.0	50.5	181°34.6	44.1	289°06.7	10.6					
11	304°33.3	333°06.7	15.3	348°24.5	50.0	196°37.4	44.2	304°08.9	10.5					
12	319°35.7	348°06.2	S13°14.3	3°25.0	S17°49.4	211°40.1	N22°44.2	319°11.1	S02°10.4					
13	334°38.2	3°05.6	13.2	18°25.5	48.9	226°42.8	44.2	334°13.3	10.2					
14	349°40.7	18°05.1	12.1	33°26.0	48.3	241°45.5	44.3	349°15.6	10.1					
15	4°43.1	33°04.5	.. 11.0	48°26.5	.. 47.7	256°48.2	.. 44.3	4°17.8	.. 10.0					
16	19°45.6	48°03.9	09.9	63°27.0	47.2	271°50.9	44.3	19°20.0	09.9					
17	34°48.1	63°03.4	08.8	78°27.5	46.6	286°53.6	44.4	34°22.2	09.8					
18	49°50.5	78°02.8	S13°07.8	93°27.9	S17°46.1	301°56.3	N22°44.4	49°24.4	S02°09.7					
19	64°53.0	93°02.3	06.7	108°28.4	45.5	316°59.0	44.4	64°26.7	09.6					
20	79°55.5	108°01.7	05.6	123°28.9	44.9	332°01.7	44.5	79°28.9	09.5					
21	94°57.9	123°01.2	.. 04.5	138°29.4	.. 44.4	347°04.4	.. 44.5	94°31.1	.. 09.4					
22	110°00.4	138°00.6	03.4	153°29.9	43.8	2°07.2	44.5	109°33.3	09.3					
23	125°02.8	153°00.1	02.3	168°30.4	43.3	17°09.9	44.6	124°35.6	09.1					
Mer.pass. 14:41			ν -0.6° d -1.1° m -3.91			ν 0.5° d -0.6° m 1.12			ν 2.7° d 0.0° m -2.58			ν 2.2° d -0.1° m 1.02		

Tue	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	140°05.3	167°59.5	S13°01.2	183°30.9	S17°42.7	32°12.6	N22°44.6	139°37.8	S02°09.0
1	155°07.8	182°59.0	13°00.1	198°31.4	42.1	47°15.3	44.6	154°40.0	08.9
2	170°10.2	197°58.4	12°59.1	213°31.8	41.6	62°18.0	44.6	169°42.2	08.8
3	185°12.7	212°57.9	.. 58.0	228°32.3	.. 41.0	77°20.7	.. 44.7	184°44.4	.. 08.7
4	200°15.2	227°57.3	.. 56.9	243°32.8	40.4	92°23.4	44.7	199°46.7	08.6
5	215°17.6	242°56.8	55.8	258°33.3	39.9	107°26.1	44.7	214°48.9	08.5
6	230°20.1	257°56.2	S12°54.7	273°33.8	S17°39.3	122°28.8	N22°44.8	229°51.1	S02°08.4
7	245°22.6	272°55.7	53.6	288°34.3	38.8	137°31.5	44.8	244°53.3	08.3
8	260°25.0	287°55.2	52.5	303°34.8	38.2	152°34.2	44.8	259°55.5	08.2
9	275°27.5	302°54.6	.. 51.4	318°35.3	.. 37.6	167°36.9	.. 44.9	274°57.8	.. 08.0
10	290°30.0	317°54.1	50.3	333°35.8	37.1	182°39.6	44.9	290°00.0	07.9
11	305°32.4	332°53.5	49.2	348°36.3	36.5	197°42.3	44.9	305°02.2	07.8
12	320°34.9	347°53.0	S12°48.1	3°36.7	S17°35.9	212°45.0	N22°45.0	320°04.4	S02°07.7
13	335°37.3	3°52.4	47.0	18°37.2	35.4	227°47.7	45.0	335°06.6	07.6
14	350°39.8	17°51.9	45.9	33°37.7	34.8	242°50.4	45.0	350°08.9	07.5
15	5°42.3	32°51.3	.. 44.8	48°38.2	.. 34.2	257°53.1	.. 45.1	5°11.1	.. 07.4
16	20°44.7	47°50.8	43.7	63°38.7	33.7	272°55.8	45.1	20°13.3	07.3
17	35°47.2	62°50.3	42.6	78°39.2	33.1	287°58.5	45.1	35°15.5	07.2
18	50°49.7	77°49.7	S12°41.5	93°39.7	S17°32.5	303°01.2	N22°45.1	50°17.7	S02°07.0
19	65°52.1	92°49.2	40.4	108°40.2	32.0	318°04.0	45.2	65°20.0	06.9
20	80°54.6	107°48.6	39.3	123°40.7	31.4	333°06.7	45.2	80°22.2	06.8
21	95°57.1	122°48.1	.. 38.2	138°41.2	.. 30.8	348°09.4	.. 45.2	95°24.4	.. 06.7
22	110°59.5	137°47.6	37.1	153°41.7	30.3	3°12.1	45.3	110°26.6	06.6
23	126°02.0	152°47.0	36.0	168°42.2	29.7	18°14.8	45.3	125°28.8	06.5
Mer.pass. 14:37									
ν -0.5° d -1.1° m -3.91 ν 0.5° d -0.6° m 1.12 ν 2.7° d 0.0° m -2.57 ν 2.2° d -0.1° m 1.02									

Stars		
	SHA	Dec
Alpheratz	357°34.1	29°14.1
Ankaa	353°06.5	-42°10.0
Schedar	349°30.5	56°41.0
Diphda	348°46.6	-17°50.7
Achernar	335°19.7	-57°06.5
Hamal	327°50.3	23°35.2
Polaris	313°34.6	89°22.8
Acamar	315°11.1	-40°12.2
Menkar	314°05.2	4°11.5
Mirafak	308°26.9	49°57.4
Aldebaran	290°38.4	16°33.7
Rigel	281°02.8	-8°10.4
Capella	280°20.3	46°01.6
Bellatrix	278°21.7	6°22.3
Elmath	278°00.5	28°37.8
Alnilam	275°36.6	-1°11.2
Betelgeuse	270°50.9	7°24.7
Canopus	263°51.6	-52°42.7
Sirius	258°25.2	-16°45.3
Adhara	255°04.8	-29°00.2
Procyon	244°49.6	5°09.4
Pollux	123°14.5	27°57.7
Avior	234°13.8	-59°35.7
Suhail	222°45.2	-43°32.4
Maplacidus	221°37.2	-69°49.5
Alphard	217°46.5	-8°46.4
Regulus	207°33.1	11°50.2
Dubhe	193°39.3	61°36.4
Denebola	182°23.8	14°25.4
Gienah	175°42.4	-17°41.3
Acrux	172°58.6	-63°14.5
Gacrux	171°50.3	-57°15.5
Alioth	166°11.8	55°48.7
Spica	158°21.2	-13°17.9
Alkaid	152°51.1	49°10.6
Hadar	148°34.5	-60°29.7
Menkent	147°56.4	-36°29.8
Arcturus	145°47.0	19°02.5
Rigel Kent.	139°38.9	-66°51.4
Kochab	137°19.7	74°02.4
Ubenai	136°55.0	-16°09.1
Alphecca	126°03.0	26°37.3
Antares	112°14.8	-26°29.4
Atria	107°08.5	-69°04.2
Sabik	102°01.9	-15°45.2
Shaula	96°09.4	-37°07.3
Rasalhague	95°57.9	12°32.6
Eltanin	90°42.1	51°28.8
Kaus Aust.	83°31.6	-34°22.3
Vega	80°32.9	38°48.2
Nunki	75°46.9	-26°15.9
Altair	61°59.4	8°56.1
Peacock	53°04.9	-56°39.0
Deneb	49°25.7	45°22.3
Enif	33°38.2	9°59.6
Al Na'ir	27°32.2	-46°50.2
Fomalhaut	15°13.8	-29°29.2
Scheat	13°44.6	28°13.5
Markab	13°29.3	15°

Aries			Venus			Mars			Jupiter			Saturn		
Wed	GHA		GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
0	141°04.4	167°46.5	$S12^{\circ}34.9$	183°42.7	$S17^{\circ}29.1$	33°17.5	$N22^{\circ}45.3$	140°31.1	$S02^{\circ}06.4$					
1	156°06.9	182°45.9	33.8	198°43.1	28.6	48°20.2	45.4	155°33.3	06.3					
2	171°09.4	197°45.4	32.7	213°43.6	28.0	63°22.9	45.4	170°35.5	06.2					
3	186°11.8	212°44.9	.. 31.6	228°44.1	.. 27.4	78°25.6	.. 45.4	185°37.7	.. 06.0					
4	201°14.3	227°44.3	30.5	243°44.6	26.8	93°28.3	45.4	200°39.9	05.9					
5	216°16.8	242°43.8	29.4	258°45.1	26.3	108°30.9	45.5	215°42.1	05.8					
6	231°19.2	257°43.3	$S12^{\circ}28.3$	273°45.6	$S17^{\circ}25.1$	123°33.6	$N22^{\circ}45.5$	230°44.4	$S02^{\circ}05.7$					
7	246°21.7	272°42.7	27.2	288°46.1	25.1	138°36.3	45.5	245°46.6	05.6					
8	261°24.2	287°42.2	26.1	303°46.6	24.6	153°30.9	45.6	260°48.8	05.5					
9	276°26.6	302°41.7	.. 25.0	318°47.1	.. 24.0	168°41.7	.. 45.6	275°51.0	.. 05.4					
10	291°29.1	317°41.1	23.9	333°47.6	23.4	183°44.4	45.6	290°53.2	05.3					
11	306°31.6	332°40.6	22.8	348°48.1	22.8	198°47.1	45.7	305°55.5	05.2					
12	321°34.0	347°40.1	$S12^{\circ}21.7$	3°48.6	$S17^{\circ}22.3$	213°49.8	$N22^{\circ}45.7$	320°57.7	$S02^{\circ}05.0$					
13	336°36.5	2°39.5	20.6	18°49.1	21.7	228°52.5	45.7	335°59.9	04.9					
14	351°38.9	17°39.0	19.4	33°49.6	21.1	243°55.2	45.7	351°02.1	04.8					
15	6°41.4	32°38.5	.. 18.3	48°50.1	.. 20.5	258°57.9	.. 45.8	6°04.3	.. 04.7					
16	21°43.9	47°37.9	17.2	63°50.6	20.0	274°00.6	45.8	21°06.5	04.6					
17	36°46.3	62°37.4	16.1	78°51.1	19.4	289°03.3	45.8	36°08.8	04.5					
18	51°48.8	77°36.9	$S12^{\circ}15.0$	93°51.6	$S17^{\circ}18.8$	304°06.0	$N22^{\circ}45.9$	51°11.0	$S02^{\circ}04.4$					
19	66°51.3	92°36.3	13.9	108°52.0	18.2	319°08.7	45.9	66°13.2	04.3					
20	81°53.7	107°35.8	12.8	123°52.5	17.7	334°11.4	45.9	81°15.4	04.2					
21	96°56.2	122°35.3	.. 11.7	138°53.0	.. 17.1	349°14.1	.. 46.0	96°17.6	.. 04.0					
22	111°58.7	137°34.8	10.5	153°53.5	16.5	4°16.8	46.0	111°19.8	03.9					
23	127°01.1	152°34.2	09.4	168°54.0	15.9	19°19.5	46.0	126°22.1	03.8					
Mer.pass. 14:33			$\nu -0.5^{\circ} d -1.1^{\circ} m -3.91$	$\nu 0.5^{\circ} d -0.6^{\circ} m 1.12$	$\nu 2.7^{\circ} d 0.0^{\circ} m -2.57$	$\nu 2.2^{\circ} d -0.1^{\circ} m 1.02$								

Thu	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	142°03.6	167°33.7	S12°08.3	183°54.5	S17°15.4	34°22.2	N22°46.0	141°24.3	S02°03.7
1	157°06.1	182°33.2	07.2	198°55.0	14.8	49°24.9	46.1	156°26.5	03.6
2	172°08.5	197°32.7	06.1	213°55.5	14.2	64°27.5	46.1	171°28.7	03.5
3	187°11.0	212°32.1	.. 05.0	228°56.0	.. 13.6	79°30.2	.. 46.1	186°30.9	.. 03.4
4	202°13.4	227°31.6	03.8	243°56.5	13.1	94°32.9	46.2	201°33.2	03.3
5	217°15.9	242°31.1	02.7	258°57.0	12.5	109°35.6	46.2	216°35.4	03.1
6	232°18.4	257°30.6	S12°01.6	273°57.5	S17°11.9	124°38.3	N22°46.2	231°37.6	S02°03.0
7	247°20.8	272°30.0	12°00.5	288°58.0	11.3	139°41.0	46.2	246°39.8	02.9
8	262°23.3	287°29.5	11°59.4	303°58.5	10.7	154°43.7	46.3	261°42.0	02.8
9	277°25.8	302°29.0	.. 58.2	318°59.0	.. 10.2	169°46.4	.. 46.3	276°44.2	.. 02.7
10	292°28.2	317°28.5	57.1	333°59.5	09.6	184°49.1	46.3	291°46.5	02.6
11	307°30.7	332°27.9	56.0	349°00.0	09.0	199°51.8	46.4	306°48.7	02.5
12	322°33.2	347°27.4	S11°54.9	4°00.5	S17°08.4	214°54.5	N22°46.4	321°50.9	S02°02.4
13	337°35.6	2°26.9	53.7	19°01.0	07.8	229°57.1	46.4	336°53.1	02.3
14	352°38.1	17°26.4	52.6	34°01.5	07.3	244°59.8	46.5	351°55.3	02.1
15	7°40.6	32°25.9	.. 51.5	49°02.0	.. 06.7	260°02.5	.. 46.5	6°57.5	.. 02.0
16	22°43.0	47°25.3	50.4	64°02.5	06.1	275°05.2	46.5	21°59.7	01.9
17	37°45.5	62°24.8	49.2	79°03.0	05.5	290°07.9	46.5	37°02.0	01.8
18	52°47.9	77°24.3	S11°48.1	94°03.5	S17°04.9	305°10.6	N22°46.6	52°04.2	S02°01.7
19	67°50.4	92°23.8	47.0	109°04.0	04.3	320°13.3	46.6	67°06.4	01.6
20	82°52.9	107°23.3	45.9	124°05.4	03.8	335°16.0	46.6	82°08.6	01.5
21	97°55.3	122°22.7	.. 44.7	139°05.0	.. 03.2	350°18.6	.. 46.7	97°10.8	.. 01.4
22	112°57.8	137°22.2	43.6	154°05.5	02.6	5°21.3	46.7	112°13.0	01.2
23	128°00.3	152°21.7	42.5	169°06.0	02.0	20°24.0	46.7	127°15.3	01.1
Mer.pass. 14:29 $\nu -0.5^{\circ} d -1.1^{\circ} m -3.91$ $\nu 0.5^{\circ} d -0.6^{\circ} m 1.12$ $\nu 2.7^{\circ} d 0.0^{\circ} m -2.56$ $\nu 2.2^{\circ} d -0.1^{\circ} m 1.02$									

Fri	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	143°02.7	167°21.2	S11°41.4	184°06.5	S17°01.4	35°26.7	N22°46.7	142°17.5	S02°01.0
1	158°05.2	182°20.7	40.2	199°07.0	50°29.4	46.8		157°19.7	00.9
2	173°07.7	197°20.2	39.1	214°07.5	17°00.3	65°32.1	46.8	172°21.9	00.8
3	188°10.1	212°19.6	.. 38.0	229°08.0	16°59.7	80°34.8	.. 46.8	187°24.1	.. 00.7
4	203°12.6	227°19.1	36.8	244°08.5	59.1	95°37.4	46.9	202°26.3	00.6
5	218°15.1	242°18.6	35.7	259°09.0	58.5	110°40.1	46.9	217°28.5	00.5
6	233°17.5	257°18.1	S11°34.6	274°09.5	S16°57.9	125°42.8	N22°46.9	232°30.8	S02°00.3
7	248°20.0	272°17.6	33.4	289°10.0	57.3	146°45.5	46.9	247°33.0	00.2
8	263°22.4	287°17.1	32.3	304°10.5	56.7	155°48.2	47.0	262°35.2	00.1
9	278°24.9	302°16.6	.. 31.2	319°11.0	.. 56.1	170°50.9	.. 47.0	277°37.4	02°00.0
10	293°27.4	317°16.1	30.0	334°11.5	55.6	185°53.5	47.0	292°39.6	01°59.9
11	308°29.8	332°15.5	28.9	349°12.0	55.0	200°56.2	47.0	307°41.8	59.8
12	323°32.3	347°15.0	S11°27.8	4°12.5	S16°54.4	215°58.9	N22°47.1	322°44.0	S01°59.7
13	338°34.8	2°14.5	26.6	19°13.0	53.8	231°01.6	47.1	337°46.3	59.6
14	353°37.2	17°14.0	25.5	34°13.6	53.2	246°04.3	47.1	352°48.5	59.4
15	8°39.7	32°13.5	.. 24.3	49°14.1	.. 52.6	261°06.9	.. 47.2	7°50.7	.. 59.3
16	23°42.2	47°13.0	23.2	64°14.6	52.0	276°09.6	47.2	22°52.9	59.2
17	38°44.6	62°12.5	22.1	79°15.1	51.4	291°12.3	47.2	37°55.1	59.1
18	53°47.1	77°12.0	S11°20.9	94°15.6	S16°50.8	306°15.0	N22°47.2	52°57.3	S01°59.0
19	68°49.5	92°11.5	19.8	109°16.1	50.3	321°17.7	47.3	67°59.5	58.9
20	83°52.0	107°11.0	18.6	124°16.6	49.7	336°20.3	47.3	83°01.8	58.8
21	98°54.5	122°10.5	.. 17.5	139°17.1	.. 49.1	351°23.0	.. 47.3	98°04.0	.. 58.7
22	113°56.9	137°09.9	16.4	154°17.6	48.5	6°25.7	47.4	113°06.2	58.5
23	128°59.4	152°09.4	15.2	169°18.1	47.9	21°28.4	47.4	128°08.4	58.4
Mer.pass. 14:25 $\nu -0.5^{\circ} d -1.1^{\circ} m -3.91$ $\nu 0.5^{\circ} d -0.6^{\circ} m 1.12$ $\nu 2.7^{\circ} d 0.0^{\circ} m -2.56$ $\nu 2.2^{\circ} d -0.1^{\circ} m 1.02$									

Stars		
	SHA	Dec
Alpheratz	357°34.1	29°14.1
Ankaa	353°06.5	-42°10.0
Schedar	349°30.4	56°41.0
Diphda	348°46.6	-17°50.7
Achernar	335°19.7	-57°06.5
Hamal	327°50.3	23°35.2
Polaris	313°35.9	89°22.8
Acamar	315°11.1	-40°12.2
Menkar	314°05.2	4°11.5
Mirfak	308°26.9	49°57.4
Aldebaran	290°38.4	16°33.7
Rigel	281°02.8	-8°10.4
Capella	280°20.3	46°01.6
Bellatrix	278°21.7	6°22.3
Elnath	278°00.5	28°37.8
Anilam	275°36.6	-1°11.2
Betelgeuse	270°50.9	7°24.7
Canopus	263°51.6	-52°42.8
Sirius	258°25.2	-16°45.3
Adhara	255°04.8	-29°00.6
Procyon	244°49.6	5°09.4
Pollux	243°15.8	27°57.7
Avior	234°13.8	-59°35.7
Shulai	222°45.2	-43°32.4
Maplacidus	221°37.2	-69°49.5
Alphard	217°46.2	-8°46.4
Regulus	207°33.1	11°50.2
Dubhe	193°39.2	61°36.4
Denebola	182°23.7	14°25.4
Gienah	175°42.4	-17°41.3
Acrux	172°58.6	-63°14.5
Gacrux	171°50.2	-57°15.5
Alioth	166°11.8	55°48.7
Spica	158°21.2	-11°51.0
Alkaid	152°51.1	49°10.0
Hadar	148°34.5	-60°29.8
Menkent	147°56.4	-36°29.8
Arcturus	145°47.0	19°02.5
Rigel Kent.	139°38.9	-60°56.4
Kochab	137°19.6	74°02.4
Zuben ubi	136°54.9	-16°09.1
Alphecca	126°03.0	-26°37.3
Antares	112°14.8	-26°29.4
Atria	107°08.4	-69°04.2
Sabik	102°01.9	-15°45.5
Shaula	96°09.3	-37°07.3
Rasalhague	95°57.9	12°32.3
Eltanin	90°42.1	51°28.8
Kaus Aust.	83°31.4	-34°22.3
Vega	80°32.9	38°48.2
Nunki	75°46.9	-26°15.9
Altair	61°59.4	8°56.1
Peacock	53°04.8	-56°39.0
Deneb	49°25.6	45°22.3
Enif	33°38.2	9°59.6
Al Na'ir	27°32.2	-46°50.2
Fomalhaut	15°13.8	-29°29.2
Scheat	13°44.6	-28°19.5
Markab	13°29.3	15°20.7
Feb 11 Wed		
Venus	26°42.0	12.49
Jupiter	252°13.0	21.43
Saturn	359°26.6	14.36
Feb 12 Thu		
Venus	25°30.1	12.50
Mars	41°50.9	11.44
Jupiter	252°18.6	21.39
Saturn	359°27.0	14.32
Feb 13 Fri		
Venus	24°18.5	12.51
Mars	41°03.8	11.43
Jupiter	252°24.0	21.34
Saturn	359°14.7	14.29
Horizontal parallax		
Venus:		0.1
Mars:		0.1

Aries			Venus			Mars			Jupiter			Saturn		
Sat	GHA		GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
0	144°01.9	167°08.9	S11°14.1			184°18.6	S16°47.3		36°31.1	N22°47.4		143°10.6	S01°58.3	
1	159°04.3	182°08.4	12.9			199°19.1	46.7		51°33.7	47.4		158°12.8	58.2	
2	174°06.8	197°07.9	11.8			214°19.6	46.1		66°36.4	47.5		173°15.0	58.1	
3	189°09.3	212°07.4	.. 10.7			229°20.1	.. 45.5		81°39.1	.. 47.5		188°17.3	.. 58.0	
4	204°11.7	227°06.9	09.5			244°20.6	44.9		96°41.8	47.5		203°19.5	57.9	
5	219°14.2	242°06.4	08.4			259°21.1	44.3		111°44.4	47.5		218°21.7	57.7	
6	234°16.7	257°05.9	S11°07.2			274°21.6	S16°43.7		126°47.1	N22°47.6		233°23.9	S01°57.6	
7	249°19.1	272°05.4	06.1			289°22.1	43.1		141°49.8	47.6		248°26.1	57.5	
8	264°21.6	287°04.9	04.9			304°22.7	42.6		156°52.5	47.6		263°28.3	57.4	
9	279°24.0	302°04.4	.. 03.8			319°23.2	.. 42.0		171°55.1	.. 47.7		278°30.5	.. 57.3	
10	294°26.5	317°03.9	02.6			334°23.7	41.4		186°57.8	47.7		293°32.7	57.2	
11	309°29.0	332°03.4	01.5			349°24.2	40.8		202°00.5	47.7		308°35.0	57.1	
12	324°31.4	347°02.9	S11°00.3			4°24.7	S16°40.2		217°03.2	N22°47.7		323°37.2	S01°57.0	
13	339°33.9	2°02.4	10°59.2			19°25.2	39.6		232°05.8	47.8		338°39.4	56.8	
14	354°36.4	17°01.9	58.0			34°25.7	39.0		247°08.5	47.8		353°41.6	56.7	
15	9°38.8	32°01.4	.. 56.9			49°26.2	.. 38.4		262°11.2	.. 47.8		8°43.8	.. 56.6	
16	24°41.3	47°00.9	55.7			64°26.7	37.8		277°13.9	47.8		23°46.0	56.5	
17	39°43.8	62°00.4	54.6			79°27.2	37.2		292°16.5	47.9		38°48.2	56.4	
18	54°46.2	76°59.9	S10°53.4			94°27.7	S16°36.6		307°19.2	N22°47.9		53°50.4	S01°56.3	
19	69°48.7	91°59.4	52.3			109°28.2	36.0		322°21.9	47.9		68°52.7	56.2	
20	84°51.2	106°58.9	51.1			124°28.7	35.4		337°24.5	47.9		83°54.9	56.0	
21	99°53.6	121°58.4	.. 50.0			139°29.3	.. 34.8		352°27.2	.. 48.0		98°57.1	.. 55.9	
22	114°56.1	136°57.9	48.8			154°29.8	34.2		7°29.9	48.0		113°59.3	55.8	
23	129°58.5	151°57.4	47.7			169°30.3	33.6		22°32.6	48.0		129°01.5	55.7	
Mer.pass. 14:22			ν -0.5' d -1.1' m -3.91			ν 0.5' d -0.6' m 1.12			ν 2.7' d 0.0' m -2.55			ν 2.2' d -0.1' m 1.02		

Sun	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	145°01.0	166°56.9	S10°46.5	184°30.8	S16°33.0	37°35.2	N22°48.1	144°03.7	S01°55.6
1	160°03.5	181°56.4	45.4	199°31.3	32.4	52°37.9	48.1	159°05.9	55.5
2	175°05.9	196°55.9	44.2	214°31.8	31.8	67°40.6	48.1	174°08.1	55.4
3	190°08.4	211°55.4	.. 43.0	229°32.3	.. 31.2	82°43.2	.. 48.1	189°10.3	.. 55.3
4	205°10.9	226°54.9	41.9	244°32.8	30.6	97°45.9	48.2	204°12.6	55.1
5	220°13.3	241°54.4	40.7	259°33.3	30.0	112°48.6	48.2	219°14.8	55.0
6	235°15.8	256°54.0	S10°39.6	274°33.9	S16°29.4	127°51.2	N22°48.2	234°17.0	S01°54.9
7	250°18.3	271°53.5	38.4	289°34.4	28.8	142°53.9	48.2	249°19.2	54.8
8	265°20.7	286°53.0	37.3	304°34.9	28.2	157°56.6	48.3	264°21.4	54.7
9	280°23.2	301°52.5	.. 36.1	319°35.4	.. 27.6	172°59.2	.. 48.3	279°23.6	.. 54.6
10	295°25.7	316°52.0	34.9	334°35.9	27.0	188°01.9	48.3	294°25.8	54.5
11	310°28.1	331°51.5	33.8	349°36.4	26.4	203°04.6	48.3	309°28.0	54.3
12	325°30.6	346°51.0	S10°32.6	4°36.9	S16°25.8	218°07.2	N22°48.4	324°30.2	S01°54.2
13	340°33.0	1°50.5	31.5	19°37.4	25.2	233°09.9	48.4	339°32.5	54.1
14	355°35.5	16°50.0	30.3	34°37.9	24.6	248°12.6	48.4	354°34.7	54.0
15	10°38.0	31°49.5	.. 29.1	49°38.5	.. 24.0	263°15.2	.. 48.4	9°36.9	.. 53.9
16	25°40.4	46°49.0	28.0	64°39.0	23.4	278°17.9	48.5	24°39.1	53.8
17	40°42.9	61°48.6	26.8	79°39.5	22.8	293°20.6	48.5	39°41.3	53.7
18	55°45.4	76°48.1	S10°25.6	94°40.0	S16°22.2	308°23.2	N22°48.5	54°43.5	S01°53.5
19	70°47.8	91°47.6	24.5	109°40.5	21.6	323°25.9	48.5	69°45.7	53.4
20	85°50.3	106°47.1	23.3	124°41.0	21.0	338°28.6	48.6	84°47.9	53.3
21	100°52.8	121°46.6	.. 22.2	139°41.5	.. 20.4	353°31.2	.. 48.6	99°50.1	.. 53.2
22	115°55.2	136°46.1	21.0	154°42.1	19.7	8°33.9	48.6	114°52.4	53.1
23	130°57.7	151°45.6	19.8	169°42.6	19.1	23°36.6	48.6	129°54.6	53.0
Mer.pass. 14:18 ν -0.5' d -1.2' m -3.91 ν 0.5' d -0.6' m 1.13 ν 2.7' d 0.0' m -2.54 ν 2.2' d -0.1' m 1.02									

Mon	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	146°00.1	166°45.2	S10°18.7	184°43.1	S16°18.5	38°39.2	N22°48.7	144°56.8	S01°52.9
1	161°02.6	181°44.7	17.5	199°46.6	17.5	53°41.9	48.7	159°59.0	52.7
2	176°05.1	196°44.2	16.3	214°44.1	17.3	68°44.5	48.7	175°01.2	52.6
3	191°07.5	211°43.7	.. 15.2	229°44.6	.. 16.7	83°47.2	.. 48.7	190°03.4	.. 52.5
4	206°10.1	226°43.2	14.0	244°45.1	16.1	98°49.9	48.8	205°06.6	52.4
5	221°12.5	241°42.7	12.8	259°45.7	15.5	113°52.5	48.8	220°07.8	52.3
6	236°14.9	256°42.2	S10°11.7	274°46.2	S16°14.9	128°55.2	N22°48.8	235°10.0	S01°52.2
7	251°17.4	271°41.8	10.5	289°46.7	14.3	143°57.8	48.8	250°12.2	52.1
8	266°19.9	286°41.3	09.3	304°47.2	13.7	159°00.5	48.9	265°14.4	51.9
9	281°22.3	301°40.8	.. 08.1	319°47.7	.. 13.1	174°03.2	.. 48.9	280°16.7	.. 51.8
10	296°24.8	316°40.3	07.0	334°48.2	12.5	189°05.8	48.9	295°18.9	51.7
11	311°27.3	331°39.8	05.8	349°48.7	11.8	204°08.5	48.9	310°21.1	51.6
12	326°29.7	346°39.4	S10°04.6	4°49.3	S16°11.2	219°11.1	N22°49.0	325°23.3	S01°51.5
13	341°32.2	1°38.9	03.5	19°49.8	10.6	234°13.8	49.0	340°25.5	51.4
14	356°34.6	16°38.4	02.3	34°50.3	10.0	249°16.5	49.0	355°27.7	51.3
15	11°37.1	31°37.9	10°01.1	49°50.8	.. 09.4	264°19.1	.. 49.0	10°29.9	.. 51.1
16	26°39.6	46°37.4	09°59.9	64°51.3	08.8	279°21.8	49.1	25°32.1	51.0
17	41°42.0	61°37.0	58.8	79°51.8	08.2	294°24.4	49.1	40°34.3	50.9
18	56°44.5	76°36.5	S09°57.6	94°52.4	S16°07.6	309°27.1	N22°49.1	55°36.5	S01°50.8
19	71°47.0	91°36.0	56.4	109°52.9	07.0	324°29.7	49.1	70°38.7	50.7
20	86°49.4	106°35.5	55.2	124°53.4	06.3	339°32.4	49.2	85°41.0	50.6
21	101°51.9	121°35.0	.. 54.1	139°53.9	.. 05.7	354°35.1	.. 49.2	100°43.2	.. 50.5
22	116°54.4	136°34.6	52.9	154°54.4	05.1	9°37.7	49.2	115°45.4	50.3
23	131°56.8	151°34.1	51.7	169°55.0	04.5	24°40.4	49.2	130°47.6	50.2
Mer.pass. 14:14									
ν -0.5' d -1.2' m -3.91 ν 0.5' d -0.6' m 1.13 ν 2.7' d 0.0' m -2.54 ν 2.2' d -0.1' m 1.01									

Stars		
	SHA	Dec
Alpheratz	357°34.1	29°14.1
Ankaa	353°06.5	-42°10.0
Schedar	349°30.4	56°41.0
Diphda	348°46.6	-17°50.7
Achernar	335°19.8	-57°06.5
Hamal	327°50.3	23°35.2
Polaris	313°37.3	89°22.8
Acamar	315°11.1	-40°12.2
Menkar	314°05.2	4°11.5
Mirfak	308°26.9	49°57.4
Aldebaran	290°38.5	16°33.7
Rigel	281°02.8	-8°10.4
Capella	280°20.3	46°01.6
Bellatrix	278°21.7	6°22.3
Elmath	278°00.5	28°37.8
Alnilam	275°36.6	-1°11.2
Betelgeuse	270°50.9	7°24.7
Canopus	263°51.6	-52°42.8
Sirius	258°25.2	-16°45.3
Adhara	255°04.8	-29°00.2
Procyon	244°49.6	5°09.4
Pollux	243°15.8	27°57.7
Avior	234°13.8	-59°35.7
Suhail	222°45.2	-43°32.4
Alphard	221°37.2	-69°49.5
Regulus	207°33.1	11°50.2
Dubhe	193°39.2	61°36.4
Denebola	182°23.7	14°25.4
Gienah	175°42.4	-17°41.3
Acrux	172°58.6	-63°14.5
Gacrux	171°50.6	-57°15.5
Alioth	166°11.8	55°48.8
Spica	158°21.1	-13°10.0
Alkaid	152°51.0	49°10.6
Hadar	148°34.4	-60°29.8
Menkent	147°56.4	-36°29.9
Arcturus	145°46.9	19°02.5
Rigel Kent.	139°28.8	-60°56.2
Kochab	137°19.6	74°02.4
Zuben'ubi	136°54.9	-16°09.1
Alphecca	126°02.9	26°37.3
Antares	112°14.8	-26°29.4
Atria	107°08.4	-69°04.2
Sabik	102°01.8	-15°45.5
Shaula	96°09.3	-37°07.3
Rasalhague	95°57.8	12°32.6
Eltanin	90°42.0	51°28.8
Kaus Aust.	83°31.5	-34°22.3
Vega	80°32.9	38°48.2
Nunki	75°46.9	-26°15.9
Altair	61°59.3	8°56.1
Peacock	53°04.8	-56°39.0
Deneb	49°25.6	45°32.3
Enif	33°38.2	9°59.6
Al Na'ir	27°32.2	-46°50.1
Fomalhaut	15°13.8	-29°29.1
Scheat	13°44.6	28°13.5
Makab	13°29.3	15°20.7
Feb 14 Sat		
Venus	SHA	Mer.pass
Venus	23°07.1	12:52
Mars	40°16.7	11:42
Jupiter	252°29.2	21:30
Saturn	359°08.7	14:25
Feb 15 Sun		
Venus	SHA	Mer.pass
Venus	21°15.9	12:53
Mars	39°29.8	11:42
Jupiter	252°34.2	21:26
Saturn	359°02.7	14:22
Feb 16 Mon		
Venus	SHA	Mer.pass
Venus	20°45.0	12:53
Mars	38°42.9	11:41
Jupiter	252°39.1	21:22
Saturn	358°56.6	14:18
Horizontal parallel		
Venus:		0.1
Mars:		0.1

Aries			Venus			Mars			Jupiter			Saturn		
Tue	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	146°59.3	166°33.6	S09°50.5	184°55.5	S16°03.9	39°43.0	N22°49.3	145°49.8	S01°50.1					
1	162°01.8	181°33.1	49.4	199°56.0	03.3	54°45.7	49.3	160°52.0	50.0					
2	177°04.2	196°32.7	48.2	214°56.5	02.7	69°48.3	49.3	175°54.2	49.9					
3	192°06.7	211°32.2	.. 47.0	229°57.0	.. 02.1	84°51.0	.. 49.3	190°56.4	.. 49.8					
4	207°09.1	226°31.7	45.8	244°57.5	01.4	99°53.6	49.4	205°58.6	49.6					
5	222°11.6	241°31.2	44.6	259°58.1	00.8	114°56.3	49.4	221°00.8	49.5					
6	237°14.1	256°30.8	S09°43.5	274°58.6	S16°00.2	129°58.9	N22°49.4	236°03.0	S01°49.4					
7	252°16.5	271°30.3	42.3	289°59.1	15°59.6	145°01.6	49.4	251°05.2	49.3					
8	267°19.0	286°29.8	41.1	304°59.6	55.0	160°04.2	49.5	266°07.5	49.2					
9	282°21.5	301°29.3	.. 39.9	320°00.1	.. 58.4	175°06.9	.. 49.5	281°09.7	.. 49.1					
10	297°23.9	316°28.9	38.7	335°00.7	57.7	190°09.5	49.5	296°11.9	49.0					
11	312°26.4	331°28.4	37.6	350°01.2	57.1	205°12.2	49.5	311°14.1	48.8					
12	327°28.9	346°27.9	S09°36.4	5°01.7	S15°56.5	220°14.8	N22°49.6	326°16.3	S01°48.7					
13	342°31.3	1°27.5	35.2	20°02.2	55.9	235°17.5	49.6	341°18.5	48.6					
14	357°33.8	16°27.0	34.0	35°02.8	55.3	250°20.1	49.6	356°20.7	48.5					
15	12°36.2	31°26.5	.. 32.8	50°03.3	.. 54.7	265°22.8	.. 49.6	11°22.9	.. 48.4					
16	27°38.7	46°26.1	31.6	65°03.8	54.0	280°25.4	49.7	26°25.1	48.3					
17	42°41.2	61°25.6	30.5	80°04.3	53.4	295°28.1	49.7	41°27.3	48.2					
18	57°43.6	76°25.1	S09°29.3	95°04.8	S15°52.8	310°30.7	N22°49.7	56°29.5	S01°48.0					
19	72°46.1	91°24.6	28.1	110°05.4	52.2	325°33.4	49.7	71°31.7	47.9					
20	87°48.6	106°24.2	26.9	125°05.9	51.6	340°36.0	49.7	86°33.9	47.8					
21	102°51.0	121°23.7	.. 25.7	140°06.4	.. 50.9	355°38.7	.. 49.8	101°36.1	.. 47.7					
22	117°53.5	136°23.2	24.5	155°06.9	50.3	10°41.3	49.8	116°38.4	47.6					
23	132°56.0	151°22.8	23.3	170°07.4	49.7	25°44.0	49.8	131°40.6	47.5					
Mer.pass. 14:10			ν -0.5° d -1.2' m -3.91			ν 0.5° d -0.6' m 1.13			ν 2.7° d 0.0' m -2.53			ν 2.2° d -0.1' m 1.01		

Wed	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	147°58.4	166°22.3	S09°22.1	185°08.0	S15°49.1	40°46.6	N22°49.8	146°42.8
1	163°00.9	181°21.8	22.0	200°08.5	48.5	55°49.3	49.9	161°45.0
2	178°03.4	196°21.4	19.8	215°09.0	47.8	70°51.9	49.9	176°47.2
3	193°05.8	211°20.9	.. 18.6	230°09.5	.. 47.2	85°54.6	.. 49.9	191°49.4
4	208°08.3	226°20.4	17.4	245°10.1	46.6	100°57.2	49.9	206°51.6
5	223°10.7	241°20.0	16.2	260°10.6	46.0	115°59.9	50.0	221°53.8
6	238°13.2	256°19.5	S09°15.0	275°11.1	S15°45.4	131°02.5	N22°50.0	236°56.0
7	253°15.7	271°19.1	13.8	290°11.6	44.7	146°05.1	50.0	251°58.2
8	268°18.1	286°18.6	12.6	305°12.2	44.1	161°07.8	50.0	267°00.4
9	283°20.6	301°18.1	.. 11.4	320°12.7	.. 43.5	176°10.4	.. 50.0	282°02.6
10	298°23.1	316°17.7	10.2	335°13.2	42.9	191°13.1	50.1	297°04.8
11	313°25.5	331°17.2	09.1	350°13.7	42.2	206°15.7	50.1	312°07.0
12	328°28.0	346°16.7	S09°07.9	5°14.3	S15°41.6	221°18.4	N22°50.1	327°09.2
13	343°30.5	1°16.3	06.7	20°14.8	41.0	236°21.0	50.1	342°11.4
14	358°32.9	16°15.8	05.5	35°15.3	40.4	251°23.6	50.2	357°13.6
15	13°35.4	31°15.4	.. 04.3	50°15.8	.. 39.8	266°26.3	.. 50.2	12°15.9
16	28°37.9	46°14.9	03.1	65°16.4	39.1	281°28.9	50.2	27°18.1
17	43°40.3	61°14.4	01.9	80°16.9	38.5	296°31.6	50.2	42°20.3
18	58°42.8	76°14.0	S09°00.7	95°17.4	S15°37.9	311°34.2	N22°50.3	57°22.5
19	73°45.2	91°13.5	08°59.5	110°17.9	37.3	326°36.8	50.3	72°24.7
20	88°47.7	106°13.1	58.3	125°18.5	36.6	341°39.5	50.3	87°26.9
21	103°50.2	121°12.6	.. 57.1	140°19.0	.. 36.0	356°42.1	.. 50.3	102°29.1
22	118°52.6	136°12.1	55.9	155°19.5	35.4	11°44.8	50.3	117°31.3
23	133°55.1	151°11.7	54.7	170°20.0	34.7	26°47.4	50.4	132°33.5
Mer.pass. 14:06			ν -0.5° d -1.2' m -3.91			ν 0.5° d -0.6' m 1.13		

Thu	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	148°57.6	166°11.2	S08°53.5	185°20.6	S15°34.1	41°50.0	N22°50.4	147°35.7
1	164°00.0	181°10.8	52.3	200°21.1	33.5	56°52.7	50.4	162°37.9
2	179°02.5	196°10.3	51.1	215°21.6	32.9	71°55.3	50.4	177°40.1
3	194°05.0	211°09.8	.. 49.9	230°22.2	.. 32.7	86°58.0	.. 50.5	192°42.3
4	209°07.7	226°09.4	48.7	245°22.7	31.6	102°00.6	50.5	207°44.5
5	224°09.9	241°08.9	47.5	260°23.2	31.0	117°03.2	50.5	222°46.7
6	239°12.3	256°08.5	S08°46.3	275°23.7	S15°30.4	132°05.9	N22°50.5	237°48.9
7	254°14.8	271°08.0	45.1	290°24.3	29.7	147°08.5	50.5	252°51.1
8	269°17.3	286°07.6	43.9	305°24.8	29.1	162°11.1	50.6	267°53.3
9	284°19.7	301°07.1	.. 42.7	320°25.3	.. 28.5	177°13.8	.. 50.6	282°55.5
10	299°22.2	316°06.7	41.5	335°25.9	27.8	192°16.4	50.6	297°57.7
11	314°24.7	331°06.2	40.3	350°26.4	27.2	207°19.0	50.6	313°00.0
12	329°27.1	346°05.8	S08°39.9	5°26.9	S15°26.6	222°21.7	N22°50.6	328°02.2
13	344°29.6	1°05.3	37.9	20°27.4	25.9	237°24.3	50.7	343°04.4
14	359°32.1	16°04.8	36.7	35°28.0	25.3	252°26.9	50.7	358°06.6
15	14°34.5	31°04.4	.. 35.5	50°28.5	.. 24.7	267°29.6	.. 50.7	13°08.8
16	29°37.0	46°03.9	34.3	65°29.0	24.0	282°32.2	50.7	28°11.0
17	44°39.5	61°03.5	33.1	80°29.6	23.4	297°34.8	50.8	43°13.2
18	59°41.9	76°03.0	S08°31.9	95°30.1	S15°22.8	312°37.5	N22°50.8	58°15.4
19	74°44.4	91°02.6	30.7	110°30.6	22.2	327°40.1	50.8	73°17.6
20	89°46.8	106°02.1	29.5	125°31.2	21.5	342°42.7	50.8	88°19.8
21	104°49.3	121°01.7	.. 28.3	140°31.7	.. 20.9	357°45.4	.. 50.8	103°22.0
22	119°51.8	136°01.2	27.1	155°32.2	20.3	12°48.0	50.9	118°24.2
23	134°54.2	151°00.8	25.9	170°32.7	19.6	27°50.6	50.9	133°26.4
Mer.pass. 14:02			ν -0.5° d -1.2' m -3.91			ν 0.5° d -0.6' m 1.13		

Stars		
	SHA	Dec
Alpheratz	357°34.1	29°14.1
Ankaa	353°06.5	-42°10.0
Schedar	349°30.4	56°41.0
Diphda	348°46.6	-17°50.7
Achernar	335°19.8	-57°06.5
Hamal	327°50.3	23°35.2
Polaris	313°38.9	89°22.8
Acamar	315°11.1	-40°12.2
Menkar	314°05.2	4°11.5
Mirafak	308°27.0	49°57.4
Aldebaran	290°38.5	16°33.7
Rigel	281°02.8	-8°10.4
Capella	280°20.3	46°01.6
Bellatrix	278°21.7	6°22.3
Elinath	278°00.5	28°37.8
Alnilam	275°36.6	-1°11.2
Betelgeuse	270°50.9	7°24.7
Canopus	263°51.6	-52°42.8
Sirius	258°25.2	-16°45.3
Adhara	255°04.9	-29°00.6
Procyon	244°49.6	5°09.4
Pollux	247°55.5	27°57.7
Avior	234°13.8	-59°35.7
Suhail	222°45.2	-43°32.4
Alphard	221°37.2	-69°49.5
Regulus	207°33.1	11°50.2
Dubhe	193°39.2	61°36.4
Denebola	182°23.7	14°25.4
Gienah	175°42.4	-17°41.3
Acrux	172°58.5	-63°14.5
Gacrux	171°50.2	-57°15.5
Alioth	166°11.7	55°48.8
Spica	158°21.1	-13°18.0
Alkaid	152°51.0	49°10.6
Hadar	148°34.4	-60°29.8
Menkent	147°56.3	-36°29.9
Arcturus	145°46.9	19°02.5
Rigel Kent.	139°38.8	-60°56.4
Kochab	137°15.9	74°02.4
Zuben el	136°54.9	-16°09.1
Alphecca	126°02.9	26°37.3
Antares	112°41.8	-26°29.4
Atria	107°08.3	-69°04.2
Sabik	102°01.8	-15°45.5
Shaula	96°09.3	-37°07.3
Rasalhague	95°57.8	12°32.2
Eltanin	90°42.0	51°28.8
Kaus Aust.	83°31.5	-34°22.3
Vega	80°32.9	38°48.2
Nunki	75°46.9	-26°15.9
Altair	61°59.3	8°56.1
Peacock	53°04.8	-56°39.0
Deneb	49°25.6	-45°22.3
Enif	33°38.2	9°59.6
Al Na'ir	27°32.2	-46°50.1
Fomalhaut	15°13.8	-29°29.1
Scheat	13°44.6	28°13.5
Markab	13°29.3	15°20.7
Feb 17 Tue		
Venus	SHA	Mer.pass
Mars	19°34.3	12:54
Jupiter	37°56.2	11:40
Saturn	252°43.7	21:17
Feb 18 Wed		
Venus	SHA	Mer.pass
Mars	18°23.9	12:55
Jupiter	37°09.5	11:39
Saturn	252°48.2	21:13
Feb 19 Thu		
Venus	SHA	Mer.pass
Mars	17°13.7	12:56
Jupiter	36°23.0	11:38
Saturn	252°52.5	21:09
Horizontal parallax		
Venus:	0.1	
Mars:	0.1	

Sun			Moon				
Tue	GHA	Dec	GHA	ν	Dec	d	HP
0	176°30.2	S12°03.4	181°51.1	12.5°	S15°31.4	-13.4°	56.7'
1	191°30.3	02.5	196°22.6	12.5°	S15°18.0	-13.5°	56.7'
2	206°30.3	01.6	210°54.1	12.6°	S15°04.5	-13.6°	56.7'
3	221°30.4	12°00.8	225°25.7	12.6°	S14°50.9	-13.6°	56.7'
4	236°30.4	11°59.9	239°57.3	12.6°	S14°37.3	-13.7°	56.8'
5	251°30.5	59.0	254°28.9	12.7°	S14°23.5	-13.8°	56.8'
6	266°30.5	S11°58.1	269°00.6	12.7°	S14°09.7	-13.9°	56.8'
7	281°30.5	57.3	283°32.3	12.8°	S13°55.9	-14.0°	56.8'
8	296°30.6	56.4	298°04.1	12.8°	S13°41.9	-14.0°	56.9'
9	311°30.6	•• 55.5	312°35.5	12.8°	S13°27.9	-14.1°	56.9'
10	326°30.7	54.6	327°07.7	12.9°	S13°13.8	-14.2°	56.9'
11	341°30.7	53.8	341°39.6	12.9°	S12°59.6	-14.3°	56.9'
12	356°30.8	S11°52.9	356°11.5	12.9°	S12°45.3	-14.3°	57.0'
13	11°30.8	52.0	10°43.4	13.0°	S12°30.9	-14.4°	57.0'
14	26°30.9	51.1	25°15.3	13.0°	S12°16.6	-14.5°	57.0'
15	41°30.9	•• 50.2	39°47.3	13.0°	S12°02.2	-14.5°	57.0'
16	56°30.10	49.4	54°19.3	13.0°	S11°47.6	-14.6°	57.1'
17	71°30.10	48.5	68°51.4	13.1°	S11°33.0	-14.7°	57.1'
18	86°30.10	S11°47.6	83°23.4	13.1°	S11°18.4	-14.7°	57.1'
19	101°30.11	46.7	97°55.5	13.1°	S11°03.7	-14.8°	57.1'
20	116°30.11	45.8	112°27.6	13.1°	S10°48.9	-14.8°	57.1'
21	131°30.12	•• 45.0	126°59.8	13.2°	S10°34.0	-14.9°	57.2'
22	146°30.12	44.1	141°32.0	13.2°	S10°19.1	-15.0°	57.2'
23	161°30.13	43.2	156°04.1	13.2°	S10°04.2	-15.0°	57.2'
SD = 16.2' d = -0.9'			SD = 15.5'				
Wed	GHA	Dec	GHA	ν	Dec	d	HP
0	176°31.3	S11°42.3	170°36.4	13.2°	S09°49.1	-15.1°	57.2'
1	191°31.4	41.4	185°08.6	13.3°	S09°34.1	-15.1°	57.3'
2	206°31.4	40.6	199°40.9	13.3°	S09°18.9	-15.2°	57.3'
3	221°31.5	•• 39.7	214°13.1	13.3°	S09°03.7	-15.2°	57.3'
4	236°31.5	38.8	228°45.4	13.3°	S08°48.5	-15.3°	57.3'
5	251°31.6	37.9	243°17.8	13.3°	S08°33.2	-15.3°	57.4'
6	266°31.6	S11°37.0	257°50.1	13.4°	S08°17.9	-15.4°	57.4'
7	281°31.7	36.1	272°22.5	13.4°	S08°02.5	-15.4°	57.4'
8	296°31.7	35.3	286°54.8	13.4°	S07°47.0	-15.5°	57.4'
9	311°31.8	•• 34.5	301°27.2	13.4°	S07°31.5	-15.5°	57.4'
10	326°31.8	33.4	315°59.6	13.4°	S07°16.0	-15.6°	57.5'
11	341°31.9	32.6	330°32.0	13.4°	S07°00.4	-15.6°	57.5'
12	356°32.0	S11°31.7	345°04.4	13.4°	S06°44.8	-15.7°	57.5'
13	11°32.0	30.8	359°36.9	13.4°	S06°29.1	-15.7°	57.5'
14	26°32.1	29.9	14°09.3	13.4°	S06°13.4	-15.7°	57.6'
15	41°32.1	•• 29.1	28°41.8	13.5°	S05°57.7	-15.8°	57.6'
16	56°32.2	28.2	43°14.2	13.5°	S05°41.9	-15.8°	57.6'
17	71°32.2	27.3	57°46.7	13.5°	S05°26.1	-15.9°	57.6'
18	86°32.3	S11°26.4	72°19.1	13.5°	S05°10.2	-15.9°	57.6'
19	101°32.3	25.5	86°51.6	13.5°	S04°54.4	-15.9°	57.7'
20	116°32.4	24.6	101°24.1	13.5°	S04°38.4	-16.0°	57.7'
21	131°32.4	•• 23.7	115°56.6	13.5°	S04°22.5	-16.0°	57.7'
22	146°32.5	22.8	130°29.1	13.5°	S04°06.5	-16.0°	57.7'
23	161°32.6	22.0	145°01.5	13.5°	S03°50.5	-16.0°	57.7'
SD = 16.2' d = -0.9'			SD = 15.6'				
Thu	GHA	Dec	GHA	ν	Dec	d	HP
0	176°32.6	S11°21.1	159°34.0	13.5°	S03°34.4	-16.1°	57.8'
1	191°32.7	20.2	174°06.5	13.5°	S03°18.4	-16.1°	57.8'
2	206°32.7	19.3	188°39.0	13.5°	S03°02.3	-16.1°	57.8'
3	221°32.8	•• 18.4	203°11.4	13.5°	S02°46.1	-16.1°	57.8'
4	236°32.8	17.5	217°43.9	13.5°	S02°30.0	-16.2°	57.8'
5	251°32.9	16.6	232°16.4	13.5°	S02°13.8	-16.2°	57.9'
6	266°33.0	S11°15.7	246°48.8	13.4°	S01°57.7	-16.2°	57.9'
7	281°33.0	14.8	261°21.3	13.4°	S01°41.5	-16.2°	57.9'
8	296°33.1	13.9	275°53.7	13.4°	S01°25.2	-16.2°	57.9'
9	311°33.1	•• 13.1	290°26.1	13.4°	S01°09.0	-16.3°	57.9'
10	326°33.2	12.2	304°58.5	13.4°	S00°52.7	-16.3°	58.0'
11	341°33.3	11.3	319°30.9	13.4°	S00°36.5	-16.3°	58.0'
12	356°33.3	S11°10.4	334°03.3	13.4°	S00°20.2	-16.3°	58.0'
13	11°33.4	09.5	348°35.7	13.3°	S00°03.9	-16.3°	58.0'
14	26°33.4	08.6	3°08.0	13.3°	N00°12.4	-16.3°	58.0'
15	41°33.5	•• 07.7	17°40.3	13.3°	S00°28.7	-16.3°	58.0'
16	56°33.6	06.8	32°12.6	13.3°	S00°45.0	-16.3°	58.1'
17	71°33.6	05.9	46°44.9	13.3°	S01°01.3	-16.3°	58.1'
18	86°33.7	S11°05.0	61°17.2	13.2°	N01°17.7	-16.3°	58.1'
19	101°33.7	04.1	75°49.4	13.2°	S01°34.0	-16.3°	58.1'
20	116°33.8	•• 03.2	90°21.7	13.2°	S01°50.3	-16.3°	58.1'
21	131°33.9	02.3	104°53.9	13.2°	S02°06.7	-16.3°	58.2'
22	146°33.9	01.4	119°26.0	13.1°	S02°23.0	-16.3°	58.2'
23	161°34.0	00.5	133°58.2	13.1°	S02°39.3	-16.3°	58.2'
SD = 16.2' d = -0.9'			SD = 15.8'				

Aries			Venus			Mars			Jupiter			Saturn		
Fri	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec	
0	149°56.7	166°00.3	S08°24.6	185°33.3	S15°19.0	42°53.3	N22°50.9	148°28.6	S01°41.8					
1	164°59.2	180°59.9	23.4	200°33.8	18.4	57°55.9	50.9	163°30.8	41.7					
2	180°01.6	195°59.4	22.2	215°34.3	17.7	72°58.5	50.9	178°33.0	41.5					
3	195°04.1	210°59.0	.. 21.0	230°34.9	.. 17.1	88°01.2	.. 51.0	193°35.2	.. 41.4					
4	210°06.6	225°58.5	19.8	245°35.4	16.5	103°03.8	51.0	208°37.4	41.3					
5	225°09.0	240°58.1	18.6	260°35.9	15.8	118°06.4	51.0	223°39.6	41.2					
6	240°11.5	255°57.7	S08°17.4	275°36.5	S15°15.2	133°09.0	N22°51.0	238°41.8	S01°41.1					
7	255°13.9	270°57.2	16.2	290°37.0	14.5	148°11.7	51.1	253°44.0	41.0					
8	270°16.4	285°56.8	15.0	305°37.5	13.9	163°14.3	51.1	268°46.2	40.8					
9	285°18.9	300°56.3	.. 13.8	320°38.1	.. 13.3	178°16.9	.. 51.1	283°48.4	.. 40.7					
10	300°21.3	315°55.9	12.6	335°38.6	12.6	193°19.5	51.1	298°50.6	40.6					
11	315°23.8	330°55.4	11.3	350°39.1	12.0	208°22.2	51.1	313°52.8	40.5					
12	330°26.3	345°55.0	S08°10.1	5°39.7	S15°11.4	223°24.8	N22°51.2	328°55.0	S01°40.4					
13	345°28.7	0°54.5	08.9	20°40.2	10.7	238°27.4	51.2	343°57.2	40.3					
14	0°31.2	15°54.1	07.7	35°40.7	10.1	253°30.0	51.2	358°59.4	40.1					
15	15°33.7	30°53.6	.. 06.5	50°41.3	.. 09.5	268°32.7	.. 51.2	14°01.6	.. 40.0					
16	30°36.1	45°53.2	05.3	65°41.8	08.8	283°35.3	51.2	29°03.8	39.9					
17	45°38.6	60°52.8	04.1	80°42.3	08.2	298°37.9	51.3	44°06.0	39.8					
18	60°41.1	75°52.3	S08°02.9	95°42.9	S15°07.5	133°40.5	N22°51.3	59°08.3	S01°39.7					
19	75°43.5	90°51.9	01.6	110°43.4	06.9	328°43.2	51.3	74°10.5	39.6					
20	90°46.0	105°51.4	08°00.4	125°43.9	06.3	343°45.8	51.3	89°12.7	39.4					
21	105°48.4	120°51.0	07°59.2	140°44.5	.. 05.6	358°48.4	.. 51.3	104°14.9	.. 39.3					
22	120°50.9	135°50.5	58.0	155°45.0	05.0	373°51.0	51.4	119°17.1	39.2					
23	135°53.4	150°50.1	56.8	170°45.6	04.3	28°53.7	51.4	134°19.3	39.1					
Mer.pass. 13:58			ν -0.4' d-1.2' m-3.91			ν 0.5' d-0.6' m1.13			ν 2.6' d0.0' m-2.51			ν 2.2' d-0.1' m1.01		

Sat	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	150°55.8	165°49.7	S07°55.6	185°46.1	S15°03.7	43°56.3	N22°51.4	149°21.5	S01°39.0
1	165°58.3	180°49.2	54.3	200°46.6	03.1	58°58.9	51.4	164°23.7	38.9
2	181°00.8	195°48.8	53.1	215°47.2	02.4	74°01.5	51.4	179°25.9	38.7
3	196°03.2	210°48.3	.. 51.9	230°47.7	.. 01.8	89°04.1	.. 51.5	194°28.1	.. 38.6
4	211°05.7	225°47.9	50.7	245°48.2	01.1	104°06.8	51.5	209°30.3	38.5
5	226°08.2	240°47.5	49.5	260°48.8	15°00.5	119°09.4	51.5	224°32.5	38.4
6	241°10.6	255°47.0	S07°48.7	275°49.3	S14°59.9	134°12.0	N22°51.5	239°34.7	S01°38.3
7	256°13.1	270°46.6	47.0	290°49.8	59.2	149°14.6	51.5	254°36.9	38.2
8	271°15.5	285°46.1	45.8	305°50.4	58.6	164°17.2	51.6	269°39.1	38.0
9	286°18.0	300°45.7	.. 44.6	320°50.9	.. 57.9	179°19.9	.. 51.6	284°41.3	.. 37.9
10	301°20.5	315°45.3	43.4	335°51.5	57.3	194°22.5	51.6	299°43.5	37.8
11	316°22.9	330°44.8	42.2	350°52.0	56.6	209°25.1	51.6	314°45.7	37.7
12	331°25.4	345°44.4	S07°40.9	5°52.5	S14°56.0	224°27.7	N22°51.6	329°47.9	S01°37.6
13	346°27.9	0°44.0	39.7	20°53.1	55.4	239°30.3	51.7	344°50.1	37.5
14	1°30.3	15°43.5	38.5	35°53.6	54.7	254°33.0	51.7	359°52.3	37.3
15	16°32.8	30°43.1	.. 37.3	50°54.1	.. 54.1	269°35.6	.. 51.7	14°54.5	.. 37.2
16	31°35.3	45°42.7	36.1	65°54.7	53.4	284°38.2	51.7	29°56.7	37.1
17	46°37.7	60°42.2	34.8	80°55.2	52.8	299°40.8	51.7	44°58.9	37.0
18	61°40.2	75°41.8	S07°33.6	95°55.8	S14°52.1	314°43.4	N22°51.8	60°01.1	S01°36.9
19	76°42.7	90°41.4	32.4	110°56.3	51.5	329°46.0	51.8	75°03.3	36.7
20	91°45.1	105°40.9	31.2	125°56.8	50.8	344°48.6	51.8	90°05.5	36.6
21	106°47.6	120°40.5	.. 29.9	140°57.4	.. 50.2	359°51.3	.. 51.8	105°07.7	.. 36.5
22	121°50.0	135°40.0	28.7	155°57.9	49.6	14°53.9	51.8	120°09.9	36.4
23	136°52.5	150°39.6	27.5	170°58.5	48.9	29°56.5	51.9	135°12.1	36.3
Mer.pass. 13:54 ν -0.4' d-1.2' m-3.91 ν 0.5' d-0.6' m1.13 ν 2.6' d0.0' m-2.50 ν 2.2' d-0.1' m1.01									

Sun	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
0	151°55.0	165°39.2	S07°26.3	185°59.0	S14°48.3	44°59.1	N22°51.9	150°14.3	S01°36.2
1	166°57.4	180°38.7	25.0	200°59.5	47.6	60°01.7	51.9	165°16.5	36.0
2	181°59.9	195°38.3	23.8	216°00.1	47.0	75°04.3	51.9	180°18.7	35.9
3	197°02.4	210°37.9	.. 22.6	231°00.6	.. 46.3	90°06.9	.. 51.9	195°20.9	.. 35.8
4	212°04.8	225°37.5	21.4	246°01.2	45.7	105°09.6	51.9	210°23.1	35.7
5	227°07.3	240°37.0	20.1	261°01.7	45.0	120°12.2	52.0	225°25.3	35.6
6	242°09.8	255°36.6	S07°18.9	276°02.2	S14°44.4	135°14.8	N22°52.0	240°27.5	S01°35.5
7	257°12.2	270°36.2	17.7	291°02.8	43.7	150°17.4	52.0	255°29.7	35.3
8	272°14.7	285°35.7	16.5	306°03.3	43.1	165°20.0	52.0	270°31.9	35.2
9	287°17.2	300°35.3	.. 15.2	321°03.9	.. 42.4	180°22.6	.. 52.0	285°34.1	.. 35.1
10	302°19.6	315°34.9	14.0	336°04.4	41.8	195°25.2	52.1	300°36.3	35.0
11	317°22.1	330°34.4	12.8	351°05.0	41.1	210°27.8	52.1	315°38.5	34.9
12	332°24.5	345°34.0	S07°11.5	6°05.5	S14°40.5	225°30.4	N22°52.1	330°40.7	S01°34.8
13	347°27.0	0°33.6	10.3	21°06.0	39.8	240°33.0	52.1	345°42.9	34.6
14	2°29.5	15°33.2	09.1	36°06.6	39.2	255°35.7	52.1	0°45.1	34.5
15	17°31.9	30°32.7	.. 07.9	51°07.1	.. 38.5	270°38.3	.. 52.2	15°47.3	.. 34.4
16	32°34.4	45°32.3	06.6	66°07.7	37.9	285°40.9	52.2	30°49.5	34.3
17	47°36.9	60°31.9	05.4	81°08.2	37.2	300°43.5	52.2	45°51.7	34.2
18	62°39.3	75°31.4	S07°04.2	96°08.8	S14°36.6	315°46.1	N22°52.2	60°53.9	S01°34.0
19	77°41.8	90°31.0	02.9	111°09.3	35.9	330°48.7	52.2	75°56.1	33.9
20	92°44.3	105°30.6	01.7	126°09.8	35.3	345°51.3	52.2	90°58.3	33.8
21	107°46.7	120°30.2	07°00.5	141°10.4	.. 34.6	0°53.9	.. 52.3	106°00.5	.. 33.7
22	122°49.2	135°29.7	06°59.2	156°10.9	34.0	15°56.5	52.3	121°02.7	33.6
23	137°51.6	150°29.3	58.0	171°11.5	33.3	30°59.1	52.3	136°04.9	33.5
Mer.pass. 13:50 ν -0.4' d-1.2' m-3.91 ν 0.5' d-0.6' m1.13 ν 2.6' d0.0' m-2.49 ν 2.2' d-0.1' m1.00									

Stars		
SHA	Dec	
Alpheratz	357°34.1	29°14.1
Ankaa	353°06.5	-42°10.0
Schedar	349°30.4	56°41.0
Diphda	348°46.6	-17°50.7
Achernar	335°19.8	-57°06.5
Hamal	327°50.3	23°35.2
Polaris	313°40.5	89°22.8
Acamar	315°11.2	-40°12.2
Menkar	314°05.2	4°11.5
Mirfak	308°27.0	49°57.4
Aldebaran	290°38.5	-16°33.7
Rigel	281°02.9	-8°10.4
Capella	280°20.3	46°01.6
Bellatrix	278°21.8	6°22.3
Elath	278°00.5	28°37.8
Alnilam	275°36.6	-1°11.2
Betelgeuse	270°50.9	7°24.7
Canopus	263°51.7	-52°42.8
Sirius	258°25.2	-16°45.3
Adhara	255°04.9	-29°00.6
Procyon	244°49.6	5°09.4
Pollux	243°15.9	27°57.7
Avior	234°13.8	-59°35.7
Suhail	222°45.2	-43°32.4
Miaplaciadus	221°37.2	-69°49.5
Alphard	217°46.5	-8°46.5
Regulus	207°33.1	11°50.2
Dubhe	193°39.2	61°36.4
Denebola	182°23.7	14°25.4
Gienah	175°42.3	-17°41.3
Acrux	172°58.5	-63°14.6
Gacrux	171°50.2	-57°15.5
Alloth	166°11.7	55°48.8
Spica	158°21.1	-11°18.0
Alkaid	152°51.0	49°10.6
Hadar	148°34.4	-60°29.8
Menkent	147°56.3	-36°29.9
Arcturus	145°46.9	19°02.5
Rigel Kent.	139°38.8	-60°56.4
Kochab	137°19.4	74°02.5
Zuben'ubi	136°54.8	-16°09.1
Alphecca	126°02.9	-26°37.3
Antares	112°14.7	-26°29.4
Atria	107°08.3	-69°04.2
Sabik	102°01.8	-15°45.5
Shaula	96°09.3	-37°07.3
Rasalhague	95°57.8	12°32.2
Eltanin	90°42.0	51°28.8
Kaus Aust.	83°31.5	-34°22.3
Vega	80°32.8	38°48.2
Nunki	75°46.8	-26°15.9
Altair	61°59.3	8°56.1
Pescocck	53°04.8	-56°39.0
Deneb	49°25.6	45°22.2
Enif	33°38.2	9°59.6
Al Na'ir	27°32.2	-46°50.1
Fomalhaut	15°13.8	-29°29.1
Scheat	13°44.6	-28°13.4
Markab	13°29.3	15°20.7
Feb 20 Fri		
Venus	16°03.6	12:56
Mars	35°36.6	11:37
Jupiter	252°56.6	21:05
Saturn	358°31.9	14:04
Feb 21 Sat		
Venus	14°53.8	12:57
Mars	34°50.3	11:37
Jupiter	253°00.4	21:01
Saturn	358°25.6	14:

Aries			Venus			Mars			Jupiter			Saturn		
Mon	GHA		GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
0	152°54.1		165°28.9	S06°56.8		186°12.0	S14°32.7		46°01.7	N22°52.3		151°07.1	S01°33.3	
1	167°56.6		180°28.5	55.6		201°12.6	32.0		61°04.3	52.3		166°09.3	33.2	
2	181°59.0		195°28.0	54.3		216°13.1	31.4		76°06.9	52.4		181°11.5	33.1	
3	198°01.5		210°27.6	.. 53.1		231°13.7	.. 30.7		91°09.5	.. 52.4		196°13.7	.. 33.0	
4	213°04.0		225°27.2	51.9		246°14.2	30.1		106°12.1	52.4		211°15.9	32.9	
5	228°06.4		240°26.8	50.6		261°14.7	29.4		121°14.7	52.4		226°18.1	32.7	
6	243°08.9		255°26.3	S06°49.4		276°15.3	S14°28.8		136°17.3	N22°52.4		241°20.3	S01°32.6	
7	258°11.4		270°25.9	48.1		291°15.8	28.1		151°19.9	52.4		256°22.5	32.5	
8	273°13.8		285°25.5	46.9		306°16.4	27.4		166°22.5	52.5		271°24.7	32.4	
9	288°16.3		300°25.1	.. 45.7		321°16.9	.. 26.8		181°25.1	.. 52.5		286°26.9	.. 32.3	
10	303°18.8		315°24.6	44.4		336°17.5	26.1		196°27.8	52.5		301°29.1	32.2	
11	318°21.2		330°24.2	43.2		351°18.0	25.5		211°30.4	52.5		316°31.3	32.0	
12	333°23.7		345°23.8	S06°42.0		6°18.6	S14°24.8		226°33.0	N22°52.5		331°33.5	S01°31.9	
13	348°26.1		0°23.4	40.7		21°19.1	24.2		241°35.6	52.6		346°35.7	31.8	
14	3°28.6		15°23.0	39.5		36°19.7	23.5		256°38.2	52.6		1°37.9	31.7	
15	18°31.1		30°22.5	.. 38.3		51°20.2	.. 22.9		271°40.8	.. 52.6		16°40.1	.. 31.6	
16	33°33.5		45°22.1	37.0		66°20.8	22.2		286°43.4	52.6		31°42.3	31.4	
17	48°36.0		60°21.7	35.8		81°21.3	21.5		301°46.0	52.6		46°44.5	31.3	
18	63°38.5		75°21.3	S06°34.5		96°21.9	S14°20.9		316°48.5	N22°52.6		61°46.7	S01°31.2	
19	78°40.9		90°20.9	33.3		111°22.4	20.2		331°51.1	52.7		76°48.9	31.1	
20	93°43.4		105°20.4	32.1		126°23.0	19.6		346°53.7	52.7		91°51.1	31.0	
21	108°45.9		120°20.0	.. 30.8		141°23.5	.. 18.9		1°56.3	.. 52.7		106°53.3	.. 30.9	
22	123°48.3		135°19.6	29.6		156°24.1	18.3		16°58.9	52.7		121°55.5	30.7	
23	138°50.8		150°19.2	28.4		171°24.6	17.6		32°01.5	52.7		136°57.7	30.6	
Mer.pass. 13:46			ν -0.4° d -1.2° m -3.91			ν 0.5° d -0.7° m 1.14			ν 2.6° d 0.0° m -2.49			ν 2.2° d -0.1° m 1.00		

Tue	GHA		GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
0	153°53.3		165°18.8	S06°27.1		186°25.1	S14°16.9		47°04.1	N22°52.7		151°59.8	S01°30.5	
1	168°55.7		180°18.3	25.9		201°25.7	16.3		62°06.7	52.8		167°02.0	30.4	
2	183°58.2		195°17.9	24.6		216°26.2	15.6		77°09.3	52.8		182°04.2	30.3	
3	199°00.6		210°17.5	.. 23.4		231°26.8	.. 15.0		92°11.9	.. 52.8		197°06.4	.. 30.1	
4	214°03.1		225°17.1	22.2		246°27.3	14.3		107°14.5	52.8		212°08.6	30.0	
5	229°05.6		240°16.7	20.9		261°27.9	13.6		122°17.1	52.8		227°10.8	29.9	
6	244°08.0		255°16.3	S06°19.7		276°28.4	S14°13.0		137°19.7	N22°52.8		242°13.0	S01°29.8	
7	259°10.5		270°15.8	18.4		291°29.0	12.3		152°22.3	52.9		257°15.2	29.7	
8	274°13.0		285°15.4	17.2		306°29.5	11.7		167°24.9	52.9		272°17.4	29.6	
9	289°15.4		300°15.0	.. 15.9		321°30.1	.. 11.0		182°27.5	.. 52.9		287°19.6	.. 29.4	
10	304°17.9		315°14.6	14.7		336°30.6	10.3		197°30.1	52.9		302°21.8	29.3	
11	319°20.4		330°14.2	13.5		351°31.2	09.7		212°32.7	52.9		317°24.0	29.2	
12	334°22.8		345°13.8	S06°12.2		6°31.7	S14°09.0		227°35.3	N22°52.9		332°26.2	S01°29.1	
13	349°25.3		0°13.4	11.0		21°32.3	08.4		242°37.9	53.0		347°28.4	29.0	
14	4°27.8		15°12.9	09.7		36°32.9	07.7		257°40.4	53.0		2°30.6	28.8	
15	19°30.2		30°12.5	.. 08.5		51°33.4	.. 07.0		272°43.0	.. 53.0		17°32.8	.. 28.7	
16	34°32.7		45°12.1	07.2		66°34.0	06.4		287°45.6	53.0		32°35.0	28.6	
17	49°35.1		60°11.7	06.0		81°34.5	05.7		302°48.2	53.0		47°37.2	28.5	
18	64°37.6		75°11.3	S06°04.8		96°35.1	S14°05.0		317°50.8	N22°53.0		62°39.4	S01°28.4	
19	79°40.1		90°10.9	03.5		111°35.6	04.4		332°53.4	53.1		77°41.6	28.2	
20	94°42.5		105°10.5	02.3		126°36.2	03.7		347°56.0	53.1		92°43.8	28.1	
21	109°45.0		120°10.0	06°01.0		141°36.7	.. 03.1		2°58.6	.. 53.1		107°46.0	.. 28.0	
22	124°47.5		135°09.6	05°59.8		156°37.3	02.4		18°01.2	53.1		122°48.2	27.9	
23	139°49.9		150°09.2	58.5		171°37.8	01.7		33°03.8	53.1		137°50.4	27.8	
Mer.pass. 13:42			ν -0.4° d -1.2° m -3.91			ν 0.5° d -0.7° m 1.14			ν 2.6° d 0.0° m -2.48			ν 2.2° d -0.1° m 1.00		

Wed	GHA		GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
0	154°52.4		165°08.8	S05°57.3		186°38.4	S14°01.1		48°06.3	N22°53.1		152°52.6	S01°27.7	
1	169°54.9		180°08.4	56.0		201°38.9	14°00.4		63°08.9	53.2		167°54.8	27.5	
2	184°57.3		195°08.0	54.8		216°39.5	13°59.7		78°11.5	53.2		182°57.0	27.4	
3	199°59.8		210°07.6	.. 53.5		231°40.0	.. 59.1		93°14.1	.. 53.2		197°59.2	.. 27.3	
4	215°02.2		225°07.2	52.3		246°40.6	58.7		108°16.7	53.2		213°01.4	27.2	
5	230°04.7		240°06.8	51.0		261°41.1	57.7		123°19.3	53.2		228°03.6	27.1	
6	245°07.2		255°06.3	S05°49.8		276°41.7	S13°57.1		138°21.9	N22°53.2		243°05.8	S01°26.9	
7	260°09.6		270°05.9	48.5		291°42.3	56.4		153°24.4	53.3		258°08.0	26.8	
8	275°12.1		285°05.5	47.3		306°42.8	55.7		168°27.0	53.3		273°10.1	26.7	
9	290°14.6		300°05.1	.. 46.0		321°43.4	.. 55.1		183°29.6	.. 53.3		288°12.3	.. 26.6	
10	305°17.0		315°04.7	44.8		336°43.9	54.4		198°32.2	53.3		303°14.5	26.5	
11	320°19.5		330°04.3	43.5		351°44.5	53.7		213°34.8	53.3		318°16.7	26.3	
12	335°22.0		345°03.9	S05°42.3		6°45.0	S13°53.1		228°37.4	N22°53.3		333°18.9	S01°26.2	
13	350°24.4		0°03.5	41.0		21°45.6	52.4		243°39.9	53.3		348°21.1	26.1	
14	5°26.9		15°03.1	39.8		36°46.1	51.7		258°42.5	53.4		3°23.3	26.0	
15	20°29.4		30°02.7	.. 38.5		51°46.7	.. 51.1		273°45.1	.. 53.4		18°25.5	.. 25.9	
16	35°31.8		45°02.3	37.3		66°47.3	50.4		288°47.7	53.4		33°27.7	25.7	
17	50°34.3		60°01.9	36.0		81°47.8	49.7		303°50.3	53.4		48°29.9	25.6	
18	65°36.7		75°01.4	S05°34.8		96°48.4	S13°49.1		318°52.9	N22°53.4		63°32.1	S01°25.5	
19	80°39.2		90°01.0	33.5		111°48.9	48.4		333°55.4	53.4		78°34.3	25.4	
20	95°41.7		105°00.6	32.3		126°49.5	47.7		348°58.0	53.5		93°36.5	25.3	
21	110°44.1		120°00.2	.. 31.0		141°50.0	.. 47.1		4°00.6	.. 53.5		108°38.7	.. 25.2	
22	125°46.6		134°59.8	29.8		156°50.6	46.4		19°03.2	53.5		123°40.9	25.0	
23	140°49.1		149°59.4	28.5		171°51.1	45.7		34°05.8	53.5		138°43.1	24.9	
Mer.pass. 13:38			ν -0.4° d -1.2° m -3.91			ν 0.6° d -0.7° m 1.14			ν 2.6° d 0.0° m -2.47			ν 2.2° d -0.1° m 1.00		

Stars		
	SHA	Dec
Alpheratz	357°34.1	29°14.1
Ankaa	353°06.6	-42°10.0
Schedar	349°30.4	56°41.0
Diphda	348°46.6	-17°50.7
Achernar	335°19.8	-57°06.5
Hamal	327°50.3	23°35.2
Polaris	313°41.8	89°22.8
Acamar	315°11.2	-40°12.2
Menkar	314°05.3	4°11.5
Mirfak	308°27.0	49°57.4
Aldebaran	290°38.5	16°33.7
Rigel	281°02.9	-8°10.4
Capella	280°20.4	46°01.6
Bellatrix	278°20.8	6°22.3
Elmath	278°00.6	28°37.8
Alnilam	275°36.7	-1°11.2
Betelgeuse	270°50.9	7°24.6
Canopus	263°51.7	-52°42.8
Sirius	258°25.2	-16°45.3
Adhara	255°40.9	-29°00.6
Procyon	244°49.6	5°09.4
Pollux	243°15.9	27°57.7
Avior	234°13.8	-59°35.8
Suhail	222°45.2	-43°32.4
Maplacidus	221°37.2	-69°49.6
Alphard	217°46.5	-8°46.5